

MEETING STATE OF CALIFORNIA  
AIR RESOURCES BOARD

JOE SERNA, JR. BUILDING  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
BYRON SHER AUDITORIUM, SECOND FLOOR  
1001 I STREET  
SACRAMENTO, CALIFORNIA

THURSDAY, JUNE 28, 2012  
9:14 A.M.

TIFFANY C. KRAFT, CSR  
CERTIFIED SHORTHAND REPORTER  
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Planning and Technical Support Division

Mr. Kurt Karperos, Assistant Division Chief, Planning and  
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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

1  
2           CHAIRPERSON NICHOLS: Welcome, everyone, to the  
3 June 28th, 2012, public meeting of the Air Resources  
4 Board. Please come to order. And we will begin with the  
5 Pledge of Allegiance to the flag.

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

8           CHAIRPERSON NICHOLS: Thank you.

9           The Clerk will please call the roll.

10          BOARD CLERK MORENCY: Dr. Balmes?

11          BOARD MEMBER BALMES: Here.

12          BOARD CLERK MORENCY: Ms. Berg?

13          BOARD MEMBER BERG: Here.

14          BOARD CLERK MORENCY: Ms. D'Adamo?

15          BOARD MEMBER D'ADAMO: Here.

16          BOARD CLERK MORENCY: Mr. De La Torre?

17          BOARD MEMBER DE LA TORRE: Here.

18          BOARD CLERK MORENCY: Mayor Loveridge?

19          Mrs. Riordan?

20          BOARD MEMBER RIORDAN: Here.

21          BOARD CLERK MORENCY: Supervisor Roberts?

22          BOARD MEMBER ROBERTS: Here.

23          BOARD CLERK MORENCY: Dr. Sherriffs?

24          BOARD MEMBER SHERRIFFS: Here.

25          BOARD CLERK MORENCY: Professor Sperling?

1 BOARD MEMBER SPERLING: Here.

2 BOARD CLERK MORENCY: Supervisor Yeager?

3 BOARD MEMBER YEAGER: Here.

4 BOARD CLERK MORENCY: Chairman Nichols?

5 CHAIRPERSON NICHOLS: Here.

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

8 CHAIRPERSON NICHOLS: Thank you very much.

9 A couple of opening announcements, which will be  
10 familiar to those who are regulars here. But in case  
11 you're not, we're required to do this anyway.

12 Anyone who wants to testify and did not sign up  
13 on line should fill out a request to speak card. And  
14 they're available in the lobby outside the boardroom.  
15 Please turn it into the Clerk over here. And then she'll  
16 sort them and make sure I have a list of everybody who's  
17 asked to testify.

18 If you did take advantage of the on line sign-up  
19 feature, you don't have to fill out a request to speak  
20 card, but you do need to check in with the Clerk anyway so  
21 she knows you're here. Otherwise, she'll take your name  
22 off the speakers list.

23 We will be imposing a time limit on testimony  
24 today. We'll certainly try to hear from everybody. But  
25 we normally give people three minutes to speak and a



1 reminder that it's a lot easier for us to follow,  
2 especially if you've given us your written testimony, if  
3 you'll try to summarize your testimony.

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

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

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

25           But we now are faced with a situation where we

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

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

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

19 EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman  
20 Nichols.

21 ARB staff from several divisions are working with  
22 the South Coast and San Joaquin Valley Air Districts to  
23 develop a shared vision for meeting both air quality and  
24 greenhouse gas reduction goals. The outcome of that work  
25 is the draft report that Chair Nichols just mentioned.

1 Vision for Clean Air illustrates the nature of  
2 multi-pollutant planning needed to meet the Federal Clean  
3 Air Act and Greenhouse Gas Reduction Goals between now and  
4 2050.

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

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

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

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

1 more detailed analytical results.

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

4           (Thereupon an overhead presentation was  
5 presented as follows.)

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

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

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

22           The Vision effort is in many ways the beginning  
23 of a dialogue on how California can move forward to  
24 address its clean air goals in ways that enhance both its  
25 economy and environment.

1 I will start staff's presentation with a  
2 description of the purpose and general approach. Then  
3 Joshua Cunningham of the Mobile Source Control Division  
4 will discuss the technical work done that is enabling us  
5 to look at strategies from a multi-pollutant perspective.  
6 Then I'll close with some questions and next steps.

7 --o0o--

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

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

22 As part of the framework, staff developed a new  
23 analysis tool that considers greenhouse gases and  
24 conventional pollutants at the same time. The tool starts  
25 with a series of technology assumptions of what might be

1 possible and translates those into estimates of what  
2 emission reductions could result and how quickly.

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

9           --o0o--

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

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

17           --o0o--

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

25           Vision expands on powering the future by posing

1 questions such as:

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

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

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

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

10                           --o0o--

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

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

22                           --o0o--

23           ASSISTANT DIVISION CHIEF KAPEROS: What are the  
24 benefits of this type of framework?

25           Why begin this discussion on comprehensive

1 multi-pollutant planning?

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

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

14                               --o0o--

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

21           The primary focus of the vision analysis is on  
22 transportation-related sectors because they are the  
23 largest contributor to greenhouse gas and regional air  
24 pollution in California. The analysis also includes  
25 off-road mobile sources. And lastly, the vision analysis



1 includes regional upstream emissions from energy  
2 production associated with transportation.

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

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

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

16                           --o0o--

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

22           To show the type of insights that this  
23 multi-pollutant planning can provide, the next few slides  
24 will look at one sector as an example, in this case,  
25 trucks.

1           One of the things that the vision analysis shows  
2 is that a transition to bio fuels, while providing very  
3 significant and important greenhouse gas reductions, does  
4 not reduce NOx emissions coming from the engine. This is  
5 not unique to trucks where you're only using them here as  
6 an example.

7                               --o0o--

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

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

15           MR. CUNNINGHAM: Thank you, Kurt.

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

20                               --o0o--

21           MR. CUNNINGHAM: The basic vision analytical  
22 approach is the same approach staff applied to cars in  
23 late 2009. At that time, staff presented to the Board  
24 scenario analysis results that showed the need for zero  
25 emission vehicles to achieve the 2050 greenhouse gas

1 targets for passenger cars. This ultimately helped to  
2 inform the advanced clean cars regulation adopted by the  
3 Board this past January.

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

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

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

25 The various scenarios explored in this analysis

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

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

15 The next slide shows this in more detail.

16 --o0o--

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

1 in this chart.

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

8 --o0o--

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

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

20 --o0o--

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

1 over multiple decades.

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

7 --o0o--

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

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

19 --o0o--

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

24 For example, this figure shows how NOx reductions  
25 could change with time for cars, the other large mobile

1 source category included in the analysis. Using the same  
2 types of strategies applied for trucks, improved  
3 efficiency, lower NOx standards, and zero and near zero  
4 emission technologies.

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

9 ASSISTANT DIVISION CHIEF KARPEROS: Thank you,  
10 Joshua.

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

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

22 --o0o--

23 ASSISTANT DIVISION CHIEF KARPEROS: In terms of  
24 next steps, we are planning to hold workshops on the  
25 Vision framework this summer. The Vision report was

1 posted yesterday on ARB's planning website. Many are  
2 obviously very interested in both the report and the  
3 analytical framework. We plan to hold the workshops in  
4 August after we release the detailed vision analysis tool  
5 for public review.

6 SIPs are due at the end of this year for the  
7 24-hour particulate matter standard and in 2015 for the  
8 recently updated federal ozone standard. The Vision  
9 framework will facilitate multi-pollutant discussions in  
10 the context of the development of these plans.

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

17 Thank you. And that concludes staff's  
18 presentation.

19 CHAIRPERSON NICHOLS: Thank you, Kurt.

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

23 But before we do that, I wanted to just turn to  
24 the Board members because I know you've only recently  
25 gotten a copy of this material. But if you have any



1 questions at this point before we launch into the public  
2 testimony -- yes, DeeDee.

3 BOARD MEMBER D'ADAMO: Just a quick question.  
4 Trying to better understand the magnitude of the  
5 challenge. Looking at slide three on the conventional,  
6 does that contemplate any changes to the rules that we've  
7 adopted over the last several years on-road, off-road?  
8 Slide 13.

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

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

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

23 ASSISTANT DIVISION CHIEF KARPEROS: The vision  
24 analysis is not attempting to identify measures or  
25 strategies in the near term. It's trying to lay out the

1 general framework for how to consider what are the  
2 implications of the sort of stringency we have to deal  
3 with the standards over time.

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

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

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

19           I think the best way to try to look at this as we  
20 went through this effort, we took into account the  
21 turnover in the fleet that occurred from the truck and bus  
22 regulation and looked at opportunities to accelerate  
23 replacement of trucks instead of 2010 technology trucks  
24 with advanced technology trucks through this process. So  
25 moving forward, I think that some of the outcomes that we

1 saw in here are there opportunities to complement and  
2 build on the turnover that's already going to occur from  
3 the truck rule to achieve these additional NOx reductions  
4 that we're going to need both in the near term and the  
5 long term.

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

12           CHAIRPERSON NICHOLS: Dan.

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

24           I think as Chairman Nichols started out, I think  
25 it's great. It's not laying out any new goals. And in

1 fact, if anything, it should make these strategies and  
2 policies and targets easier and less expensive than they  
3 would be otherwise. And it's not just within ARB, of  
4 course, it's working for the South Coast and working for  
5 the PUC and working with others.

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

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

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

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

18 CHAIRPERSON NICHOLS: Thank you. That's great.

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

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

24 It's a pleasure to be here today on the release  
25 of what I think is a really fantastic document and an

1 extremely important one. And one that will not just  
2 collect dust on people's bookshelves, but that some 10 or  
3 20 years from now people will look back and say a seed was  
4 planted that created a clean air oak tree that provides a  
5 foundation for achieving federal standards as well as the  
6 state's greenhouse gas goals.

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

20 I can tell you I've read this document now twice  
21 in the last week, and I'm really impressed with the  
22 document. And I think the Chairman had it right and I  
23 think Dr. Sperling had it right. Chair, you had it right  
24 that it starts a process. But as this Board and everyone  
25 in this room knows, sometimes that first step can be the

1 most important step, and that is what we're doing here  
2 today. And I think Dr. Sperling had it right. We really  
3 are looking at things differently. And in looking at  
4 things differently, I think our investments will be wiser,  
5 that we'll reap economic advantage as well as public  
6 health advantage. And what we will see is a clearer --  
7 I'll use the word vision again -- a clearer vision as to  
8 how to get to attainment to meet the State's greenhouse  
9 gas goals. And we look forward to working with your staff  
10 and the San Joaquin District over the summer to receive  
11 public comments and make refinements to the document.  
12 Thank you for the opportunity to be here.

13 CHAIRPERSON NICHOLS: Thank you very much.  
14 Seyed.

15 MR. SADREDIN: Good morning, Madam Chair and  
16 members of the Board. It's a pleasure to be before you.

17 I'm here to support the document that is before  
18 you and also at the beginning of the process to bring all  
19 the other key stakeholders into the mix to make this  
20 document ultimately one that we can rely on and use in  
21 many critical areas that I think we need a well-crafted  
22 document such as the one that is before you.

23 As we look at the document, you'll see we're  
24 going to reach certain milestones in the future where  
25 technology is available, but to get the technology

1 deployed in a timely fashion with the time lines before  
2 us, the deadlines before us, it will require a public and  
3 private investment. I think a document like this will be  
4 critical to bring resources to the state, to the region,  
5 to get the job done ultimately, both to deploy the  
6 technology and also to develop the technology that is yet  
7 to actually be there.

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

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

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

25 Now to make this happen, we do need to bring in

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

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

19 So just on time. Thank you.

20 CHAIRPERSON NICHOLS: Thank you very much.  
21 Thanks for emphasizing the beginning of the process here.

22 Elizabeth Adams.

23 MS. ADAMS: Good morning, Madam Chairman and  
24 esteemed Board members. Thank you for this opportunity to  
25 speak with you today.



1 I'm Elizabeth Adams, Deputy Director of the Air  
2 Division at EPA Region 9's office in San Francisco.

3 First, I would like to thank the staff of the  
4 California Air Resources Board and the South Coast and San  
5 Joaquin Valley Air Districts for their hard work in  
6 preparing the materials presented here today. EPA greatly  
7 appreciates the proactive collaborative effort of  
8 California's state and local agencies to develop a  
9 comprehensive strategy for addressing both criteria  
10 pollutant and greenhouse gas emissions through the year  
11 2050.

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

22 The Federal Clean Air Act allows extreme ozone  
23 non-attainment areas like the South Coast and San Joaquin  
24 Valley to rely on the future development and  
25 implementation of new technologies to demonstrate

1 attainment. Our collective leadership and commitment to  
2 accelerate the development and deployment of these  
3 technologies is the only way these areas will be able to  
4 attain the existing federal 8-hour ozone standard.

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

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

20 Right now, many entities are in the process of  
21 making decisions that will impact the State's ability to  
22 attain the federal ozone and PM2.5 standards. We need to  
23 make sure that these efforts have a coordinated vision to  
24 both optimize the implementation of new technologies and  
25 maximize the health and environmental benefits for the

1 residents of California. There is much work for us to do  
2 and we're happy to help you along the way. Thank you.

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

17 MS. ADAMS: Thank you.

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

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

24 I want to share a few thoughts that I had the  
25 opportunity to share with your staff last week. I

1 appreciate very much the challenge of what you guys are  
2 undertaking here. But I'd say it's fair to characterize  
3 my membership as one of those concerned parties.

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

20           And today, there isn't really an incentive in  
21 place for the engine manufacturers to go out and get that.  
22 And by the next few years, I'm not committing to 2015, but  
23 2016, 2017, my members think is very realistic for  
24 achieving the low NOx standard as you see it or very, very  
25 close to that. That's eight or nine years in advance of

1 what you're proposing as a regulator target. I would  
2 submit there is a lot of value in collaborating to achieve  
3 that as soon as possible. And frankly, not just on a  
4 workbench or test situation, but deploying those vehicles.

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

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

21 I would submit again that is not consistent with  
22 this vision and that you should be thinking seriously this  
23 summer about shifting the remaining funds in that program  
24 to alternative fuels only. And I mean alternative fuels.  
25 I don't mean just natural gas. I mean alternative fuels.

1 I do see natural gas as being a key part of that. But I  
2 think all of the alternative fuels we're talking about are  
3 more worthy in trying to achieve this set of goals for  
4 those funds than clean diesel trucks are today.

5 Thanks very much.

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

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

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

24 MR. CARMICHAEL: One of the ideas -- I know some  
25 of my Board members have spoken with some of you about is

1 an occupational low NOx standard. And not making that a  
2 requirement in the next couple years, but making it an  
3 option that has a benefit possibly framed the way you just  
4 did for the manufacturers to go after. And the sooner  
5 they achieve it, the more credits they would generate and  
6 could use as part of their compliance strategy.

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

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

19 CHAIRPERSON NICHOLS: Todd.

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

22 My name is Todd Campbell. I represent Clean  
23 Energy.

24 And we agree strongly with staff that this vision  
25 does start a very important dialog. And as a partner not

1 only to the Air Resources Board, but also the South Coast  
2 and many other air districts throughout this fine state,  
3 we wanted to present a pretty exciting update of our  
4 industry.

5 --o0o--

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

14 --o0o--

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

24 --o0o--

25 MR. CAMPBELL: A recent MIT study came out and



1 showed both private benefits as well as external benefits,  
2 when using a natural gas truck versus a diesel powered  
3 truck. And some of those social benefits and external  
4 benefits are pretty significant, as you see on the bottom  
5 line. Of course, that's assuming the \$70,000 incremental  
6 cost for natural gas. Today's natural gas engines are  
7 coming down to about 30 to 35,000 incremental costs.  
8 Those benefits are destined to go higher.

9 --o0o--

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

16 --o0o--

17 MR. CAMPBELL: And Clean Energy just recently  
18 announced the American Natural Gas Highway. It's a 150  
19 station development of liquified natural gas in CNG  
20 stations for heavy-duty trucks to facilitate the goods  
21 movement. This is going to be built out by 2013. We're  
22 not alone. There's plenty of providers out there,  
23 including Shell and Travel Centers of American and General  
24 Electric that are moving to this space and announced  
25 similar plans.

1                                   --o0o--

2                   MR. CAMPBELL:  These are the customers that are  
3 very interested in this development and are taking a very  
4 serious look at this technology.

5                                   --o0o--

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

14                                   --o0o--

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

18                                   --o0o--

19                   MR. CAMPBELL:  I just want to conclude we're also  
20 looking at other strategies, for example, cadinary  
21 (phonetic) systems that air quality is looking at, we  
22 think we can match that.  With a renewable component and  
23 low optional NOx incentive, I think we can move this  
24 industry forward.

25                                   --o0o--

1           MR. CAMPBELL: We think that finally we're happy  
2 that this graph moved off of the presentation from May and  
3 the new graph is in place. Because it inspires all of us,  
4 not just the natural gas industry, but all industry  
5 players, to move towards near zero, zero emission  
6 standard.

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

8           CHAIRPERSON NICHOLS: Thank you.

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

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

1 benefit to moving in this direction.

2 CHAIRPERSON NICHOLS: Absolutely. Thank you.

3 Bonnie Holmes-Gen.

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

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

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

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

24 I just wanted to call attention to this study  
25 helps remind people of the pressing need to do more,

1 particularly to reach our national air quality standards  
2 and reduce the serious health effects that are linked to  
3 ozone and particle pollution, ranging from asthma attacks  
4 to premature deaths.

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

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

16           And finally, this underscores the importance, of  
17 course, of early actions and of the incentive programs  
18 like the AB 118 program that we'll be talking about later  
19 today. And we hope we can use the information that's  
20 developed in this process to help inform the decisions in  
21 the near term and translate some of this information about  
22 what these pathways need to be into what are the mixes  
23 that we need over the next decade and how can we get our  
24 funding to promote that technology mix. So we look  
25 forward to working with you and thank you for this effort.

1           CHAIRPERSON NICHOLS: Mark Bell and then Chris  
2 Shimoda and Jamie Hall.

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

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

21           This is what a filter looks like after  
22 six months. And it's full of material that could be  
23 burned in a plant, such as an H power plant. It's an  
24 inexpensive solution to road pollution. They cost less  
25 than a dollar to manufacture. And if enough vehicles have

1 these both cars and trucks, then we believe we'll be  
2 picking up more garbage off the streets than what we're  
3 laying down.

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

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

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

19           Thank you.

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

1 MR. BELL: Oh, absolutely.

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

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

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

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

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

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

22 I just wanted to comment on one specific part of  
23 the document that I think is one of the first things that  
24 are going to come up on your radar. Page 18, we're  
25 talking about -- to Board Member D'Adamo's point as far as



1 how this interacts with existing rules moving up a  
2 requirement potentially for very specific subset of  
3 drayage trucks that service near dock rail facilities.  
4 We're really talking about the ICTF and the potential SCIG  
5 (phonetic) project. It's about 500 trucks moving into  
6 some kind of electrified technology.

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

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

18           And obviously to the point that there is no  
19 economic component here. It's been mentioned a couple of  
20 times by staff. That's really something we're going to  
21 have to watch because we are moving from some very known  
22 commodities as far as technologies that have been  
23 implemented so far to stuff that's either in its very,  
24 very early demonstration phase to stuff that is actually  
25 not really commercially available now.

1           So again, looking forward to the work that's  
2 ahead and keeping the dialogue open with the Board. Thank  
3 you.

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

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

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

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

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

21           We need to think about how to drive innovation  
22 and move towards these advanced technologies and need to  
23 identify and pursue the technology pathways that move us  
24 in the right direction. This long term perspective is  
25 very important and will have implications we think for the

1 regulations that you work on and for the incentive  
2 programs at ARB and CEC.

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

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

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

14 So thank you. Look forward to working with you.

15 CHAIRPERSON NICHOLS: Thank you.

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

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

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

1 goals.

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

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

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

1 maintain its leadership in this area.

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

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

10           CHAIRPERSON NICHOLS: Thank you.

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

21           Board comments? Yes.

22           BOARD MEMBER BERG: I would just like to add  
23 on to your comments that I want to thank staff and the  
24 South Coast and San Joaquin Valley for just a yoman's  
25 group in this. The presentation was dynamic and exciting.

1           And one of the things that struck me with the  
2 list of witnesses was the fact that there really is a  
3 positive feeling about the need for this. Nobody is  
4 surprised by the challenge. But the fact that this  
5 document can give us the framework to find some of the  
6 commonalities for a very, very tough challenge ahead. And  
7 I'm excited about that. I just want to thank staff along  
8 with our partners. Great job.

9           CHAIRPERSON NICHOLS: Thanks.

10          John.

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

19                 From my work with U.S. EPA on the Clean Air  
20 Scientific Advisory Committee, it's been a struggle for  
21 the last few years to actually even frame the science  
22 around specific pollutants with regard to setting national  
23 ambient air quality standards because really we're dealing  
24 with, as everyone in this room knows, a pollutant mixture  
25 that contains multiple hazards to health.

1           So just to emphasize on the public health side,  
2 we need to look at multi-pollutants. And then when we  
3 look at climate as well as public health, we have to get  
4 smarter, as Dr. Sperling said.

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

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

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

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

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

20           We're going to next be looking at our research  
21 program for fiscal year 2012/2013. I'm happy to say we  
22 still have a research program. I'm being a little  
23 factious. But in an era where science is under attack in  
24 many respects, even though the program is small, it  
25 continues. And the subject is not a controversy when it

1 comes to our funders in the Legislature. It's been very  
2 gratifying to see the continued support.

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

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

16           Mr. Goldstene, would you please introduce this  
17 item?

18           EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman  
19 Nichols.

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

25           The proposed projects support ARB's priorities in



1 three key areas: Foundational science, clean air  
2 strategies, and program effectiveness. If approved by the  
3 Board, the projects described in the research plan will be  
4 developed into full proposals and then brought back to the  
5 Board for your final approval over the next several  
6 months.

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

10 (Thereupon an overhead presentation was  
11 presented as follows.)

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

14 --o0o--

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

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

23 We will then take proposals to the Board's  
24 Research Screening Committee for review before returning  
25 to the Board to request approval and funding for each

1 research project.

2 --o0o--

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

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

15 --o0o--

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

21 ARB received 154 responses to the annual public  
22 solicitation for research ideas, from which staff selected  
23 concepts that address ARB program priorities. Staff  
24 prepared additional research concepts to address ARB's  
25 crucial program needs. All of the proposed research

1 projects link to California's long-term air quality and  
2 climate goals. We sought feedback from the public and  
3 private agencies that fund similar research to identify  
4 partners for collaboration and co-funding and to avoid  
5 duplication.

6 --o0o--

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

15 --o0o--

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

22 Five research projects are proposed to study  
23 mobile source emission reduction opportunities. The first  
24 two projects address research needs identified by the  
25 Vision for Clean Air and investigate the potential for

1 reducing emissions from heavy-duty trucks and trains.

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

9   --o0o--

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

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

1 benefit.

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

6 --o0o--

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

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

25 --o0o--

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

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

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

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

25 --o0o--

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

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

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

24 --o0o--

25 DR. SCHILLA: This last proposed midterm review

1 project will address the measurement challenges presented  
2 by the advanced clean cars PM standards. At the ARB Board  
3 meeting in January, staff committed to resolve whether PM  
4 could be reliably measured at such low levels.

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

11 --o0o--

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

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

21 --o0o--

22 DR. SCHILLA: The first proposed scientific  
23 foundation project will inform strategies to reduce PM  
24 emissions. This study will build on results from recent  
25 research which showed that light-duty gasoline vehicles



1 emit significant amounts of precursor organic compounds  
2 that form secondary particulate matter and that diesel  
3 particulate filters effectively reduce emissions of both  
4 directly emitted and secondary PM.

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

10                   --o0o--

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

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

1 compounds in generating ozone and PM in California's air  
2 sheds.

3 --o0o--

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

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

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

20 --o0o--

21 DR. SCHILLA: This project will identify  
22 California's likely sources of brown organic carbon,  
23 investigate how it is formed, including quantifying the  
24 relative contribution of primary and secondary PM, and  
25 assess brown carbon's contribution to regional climate

1 impacts. These results will improve projections for  
2 California and elsewhere.

3 --o0o--

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

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

19 --o0o--

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

25 As California pursues increasingly compact

1 development to reduce vehicle travel demand, the air  
2 pollution exposures of people living and walking in these  
3 areas may increase.

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

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

20                               --o0o--

21           DR. SCHILLA: The next proposed project will  
22 assess changes in travel mode for households living in the  
23 vicinity of a new light rail line in Los Angeles. Many  
24 communities are working to improve citizen's access to  
25 transit as part of their SB 375 planning. In Los Angeles

1 alone, there are six light rail projects currently planned  
2 and a number of other regions are also planning or  
3 considering them.

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

15                           --o0o--

16           DR. SCHILLA: The last proposed project in this  
17 research area will examine the measured emission benefits  
18 of cool pavements. Pavement materials that absorb less of  
19 the sun's energy reduce urban heat islands, slow smog  
20 formation, reduce building energy use, and cool the  
21 earth's atmosphere. If cool pavements were used widely  
22 throughout the state, they could reflect enough sun to  
23 offset the equivalent of at least two million metric tons  
24 of carbon dioxide and have significant air quality  
25 benefits.

1           ARB is currently co-funding a cool pavement  
2 demonstration project with the California Energy  
3 Commission and the US Department of Energy and has funded  
4 related work to assess the reflectants of cool roofs.

5                           --o0o--

6           DR. SCHILLA: This study will leverage and expand  
7 upon ongoing research on cool surfaces. The project will  
8 measure emissions of air pollutants from both cool and  
9 conventional pavement materials commonly used in  
10 California and will conduct greenhouse gas life cycle  
11 assessment for cool pavements.

12           This project will be closely coordinated with  
13 Caltrans. Results will inform the development of  
14 regionally appropriate guidelines for use of cool  
15 pavements and provide ARB insight into the actual climate  
16 and air quality benefits of these materials.

17                           --o0o--

18           DR. SCHILLA: To verify that ARB's regulations  
19 are successfully meeting their targets and protecting  
20 public health, staff propose funding two projects to  
21 quantify emissions from cars and trucks operating on  
22 California's roads. Results from these projects will shed  
23 light on the emissions reductions that have occurred in  
24 response to recent ARB regulations and will assess the  
25 durability of current emission control technologies.

1                   --o0o--

2           DR. SCHILLA: The first program effectiveness  
3 project will assess the real world emissions reductions  
4 realized from the recently adopted truck and bus rule.  
5 The project will measure emissions from trucks traveling  
6 through the Caldecott Tunnel in the San Francisco Bay Area  
7 in 2014, 2015, and 2017 corresponding to key  
8 implementation milestones for the truck and bus rule.

9           This study will assess the effectiveness and  
10 durability of exhaust aftertreatment technologies over  
11 time. The proposed project will complement related  
12 research examining heavy-duty trucks in the Los Angeles  
13 basin in order to characterize the statewide emissions  
14 from the heavy-duty truck fleet and to improve emissions  
15 forecasts. Results will be used to quantify the actual  
16 air quality benefits of the truck and bus rule.

17                   --o0o--

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

24           The proposed study will measure emissions from  
25 passenger cars at the La Brea Boulevard onramp to

1 Interstate 10 in Los Angeles in 2013 and 2015. This study  
2 will build upon prior measurements from this same location  
3 which began characterizing passenger car emissions in 1999  
4 in order to allow ongoing analysis of emission trends.

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

12 --o0o--

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

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

22 --o0o--

23 DR. SCHILLA: If the 2012-2013 research plan is  
24 approved today, staff will work with our research partners  
25 to bring full proposals to the Research Screening



1 Committee. Then we will return to the Board to request  
2 approval and funding for each project.

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

5 CHAIRPERSON NICHOLS: Thank you.

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

11 BOARD MEMBER SPERLING: So I was one of those.  
12 I've been paying attention to the Research Program, and  
13 I'm pleased to see I think we -- I mean, the challenges  
14 that we have a limited amount of money and how do you  
15 spend that money. And I think we're getting better at  
16 focusing in on what the real needs of ARB are in terms of  
17 our missions, our needs.

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

21 You know, the only thought that came to my  
22 mind -- additional thought beyond what I conveyed to the  
23 staff already is listening this morning to the discussion  
24 about division framework. It occurred to me that this  
25 really is unique what we're doing in terms of integrating

1 the criteria planning with the greenhouse gases and  
2 working across jurisdictions and so on. And it's probably  
3 where we do need better research support to understand how  
4 all these things fit together if we are talking about --  
5 there's all this talk about new technologies, but the  
6 other part is how does that integrate into a system and  
7 how does that integrate into land use, community design,  
8 and so on. Not too many people really think about it in  
9 the ways that we are as a system and forward-looking like  
10 that.

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

20 CHAIRPERSON NICHOLS: Important weeds.

21 BOARD MEMBER SPERLING: It's important weeds.

22 But what we also need is better understanding of  
23 how it all fits together and how we can use that and how  
24 South Coast and San Joaquin and the Bay Area can use it as  
25 we move forward with our greenhouse gas and our criteria

1 planning.

2 CHAIRPERSON NICHOLS: So you're suggesting that  
3 at least for the next round they actually try to look for  
4 some support for the integrative kind of analysis that  
5 we're doing; is that what you had in mind?

6 BOARD MEMBER SPERLING: Yes. That's number one.

7 And number two is actually think about doing the  
8 research that would help us figure out -- you know, one  
9 simple way to think how do you actually implement SB 375  
10 and all the NPOs and cities are all kind of struggling  
11 with different things. But integrating that with all of  
12 these technologies and very low emitting strategies.

13 CHAIRPERSON NICHOLS: Okay. Sounds like a  
14 vision.

15 Dr. Balmes.

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

19 I really like the fact that slide five was put  
20 up. That's the one with planning considerations, and it  
21 showed the time line from 2010 to 2050 with regard to  
22 multiple goals. And I think that's great. This is the  
23 first time I've seen something like this in a research  
24 presentation in the few years I've been on the Board,  
25 research planning presentation.

1           But I think that in addition to this kind of time  
2 line where we talk about ozone and PM standards,  
3 greenhouse gas emission reduction targets, that we  
4 actually have the rules -- the important rules that we are  
5 trying to implement on here as well to try to see how --  
6 move toward what Professor Sperling is asking for, an  
7 integrated plan for the future and where we have data gaps  
8 that are necessary to fill to move forward as smoothly as  
9 possible.

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

16           CHAIRPERSON NICHOLS: Seems like a useful  
17 suggestion.

18           Any other comments? Yes.

19           BOARD MEMBER D'ADAMO: Just like to -- Professor  
20 Sperling reminded me of a thought I had after I had my  
21 briefing last week on this with respect to 375. And just  
22 wanted to encourage staff to maybe see if they could work  
23 with some of the public health organizations like the Lung  
24 Association to develop a research that can help tie in a  
25 connection between 375 goals and improved public health.

1 I think that will help to sell the program, particularly  
2 in the San Joaquin Valley where we're seeing a lot of  
3 challenges with acceptance of the climate change goals.

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

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

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

24 MR. PERRY: Good morning, Chairman Nichols.  
25 Thank you for allowing us to speak.

1           Just like to offer Nissan's support of the staff  
2 recommendation on plug-in electric vehicle advanced  
3 charging and travel behavior. As you may imagine, we  
4 collect lots of data. We have millions of miles of real  
5 customer use data in California already that we're willing  
6 to share. They're a very engaged bunch, our owners. They  
7 are not wallflowers. They tell us what's happening that's  
8 good and bad so we have lots of real use data. It's a  
9 very large sample size, too. From a research standpoint,  
10 we'll have no trouble meeting any of the standard research  
11 criteria.

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

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

22           CHAIRPERSON NICHOLS: Thank you very much.  
23 Appreciate that.

24           BOARD MEMBER SHERRIFFS: As a recent purchaser of  
25 an all-electric vehicle now having 1200 miles on it, I

1 must say I'm really happy with the vehicle. Every time I  
2 start the automobile, I get a message that says, "Can we  
3 collect data?" And it would mean a lot to me if I knew  
4 how widely that data was being used to improve what's  
5 going on with emissions and air quality. So I'd love to  
6 see the cooperation and coordination. Because there is  
7 obviously a lot of data in Nissan and other manufacturers  
8 as well.

9 CHAIRPERSON NICHOLS: Okay. Terrific.

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

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

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

18 BOARD MEMBER RIORDAN: I move approval.

19 BOARD MEMBER D'ADAMO: Second.

20 CHAIRPERSON NICHOLS: All in favor, please say  
21 aye.

22 (Ayes)

23 CHAIRPERSON NICHOLS: Any abstentions or nos?  
24 Great. All right.

25 In that case, we have one more item. The plan

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

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

23 EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman  
24 Nichols.

25 AB 118 signed into law in 2007 created AQIP which



1 provides ARB between 25 and \$40 million annually through  
2 2015 to invest in clean vehicle and equipment projects to  
3 reduce criteria pollutants and air toxics often with  
4 concurrent greenhouse gas benefits.

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

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

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

21 AQIP investments are an important early step in  
22 the fundamental transformation of the California vehicle  
23 fleet necessary to meet these goals. This year's funding  
24 plan continues hybrid and zero emission passenger vehicle  
25 and truck incentives as well as advanced technology

1 demonstration project funding. The funding plan maintains  
2 coordination with the Energy Commission portion of AB 118,  
3 the alternative and renewable fuel and vehicle technology  
4 program, which supports the necessary infrastructure  
5 foundations for cleaner cars and trucks. In particular,  
6 the hydrogen fueling and electric charging infrastructure  
7 funded by CEC compliments our funding for clean car  
8 deployment through the Clean Vehicle Rebate Project.

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

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

17 (Thereupon an overhead presentation was  
18 presented as follows.)

19 MS. LEVINE: Thank you, Mr. Goldstene.

20 Good morning, Chairman Nichols and members of the  
21 Board.

22 --o0o--

23 MS. LEVINE: We are here to present our plan for  
24 the expenditure of next fiscal year's funds under the Air  
25 Quality Improvement Program known as AQIP. Overall, this

1 program has been highly effective in promoting advanced  
2 technology in the first three years, and we are excited to  
3 build on that momentum as we embark on our fourth year.  
4 You will see over the course of my presentation that we  
5 are recommending continued funding for our largest and  
6 most popular projects.

7 --o0o--

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

14 The California Energy Commission also receives AB  
15 118 funding for a complimentary program focusing on  
16 alternative and renewable vehicle and fuels projects to  
17 reduce greenhouse gas emissions and increase fuel  
18 diversity. This program has complimented AQIP's progress  
19 by establishing the necessary infrastructure foundation  
20 and increasing fuel diversity.

21 AQIP expands ARB's portfolio of air quality  
22 incentives, providing the opportunity to fund projects not  
23 covered by our other programs, such as the Carl Moyer and  
24 Goods Movement Programs. These generally focus on  
25 near-term emission reductions from fully commercialized

1 technologies.

2 AQIP has a different focus as an ARB's only  
3 incentive program that allows for investment in mobile  
4 source technology-advancing projects critical to meeting  
5 California's post-2020 air quality and climate change  
6 goals. This longer term focus combined with the near term  
7 focus of other incentive programs puts us on the path  
8 towards the fleet transformation presented earlier this  
9 morning.

10 --o0o--

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

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

25 --o0o--

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

3 You may remember that the Legislature directed  
4 2008 funds for trucking financing to help truckers  
5 impacted by the fleet rules. This program is ongoing with  
6 financing provided for over 1700 trucks and retrofits.

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

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

18 AQIP also provided funding for zero-emission lawn  
19 and garden equipment, which has replaced over 12,000  
20 mowers statewide. The zero emission agricultural work  
21 vehicle project concluded at the end of last year with 56  
22 rebates issued. Unspent funds were returned and  
23 reallocated to clean car rebates and hybrid truck testing.  
24 The off-road hybrid equipment project is ongoing. Staff  
25 is proposing the flexibility to include this equipment in

1 the voucher project for advanced technology trucks if  
2 testing shows positive results.

3 --o0o--

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

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

16 --o0o--

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

25 There are many examples on how these programs

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

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

14                           --o0o--

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

17                           --o0o--

18           MS. LEVINE: I'll start by highlighting our  
19 priorities for the year. Staff proposes to continue  
20 directing most of this year's funds to our two largest  
21 projects, the clean vehicle rebate project, more commonly  
22 known as CVRP, and the hybrid and zero emission truck and  
23 bus voucher incentive project, commonly known as HVIP. We  
24 are seeing strong demand for funding in the CVRP. While  
25 demand in the HVIP has slowed down over the past year, we

1 believe that both hybrid truck and zero emission vehicle  
2 technologies are at a key point where the public  
3 incentives can help them become more prominent mainstream  
4 choices.

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

11                           --o0o--

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

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

23           The \$27 million target is a conservative estimate  
24 of total funding we expect based on AQIP revenues over the  
25 last three funding cycles. This allows us to fund a



1 potential of 8,000 vehicles. In addition to the proposed  
2 \$15 million allocation for CVRP, up to eight million in  
3 additional funds may be available next year.

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

11 --o0o--

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

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

23 We made some changes to address the increased  
24 demand, such as reducing rebate amounts as well as  
25 tripling our investment. These changes have served the

1 program well, as we are on target to exhaust 2011 funding  
2 right around the time that funding from this plan becomes  
3 available. Looking ahead, we still have some challenges  
4 in the program, primarily the continued pressure on the  
5 program to meet growing demand.

6 --o0o--

7 MS. LEVINE: A challenge over the past year has  
8 been how we could modify the program to increase  
9 manufacture diversity. This issue was discussed at last  
10 year's Board meeting since Nissan had received close to 90  
11 percent of the rebates at the time primarily because they  
12 were the only major manufacturer with an eligible vehicle.

13 As you can see, a lot has changed since last  
14 summer. Seven new vehicle models have been added to the  
15 program since October 2011 and we are expecting to add  
16 another five by the end of 2012. We believe a significant  
17 measure of success is that diversity has come to the  
18 program naturally.

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

1 diversity.

2 --o0o--

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

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

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

24 --o0o--

25 MS. LEVINE: As we look forward, demand continues

1 to increase. This chart displays the total funding needed  
2 to continue incentives at current levels. Beneath the  
3 chart are the anticipated sales volumes by vehicle type.  
4 We believe we could see potential sales of CVRP eligible  
5 vehicles of about 15,000 in 2012 with greater than 20,000  
6 in 2013. If this level of demand occurs, we will only  
7 have sufficient funding to rebate about one-third to  
8 one-half of expected sales.

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

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

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

23 --o0o--

24 MS. LEVINE: Let's move on to our hybrid and zero  
25 emission truck voucher project, the HVIP. The HVIP

1 provides vouchers for California fleets to buy down the  
2 cost of hybrid or zero emission trucks at the dealership  
3 when placing an order.

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

9   --o0o--

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

20           Many of the fleets that participated in the  
21 initial launch of the HVIP have saturated their fleet with  
22 hybrid vehicles and are waiting to get some user  
23 experience before making additional investments. Many of  
24 these fleets are now making initial investments into zero  
25 emission trucks.

1           To achieve the large scale fleet transformation  
2 the vision presented earlier, we need to find ways to  
3 expand beyond these fleets. Many of the changes we are  
4 presenting today are aimed at increasing participation in  
5 the program.

6                               --o0o--

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

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

20           The program changes we are presenting today are  
21 meant to address some of the deployment challenges we are  
22 facing with these vehicles and we expect demand to  
23 increase once the changes are implemented. In the event  
24 that demand does not increase, staff has included  
25 contingency provisions that would redirect up to ten

1 million in HVIP funds to other AQIP projects that have  
2 greater demand. This ensures that adequate funding is  
3 available for HVIP while providing funding where demand is  
4 highest.

5 --o0o--

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

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

25 --o0o--

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

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

19 --o0o--

20 MS. LEVINE: To conclude, the proposed funding  
21 plan builds on our past successes, providing continuing  
22 funding for existing categories, and complement the Energy  
23 Commission's investment plan approved last month. Because  
24 we are seeing strong demand and have limited funding,  
25 we've had to make difficult choices regarding allocation



1 and incentive levels for each category. We believe our  
2 proposal strikes the right balance. This funding provides  
3 the critical investment needed now given the long time  
4 frames required for significant fleet turnover.

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

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

10 EXECUTIVE OFFICER GOLDSTONE: Mr. Perez was going  
11 to say a few words.

12 CHAIRPERSON NICHOLS: Okay. Thank you.

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

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

18 Let me say at the outset that the Energy  
19 Commission is very pleased to support the 2012/2013 Air  
20 Quality Improvement Funding Plan that is before you today.  
21 As pointed out by Mr. Goldstone and Ms. Levine, the  
22 complimentary program that we have at the Energy  
23 Commission which is the alternative that renewable fuel  
24 vehicle technology program works in tandem with ARB's  
25 program. Certainly, your program is designated to provide

1 funding support for commercially available electric and  
2 fuel cell electric light duty vehicles as well as hybrid  
3 and electric trucks.

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

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

16           And certainly as you heard this morning, the  
17 Vehicle Clean Rebate Program vouchers are playing a key  
18 roll in spurring not only consumer demand for plug-in  
19 electric and electric passenger cars but also providing  
20 the environment, an environment which is very exciting  
21 right now in California as so many auto makers launch  
22 all-electric and plug-in electric vehicles. And I was  
23 certainly very fortunate on Friday along with Tom Cackette  
24 to drive the new Model S Tesla vehicle, a very exciting  
25 moment for all of us. And underscores our appreciation

1 how this ARB program as well as the Energy Commission's  
2 complimentary activities are accelerating deployment of  
3 cleaner vehicles. But also providing our driving  
4 motorists with additional choices and facilitating the  
5 commercialization of new technological advances here in  
6 our golden state.

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

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

22           We also very, very pleased with ARB staff's  
23 recent adjustment and refinements to the plan, to the  
24 hybrid and zero emission truck and bus voucher incentive  
25 program for medium and heavy duty technology trucks.

1 Certainly the electric truck market is really beginning to  
2 take off. Commercial acceptance of electric trucks will  
3 be a key in reducing the disproportionate levels of  
4 petroleum use as well as carbon emissions and criteria  
5 emissions associated with their existing and future truck  
6 fleets as we move and transport goods throughout  
7 California.

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

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

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

19           Any questions before we turn to the audience?  
20 Ms. Berg.

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

23           One of the things I was thinking about as we were  
24 talking about the clean vehicles rebate program, do we  
25 have kind of a sense or some criteria about at what point

1 we get to say this program is a success?

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

3 BOARD MEMBER BERG: No, I understand.

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

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

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

10 BOARD MEMBER BERG: Right.

11 MS. LEVINE: Okay.

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

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

23 BOARD MEMBER BERG: So my question is have we  
24 thought about how we define that? Do we have numbers that  
25 we're reaching for? At what point? What is some of the

1 criteria we're reaching for in order to make that  
2 decision?

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

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

19 CHAIRPERSON NICHOLS: I guess I have a somewhat  
20 different point that I would make here, which is that as a  
21 participant in the plug-in vehicle collaborative along  
22 with the Energy Commission and the PUC, we have been  
23 talking about how long it's going to be necessary to have  
24 up front purchases in addition to other kinds of  
25 incentives, like access to car pool lanes, deployment of

1 infrastructure, et cetera. And I don't think we have an  
2 answer for that yet.

3           But it seems pretty clear that at this point that  
4 \$10,000 increment is a really critical issue hurdle for  
5 people to have to get over. And I guess Tom's point was  
6 that their projections are looking at maybe another eight  
7 or ten years in which that would be the case. Obviously,  
8 we would hope we could do much better than that. But it  
9 seems to me there has to be some more research done based  
10 on consumer behavior really to tell what the right price  
11 point is where people would be willing to pay a little bit  
12 more because they understand they're going to get a  
13 benefit over the lifetime use of the vehicle because  
14 they're using electricity rather than gasoline. But I  
15 don't think anybody really at least in public has been  
16 able to come out and say exactly what that point is yet.

17           BOARD MEMBER BERG: Well, I think in that  
18 conversation as resources are scarce, that we continue  
19 bringing up this type of dialogue so that people are aware  
20 that as numbers are growing it doesn't mean the job is  
21 done yet. And I think that getting people used to  
22 understanding how many vehicles we need on the road and  
23 the price differential and the consumer change and  
24 acceptance, it isn't going to happen in a couple year  
25 period of time.

1           CHAIRPERSON NICHOLS: Right. That's a very good  
2 point. Great job. Thank you. Others? Yes.

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

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

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

21          CHAIRPERSON NICHOLS: Yes, go ahead.

22          BOARD MEMBER SHERRIFFS: Coming from the central  
23 valley, have a number of farming friends who, in fact, are  
24 interested in electric vehicles. They can see a real  
25 place for it. I'm wondering -- it's great the Energy



1 Commission is here as well to reflect on that. If much is  
2 being done in that area of small pickup trucks that are  
3 electrified, there's not much information out there in the  
4 farming community. So that may be a --

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

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

16 MR. CALAVITA: It would be in the eight to  
17 \$10,000 range. And it would be for commercial entities  
18 who want to access that voucher. If they want to access  
19 that vehicle, it would be in the CVRP to get a lesser  
20 amount. If it's a farming entity, it would be great.

21 MR. PEREZ: From the Energy Commission's  
22 perspective, one of the exciting things about the  
23 agricultural farming area is that in the number of  
24 proposals that we're receiving from this area for off-road  
25 equipment such as electric forklifts and equipment, we're

1 seeing more and more as we move forward with additional  
2 solitications. In fact, I believe we funded one or two of  
3 those in our most recent solicitation. So we're seeing  
4 greater interest by that sector.

5 CHAIRPERSON NICHOLS: Great. Thank you. Good  
6 questions.

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

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

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

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

25 In this case, it was the ports of L.A., Long

1 Beach, South Coast Air Quality Management District and  
2 ARB. This tug Carolyn Dorothy is the world's first hybrid  
3 tugboat and it has been operating in the San Pedro harbor  
4 since 2009.

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

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

25           The second tug has been operating as part of the

1 Foss fleet in southern California since the beginning of  
2 this year and is finishing emissions testing over the next  
3 few weeks. There is now also a hybrid tug in Rotterdam  
4 which was brought out a few months later utilizing the  
5 same technology. So there are now three hybrid tugs in  
6 the world, two of them right here in southern California.

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

20 Of course, this model symbolizes something very  
21 important to both of us that private/public partnerships  
22 do work and how much we at Foss value our partnership with  
23 ARB. I also particularly appreciate the technical help,  
24 support and guidance from ARB staff, including Earl  
25 Landberg, Todd Sterling, and many others.

1           Thank you for your continued support in advancing  
2 the deployment of this extremely important technological  
3 advance for our industry.

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

12           MS. HAYMAN: Yes, you are.

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

17           MS. HAYMAN: Thank you.

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

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

22           (Laughter)

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

25           Thank you, Madam Chairman and members of the

1 Board. I'm here to support your staff recommendation for  
2 the funding allocation and expending plan for the AB 118  
3 AQIP program.

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

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

18 We have begun to turn around, turn the corner in  
19 terms of vehicle acceptance and market share in San  
20 Joaquin Valley. About a year ago, the district began with  
21 the help of your staff with the funding from ARB and CEC  
22 to really take a concentrated effort in getting the public  
23 to get a buy-in for these vehicles. We put in over \$5  
24 million of our local funds into this. We have HVIP plus  
25 program that provides additional funding in addition to

1 the State's HVIP plan. The drive clean program, the  
2 public benefits grant which is aimed at municipalities  
3 throughout San Joaquin Valley and we've been able to last  
4 year to deploy 51 electric vehicles with municipalities.  
5 And also two million dollar project for manufacturing  
6 electric utility vehicles for UPS that were built in San  
7 Joaquin Valley and deployed in San Joaquin Valley and  
8 we're going to do another around of that shortly.

9 I said we have turned the corner last year. We  
10 increased the clean vehicle rebate program in terms of the  
11 number of people that took advantage of that rebate from  
12 26 to over 150. We went from 450 initiated HVIP to 115.  
13 But we are still -- we still have a long ways to go. And  
14 I want to urge your Board to continue your investment in  
15 this area and in San Joaquin Valley in particular, both  
16 for being non-attainment as well as really needing these  
17 emission reductions to make this program really work. So  
18 thank you very much.

19 CHAIRPERSON NICHOLS: Thank you.

20 Bonnie Holmes-Gen.

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

23 Bonnie Holmes-Gen with the American Lung  
24 Association in California. And I wanted to state first of  
25 all our strong support for the AB 118 program and that we

1 believe that both the CEC and the ARB components of the  
2 program have been very successful and we're pleased at how  
3 this is rolling out. Of course, we all need to work  
4 together to continue this funding stream. That's very  
5 important.

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

20           I just wanted to comment that we really  
21 appreciate the ARB's support and engagement in the plug-in  
22 electric vehicle collaborative. I know the Chair and  
23 others have put a lot of time into this. And there is  
24 some great efforts going on around the state. And I  
25 wondered if it might be a good time to have an update to



1 the Board in the near future about what's happening with  
2 the PEV collaborative and specifically the efforts at the  
3 local government level because we really need our local  
4 government leaders to support this roll-out effort. And  
5 there are a lot of good efforts going on. And this needs  
6 to be a collaboration between the State Board the air  
7 districts and local governments to really support this  
8 roll out.

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

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

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

1 Matthew Kevnick.

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

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

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

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

1 designed.

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

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

20 Thank you.

21 CHAIRPERSON NICHOLS: Thank you.

22 John Clements.

23 MR. CLEMENTS: Good morning, Madam Chair and  
24 members of the Board. Seyed's modest back there.

25 The toys are actually tools. And there are two

1 school buses parked out front from Kings Canyon Unified,  
2 which is in the San Joaquin Valley APCD. If it was not  
3 for him and his staff, supporting us with administration  
4 of the lower emission school bus program on top of using  
5 AQIP funds for through hybrid voucher incentives, we  
6 wouldn't have the first production model all-electric  
7 lithium ion electric battery powered school bus in the  
8 nation and the San Joaquin Valley. And we wouldn't have  
9 five hybrids.

10 We've taken advantage of 2010 program and the  
11 2011 program to fund five hybrid electric school buses for  
12 our district. And during these tough economic times, we  
13 used our lower emission school bus dollars, but we  
14 wouldn't be in those alternatives if it was not for AQIP  
15 HVIP funds. Thank you very much. I'm here to support  
16 that.

17 I have a picture I would like to present to you  
18 of that first electric bus from our community, city of  
19 Reedly in the San Joaquin Valley. Our kids are grateful  
20 to have the opportunity to ride on those buses. The  
21 hybrids are currently in use. The electric will soon be  
22 in use and it will be accompanied by two more programs,  
23 your AQIP demonstration program which will serve other  
24 schools throughout the central valley which will help to  
25 share the message with. So thank you very much.

1           CHAIRPERSON NICHOLS: Thank you. Thanks on  
2 behalf of your kids, too. Doing a good job for their  
3 health as well as for the air as a whole.

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

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

8           Mr. Kevnick.

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

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

18           Just a point or two to mention from Toyota's  
19 hybrid experience, market acceptance is really enhanced  
20 when you provide consumers with choices. And allowing the  
21 CVRP to continue as a first come, first serve program,  
22 it's consistent with this approach because it entices  
23 manufacturers to provide an array of clean vehicle  
24 technologies to meet the differing customer needs. And  
25 obviously in providing vehicles that the customers want,

1 we all achieve a benefit because the technology costs come  
2 down. The market expands, and we promote the technology.

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

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

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

13 MS. WOODARD: Thank you, Chairman Nichols.

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

21 We also want to thank them and the third party  
22 for the management of the CVRP. We have heard nothing  
23 about things even when the money ran out from consumers  
24 and we were put on a waiting list. It was very well run.  
25 And we appreciate that.

1           Nissan is committed to electric vehicles. Our  
2 plant in Tennessee is getting ready to come on track in  
3 late December this year.

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

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

25           Again on effectiveness, we have lots of data. If

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

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

25 CHAIRPERSON NICHOLS: Thank you. That's it. All



1 right. Thank you so much.

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

4 MR. AUBRY: Good morning.

5 CHAIRPERSON NICHOLS: Good morning.

6 MR. AUBRY: Madam Chair, Board and staff. Thanks  
7 for having us here today. My name is Mark Aubry, the  
8 Chairman of the Electrification Leadership Council. We  
9 appreciate the opportunity to present a point of view on  
10 the HVIP portion of the 2012/2013 AB 118 funding plan.  
11 The ELC team is especially appreciative of the staff's  
12 willingness to invest time on our proposal and to provide  
13 input and guidance. The staff has done an excellent job.

14 As an example of ARB's staff's laudatory work on  
15 the 2012/12 funding plan development, the staff recognized  
16 the increased cost premium for commercial electric  
17 vehicles when compared with hybrids and responded with  
18 larger voucher amounts to offset these higher costs.

19 I would normally take this time to briefly  
20 address the ELC's plan to deploy 1500 all-electric  
21 commercial vehicles in South Coast AQMD over the next 24  
22 months through what we call the EV ecosystem. However,  
23 what I'd like to do today is to focus my remarks on  
24 addressing a proposed interim policy for the HVIP program,  
25 a program that ELC members support. We have provided a

1 copy of this policy change request to the staff previously  
2 and in hard copy today for you to review.

3           Members of the ELC have proposed a comprehensive  
4 commercial deployment plan that includes 1500 or more  
5 all-electric commercial vehicles grid upgrades, electrical  
6 EVSC equipment, and supporting workforce development  
7 programs. The ELC has submitted proposals to the ARB, the  
8 CEC, and South Coast AQMD to support this project.

9 Through this process, the ELC team has identified an  
10 interim policy revision for HVIP that can have major  
11 near-term impact. The ELC is proposing an interim policy  
12 under which conversion of diesel powered delivery advances  
13 to all-electric drive would become HVIP eligible.

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

22           As you may know, commercial delivery vans, such  
23 as a class five UPS truck, are increasingly powered by a  
24 variety of fuels, CNG, diesel electric and all electric.  
25 And because of the mild climate, a California based

1 delivery van has a useful life of over 25 years. Of  
2 course all of these 25 years diesel engines are overhauled  
3 on a scheduled basis, but an overhaul simply restores a  
4 diesel engine to its original state. Fleet operators are  
5 beginning to explore a different path. Instead of  
6 overhauling diesel motors, operators are removing diesel  
7 engines and scrapping them, and these operators are  
8 testing a conversions to all-electric power.

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

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

20           Eileen Tutt.

21           MS. TUTT: Good morning, Chairman of the Board,  
22 members and staff. My name is Eileen Tutt, and I am the  
23 Executive Director for the California Electric  
24 Transportation Coalition. Our members include large and  
25 small utilities and some very progressive auto makers like

1 Nissan and GM who are here today.

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

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

21           And one of the problems right now is the  
22 uncertainty for those who are buying the vehicles. They  
23 don't know whether or not they're going to get the rebate  
24 money because they don't know if it's going to be there.  
25 So we cannot lose that \$5 million. And I hope that is not

1 impacted by the budget that was signed last night.

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

12 CHAIRPERSON NICHOLS: Thanks very much.

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

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

21 First, little background on EVI. EVI is a  
22 California-based company headquartered in Stockton in the  
23 heart of the Central Valley creating jobs and helping  
24 clean the air in California and beyond. The HVIP program  
25 has been really incremental and really instrumental in

1 helping just next month launch the largest class six zero  
2 emission roll out of UPS vehicles in the world. And we'd  
3 strongly encourage all of you to participate in a  
4 celebration we're still scheduling, but we'll get all the  
5 details to members of the Board and the public.

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

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

25 I should also mention that deployment UPS is

1 contributing a lot to the incremental as well which is  
2 somewhat rare for clean vehicles.

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

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

18           So with that, thank you.

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

1 I understand that it has been brought to the staff and  
2 possibly some Board members.

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

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

20 So we have yet to see the results of the  
21 technology. And again, we think it's important to  
22 differentiate between the robust systems and the  
23 demonstration types of projects. So I think that leaves  
24 us with a question as to whether this is the right time  
25 for investments in conversion versus in the OEM types of



1 products that are currently a part of our program.

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

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

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

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

25 CHAIRPERSON NICHOLS: Great. Any questions or

1 discussion on the part of the Board? If not, I would  
2 entertain a motion to approve the plan.

3 BOARD MEMBER ROBERTS: So moved.

4 BOARD MEMBER RIORDAN: Second.

5 CHAIRPERSON NICHOLS: All those in favor say aye.

6 (Ayes)

7 CHAIRPERSON NICHOLS: Any opposed? Any  
8 abstentions? Great.

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

15 (Whereupon a lunch recess was taken.)

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1 AFTERNOON SESSION

2 CHAIRPERSON NICHOLS: This afternoon session of  
3 the Air Resources Board is devoted to AB 32 and to our cap  
4 and trade regulation for greenhouse gases.

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

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

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

21 Before we do that, however, I'm reminded I need  
22 to report on the closed session that we had at noon, which  
23 is easy to do because we had a briefing by our counsel on  
24 status of several lawsuits that the Air Resources Board  
25 has been involved with. But the Board did not take any

1 action on those. So I have no action to report but am  
2 required to put that on the record.

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

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

19 So I think it's important that the Board hear  
20 some information about where things stand in our  
21 discussions with Quebec, because we've had very strong and  
22 very positive working relationship with the Province of  
23 Quebec. And we've also seen that they are going to be  
24 moving forward in parallel with us, not on exactly the  
25 same schedule, but a closely aligned schedule so they will

1 begin issuing allowances and operating their own Cap and  
2 Trade Program in the same time frame that we will be. But  
3 in order to formally link our two programs with each other  
4 and hold joint auctions or treaties of each other's  
5 allowances as being identical, we need to go through a  
6 further step.

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

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

15           EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman  
16 Nichols.

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

23           In developing the modifications to the program,  
24 the staff has worked very closely with stakeholders to  
25 ensure that the proposed amendments would support and

1 secure a very state-of-the-art program.

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

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

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

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

18           (Thereupon an overhead presentation was  
19 presented as follows.)

20           PROGRAM MONITORING SECTION MANAGER SAHOTA: Thank  
21 you, Mr. Goldstene. Good afternoon, Chairman Nichols and  
22 members of the Board. This Board Item is to discuss  
23 staff's proposed amendments to the cap and trade  
24 regulation.

25   --o0o--

1           PROGRAM MONITORING SECTION MANAGER SAHOTA: As  
2 part of my presentation, I will present two items for  
3 Board consideration.

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

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

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

21                           --o0o--

22           PROGRAM MONITORING SECTION MANAGER SAHOTA:  
23 California's long-standing pollution control programs have  
24 demonstrated that strong environmental regulation and  
25 economic growth can go hand in hand. AB 32 represents a

1 pioneering effort to address climate change. It mandates  
2 a 2020 greenhouse gas emissions target equivalent to 1990  
3 emissions levels.

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

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

17 --o0o--

18 PROGRAM MONITORING SECTION MANAGER SAHOTA: It  
19 has taken three years and an extensive consultation  
20 process to develop the final regulation. We held over 40  
21 public workshops and over a thousand individual  
22 stakeholder meetings while developing the regulation. We  
23 received over 1100 written comment letters, each of which  
24 we responded to in our final statement of reasons on the  
25 original regulation.



1           We have also collaborated closely over the last  
2 five years with the Western Climate Initiative partner  
3 jurisdictions. As of last month, WCI had released over  
4 130 public documents, held 86 public consultation events,  
5 and received public comments on 48 separate occasions.

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

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

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

17                           --o0o--

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

23           One of the key areas currently being addressed is  
24 related to compliance instrument tracking. As a reminder,  
25 compliance instruments are allowances and offsets issued

1 under the program. Staff has been working with the U.S.  
2 EPA and their contractor to develop the market tracking  
3 system, as they have extensive expertise in this area.

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

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

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

23 --o0o--

24 PROGRAM MONITORING SECTION MANAGER SAHOTA: We  
25 have designed the Cap and Trade Program to deter market

1 manipulation. We plan extensive program monitoring to  
2 detect potential irregularities in the auction and the  
3 market.

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

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

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

25           Together, these auctions will support the

1 administration of a robust and well-functioning market  
2 program.

3 --o0o--

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

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

17 Two voluntary registries have also submitted  
18 applications for approval as offset project registries  
19 under our program. Approved offset project registries  
20 will help ARB administer the Compliance Offset Program,  
21 but will not be able to issue any compliance offset  
22 credits. To date, applications have been received from  
23 the American Carbon Registry and the Climate Action  
24 Reserve. We hope to have the first verifiers and  
25 registries approved in the next few weeks. We will

1 continue to offer offset verifier training through the  
2 fall.

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

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

22           We are continuing to pursue research to support  
23 the eventful development of a potential fertilizer  
24 management offset protocol. Staff will also coordinate  
25 with WCI partners to ensure any protocols that are

1 developed meet the ARB's rigorous standards and would be  
2 eligible for use in a regional program. This coordination  
3 will also ensure that any protocols developed by linked  
4 jurisdictions would also be acceptable for generating  
5 offsets that would be accepted for use in California.

6 --o0o--

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

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

23 You directed us to work with experts to evaluate  
24 the cap and trade market provisions before the start of  
25 compliance next January. In response, ARB and U.C.

1 Berkeley have established an inter-agency agreement for a  
2 Market Simulations Group. In June, the Market Simulations  
3 Group held a public meeting on the campus of U.C. Berkeley  
4 to talk with stakeholders about specific market concerns  
5 that this group could model. The Market Simulations Group  
6 will be working diligently through the summer and is  
7 planning more public meetings and a report on their work  
8 this fall.

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

19 A key part of the industrial allocation system is  
20 the emissions efficiency benchmarks. We have contracted  
21 with Ecofys and the Lawrence Berkeley National Laboratory  
22 to develop benchmarks for new products entering the  
23 California market and to help us further develop the  
24 benchmarking approaches for a variety of sectors. Ecofys  
25 and LBNL have been gathering information from industries

1 and will be providing information to ARB staff to inform  
2 our work over the next year. This benchmark will continue  
3 into 2013 with any amendments coming back to the Board  
4 sometime next year.

5 --o0o--

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

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

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

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

25 We have continued to evaluate the progress of



1 resolving legacy contracts that do not allow for  
2 reasonable means of recovering costs associated with  
3 greenhouse gas emissions. Active discussions with  
4 counterparties been productive. Staff is planning a  
5 workshop in the fall to discuss potential solutions to  
6 this issue.

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

14           --o0o--

15           PROGRAM MONITORING SECTION MANAGER SAHOTA: Now  
16 I'd like to focus on the two sets of proposed amendments.

17           The first set is focused on requirements to help  
18 staff implement the program. In general, these amendments  
19 focus on the mechanics of the program administration and  
20 enforcement.

21           The second set of amendments focus on linking the  
22 California and Quebec Cap and Trade Programs. These  
23 amendments would allow regulated entities in each  
24 jurisdiction to use the allowances and offsets issued by  
25 either jurisdiction to comply with their regulations. As

1 Chairman Nichols noted, we are not recommending Board  
2 action on these amendments today.

3 --o0o--

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

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

21 We understand consolidation may not be  
22 appropriate for all entities so these proposed amendments  
23 also provide entities the flexibility to opt out of  
24 consolidated accounts if the compliance obligation is not  
25 going to be handled by a single parent company.

1                   --o0o--

2                   PROGRAM MONITORING SECTION MANAGER SAHOTA: This  
3 slide contains a summary of the provisions to establish an  
4 enforceable program and enhance program integrity.

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

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

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

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

24                   --o0o--

25                   PROGRAM MONITORING SECTION MANAGER SAHOTA: The

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

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

13 --o0o--

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

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

1 complications to market monitoring.

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

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

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

23   --o0o--

24           PROGRAM MONITORING SECTION MANAGER SAHOTA: The  
25 next area of amendments allows staff to clarify and

1 implement the requirements of the auction and reserve  
2 sales. These proposed changes will further support the  
3 effective functioning of the auction.

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

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

13 --o0o--

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

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

1 entities will be able to use California-issued allowances  
2 and offsets for compliance.

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

10 --o0o--

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

15 Bill 42, similar to AB 32 in California, requires  
16 Quebec to address climate change and authorizes the  
17 establishment of a Cap and Trade Program. Like  
18 California, Quebec has been a WCI partner for five years  
19 and has participated in the development of WCI  
20 recommendation for a regional market program. Quebec's  
21 2020 greenhouse gas emissions target is 20 percent below  
22 the 1990 levels, and thus slightly more stringent than the  
23 2020 target mandated in AB 32.

24 Prior to the coordination efforts that began this  
25 year to harmonize the California and Quebec regulations

1 for linkage, Quebec had existing mandatory greenhouse gas  
2 reporting and cap and trade regulations. Earlier this  
3 month, Quebec released amendments to their existing  
4 mandatory reporting and cap and trade regulations that  
5 would harmonize their regulations and allow for a joint  
6 market program in California. These regulations are  
7 expected to become final in September of this year.

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

15 --o0o--

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

21 Both programs require reporting by the same types  
22 of industrial sectors with an identical threshold for  
23 inclusion in the Cap and Trade Programs. The reporting  
24 methods for each sector are consistent with the  
25 requirements in California's regulation.



1           And, like California, Quebec requires third-party  
2 verification of its greenhouse gas inventory reports.

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

9                               --o0o--

10                           PROGRAM MONITORING SECTION MANAGER SAHOTA:

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

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

23           Both programs have an allowance price containment  
24 reserve which is comprised of allowances that set aside  
25 from the annual allowance budgets. There would not be

1 joint reserve auctions, and only California entities would  
2 be able to bid at the California reserve auction.

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

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

12 --o0o--

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

20 As with California, Quebec also has an eight  
21 percent offset usage limit for their regulated entities.

22 The recently released draft amendments include  
23 three proposed compliance offset protocols. The livestock  
24 protocols requires the capture and destruction of methane,  
25 similar to the ARB livestock protocol.

1           The ozone-depleting substances protocol only  
2 applies to ODS from foams, as Quebec has a program in  
3 place to address refrigerant ODS. And those reductions  
4 would not be considered additional.

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

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

22                           --o0o--

23           PROGRAM MONITORING SECTION MANAGER SAHOTA: For  
24 both sets of amendments, staff carried out a California  
25 Environmental Quality Act environmental analysis in

1 accordance with ARB certified regulatory program. The  
2 analysis is based on potential compliance responses of  
3 covered entities and relies on the prior analysis  
4 performed for the cap and trade regulation in the Appendix  
5 O to the October 2010 staff report referred to as the FED.

6 For the non-linkage amendments, the analysis  
7 found there would be similar impacts as those identified  
8 in the FED, as those are mostly administrative changes.

9 For the linkage amendments, the analysis found  
10 some potential indirect impacts that may occur due to  
11 California entities seeking out Quebec-issued offsets.  
12 These indirect potential impacts would be similar to those  
13 described in the FED and staff report for the landfill  
14 measure, which found the livestock protocol has the  
15 potential for significant adverse impacts to odors,  
16 cultural resources, noise, and transportation, traffic.

17 --o0o--

18 PROGRAM MONITORING SECTION MANAGER SAHOTA:

19 Today, staff is recommending that the Board approve  
20 Resolution 12-27 that would allow staff to finalize the  
21 amendments related to implementation and program  
22 enforceability.

23 Staff is also recommending that the Board approve  
24 Resolution 12-28, directing staff to take the necessary  
25 steps specified in the budget trailer bill legislation

1 adopted yesterday to enable California to link our Cap and  
2 Trade Program with Quebec. These findings include the  
3 jurisdiction ARB proposes to link with has a Cap and Trade  
4 Program as stringent as California's program, including  
5 the offset program, and that the program has equivalent or  
6 greater enforceability.

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

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

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

19 So if there aren't any comments right now, which  
20 it doesn't appear that there are, I just want to say  
21 before we get going here that obviously this is a  
22 complicated technical regulation. The rule is requiring a  
23 great deal of work to get ready to actually begin the full  
24 allocation of allowances in November. But it appears as  
25 though with this set of amendments, we will have the

1 entire rulemaking in effect and that from that point on  
2 there will still be a need for a lot of communication with  
3 the regulated community as well as interested members of  
4 the public. There will undoubtedly be a need for  
5 guidance-type documents to be issued. But this is the  
6 point at which we're kind of trying to wrap up the  
7 specific pieces that will make this program work.

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

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

15 CHAIRPERSON NICHOLS: I'm used to that.

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

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

23 BOARD MEMBER SPERLING: One of the things -- just  
24 so you address it also -- is some people have mentioned to  
25 me they had some concerns about tidying up a lot of the

1 rules and so on with Quebec that it's not been put in  
2 place yet. There's information, disclosure, and things go  
3 wrong and how do you deal with it, and a lot of those  
4 kinds of things.

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

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

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

21 However, in addition to just saying, yes, we're  
22 linked, there is also work that has to be done on both of  
23 our sides as we move forward to actually having the  
24 auction. And our sense has been that given the workload  
25 that the contractors on both sides have with that, that it

1 was very likely that the first joint auction would not  
2 take place until sometime next year. So in other words,  
3 even before the legislation passed, I think we had pretty  
4 much concluded and had discussed with Quebec the strong  
5 likelihood that we would do our first auction in November  
6 and theirs would happen sometime in 2013. So they were  
7 looking at February. There is no mandate for a specific  
8 date. But that was the track they were on.

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

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

22           BOARD MEMBER SPERLING: And we get another  
23 chance.

24           CHAIRPERSON NICHOLS: We can think about it some  
25 more before we set the final date for the wedding.



1           Okay. Any other kind of initial questions?

2           If not, let's begin with Norman Pedersen and  
3 Frank Harris and Erica Morehouse.

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

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

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

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

22           Regarding the non-linkage changes to the cap and  
23 trade regulation, we submitted a written comment that  
24 strongly supports a new section that allows electric  
25 utilities to consolidate their accounts for their various

1 generating facilities and their imported electricity. For  
2 many, consolidated accounts will reduce the administrative  
3 burden of the Cap and Trade Program and will have  
4 potential benefits for all participants in the Cap and  
5 Trade Program.

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

19           There are several ways in which the "Know Your  
20 Customer" requirements could be revised to avoid the  
21 intrusiveness, while fully ensuring the security of the  
22 tracking system. We recommended specific alternatives in  
23 our comments. I hope to see 15-day language on the table  
24 in the lobby this morning that would reflect some of  
25 SCPA's comments, both on the "Know Your Customer"

1 requirements and also the other points that we raised,  
2 which I won't go into now, in our written comments.  
3 Unfortunately, I have not seen any proposed 15-day  
4 language, but I hope there will be some way that the Board  
5 can take our written comments on, again, more than a dozen  
6 points into account.

7           And thank you very much for your attention.

8           CHAIRPERSON NICHOLS: Thank you.

9           Frank Harris.

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

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

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

22          California is taking a leadership role to address  
23 global climate change. It's critical that the State's Cap  
24 and Trade Program work effectively to demonstrate the  
25 value of a market-based approach. The date to go live

1 with cap and trade, as Chair Nichols mentioned, is fast  
2 approaching. And while much of the policy discussions  
3 have been wrapped up, where we are focused right now is on  
4 the many details of implementation and the requirements of  
5 making this program actually work as designed.

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

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

23 However, it's insufficient to have simply one.  
24 If the results of that auction don't necessarily yield any  
25 problems, it's not clear that it was broadly

1 representative. We would like to have a second practice  
2 or test auction to make sure that those results are robust  
3 as you would like. If there is a problem that's  
4 demonstrated in that test auction, of course, you would  
5 want to implement some sort of a repair or fix and then  
6 run another practice auction.

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

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

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

23 CHAIRPERSON NICHOLS: Thank you.

24 BOARD MEMBER RIORDAN: Madam Chair?

25 CHAIRPERSON NICHOLS: Yes.

1           BOARD MEMBER RIORDAN: Could I ask staff  
2 regarding this repeated auction, even if your first run  
3 works well, would you go back and double test it? I'm  
4 wondering what your response might be.

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

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

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

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

24           We don't have plans that if the timing is such  
25 that we're running the practice auction at the end of

1 August. Registration for the November auction actually  
2 opens in mid-September. So we've got two weeks between  
3 those. If something were to go very, very wrong, I think  
4 we would obviously need to re-evaluate and determine if we  
5 could run an auction. I don't think we could put  
6 ourselves in a situation where we knew something was going  
7 to go wrong that we would go forward with an auction.

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

10 BOARD MEMBER RIORDAN: I understand that. But I  
11 also understand the meaning of putting the money  
12 investment into it and not having it function correctly.

13 I'm torn. I'm sort of conservative on this side  
14 which says maybe we ought to try. But let's see. I'll  
15 think about that.

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

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

22 ASSISTANT DIVISION CHIEF CHANG: Excuse me?

23 BOARD MEMBER ROBERTS: What would it take to do  
24 this twice? Those of us who lived through something  
25 called the ISO and the great debacle have extreme concerns

1 with regard to something that is this complex, no matter  
2 what the assurances are.

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

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

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

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

19 If you run the August practice auction, you do an  
20 evaluation of how that goes. Then you have another  
21 process to run another practice auction. That whole  
22 process might take more than a month to run through. So  
23 I'm not sure that December would work. We would have  
24 to -- we have to play out those time lines and talk with  
25 the contractor about what's possible.



1           CHAIRPERSON NICHOLS: You might want to talk  
2 about the relationship between this auction of the  
3 State-held allowances and the Public Utilities Commission  
4 and their role in all of this, too. Because it's a little  
5 more complicated than just one auction. There's one  
6 auction, but there is the financial consequences of all of  
7 this are playing out over a period of years, not of one  
8 day of auctioning.

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

12           CHAIRPERSON NICHOLS: The allowances they're  
13 given --

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

21           But I think the other piece of this is, this is  
22 just one part of the testing that we're going to be doing.  
23 Actually, when the Chairman said about asking questions  
24 about submitting additional testing, we can get more  
25 details definitely. But we are doing user acceptance

1 testing as different modules of the auction platform are  
2 being developed. And we are working with both the  
3 tracking system and the market and the auction platform  
4 developer on how the systems talk to each other so that  
5 the file transfers are happening smoothly. These are all  
6 things that are under development right now. And I think  
7 we're starting user testing the next week or so on the  
8 auction platform.

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

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

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

25 You know, I think we all should realize and I'm

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

10 CHAIRPERSON NICHOLS: I agree with you.

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

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

19 Okay. Erica.

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

22 Showing that two different governments with two  
23 different economies can work together and put a price on  
24 carbon and reduce greenhouse gas emissions would be a  
25 transformative step for North America and a step that

1 could really launch a regional effort to join the  
2 international movement that's desperately needed to  
3 address the threat of climate change and to create a  
4 prosperous and green economy.

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

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

19           And the main thing with other jurisdictions that  
20 meet California's rigorous environmental standards can  
21 provide both economic and environmental benefits,  
22 including increasing market liquidity and broaden the  
23 emission reductions that are possible and also expanding  
24 the demand for emission reduction technology, many of  
25 which are made here in California.

1           And linking with Quebec in particular can bring  
2 capital flows into California to increase investments in  
3 on-site emissions which can create local jobs and local  
4 emissions reductions.

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

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

14           CHAIRPERSON NICHOLS: Thank you.

15           Craig Anderson and Kate Beardsley and Tamara  
16 Raspberry.

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

21           Our turbine engine research and test facility in  
22 San Diego has been reporting and verifying greenhouse gas  
23 emissions through the climate registry and now with ARB  
24 since 2006 and will be one of the initial businesses in  
25 the Cap and Trade Program.

1           First, Solar very much appreciates the time and  
2 effort ARB staff has spent over the last two years  
3 understanding our very unique business. Thank you, Mr.  
4 Cliff, in particular. And we also very much appreciate  
5 the personal visits by Member Roberts and Chair Nichols to  
6 our facility.

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

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

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

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

9 CHAIRPERSON NICHOLS: Thank you.

10 Kate Beardsley.

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

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

22 The first is holding limits and the removal of  
23 the beneficial holding section. As was noted in the staff  
24 presentation, the beneficial holding section was removed.  
25 However, a substitute has not been provided yet.

1           PG&E's concern that the removal of this section  
2 and the lack of change to the current holding limit  
3 unfairly disadvantages entities such as PG&E that have an  
4 electricity portfolio consisting of both our utility-owned  
5 power plants and power plants under contract.

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

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

19           The last item is somewhat echoing what SCE was  
20 commenting about with respect to practice auction. We  
21 fully support the practice auction. But we do believe  
22 that in order for the practice auction to fully prepare  
23 both ARB and the stakeholders for the first auction, we  
24 recommend that ARB proceed with the practice auction with  
25 a few key considerations in mind.



1           The first is completeness. We also think that  
2 the practice auction needs to be a full end to end. The  
3 current practice auction being envisioned today is close,  
4 but it's missing this kind of integration with the market  
5 tracking system. So we would like to see if that could  
6 somehow be captured in a practice.

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

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

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

19           CHAIRPERSON NICHOLS: Okay. Thank you.

20           Tamara.

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

23           My name is Tamara Rasberry, and I'm representing  
24 the Sempra Energy Holding Company, San Diego Gas and  
25 Electric, and the Southern California Gas Company. And we

1 just wanted to say for the record that we support ARB's  
2 linkage with Quebec. And we support this to provide a  
3 successful market model.

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

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

22 We also have concerns with the holding limit  
23 violation language in Sections 95911(e)(3)(b) and  
24 95913(g)(3)(a). I won't go into details about that. It's  
25 very complex, but it's also found in our comments towards

1 this regulation.

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

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

17           Thank you.

18           CHAIRPERSON NICHOLS: Thank you.

19           Tony Andreoni, William Westerfield and Cindy  
20 Parsons.

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

25           I'm Tony Andreoni. I represent the California

1 Municipal Utilities Association, or CMUA for short.

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

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

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

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

22 CMUA understands that the ARB wants to be able to  
23 confirm the identity of individuals and to avoid any  
24 issues with fraud and market manipulation that occur in an  
25 emissions trading system.

1           However, the KYC requirements are intrusive and  
2 it would be difficult for our members to require their  
3 staff to provide personal information to the ARB.

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

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

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

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

24           Thank you.

25           CHAIRPERSON NICHOLS: William Westerfield.

1 MR. WESTERFIELD: Good afternoon, Madam Chair and  
2 other members of the Board.

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

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

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

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

21 In comments that we filed yesterday, SMUD laid  
22 out a number of arguments for why we feel that the ARB has  
23 over-reached in requiring disclosure of sensitive and  
24 confidential information. And we discussed in those  
25 comments a number of legal and policy problems with the

1 proposal.

2           For one, we believe that the ARB is prohibited  
3 under California Information Practices Act from collecting  
4 this personal information and disclosing it to its banker,  
5 Deutsche Bank.

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

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

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

24           In our communications back and forth between the  
25 ISO and SMUD to ensure that the trades used by -- are only

1 made by authorized SMUD representatives and would address  
2 the problems that have been seen in other trading schemes.

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

10 Thank you.

11 CHAIRPERSON NICHOLS: Thank you.

12 Andy Katz -- sorry. Cindy Parsons first and then  
13 Andy Katz.

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

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

22 First, LADWP supports the amendments which allows  
23 publicly-owned utilities to consolidate their facility and  
24 entity accounts into a single account. Publicly-owned  
25 utilities are vertically integrated so they operate both



1 in-state generating facilities as well as electricity  
2 distributing customers. Being able to consolidate those  
3 accounts will resolve the difficulty of having to predict  
4 how to divvy up the allowances into separate accounts  
5 prior to the actual emissions occurring.

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

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

21 Rather, LADWP encourages ARB to look to EPA's  
22 acid rain program as a model for developing ARB's emission  
23 tracking system. EPA's registration structure is also  
24 used for reporting of greenhouse gas emissions to both EPA  
25 and CARB. If the EPA registration structure is good

1 enough for reporting of greenhouse gas emissions, which  
2 serves as the basis for the cap and trade compliance  
3 obligations, we think it should be good enough for the  
4 compliance instrument tracking system as well.

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

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

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

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

21           CHAIRPERSON NICHOLS: Thank you.

22           Mr. Katz and then Kassandra Gough and Brenda  
23 Coleman.

24           MR. KATZ: Good afternoon, Chairman Nichols and  
25 Board. Andy Katz representing Breathe California.

1           And I want to congratulate the Board on reaching  
2 this very, very significant step in achieving a regional  
3 greenhouse gas emission reduction program by linking with  
4 another jurisdiction.

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

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

20           Like to urge the Board to clarify that if a  
21 jurisdiction changes its program, that, for example,  
22 adopting new offsets protocol or linking with another  
23 third jurisdiction that CARB will evaluate these changes  
24 and that if CARB finds the linked program no longer meets  
25 AB 32 requirements, those linked jurisdictions's

1 compliance instruments would not be accepted until the  
2 Board finds that the program does meet the requirements.

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

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

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

16 CHAIRPERSON NICHOLS: Thank you.

17 Kassandra and then Brenda and then Paul Mason.

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

20 My name is Kassandra Gough. I'm the Director of  
21 Government and Legislative Affairs for Calpine, the  
22 state's largest independent power producer. We're also  
23 the state's largest renewable energy provider and the  
24 owner of the state's largest combined heat and power  
25 facilities.

1           As the state's largest independent power  
2 producer, we have the greatest number of emissions among  
3 our fellow power producers. It's not because of our  
4 efficiencies, but because of our size. We have over 6,000  
5 megawatts in the state. And we've invested \$6 billion  
6 since 2001 to build clean efficient generation for  
7 California.

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

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

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

21           You've heard parties comments about the removal  
22 of the beneficial holding relationship which was supposed  
23 to be a mechanism whereby the utility which has a tolling  
24 contract for our facilities -- in other words, they run  
25 our facilities, we do not -- could buy allowances and

1 transfer them to Calpine or entities so we could retire  
2 them. That's been removed. It was imperfect as  
3 originally written, but I think a number of us had offered  
4 really helpful suggestions that have not been  
5 incorporated.

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

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

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

23           We ask that the Board make through 15-day changes  
24 changes to the auction purchase limit and the holding  
25 limit. And also, we ask that the Board direct staff to

1 take action today on the legacy contracts and direct staff  
2 to withhold allowances to those entities who are receiving  
3 a free allocation for emissions associated with steam and  
4 electricity for which they do not have an obligation under  
5 long-term contracts. We have the obligation. They do  
6 not. They are essentially getting unjustly enriched. We  
7 ask that the Board direct staff to withhold those  
8 allowances from those entities as we move forward and work  
9 on the other long-term contract issues. Thank you.

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

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

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

20 We are pleased to hear that the Board will be  
21 taking action pursuant to the budget trailer bill language  
22 directive of 1478 as it relates to linkage. The IG  
23 submitted extensive comments which we hope you will take  
24 into consideration. Several of these comments have been  
25 expressed by several of the other speakers already.

1           However, briefly, we are opposed to the linkage  
2 today because of the following reasons:

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

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

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

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

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

23           CHAIRPERSON NICHOLS: Okay. Thank you.

24           Paul Mason, followed by Ann Chan and Michael  
25 Wang.



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

3 Paul Mason, Pacific Forest Trust.

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

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

22 Additionally, as these other jurisdictions are  
23 adopting offset protocols, I think it would be very useful  
24 for ARB to again have a guidance document, a process for  
25 independently evaluating those offset protocols that are

1 adopted in other jurisdictions to make absolutely sure  
2 that they meet the criteria of AB 32 and any other  
3 applicable California standards, rather than just letting  
4 them come into the system because another jurisdiction has  
5 approved them. I think it behooves to the Board to retain  
6 a little more oversight over the compliance instruments  
7 that we use in our system.

8           So those are areas that I think -- I'm not sure  
9 what the best mechanism is at this point in terms of  
10 15-day changes or additional language in the resolution or  
11 guidance documents from the staff. But those are two  
12 areas that I think would be very beneficial to further  
13 clarify with additional linkages in the future.

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

16           CHAIRPERSON NICHOLS: Thank you.

17           Ann Chan followed by Michael Wang and Belinda  
18 Morris.

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

22           The Wilderness Society appreciates your continued  
23 leadership on climate change that supports linkage to  
24 other jurisdictions and underscores the timeliness of this  
25 effort at the end of the week that has seen over 1,000

1 heat records broken across the United States in  
2 catastrophic wildfires across the west that have impacted  
3 many lives and the public lands that the Wilderness  
4 Society seeks to protect.

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

18           We'd also like to see additional clarification  
19 regarding any remedies that might be available pursuant to  
20 a finding that any after-adopted protocols or amended  
21 protocols or not in compliance with the WCI offset  
22 essential elements recommendations for additionality,  
23 verifiability, and additionality. And also any remedies  
24 that might be available for findings that after adopted  
25 protocols or modifications are in violation or

1 inconsistent with other relevant environmental laws.

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

10           CHAIRPERSON NICHOLS: Thank you.

11           Michael Wang and then Belinda Morris.

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

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

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

23           For example, the proposed linkage provisions are  
24 neither simple nor supportive of the cap and trade effort.  
25 Instead, it makes things harder. It's simply not linkage

1 to a broader market and not a way to make compliance  
2 easier and less costly. So it's good that additional work  
3 on linkage is contemplated.

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

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

18 CHAIRPERSON NICHOLS: Thank you.

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

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

23 I'm Belinda Morris, California Director of the  
24 American Carbon Registry. American Carbon Registry really  
25 appreciates all the hard work you and your staff are doing

1 to get the Cap and Trade Program launched, and we support  
2 all the work that you have done.

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

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

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

21 CHAIRPERSON NICHOLS: Thank you.

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

25 There have been a number of issues that have been

1 identified that people want to work on. This is not the  
2 last time this issue is going to come before the Board.  
3 This is, I think, the end of the regulatory process, but  
4 it is far from the end of the implementation or oversight  
5 portion of this process.

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

16           But I want to make sure that Board members get a  
17 chance to have their issues discussed and addressed and  
18 that there is another at least one more opportunity built  
19 into this process under which the Board as a whole would  
20 be enabled to be comfortable with that, in fact, we're  
21 ready to go. Because I fully understand -- and I know the  
22 staff does, too. But this is the first time that this has  
23 been back to the Board in a while, that the weight of  
24 responsibility is on us for the success of this program.  
25 And we do favor in general a belt and suspenders and

1 second belt approach to making sure there is safety as far  
2 as -- particularly as far as the electrical supply system  
3 is concerned, but just in general for the program.

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

6 BOARD MEMBER BERG: Thank you, Madam Chair.

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

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

21 Number two, I'm very happy to hear that staff  
22 will be coming back to the Board. And what I would like  
23 to suggest that I would like to see is I really would like  
24 to see a report where staff comes back and really outlines  
25 the testing that has been done on the various levels of



1 the systems and get a report back from staff on what the  
2 outcomes were of the testing. And in fact, that as a  
3 group, you are saying to us that you feel we have the  
4 systems in place and that you are, in fact, ready to go  
5 live.

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

19           And the final thing is I'd really like to hear  
20 that we do not feel so pushed in a corner on a time line  
21 that if, in fact, we need more time to get this right,  
22 that we will take the time to get it right. I think that  
23 is a critical element that we don't feel like we're just  
24 marching towards a time line that we have to go at a  
25 certain time.

1           So I think that the only issue that I'm hearing  
2 loud and clear is the "Know Your Customer". I'd like you  
3 to go back and take a look at that based on the testimony  
4 that you've heard today.

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

6           CHAIRPERSON NICHOLS: Thank you.

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

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

23           But, yeah, just like to give the staff a chance  
24 to respond to your comments. If you want to do that now,  
25 that would be fine.

1           DEPUTY EXECUTIVE OFFICER COREY: I'd like Edie  
2 Chang to respond to "Know Your Customer," and I would like  
3 to go back and walk through the practice auction and  
4 provide a little bit more background on that and then go  
5 to Ms. Berg's questions and comment overall.

6           CHAIRPERSON NICHOLS: Sound good.

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

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

19           The reason that we ask for proof of an open bank  
20 account is banks, when you open a bank account, do their  
21 own "Know Your Customer" checks. So they want to make  
22 sure that you are who you are. And actually as a result  
23 of the Patriot Act, they have to check for things --  
24 they're looking at things like terrorism and money  
25 laundering and things like that as well.

1           Our understanding is in the U.S. to open a bank  
2 accounts you need to appear in person to do that. And we  
3 don't require that folks appear in person to qualify to  
4 register into our system. So those are the things that  
5 we're requiring.

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

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

21           We did look at what other sort of trading systems  
22 require. This is consistent with the direction the EU ETS  
23 is heading. It's similar to what they do in the UK for  
24 their carbon trading system. We did look at the banking  
25 industry in terms of the kinds of checks they ask folks to

1 go through. These are the kinds of things that make us  
2 confident that we can oversee this market, that we are  
3 going to know who is in this market, and that we can  
4 enforce in the market.

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

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

24           So I'm trying to think of anything else

25           CHAIRPERSON NICHOLS: Several people were trying

1 to use the analogy of the EPA acid rain trading system and  
2 the amount of information they require, which is  
3 considerably less.

4 ASSISTANT DIVISION CHIEF CHANG: It is  
5 considerably less.

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

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

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

25 CHAIRPERSON NICHOLS: And you choose not to go

1 down that path because --

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

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

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

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

25 I would also state that's the same standard that

1 we're using as we're developing the security for the  
2 computer systems we're developing, that our standard is an  
3 industry standard that is secure on those systems as well.

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

10 Yes, Mr. Roberts?

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

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

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

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



1 us. But we also are going to be doing double checks of  
2 that to make sure that the information hasn't been  
3 falsified and checks things like that.

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

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

10 BOARD MEMBER ROBERTS: Okay.

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

13 Rich was going to comment further about the time  
14 line.

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

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

21 The objective of the practice auction is -- this  
22 was a recommendation in terms of our stakeholders. We  
23 thought it was a great idea and we would integrate it into  
24 the roll-out of the program. But it's to ensure there is  
25 a familiarity with the system in terms of a user interface

1 and actually it helps, in fact, on the staff side, too.

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

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

17           And in terms of this discussion, one thing that  
18 did occur to me that wasn't initially planned was it could  
19 be valuable for a summary of that practice auction to be  
20 put together, provided to the Board, put on a website and  
21 characterize this is how it played out and also discuss at  
22 the following Board meeting. Just a printout in very  
23 clean plain language how that experience played out. The  
24 first auction is one element of extensive testing of the  
25 systems and their functionality of the systems.

1           The other element that I want to get to goes back  
2 to Ms. Berg's comment. Basically, to me, at its core was:  
3 Do you have sufficient team on the program? And are you  
4 ready? Are you going to be ready? If you're not, are you  
5 willing and prepared to indicate that?

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

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

20           But also listening to this discussion, I'm  
21 thinking about the report back to the Board in September  
22 in terms of staff's program. So there will be value in  
23 terms of I think actually having some of the contractors  
24 present, because in a sense, it's a count down at that  
25 point in terms of the auction. Registration would have

1 happened. Preparation for participating in the auction,  
2 hearing from us on status, hearing from us in terms of the  
3 practice auction, hearing from the contractors, hearing  
4 from the market monitoring and the role of the market  
5 monitor, the Market Surveillance Committee that we have,  
6 and also some of the market simulation modeling that we  
7 have underway to help inform the oversight of the program  
8 and kind of mapping out and laying out the overall effort  
9 prior to that final launch to the auction.

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

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

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

1 see who the people are who are going to be doing them.

2 So, yes.

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

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

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

15 BOARD MEMBER RIORDAN: I think if I can remember  
16 back to some of our very early discussions and some of the  
17 experts that appeared before us, there was one -- and I  
18 cannot recall who he was -- was a gentleman -- and he  
19 specifically I think in his presentation wanted to be  
20 assured -- for us to be assured that this system would  
21 work. And even suggested putting somebody into the system  
22 to game the system to see if there was a gaming  
23 opportunity. And so that sort of is in the back of my  
24 mind. And so I might just reflect that gentleman's  
25 testimony that day because I think that's --

1 ASSISTANT DIVISION CHIEF CHANG: And we talked  
2 about as part of the practice auction having folks set up  
3 to try to game the system to see what happens or try to do  
4 something that wouldn't normally be allowed. That is part  
5 of what we want to test.

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

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

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

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

23 What I'd like to do is look at slide nine real  
24 quickly. And you know, I could hear the frustration from  
25 Cassandra from Calpine. And you know, that's on this

1 issue of holding limits and legacy contracts. But if  
2 staff could quickly go through and give us a quick update  
3 on these issues, water agencies, public universities. I'm  
4 just adding the two that I keep hearing about from  
5 stakeholder groups: Leakage, waste to energy legacy. And  
6 let us know when you're planning on coming back. So this  
7 would be September for all these issues and kind of puts a  
8 status report?

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

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

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

24 So what this Market Simulations Group is going to  
25 do would be to design a computer model of the market,

1 including the rules as they exist, and then sort of  
2 perturb that model to determine what sort of outcomes  
3 might result from specific type of activities. And if  
4 that result is that there's something that requires an  
5 amendment to the regulation, we, of course, would bring  
6 that back.

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

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

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

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

25           But we do understand, as Board Member D'Adamo



1 said, there is an equity issue here that we need to look  
2 at. So that's why we've been working to try to evaluate  
3 the potential use of proceeds. There will be proceeds  
4 from auction. Of course, that's subject to appropriation  
5 by the Legislature and the Governor through the budget  
6 process. ARB would be developing a plan, and I think that  
7 if we can figure out a way to make some sort of support  
8 for the activities that water agencies and public  
9 universities would undertake, emission reduction  
10 activities they would undertake, that would be an  
11 appropriate use of auction proceeds.

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

21 It turns out that, you know, as we've talked  
22 through this issue in the past and over the past year or  
23 so, we suggested that we're really encouraging those  
24 parties to come together and figure out some resolution  
25 without the government stepping in. We always recognize

1 that at the end of the day this wasn't going to be  
2 resolved for all parties. It turns out it's been pretty  
3 successful. There have been many parties who have  
4 resolved these contract issues. And we're down to  
5 something like maybe a dozen contracts out of all of the  
6 contracts throughout the state that don't allow for this  
7 cost pass through according to the information that we've  
8 been provided.

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

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

24           And leakage I think was the other one that you  
25 mentioned. So as directed in Resolution 11-32 and

1 actually in Resolution 10-42 back from December 2010 when  
2 the Board first considered cap and trade, you directed us  
3 to continue to monitor the leakage risk to industries in  
4 California.

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

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

25           And we also will be announcing in the next couple

1 of days a workshop on July 30 to talk to stakeholders  
2 about how we'll monitor leakage going forward and ideas  
3 for that, as well as talk through what sort of research  
4 we're planning to do under this interagency agreement.

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

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

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

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

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

24 And also it looks as though the PUC is going to,  
25 in effect, be given discretion to distribute the value of

1 up to 15 percent of these allowances, which is a lot of  
2 revenue, for purposes consistent with AB 32.

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

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

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

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

24           Again, we are ultimately going to be tasked with  
25 developing an expenditure plan for the State funds in

1 accordance with some general guidelines that will go  
2 through the Department of Finance to the Governor and have  
3 to be approved by the Legislature. But we will have a  
4 role in all of this going forward.

5 Yes, Dr. Sperling?

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

12 Would it be appropriate to set some kind of  
13 calendar when some of these decision are going to be made  
14 along the way? And you know through -- and of course,  
15 prioritize what's more important? Because a lot of these  
16 do affect stakeholders, and the uncertainty creates lot of  
17 problems for them.

18 EXECUTIVE OFFICER GOLDSTONE: That would be part  
19 of our September update to be specific about where we are.  
20 And if a change is to be made in any of these areas, I  
21 think almost all of them require a change to the rules,  
22 which would take time. So we have to give you a  
23 recommendation and a time line for making the rule change.

24 CHAIRPERSON NICHOLS: A lot of the requests that  
25 I've heard are really for guidance as opposed to rule

1 changes. Therefore, specific responses to questions of  
2 how certain things would be treated or considered, which  
3 doesn't change the need to do it.

4 But I think we're also at the point where some of  
5 those requests could be turned into actual proposals  
6 coming from those who want the answers. In other words,  
7 some of that is already there. But I've noticed there's  
8 some opportunities there for people who want something  
9 specific to actually tell us what it is they need in clear  
10 terms so we can act on it and do something with it.

11 BOARD MEMBER D'ADAMO: Just for clarification, I  
12 sense there is some confusion out there in terms of  
13 timing. So I just want to make sure on this list that you  
14 just went through, unless there is a guidance issue where  
15 it wouldn't require regulatory change, we're looking at  
16 staff coming back later this year for possible amendments  
17 for the second compliance period.

18 CHAIRPERSON NICHOLS: No. Go ahead. I don't  
19 think so.

20 BOARD MEMBER D'ADAMO: Or can they take effect in  
21 the first compliance period?

22 CHIEF CLIFF: If we were to come back with  
23 amendments for the second compliance period, that would be  
24 sometime in 2013.

25 BOARD MEMBER D'ADAMO: So would there be a

1 possibility for us to take action -- let's say staff  
2 determines that it's possible to resolve any number of  
3 these issues. Is it possible to come back and get a  
4 change implemented during the first compliance period?

5 CHIEF CLIFF: I think not likely in advance of  
6 the first auction or the beginning of the first one.

7 BOARD MEMBER D'ADAMO: I just think I'm confused  
8 on this. And I know I talked with a lot of food  
9 processors, and they seem to be confused in terms of how  
10 soon -- let's say this study comes out, how soon? And  
11 that's just an example. I don't want to pin you down  
12 necessarily on food processing.

13 But there's two issues here. There's the need to  
14 resolve these issues substantively, and then there is the  
15 process issue. And I think it would be helpful for us to  
16 be more clear about what is even within the art of the  
17 possible with respect to our regulatory calendar, the  
18 first and second compliance period, just to get everybody  
19 on the same page so we don't have any false expectation  
20 within the stakeholder communities.

21 DEPUTY EXECUTIVE OFFICER COREY: Ms. D'Adamo,  
22 understand -- and the September update, what we can do is  
23 walk through the path forward, because some of these --  
24 and Steve talked on these. There are studies underway,  
25 for instance, on the benchmarking. You talked about food



1 processors. What that study may inform. And for  
2 instance, if that is suggested, the need for subsequent  
3 amendments that would be conclusions would be determined  
4 in the 2013 time frame and then to follow at some point  
5 forward. So what we could do is clarify in a sense the  
6 path and approximate time frame for these things to play  
7 themselves out.

8 CHAIRPERSON NICHOLS: Yeah, I think what this  
9 should look like is a work plan which includes the time  
10 frame for addressing these issues and some opportunity for  
11 the Board, if they feel it's necessary, to say this should  
12 go before that. Or you should speed up this one and that  
13 one isn't quite as important. I think that's within our  
14 area of policy jurisdiction that people are going to want  
15 to have some input to.

16 I just wanted to raise one more issue because I  
17 think people are getting a little bit more comfortable  
18 with this issue of market readiness and how this is being  
19 addressed. I think it's really important that we sit down  
20 sooner rather than later, like in the next couple of  
21 weeks -- I know the 4th of July is next week -- with the  
22 utilities, particularly with PG&E and Southern California  
23 Edison, because they're the ones who have the most at  
24 stake here.

25 And frankly, I had the feeling these people

1 actually had moved into our office. I don't seem to be  
2 able to turn around without seeing Frank and Kay in our  
3 office.

4 But obviously, they have the need for some very  
5 concrete and specific assurance. And so it's not just a  
6 matter of whether we're feeling comfortable about this.  
7 They need to be feeling comfortable about this since  
8 they're the ones that have to serve the customers.

9 So I would like to have the direction to the  
10 staff that this is something that you need to be doing.  
11 I've seen heads nodding, so I'm going to take that as  
12 consensus that this is something you need to be doing  
13 within the next couple of weeks.

14 And again, you can report back in September, but  
15 I think it has to happen before the Board would be in the  
16 a position to get back together.

17 Yes.

18 BOARD MEMBER ROBERTS: Thank you.

19 First of all, sometimes it's not just who's here  
20 speaking to us, but who isn't here that's maybe indicative  
21 of some things going on. I think may be good news the  
22 water districts that have been concerned aren't here.

23 And I think to some extent, Madam Chairman, it's  
24 a reflection of your efforts to meet with these people and  
25 hopefully offer what will be solutions.

1 I think the unease that maybe universities feel  
2 is maybe similar to being dependent on the Legislature in  
3 the future. You know, I'm from a county and we always are  
4 nervous since we depend on the Legislature. That seems to  
5 face long-term issues in the kind of unexpected way.  
6 Enough said on that. But I think I've been meeting with  
7 them and will continue to do.

8 Also one of the issues raised of cogeneration.  
9 Those people aren't here. And I know staff has been  
10 meeting with them directly and hopefully that's being  
11 resolved.

12 CHAIRPERSON NICHOLS: I believe so. But under  
13 our public comment period, we do have someone from Qualcom  
14 who's asked to testimony. So they didn't testify on this  
15 item, but they are going to testify more generally on cap  
16 and trade.

17 BOARD MEMBER ROBERTS: I'm surprised they're not  
18 testifying on the item. Qualcom specifically is one of  
19 the groups. And it seemed like appropriate they may --

20 CHAIRPERSON NICHOLS: They may have --

21 BOARD MEMBER ROBERTS: They should be speaking on  
22 this issue, but we'll listen to them under public comment.

23 This has been very informative today. And there  
24 have been so many things that have come up that have  
25 helped me.

1           I still remain concerned. I guess I'm looking at  
2 solar, and I look at the list of medium linkage which  
3 there are such things as breweries cut and sew. So after  
4 seeing their facilities and test procedures and knowing  
5 there is no way they're going to reduce by 50 percent what  
6 they're doing. And it's one of the significant exporters  
7 for California. In fact, it's probably one of our few  
8 remaining manufacturing exporters in the significant way.  
9 I remain concerned.

10           CHAIRPERSON NICHOLS: I know that there is an  
11 ongoing conversation here and there has been a lot of  
12 conversation already. But within the last couple of days,  
13 I received a copy of a letter that came from the company  
14 through Senator Kehoe's office with some very specific  
15 requests that they're making for a letter to go into their  
16 planning process. And I would like you to know that I  
17 asked for my staff to prepare something ASAP so we can  
18 respond to that request. So we're not going to just let  
19 it sit.

20           BOARD MEMBER ROBERTS: Thank you. I haven't seen  
21 that.

22           CHAIRPERSON NICHOLS: No, I would be happy to  
23 share it with you.

24           BOARD MEMBER ROBERTS: The fact we live in San  
25 Diego, they could be anywhere in the state and have the

1 same feelings.

2 CHAIRPERSON NICHOLS: They are a category one so  
3 that automatically entitles them to some different  
4 treatment.

5 BOARD MEMBER ROBERTS: Had they been in our high  
6 category, I think that would have literally and certainly  
7 in the foreseeable future would have taken care of these  
8 issues.

9 And I think it's the uncertainty of the process  
10 that we need to be making continuing investments that has  
11 them concerned. So I would be appreciative of anything  
12 staff can do to either expedite some certainty or take a  
13 good look at what we have. Again, I don't know. We have  
14 a lot of breweries in San Diego, but I don't think they're  
15 on the same list. So in any event, we will get I guess  
16 into Quebec in greater detail.

17 CHAIRPERSON NICHOLS: Yes. That will be coming  
18 back presumably when the staff sends the letter out. In  
19 45 days, we'll have something back.

20 BOARD MEMBER ROBERTS: I think these are the  
21 major items.

22 Personally, I'd like to go over this with staff  
23 and get more background on exactly who is on these various  
24 committees of the market surveillance and things like  
25 that. And I think these are going to be extremely

1 important in ensuring that the systems are working even in  
2 the test.

3           So again, my compliments. This has been very,  
4 very helpful for me personally.

5           CHAIRPERSON NICHOLS: There were two things that  
6 we do need to do though. One is to move the set of  
7 amendments that we're going to be doing forward so they'll  
8 be ready in time. And then the other is to direct staff  
9 to submit the necessary paperwork/factual record to the  
10 Governor so that they can at least move forward with the  
11 process of making a decision on this.

12           This is a situation where we are really wanting  
13 to make sure that we have honored the desire of the  
14 Legislature to have this kind of openness about the  
15 process. And there will be that opportunity to come back  
16 again after the Governor makes his findings so that people  
17 who want to testify further about that issue will be able  
18 to do it.

19           So any additional comments or a motion?

20           BOARD MEMBER D'ADAMO: I'll move adoption -- you  
21 want separate motions?

22           CHAIRPERSON NICHOLS: Yes.

23           ASSISTANT DIVISION CHIEF CHANG: Before you vote  
24 on the linkage resolution, I just wanted to note on the  
25 12-28, the bill number that is in there is actually not

1 the one that the Governor --

2 CHAIRPERSON NICHOLS: They changed the number for  
3 the trailer bill.

4 ASSISTANT DIVISION CHIEF CHANG: I want to make  
5 sure that we have the right bill number. And I think you  
6 all can modify that. The correct bill number is SB 1018.

7 CHAIRPERSON NICHOLS: Okay. All right. Thank  
8 you. That probably could just be done ministerially, but  
9 it's just as well to be correct.

10 BOARD MEMBER D'ADAMO: Move adoption of  
11 Resolution 12-27.

12 CHAIRPERSON NICHOLS: Is there a second?

13 BOARD MEMBER DE LA TORRE: Second.

14 CHAIRPERSON NICHOLS: All in favor, please say  
15 aye.

16 (Ayes)

17 CHAIRPERSON NICHOLS: Any abstentions or  
18 opposition? Okay. Very good.

19 BOARD MEMBER D'ADAMO: Move adoption of  
20 Resolution 12-28 reflecting the appropriate bill number SB  
21 1018.

22 BOARD MEMBER DE LA TORRE: Second.

23 CHAIRPERSON NICHOLS: Okay. And again all in  
24 favor? Aye.

25 (Ayes)

1           CHAIRPERSON NICHOLS: Opposed? Great. Thank  
2 you. This was a very productive discussion. And to be  
3 continued.

4           We have one public comment, and that is Mike  
5 Rosen. Mike, hurry on down. Did you mean to testify?

6           MR. ROSEN: Well, I apologize. I probably should  
7 have recognized this was -- the previous item was the  
8 appropriate item to testify under. But you've --

9           CHAIRPERSON NICHOLS: We'll listen to you anyway.

10          MR. ROSEN: You more or less discussed it.  
11 Really quick, Qualcomm, Incorporated, they're a San Diego  
12 based technology company, 12,000 employees in San Diego  
13 and growing. And I think you've hit on it a little bit.

14          We are in the unique situation, they are category  
15 one. I don't know who else is in their situation. But  
16 you know, proud of their environmental stewardship and  
17 their environmental record.

18          And over the years, they have taken great strides  
19 to reduce the energy intensity of their presence in San  
20 Diego. They have two combined heat and power cogeneration  
21 facilities. Those CHP units have reduced their greenhouse  
22 gas emissions from if they had been just stayed with  
23 SDG&E. Their emissions are essentially 6,000 metric tons  
24 less than had they stayed with SDG&E. Somehow this has  
25 put them into a -- made them a covered entity. These



1 co-gen units which all the energy is used on site, they  
2 don't export any of the energy is used on site. Somehow  
3 they are a covered entity and they get no allowance for  
4 this. They're going to eat the cost of complying with cap  
5 and trade.

6           And frankly, they'd have been better off never  
7 trying to do anything to reduce their emissions profile.  
8 And if they want to grow in San Diego, which they want to  
9 grow in San Diego and California, other places in  
10 California, you know, combined heat and power works for  
11 them and they would like to do more of it. It seems to be  
12 the goal of the Governor and of this body to do more CHP  
13 and frankly they won't do more if they're going to have to  
14 be under this cap and trade rubric.

15           So, like I said, you already discussed it a  
16 little bit and sound like you have some staff working on  
17 it. That's very positive. I just wanted to come here and  
18 make those comments. Thank you.

19           CHAIRPERSON NICHOLS: We need to be sending the  
20 right incentive message. This is one of the situations  
21 where you have us and the PUC, different proceeding. And  
22 we need to get these coordinated and make sure that we're  
23 putting our message together with our action on what we  
24 like, which is more of cap and -- more of combined heat  
25 and power. Thank you.

1           All right. Without further ado then, I believe  
2 we are adjourned. Thank you all very much.

3           (Whereupon the Air Resources Board adjourned  
4 at 3:59 p.m.)

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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  
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