

MEETING  
STATE OF CALIFORNIA  
AIR RESOURCES BOARD

CALEPA HEADQUARTERS  
BYRON SHER AUDITORIUM  
SECOND FLOOR  
1001 I STREET  
SACRAMENTO, CALIFORNIA

THURSDAY, NOVEMBER 17, 2016

9:14 A.M.

JAMES F. PETERS, CSR  
CERTIFIED SHORTHAND REPORTER  
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A P P E A R A N C E S

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Ms. Judy Mitchell

Supervisor Ron Roberts

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Dr. Alberto Ayala, Deputy Executive Officer

Ms. Edie Chang, Deputy Executive Officer

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Ms. Ellen Peter, Chief Counsel

Ms. La Ronda Bowen, Ombudsman

Ms. Stephen Adams, Assistant Chief Counsel

Mr. Michael Benjamin, Division Chief, Monitoring and Lab  
Division

Mr. Pippin Brehler, Senior Attorney, Legal Office

Ms. Mary Jane Coombs, Climate Change Program Evaluation  
Branch, ISD

A P P E A R A N C E S C O N T I N U E D

STAFF:

Mr. Christopher Dilbeck, Air Pollution Specialist, Testing and Certification Section, Monitoring and Laboratory Division, Monitoring and Lab Division(MLD)

Ms. Catherine Dunwoody, Assistant Division Chief, MLD

Mr. Dave Edwards, Chief, Greenhouse Gas Emission Inventory Branch, AQPSD

Mr. Jason Gray, Chief, Climate Change Program Evaluation Branch, ISD

Ms. Jennifer Gress, Legislative Director, Office of Legislative Affairs

Mr. David Hultz, Senior Attorney, Legal Office

Mr. Wes Ingram, Chief, Project Assessment Branch, ISD

Ms. Margret Kim, Senior Attorney, Legal Office

Mr. Angus MacPherson, Manager, Testing and Certification Section, MLD

Ms. Karen Magliano, Chief, Air Quality Planning and Science Division(AQPSD)

Mr. David Mallory, Manager, Climate Change Policy Section, ISD

Mr. Michael Miguel, Chief, Quality Management Branch, MLD

Mr. Johnnie Raymond, Air Pollution Specialist, Climate Change Policy, ISD

Ms. Rajinder Sahota, Assistant Division Chief, ISD

Mr. Floyd Vergara, Division Chief, ISD

Mr. Alex Yiu, Air Pollution Specialist, Program Operations, Industrial Strategies Division (ISD)

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Mr. Alan Abbs, California Pollution Control Officers Association

Ms. Fariya Ali, Pacific, Gas & Electric

Mr. Gerry Barnaby, EGO

Mr. Will Barrett, American Lung Association

Mr. Nathan Bengtsson, Pacific Gas & Electric

Ms. Susie Berlin, Northern California Power Agency, M.S.R. Public Power Agency

Mr. Brian Biering, Turlock Irrigation District

Mr. Danny Breuninger, Mescalero Apache Tribe

Ms. Julia Bussey, Chevron Corp

Mr. Tim Carmichael, SoCalGas

Mr. Brock Costalupes, Modesto Irrigation District

Mr. Jon Costantino, Southern California Public Power Authority

Ms. Chanell Fletcher, Climate Plan

Mr. Roger Gault, Engine Manufacturers Association

Mr. Michael Geller, Manufacturers of Emission Controls Association

Mr. Bob Gonzales

Mr. Jerry Green

Mr. Dan Griffiths, California Municipal Utilities Association

Mr. Miles Heller, Tesoro

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Mr. Lenny Hochschild, International Emission Trading Association

Mr. Henry Hogo, South Coast Air Quality Management District

Ms. Bonnie Holmes-Gen, American Lung Association

Mr. Alex Jackson, Natural Resources Defense Council

Mr. Shrayas Jatkar, Coalition for Clean Air

Mr. Ryan Kenny, Clean Energy

Mr. Greg Knott, Outdoor Power Equipment Institute

Mr. Gabriel Kompkoff, Chugach Alaska Corp

Mr. Mark Krausse, Pacific, Gas & Electric

Mr. John Larrea, California League of Food Processors

Mr. Daniel Mabe, American Green Zone Alliance

Mr. Bill Magavern, Coalition for Clean Air

Mr. Bruce Magnani, Gerdau Steel

Ms. Christina McCain, Environmental Defense Fund

Mr. Zach Mersch, Mean Green Mowers

Mr. Ted Michaels, Third Party Delivered Energy Efficiency Coalition

Mr. Elmer Moonin, Port Graham Corporation

Mr. Brent Newell, Center on Race, Poverty & the Environment

Ms. Rachel O'Brien, Agricultural Council

Ms. Michelle Passero, The Nature Conservancy

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Mr. Arjun Patney, American Carbon Registry, American Carbon Registry

Mr. Sean Penrith, The Climate Trust

Ms. Kathryn Phillips, Sierra Club of California

Ms. Tiffany Roberts, Western States Petroleum Association

Mr. Jared Sanchez, Cal Bike

Mr. Brian Shillinglaw, NewForests

Ms. Mikhael Skvarla, California Council for Environmental Economic Balance

Mr. Adam Smith, Southern California Edison

Ms. Sarah Somorai, Honda

Mr. Josh Stark, Transform

Ms. Shelly Sullivan, Climate Change Policy Coalition

Mr. James Sweeney, James Sweeney & Associates

Mr. Andre Templeman, Alpha Inception

Mr. Tim Tutt

Mr. Nico Van Aelstyn, Sealaska

Ms. Amy Vanderwarker, California Environmental Justice Alliance

Mr. Evan Vessels, Vessels Coal Gas, Inc.

Mr. Tom Vessels, Vessels Coal Gas, Inc

Mr. Ernie Villegas, Villegas Public Affairs

Mr. Kevin Walsh, Fresh Air Yard Care

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Mr. Peter Weiner, Crockett Cogeneration

Ms. Janet Whittick, California Council for Environmental  
Economic Balance

Mr. Roger Williams, Blue Source

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## P R O C E E D I N G S

CHAIR NICHOLS: Good morning, everybody; and apologies for starting a few minutes late here this morning. This is the November 17th, 2016, public meeting of the Air Resources Board. And we will begin, as we always do, with the Pledge of Allegiance to the Flag.

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

CHAIR NICHOLS: Okay. Madam Clerk, would you please call the role.

BOARD CLERK HARLAN: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK HARLAN: Mr. De La Torre?  
Senator Florez?

BOARD MEMBER FLOREZ: Here.

BOARD CLERK HARLAN: Supervisor Gioia?

BOARD MEMBER GIOIA: Here.

BOARD CLERK HARLAN: Ms. Mitchell?

BOARD MEMBER MITCHELL: Here.

BOARD CLERK HARLAN: Supervisor Roberts?

BOARD MEMBER ROBERTS: Here.

BOARD CLERK HARLAN: Supervisor Serna?

BOARD MEMBER SERNA: Here.

BOARD CLERK HARLAN: Professor Sperling?

BOARD MEMBER SPERLING: Here.

1 BOARD CLERK HARLAN: Ms. Takvorian?

2 BOARD MEMBER TAKVORIAN: Here.

3 BOARD CLERK HARLAN: Chair Nichols?

4 CHAIR NICHOLS: Here.

5 BOARD CLERK HARLAN: Madam Chair, we have a  
6 quorum.

7 CHAIR NICHOLS: Great. Thank you very much.

8 There's an item on our internal agenda known as  
9 Chair's opening remarks. I'd like to think of this as the  
10 Chair's monologue.

11 (Laughter.)

12 CHAIR NICHOLS: But don't think of it as being  
13 quite that exciting. I do want to say a couple words  
14 though.

15 First of all, we do have some logistical things  
16 which I will go through first, which is:

17 We are changing the order of the last two items  
18 of the agenda. So the way the agenda works now is first  
19 we'll get the Legislative Update, then we'll get the  
20 Proposed Amendments to the Evaporative Emissions  
21 Requirements for Small Off-road Engines. Then the  
22 informational item on Assembly Bill 32 and the Scoping  
23 Plan Development. Then the update on the adaptive  
24 management process. And last, the Cap-and-Trade Program  
25 Update.

1           So for those of you who are here or will be here  
2 primarily for the Cap-and-Trade Program, update, although  
3 as you know it's not an item that we're going to be voting  
4 on, that will be the last item of the day.

5           Interpretation services are going to be available  
6 for three of our items today: The scoping plan  
7 development; the annual cap-and-trade update, and the  
8 update on adaptive management. There are headsets  
9 available outside the hearing room; and there's an  
10 attendant sign-up table, and they can be picked up at  
11 anytime.

12           Madam Translator, would you please repeat that in  
13 Spanish.

14           (Thereupon translated into Spanish.)

15           CHAIR NICHOLS: Gracias.

16           Okay. Anyone who wants to testify should fill  
17 out a request-to-speak card, and those are available also  
18 in the lobby or from the clerk. We appreciate it if  
19 people turn them in before the item that they want to  
20 speak on.

21           We will be imposing our usual three-minute time  
22 limit on speakers. And so we ask people to abbreviate  
23 their remarks and especially not to read from their  
24 written testimony if they have written testimony.

25           Also, required by the rules of this building, to

1 point out to you where the exits are. They're in the back  
2 of the room or to the sides of the dais up here. And in  
3 the event of a fire alarm, we're required to immediately  
4 vacate the building, go down the stairs, out into the park  
5 across the street, and wait until we get the all-clear  
6 hearing.

7 I am told that there actually was once a fire  
8 alarm during a board meeting, so just be prepared in case  
9 that should happen.

10 So, before we launch into the business of the  
11 meeting, I did just want to say a word to our friends here  
12 in the room and those who may be watching us on the Web.  
13 This meeting takes place of course as first meeting in the  
14 year that follows the presidential election. And the  
15 results of the presidential election were a surprise to  
16 most pundits, although not all, and were certainly not the  
17 results that the majority of the voters of California  
18 asked for.

19 And I'm not here to explain what it all means  
20 because that would be a bit presumptuous. But I have been  
21 asked a number of times by the press and others what does  
22 this mean for California, what does it mean for our  
23 environmental programs, what does it mean for our climate  
24 programs. And I put out a very, very short statement  
25 right after the election, which was also similar to what

1 the Governor and our legislative leaders have all said in  
2 various ways, which is California is still here, we are  
3 still governed by the same set of laws, we still have the  
4 same constitution in our country, we still have a mandate  
5 to clean up the air and very strong directions on our  
6 climate programs and we intend to carry on with those.

7 We do not know yet who the key players in  
8 positions in Washington are going to be. Certainly, there  
9 were things said during the course of the campaign that  
10 were not at all supportive of the direction that  
11 California has been taking for these many years, but  
12 there's nothing as of yet that's concrete for us to  
13 organize around, rally around, or even anticipate other  
14 than to do our best, as President Obama has said, to  
15 assist in the transition and to try to make it successful.  
16 And by successful, we don't mean successful in blocking  
17 dismantling the progress we've made. We mean successful  
18 in perhaps bringing a slightly different perspective to  
19 how we go about doing these things.

20 So we are pursuing everyone of our agenda items  
21 that we were pursuing before the election occurred. And  
22 we're still working productively and constructively with  
23 colleagues in other states, in other agencies at the  
24 federal level, and globally. We have a delegation in  
25 Marrakech even as we speak. One of our staff members,

1 Edie Chang, was in Marrakech briefly and was a part of the  
2 California delegation there. California is still looked  
3 to for our leadership as a global actor. We're still -- I  
4 believe we're now fifth largest economy in the world.  
5 That also is not about to change, and we know how heavily  
6 dependent that is on our commitments in the areas of clean  
7 energy and clean technology and good environment.

8           So I just wanted to send a small note of calm and  
9 reassurance to anybody who may think that anything is  
10 going to be different as far as the way this meeting is  
11 going to go. We have an exciting year on tap. We had an  
12 exciting year last year, and we don't expect that to  
13 change. But we are -- we are as determined and perhaps  
14 even more determined than ever to face the truly  
15 catastrophic potential that we see in what's happening in  
16 the physical environment around us, and to do our best to  
17 deal with it in a responsible manner as we always have.

18           So that's it for opening remarks.

19           I suspect other members during the course of the  
20 day or at the end will also want to make comments. We do  
21 have time for board member comments at the end of the  
22 meeting. So I hope that will happen.

23           But for the moment, I think we should begin with  
24 our update on what happened in the Legislature and what we  
25 are looking forward to.





1 the end, more than a thousand bills made it to the  
2 Governor's desk, and the Governor signed 900 into law.

3 ARB's Office of Legislative Affairs has tracked a  
4 record number of bills and resolutions this year - nearly  
5 600. One hundred forty-four of the bills we tracked were  
6 signed into law, and 20 of these bills prescribe specific  
7 responsibilities for ARB. The 2016 Annual Summary of Air  
8 Quality and Climate Legislation, which is included in your  
9 packet, summarizes each bill that we tracked and includes  
10 a section that summarizes ARB's new duties.

11 In addition to tracking and analyzing  
12 legislation, ARB participated in a number of hearings and  
13 special events at the local, State, and federal levels on  
14 topics such as sustainable freight, Cap-and-Trade auction  
15 proceeds, incentive programs, and U.S. EPA's most recent  
16 ozone standard.

17 The budget was a key area of success. The  
18 Legislature approved the majority of ARB's budget  
19 proposals, and the Budget Act authorized 45 positions and  
20 about 6.8 million in contract and equipment funds. These  
21 resources will allow us to strengthen our work on several  
22 key initiatives, including short-lived climate pollutants,  
23 advanced clean cars, and engine standards for heavy-duty  
24 vehicles.

25 --o0o--

1           LEGISLATIVE DIRECTOR GRESS: There were a number  
2 of themes or hot topics that percolated throughout ARB's  
3 legislative activity this year, many of which you heard  
4 about last year. These included post-2020 climate action,  
5 environmental justice, legislative oversight, and the  
6 expenditure of cap-and-trade auction proceeds.

7           We also saw significant legislative activity  
8 dealing with issues that were prominent in the news -  
9 specific the Volkswagen emissions scandal and the Aliso  
10 Canyon natural gas leak.

11           In the next several slides I'll highlight some of  
12 the most significant outcomes in each of these areas.

13                           --o0o--

14           LEGISLATIVE DIRECTOR GRESS: Post-2020 climate  
15 action. Ten years following the passage of AB 32 this was  
16 the year for climate action. The two most significant  
17 triumphs were SB 32, which establishes the 2030 greenhouse  
18 gas reduction target and statute, and SB 1383, which  
19 establishes a comprehensive framework for controlling  
20 short-lived climate pollutants. I will start with SB  
21 1383.

22           This bill codifies the targets in ARB's proposed  
23 Short-Lived Climate Pollutant Reduction Strategy. Did we  
24 have authority to implement our strategy without  
25 legislation? Yes. But this bill was significant in three

1 important ways.

2 First, the bill represents a compromise with the  
3 dairy and livestock industry, establishing a mandate to  
4 work with and regulate dairy while delaying emission  
5 reduction requirements until at least 2024 and putting in  
6 place a number of conditions and requirements that ARB  
7 must meet. Much work needs to be done, and we intend to  
8 work closely with the dairy industry to ensure any  
9 emission reduction requirements are technologically and  
10 economically feasible.

11 Second, SB 1383 establishes a framework to  
12 accelerate the development of markets for the biomethane  
13 generated from organic waste and manure management at  
14 dairies. For example, the bill requires ARB to adopt a  
15 procurement policy to encourage biomethane projects. And  
16 the Public Utilities Commission must implement five dairy  
17 biomethane pilot projects to demonstrate interconnection  
18 to the common carrier pipeline system.

19 Third, this bill embodies a multi-pronged  
20 administration-wide commitment to take concrete actions to  
21 reduce short-lived climate pollutants. The goals and  
22 policies articulated in ARB's proposed short-lived climate  
23 pollutant strategy are not ARB's alone, but rather reflect  
24 a mandate on the whole administration, including the  
25 California Department of Food and Agriculture, the Public

1 Utilities Commission, the Energy Commission, CalRecycle  
2 and others, that this will endure for administrations to  
3 come.

4 To support the goals articulated in that bill,  
5 this year's Cap-and-Trade budget appropriated 95 million,  
6 including 50 million for CDFA for dairy digester projects,  
7 40 million for CalRecycle to fund waste diversion  
8 projects, and 5 million for ARB to fund programs that  
9 reduce black carbon from wood smoke.

10 --o0o--

11 LEGISLATIVE DIRECTOR GRESS: SB 1383 was a  
12 tremendous success, but it was SB 32 that proved to be the  
13 defining bill this year. Codifying the 2030 greenhouse  
14 gas reduction goal ensures California builds on the work  
15 we have done to achieve the 2020 limit and puts the State  
16 on a path to meet the 2050 target.

17 I'd like to highlight two points:

18 First, as I noted a moment ago, it has been ten  
19 years since the passage of AB 32; and in that time,  
20 California, principally ARB, has adopted and implemented  
21 dozens of programs to reduce greenhouse gas emissions.  
22 Not surprisingly, doing so has engendered some opposition.  
23 Regulated entities, notably the oil industry, have engaged  
24 in a sustained campaign over several years to undermine AB  
25 32 and discredit ARB. And they have been successful in

1 many ways, as we have faced hostility in the Legislature.  
2 This makes the passage of SB 32 all the more gratifying -  
3 with ten years of experience implementing AB 32, our  
4 political leaders were ready to re-up.

5 --o0o--

6 LEGISLATIVE DIRECTOR GRESS: One of the keys to  
7 Senator Pavley's triumph in passing SB 32 was her  
8 partnership with Assemblymember Eduardo Garcia. As you  
9 may recall, SB 32 failed passage on the Assembly Floor  
10 last year. This year, Assemblymember Garcia reached out  
11 and worked with members of the assembly and key  
12 stakeholders to address their concerns and cultivate  
13 support for climate action. Out of that effort was borne  
14 AB 197, and the passage of SB 32 was contingent on the  
15 passage of AB 197.

16 This slide pictures the signing ceremonies for  
17 AB 32 in 2006 on the left and for SB 32 on the right. The  
18 differences these photographs reveal are interesting in  
19 several different respects. But one thing you can see  
20 clearly is the legislative partnership that came together  
21 for SB 32: The Senate and the Assembly working together  
22 on a common goal, and the involvement of members who  
23 represent diverse and urban districts.

24 I do note, however, that the only woman  
25 represented in the photo for SB 32 is now retired.



1 plan update.

2 --o0o--

3 LEGISLATIVE DIRECTOR GRESS: Among other  
4 requirements to analyze and postdata, ARB must post the  
5 amount of greenhouse gases, criteria pollutants, and toxic  
6 air contaminants admitted by each facility that reports to  
7 ARB under the AB 32 mandatory reporting regulation, and to  
8 illustrate the change in emission levels over time.

9 These provisions will enable greater access to  
10 emissions data that will better inform communities about  
11 the emissions occurring in their areas, as well as inform  
12 local and State decision-making.

13 Environmental justice was also prominent in  
14 discussions about cap-and-trade auction proceeds.

15 The Governor signed AB 1550 by Assemblymember  
16 Gomez to increase investment in disadvantaged communities,  
17 from 10 percent of auction proceeds to 25 percent. Given  
18 that 25 percent of California's population lives in the  
19 top 25 percent of disadvantaged communities, this bill  
20 more closely aligns the minimum level of investment with  
21 the population living in those areas, and upholds the  
22 original intent and promise of AB 535.

23 AB 1550 expands funding requirements beyond  
24 disadvantaged communities by requiring that an additional  
25 10 percent of auction proceeds be spent for projects that



1 benefit low-income households or communities. ARB will  
2 kick off a public process in January to incorporate these  
3 requirements into the funding guidelines for the  
4 greenhouse gas reduction fund.

5 --o0o--

6 LEGISLATIVE DIRECTOR GRESS: As with last year,  
7 legislative oversight of ARB was a prominent theme, and it  
8 showed up in many places.

9 First, AB 197 had a number of oversight and  
10 transparency provisions. It added two legislators as ex  
11 officio, non-voting board members, and the bill limits  
12 other board members to six-year terms staggered. The  
13 timeline in process for staggering the terms has not yet  
14 been determined.

15 To provide additional oversight and transparency  
16 for our climate programs, AB 197 created the Joint  
17 Legislative Committee on Climate Policies, and requires  
18 ARB's Chair to appear each year to report on greenhouse  
19 gas, criteria pollutant, and toxic air contaminant  
20 emissions.

21 In addition to AB 197, ARB was the subject of an  
22 audit request by Assemblymember Gray regarding the  
23 expenditure of auction proceeds. Among other things, the  
24 audit sought to understand the greenhouse gas reductions  
25 and cost effectiveness of each funded project, how cost

1 effectiveness was considered in project selection, and  
2 whether the program could have achieved reductions through  
3 other means.

4           It was later revealed that the audit request was  
5 made at the behest of the Western States Petroleum  
6 Association. And lieu of pursuing the audit, the  
7 Committee rejected -- requested ARB to provide the  
8 information to Assemblymember Gray and the Committee,  
9 which we did.

10           Finally, the Assembly Transportation Committee  
11 held two oversight hearings on ARB's emission reduction  
12 programs in the transportation sector. These hearings  
13 were contentious at times, and we are continuing to work  
14 to provide the Committee with information in a forum we  
15 fondly refer to as The Matrix.

16           We anticipate that these oversight hearings will  
17 continue next year.

18                           --o0o--

19           LEGISLATIVE DIRECTOR GRESS: Cap-and-trade  
20 auction proceeds was the area where we devoted the  
21 greatest time and resources. In addition to budget  
22 deliberations, the Legislature introduced just under 40  
23 new bills in 2016 related to auction proceeds, also  
24 referred to as the Greenhouse Gas Reduction Fund or GGRF.  
25 With the exception of AB 1550, these bills were held in

1 the Assembly -- or in the Appropriations Committees and  
2 auction proceeds were dealt with through the budget  
3 process.

4 Auction proceeds were lower than the Governor's  
5 proposed budget assumed. That, combined with uncertainty  
6 about major climate legislation earlier in the year,  
7 delayed consideration of the Cap-and-Trade budget until  
8 August.

9 Just before the session ended, however, the  
10 Legislature passed AB 1613, which appropriated 900 million  
11 in auction proceeds from the GGRF. Note that this 900  
12 million does not include the 60 percent of GGRF monies  
13 that were continuously appropriated to transit, high-speed  
14 rail, and sustainable communities in affordable housing.  
15 ARB received 368 million for low carbon transportation  
16 investments and a wood stove replacement program, which  
17 represents about 40 percent of the 900 million  
18 appropriated.

19 SB 859, a budget trailer bill that guides the  
20 expenditure of GGRF funds appropriated in AB 1613,  
21 established new programs and modified others. Of note,  
22 SB 859 modified the Clean Vehicle Rebate Project by  
23 restricting income eligibility and increasing rebate  
24 amounts for low-income consumers until July 1, 2017.

25 Discussion about whether and how to change the

1 State's incentive programs for zero-emission vehicles is  
2 already underway in the Legislature.

3 --o0o--

4 LEGISLATIVE DIRECTOR GRESS: A prominent issue in  
5 the news this year was the Volkswagen emission scandal.  
6 As you may recall, VW had been installing defeat devices  
7 on some of its 2.0 and 3.0 liter vehicles to cheat the  
8 test cycles designed to assess compliance with  
9 California's emission standards. Late last month a  
10 federal judge approved a \$14.7 billion settlement to  
11 settle the consumer claims and address mitigation of  
12 excess emissions associated with the 2.0 liter vehicles.

13 California will receive about 1.2 billion for  
14 projects that mitigate the emissions and support the ZEV  
15 market. The settlement will kick off a public process  
16 regarding the expenditure of funds, and members of the  
17 Legislature have already begun to weigh in.

18 ARB was instrumental in uncovering the VW  
19 scandal, and ACR 112 by Assemblymember Hadley formally  
20 commended ARB for its diligent work to uncover the defeat  
21 devices.

22 Finally, to help ensure this type of violation  
23 does not occur again, ARB worked closely with  
24 Assemblymember Jimmy Gomez on AB 1685 to update penalties  
25 for vehicles that violate mobile source emission control

1 laws.

2           Of note, the bill increased the maximum penalty  
3 to 37,500 per violation, which is consistent with the  
4 maximum penalties that U.S. EPA may assess for similar  
5 violations.

6           The intent of this bill is to deter other  
7 manufacturers from violating our emission laws, thereby  
8 protecting air quality and creating a level playing field  
9 for those businesses that do comply with our emission  
10 standards.

11                           --o0o--

12           LEGISLATIVE DIRECTOR GRESS: Aliso Canyon. As  
13 you may recall, in October 2015, the Southern California  
14 Gas Company discovered a significant methane leak at its  
15 Aliso Canyon natural gas storage facility in Southern  
16 California. This leak was finally stopped in February  
17 2016, after approximately 109,000 metric tons of methane  
18 had escaped. The Legislature introduced nine bills  
19 related to this event, three of which were signed into  
20 law.

21           SB 380 by Senator Pavley prohibits the injection  
22 of natural gas into the Aliso Canyon facility until a  
23 comprehensive review of the safety of the storage wells is  
24 completed and the risk of failure addressed. Recently  
25 SoCalGas petitioned regulators to begin injecting natural

1 gas into the facility. That decision is pending.

2 SB 887, also by Senator Pavley, is intended to  
3 prevent future natural gas leaks from storage facilities  
4 like Aliso Canyon by setting numerous new requirements  
5 regarding how State agencies regulate natural gas storage  
6 facilities. ARB must develop a continuous monitoring  
7 program to detect gas leaks and the presence of natural  
8 gas emissions in the atmosphere at such facilities. ARB's  
9 proposed oil and gas regulation, which was heard in July  
10 and will be presented for your consideration early next  
11 year, included similar provisions but will be updated to  
12 fully incorporate the additional requirements.

13 The third bill is Senator Allen's SB 888. This  
14 bill requires that any penalties the Public Utilities  
15 Commission assesses be sufficient to fully mitigate the  
16 climate impacts of a methane leak from a natural gas  
17 storage facility, and establishes requirements for the  
18 expenditure of those funds.

19 --o0o--

20 LEGISLATIVE DIRECTOR GRESS: Moving on to the  
21 election results. Focusing just on California, the Senate  
22 had 20 races which produced eight new members. There are  
23 26 Democrats and 14 Republicans. Excuse me. Nine new  
24 members.

25 In the Assembly, all 80 members were up for

1 election, and we'll be welcoming 22 new members. Here the  
2 party balance changed somewhat, with Democrats gaining  
3 three seats, resulting in a two-thirds and supermajority  
4 in that house.

5           The racially charged rhetoric Rick that emerged  
6 during the presidential campaign, and the fear and  
7 disappointment that some are expressing with the election  
8 results, have prompted me to examine changes in the  
9 Legislature with respect to race and gender.

10           Looking just at Latinos, Asian and Pacific  
11 Islanders, and African Americans, those elections saw an  
12 increase in diversity by roughly six members, depending on  
13 how individuals identify themselves. Members of these  
14 groups will comprise approximately 44 percent of our  
15 Legislature. But note they represent approximately 60  
16 percent of California's population as a whole.

17           With respect to gender, the Legislature lost  
18 three women. While women represent 50 percent of  
19 Californians' population, they comprise only about 23  
20 percent of members. As it turns out, these results were  
21 not unique. Looking back to 2006 when AB 32 was signed,  
22 women comprised 31 percent of the Legislature. We've seen  
23 a steady decline in women since.

24           --o0o--

25           LEGISLATIVE DIRECTOR GRESS: Looking ahead to

1 next year, the 2017-2018 regular session convenes on  
2 December 5th. I expect issues of environmental justice  
3 and oversight will continue next year. Transportation  
4 funding will continue to be on the agenda, albeit with  
5 unclear prospects.

6 Cap and trade will be the subject of significant  
7 activity with respect to program design, legislation  
8 potentially to explicitly extend the program, and the  
9 expenditure of auction proceeds, as always.

10 The scoping plan will be a strong focus of  
11 attention, as there is intense interest in measures ARB  
12 chooses to achieve the 2030 target.

13 As I mentioned earlier, ARB's work on the  
14 Volkswagen case will continue into next year. We will be  
15 working to engage members on their ideas for Volkswagen's  
16 ZEV investments and the selection of mitigation projects,  
17 and of course we will continue to keep folks apprised of  
18 key developments in the case.

19 Lastly, outreach to the new members will be a  
20 focus for ARB as we seek to meet with the new members and  
21 introduce them to our work.

22 --o0o--

23 LEGISLATIVE DIRECTOR GRESS: Before closing, I  
24 would like to acknowledge my outstanding staff. The  
25 Legislative Office is extremely busy for about ten months



1 of the year, and the work is sometimes stressful. It  
2 takes a strong team to get everything done while producing  
3 high quality work. I am very proud of and grateful for  
4 the work they do.

5 That concludes my presentation. I'd be happy to  
6 answer any questions.

7 CHAIR NICHOLS: Thank you very much, Jen.  
8 Congratulations to you and your staff for a really great  
9 year. And throughout the year I certainly heard requests  
10 for attention, but also very positive feedback about the  
11 work that you and your team did. So I think we need to  
12 acknowledge that they played a key role in getting us to  
13 where we are today.

14 I would like to see if there are any Board  
15 members who wish to speak.

16 Yes, we'll start down at the end here with  
17 Professor Sperling.

18 BOARD MEMBER SPERLING: So I joined the Board  
19 just after AB 32 was passed. And so it kind of made me a  
20 little sentimental hearing about the ten-year history.  
21 But I'm not going to be here at the end of the day, so I  
22 just want to -- these are going to be my few comments  
23 here.

24 And it's been so impressive. I mean, what  
25 happened this past year is great. But really the ten-year

1 history has been extraordinary, what we've done at ARB,  
2 and it's really made me so proud to be part of this  
3 organization.

4           And it's an organization that's so impressive  
5 because it's so -- there's two attributes that I've always  
6 admired. One, it's grounded in science. We have a lot of  
7 technical people. It's really -- these regulations and  
8 policies we developed are -- you know, have a lot of  
9 science and technical analysis that goes into them.

10           And the "two" is engagement, how much effort is  
11 put into all the workshops and meetings, and the staff --  
12 it's part of the culture of the agency and it's rare. I  
13 have not seen that, you know, anywhere else.

14           And so just the -- kind of this ten-year period,  
15 I thought, in the beginning we passed all -- we adopted  
16 all these rules, Cap and Trade, Low Carbon Fuel Standards,  
17 zero-emission vehicle. We got to 2012 and I thought, job  
18 done, you know.

19           (Laughter.)

20           BOARD MEMBER SPERLING: Pat ourselves on the  
21 back, you know.

22           And obviously I was way off.

23           (Laughter.)

24           BOARD MEMBER SPERLING: But the leadership that  
25 ARB has shown over these years, it was always really

1 important. And now it's in many ways going to be even  
2 more important, because in the beginning we were worried  
3 about anyone following us, you know, we were adopting  
4 these rules and we're going, "Okay, we're supposed to be a  
5 model and a leader," but you're not a leader if no one's  
6 following you.

7 But then the rest of the world did come along.  
8 And the Paris Accords is a huge accomplishment. And so  
9 now the rest of the world -- you know, given what's  
10 happening in Washington now, I think the rest of the world  
11 is going to look at us even more than before, or at least  
12 as much.

13 And therefore what we do here, it really is so  
14 critical, so important. And so I just wanted to say that,  
15 because ten years, it's amazing what we've done here in 10  
16 years.

17 And obviously we have a lot more to do, unlike  
18 what I had thought a few years ago.

19 CHAIR NICHOLS: Thank you for that, Dan.

20 Anybody else wish to comment at this time? It's  
21 not necessary but, yes, you may.

22 Dr. Balmes.

23 BOARD MEMBER BALMES: Just a brief mention of  
24 something that I said to Richard Corey in private. The  
25 email that he sent out to staff that the Board members

1 also received saying pretty much the same thing as the  
2 Chair's monologue that we just have to keep on pushing, I  
3 greatly appreciated that, and I'm glad you're at the helm  
4 at this point. Thank you.

5 CHAIR NICHOLS: Thank you very much.

6 Okay. I'm just going to add one other thing,  
7 which is not -- Oh, sorry. Excuse me, excuse me.

8 Mr. De La Torre.

9 BOARD MEMBER DE LA TORRE: Thank you.

10 I wanted to congratulate staff. I don't know  
11 that I'd be as triumphal about it.

12 (Laughter.)

13 BOARD MEMBER DE LA TORRE: I think the stars  
14 aligned. There was a lot of work. But I absolutely want  
15 to thank staff for their hard work and keeping on top of  
16 it.

17 The one thing she didn't say is that most of this  
18 work was really pressure packed in that last month. So  
19 all this stuff was going on at the same time in the last  
20 month, and it was crazy.

21 And I also wanted to acknowledge the leadership  
22 in both houses. What a difference a year made in that  
23 regard. To have that much production coming out of both  
24 houses was a testament also to both the Speaker and the  
25 Pro Tem for their hard work and dedication and commitment

1 to all of this. I wanted to say that, because it isn't  
2 always the case.

3 Thank you.

4 CHAIR NICHOLS: We didn't do it all by ourselves,  
5 hardly.

6 No, thank you. That's a really good point. And  
7 I haven't detected any slackening of interest in these  
8 issues on their part or the Governor's. That's one of the  
9 reasons why we can be confident that it's going to be a  
10 busy year -- a busy session beginning in January.

11 I do want to add just because it's as relevant  
12 here as anywhere else - and I didn't open the meeting on  
13 this note - but yesterday we received word of the passing  
14 of one of the giants of clean air in our country and in  
15 the world, and that was Leon Billings. Leon was a mentor  
16 of mine. He was the leading writer of the original 1970  
17 Federal Clean Air Act as a staff member to Edmund Muskie.  
18 He served on the bipartisan and very, very effective  
19 Senate Environment and Public Works staff for many years.  
20 He headed up that staff. He then followed Senator Muskie  
21 to the State Department, and had a distinguished career of  
22 his own as a Washington figure who never gave up his  
23 commitment to the Clean Air Act or clean air, including  
24 dedicating his son or sending off his son, Paul Billings,  
25 to be the chief political strategist for the American Lung

1 Association in Washington.

2           Leon was a character, and you'll be hearing more  
3 about him. I think there's probably going to be a number  
4 of memorials to him along the way. But he was famously  
5 grouchy, famously foul-mouthed at times, but also  
6 completely passionate about the right of people wherever  
7 they lived and whatever their socioeconomic background to  
8 breathe clean and healthy air.

9           I was also reminded of him when I looked at  
10 today's agenda, because he hated the Cap-and-Trade  
11 Program. He hated it. He thought it was a complete  
12 abdication of his view that everything should be done by  
13 direct regulation and as punitive as possible to those who  
14 caused pollution.

15           He wouldn't have said it quite that way probably,  
16 but it's sort of what it amounted to.

17           And the fact that he disagreed with me so  
18 vehemently about that policy direction, and at the same  
19 time was able to remain engaged and to get me to return  
20 his phone calls and email messages as recently as last  
21 Friday. Just remind me of the fact that these issues are  
22 never simple, they're never straightforward, they are  
23 always contentious even among people who basically agree  
24 with us on the direction and the goals. And so why should  
25 it be any different now, right? We'd have to anticipate

1 that there will be more battles ahead, but the direction  
2 seems to be a good one.

3           So thanks to all the Board members who also at  
4 short notice often were willing to appear and to speak and  
5 do things that helped make this all possible.

6           All right. I think we should now move on to our  
7 next item of business, which is the proposal to amend some  
8 regulations that deal with evaporative emissions of small  
9 off-road engines. My notes here say that they are  
10 referred to as SORE. I've never heard them referred to as  
11 SORE, and I'm not going to do that in this meeting either.  
12 So it may take a little longer, but these are small  
13 off-road engines. You saw some of them out in the  
14 courtyard if you came in the front door this morning.  
15 Examples of some of the kinds of equipment that we're  
16 dealing with.

17           They are significant source of reactive organic  
18 gas emissions statewide. And controlling them is an  
19 important element in meeting our standards for ozone as  
20 well as other goals in the Mobile Source Strategy. They  
21 have been regulated since 2003. But since that time the  
22 staff has identified a number of issues relating to  
23 implementation and enforcement of the 2003 rules. And so  
24 in keeping with our practice, we've gone back and looked  
25 at what was good and what was not so good and come up with

1 some proposals that will address some of the near-term  
2 problems as well as to harmonize with federal regulations  
3 in a number of areas.

4           But the fact remains that over the next 15 years  
5 or so, this equipment needs to become much cleaner overall  
6 if we're going to meet our goals and needs with respect to  
7 air quality and climate. Zero-emission engines are a fact  
8 in this area as well as others. There's already electric  
9 lawn and garden equipment in both commercial and  
10 residential use, as you saw in some of the equipment  
11 that's highlighted here today. And so I encourage any of  
12 you who haven't already done so to go check out what's  
13 available and learn from the people who are there to staff  
14 the various booths or displays in this showcase.

15           Now I will turn it over to Mr. Corey to introduce  
16 the item.

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

19           EXECUTIVE OFFICER COREY: Yes, thanks, Chair  
20 Nichols.

21           Small off-road engines are spark-ignited engines  
22 rated at or below 19 kilowatts used to power lawn and  
23 garden equipment, portable generators, and other types of  
24 equipment. There are approximately 16.5 million pieces of  
25 this type of equipment in California in 2016, which



1 produce about 45 tons per day of reactive organic gases.

2 ARB has conducted an extensive testing in two  
3 validation studies to assess evaporative emissions from  
4 this equipment since the adoption of the regulations in  
5 2003. These validation studies suggest over 50 percent --  
6 50 percent of the small off-road equipment sold in  
7 California since 2008 do not meet the applicable diurnal  
8 emission standards.

9 Today staff is proposing amendments to our  
10 existing evaporative emission regulations to address the  
11 low compliance rate observed in the validation studies.  
12 The amendments include improvements to the certification  
13 procedures, strengthening the current enforcement  
14 provisions and update to the certification fuel used in  
15 the test procedures to represent commercially available  
16 gasoline, and alignment of aspects of ARB's requirements  
17 with those of the United States Environmental Protection  
18 Agency to reduce costs.

19 I'd now like to ask Christopher Dilbeck of our  
20 staff to provide the presentation.

21 Chris.

22 AIR POLLUTION SPECIALIST DILBECK: Good morning  
23 Chair Nichols and members of board. It's my pleasure  
24 today to present staff's proposed amendments to ARB's  
25 small off-road engine evaporative emissions regulations.

1 Throughout the presentation we will be using the term  
2 "SORE" as shorthand for "small off-road engines. And I'll  
3 have to ask you to excuse me for that, Chair Nichols.

4 (Laughter.)

5 Today's presentation will cover the issues that  
6 require regulatory action, the produced regulatory  
7 amendments intended to mitigate the issues identified by  
8 staff, a vision for achieving significant additional  
9 emissions reductions from SORE to meet air quality and  
10 climate goals, and finally a summary of the proposed  
11 amendments and staff's recommendation.

12 --o0o--

13 AIR POLLUTION SPECIALIST DILBECK: ARB staff has  
14 conducted a comprehensive review of the current SORE  
15 evaporative emissions regulations, and has concluded that  
16 they are falling short of the projected goals. The  
17 primary issue is compliance with existing emission  
18 standards. ARB test results suggest less than half of  
19 SORE in California meet the applicable emission standards.  
20 The high in-use emission rates, combined with a compliance  
21 testing process that severely limits ARB's ability to take  
22 enforcement action, results in emissions in excess of the  
23 projected amount. The certification fuel for SORE  
24 evaporative emissions no longer matches gasoline sold in  
25 California, potentially leading to underestimates of

1 real-world emissions from SORE.

2           Finally, although ARB and U.S. EPA have similar  
3 fuel tank testing requirements, manufacturers must conduct  
4 two separate sets of certification tests.

5                               --o0o--

6           AIR POLLUTION SPECIALIST DILBECK: Staff has  
7 developed a proposal for amendments to the SORE  
8 evaporative emissions regulations that we believe will  
9 address the four issues outlined on the previous slide.

10           Staff has worked closely with industry, and in  
11 fact, the proposal incorporates a number of their  
12 suggestions. Staff's proposal will increase compliance  
13 with the emission standards by requiring all SORE to meet  
14 the existing emission standards and strengthening the  
15 compliance testing procedure to facilitate enforcement of  
16 the standards. It will require E10 certification fuel to  
17 match gasoline currently sold in California.

18           Staff's proposal will also align ARB's fuel tank  
19 test procedure with U.S. EPA's to provide industry the  
20 option to conduct one streamlined set of tests that will  
21 be acceptable to both, agencies saving manufacturers time  
22 and money.

23                               --o0o--

24           AIR POLLUTION SPECIALIST DILBECK: SORE are  
25 spark-ignition engines rated at or below 19 kilowatts.





1 approximately three grams of hydrocarbons per day. The  
2 hydrocarbon compounds emitted from SORE are typically  
3 highly volatile and include toxic compounds such as  
4 benzene.

5 To allow manufacturers time to redesign products,  
6 the implementation of the diurnal emission standard for  
7 lawn mowers was phased in from 2007 through 2009,  
8 gradually becoming more stringent. A standard of 1.3  
9 grams per day became effective in 2007.

10 In 2009 the standard was fully phased in at 1.0  
11 grams per day, where it remains today.

12 For comparison, the green line shows the hot soak  
13 plus diurnal emissions standard for passenger cars since  
14 2000. Although emissions of 1 gram per day for a lawn  
15 mower may appear to be inconsequential, one model year  
16 2016 lawn mower produces as much evaporative emissions as  
17 three model year 2016 cars.

18 --o0o--

19 AIR POLLUTION SPECIALIST DILBECK: In the year  
20 2000, total evaporative emissions from SORE were estimated  
21 at 47 tons of reactive organic gases, or ROG, per day.  
22 ROG are organic gases including hydrocarbons and other  
23 compounds that contribute to the formation of ground-level  
24 ozone and photochemical smog.

25 At the time of the 2003 rulemaking, uncontrolled

1 SORE evaporative emissions were projected to increase to  
2 52 tons per day in 2010 and 58 tons per day in 2020.

3 After implementation of the regulations began in  
4 2006, evaporative emissions from SORE were projected to  
5 decrease to 38 tons per day in 2010 and 25 tons per day in  
6 2020, shown by the green curve.

7 The expected benefit of the regulations are  
8 indicated by the blue shaded area. ARB and industry  
9 designed validation studies to ensure the expected  
10 benefits were actually being achieved.

11 --o0o--

12 AIR POLLUTION SPECIALIST DILBECK: ARB typically  
13 requires performance testing in a sealed housing for  
14 evaporative determination, or SHED, as the only pathway to  
15 demonstrate compliance with diurnal emission standards.  
16 In contrast, ARB SORE regulations provide two options for  
17 certifying greater than 80 cc engines: Performance and  
18 design. The two options are a result of the compromise  
19 between ARB and industry when drafting the regulations in  
20 2003. ARB initially proposed that SORE certification  
21 would be strictly performance-based, but industry  
22 expressed concerns about SHED testing costs and proposed  
23 design certification as an alternative during the 45-day  
24 comment period leading up to the Board hearing.

25 The 2003 regulations assumed that, regardless of

1 the certification pathway selected, equivalent emissions  
2 reductions would be achieved.

3 The adopted regulations represented a compromise  
4 between ARB and industry by allowing both performance and  
5 design certification, and were the first ARB regulations  
6 ever to allow a design certification option.

7 For performance certification, a manufacturer  
8 assembles the evaporative system and tests the assembled  
9 unit in a SHED to ensure its diurnal emissions are below  
10 the emission standard. When using the design  
11 certification option, equipment manufacturers use  
12 individually certified fuel lines, fuel tanks, and carbon  
13 canisters to assemble the evaporative system, but do not  
14 measure the emissions of the assembled unit. Current  
15 rules allow them to assume the assembled equipment will  
16 meet the diurnal emission standards. The validation  
17 studies were designed to evaluate this assumption.

18 --o0o--

19 AIR POLLUTION SPECIALIST DILBECK: The validation  
20 studies were designed together by ARB and industry as a  
21 condition of allowing the design certification option, and  
22 were defined in the 2003 regulations. Diurnal emissions  
23 of SORE sold in California were measured at ARB and  
24 industry laboratories and compared to the emission  
25 standards.



1           The first validation study included model year  
2 2008 through 2010 equipment, and was intended to gauge  
3 compliance with the emission standards early in their  
4 implementation.

5           The second validation study included model year  
6 2013 through 2015 equipment, and was intended to gauge  
7 compliance after implementation of the emission standards  
8 was complete.

9           Forty-nine design certified and ten performance  
10 certified units were tested, for a total of fifty-nine.  
11 The goals of the validation studies were to assess whether  
12 the expected emissions reductions were being achieved and  
13 whether ARB should continue to allow design certification.  
14

15                           --o0o--

16           AIR POLLUTION SPECIALIST DILBECK: We compared  
17 compliance rates reported by manufacturers with those  
18 observed by ARB during the validation studies. All of the  
19 equipment tested was expected to meet the diurnal emission  
20 standards based on certification data submitted to ARB by  
21 manufacturers. However, only 40 percent of the  
22 performance-certified engines tested for the validation  
23 study in 2013 through 2015 were compliant, and only half  
24 of the design-certified engines passed. From this  
25 comparison, it looks like design-certified units did

1 better overall than performance-certified units.

2 But if we compare the corresponding emission  
3 rates, as shown here, we see something else. The test  
4 results for performance-certified units in the 2013  
5 through 2015 validation study were on average 8 percent  
6 higher than the emission standard, and design-certified  
7 units were on average 117 percent above the emission  
8 standard.

9 So while performance-certified equipment failed  
10 more often in these years of the validation study, the  
11 emissions impact from failing design-certified equipment  
12 is much greater because it fails by a larger margin,  
13 perhaps because design-certified equipment does not  
14 account for all potential sources of emissions.

15 The data suggest that gross emitters, all of  
16 which were design certified, produce approximately ly 93  
17 percent of excess emissions.

18 Based on the results of the validation study,  
19 it's clear that ARB must have the ability to take  
20 enforcement action against manufacturers of failing  
21 performance- and design-certified equipment, and adopt  
22 measures to mitigate the emissions impact attributable to  
23 design-certified equipment.

24 --o0o--

25 AIR POLLUTION SPECIALIST DILBECK: It is clear

1 from the validation study results that neither performance  
2 nor design certification is enabling ARB to meet its  
3 overall emission reduction goals for SORE, and the  
4 emissions impact of failing design-certified engines is  
5 much greater. The Board must now decide how to respond to  
6 these results.

7           The first option is to eliminate design  
8 certification and make the necessary changes to facilitate  
9 enforcement of the diurnal emission standards. This would  
10 provide the greatest assurance that the expected emissions  
11 reductions are being achieved. But it would also force  
12 all manufacturers, even those who have demonstrated their  
13 ability to produce design-certified engines that comply  
14 with the diurnal emission standards, to use performance  
15 certification for their greater than 80 cc engines.

16           The second option is to retain design and  
17 performance certification with improvements and add  
18 accountability by requiring all greater than 80 cc engines  
19 to comply with the diurnal emission standards.

20           The third option is to make no changes to the  
21 certification options and continue to allow manufacturers  
22 to produce engines with no regard for their total  
23 emissions.

24           Staff recommends the second option because it  
25 does not punish the good actors, and gives ARB the ability

1 to enforce the emission standards.

2 --o0o--

3 AIR POLLUTION SPECIALIST DILBECK: ARB must be  
4 able to address noncompliance to ensure emission reduction  
5 goals are achieved. The biggest challenge ARB faces in  
6 addressing noncompliance is that the diurnal emission  
7 standards cannot be enforced for design-certified engines.  
8 But there are challenges in addressing noncompliance of  
9 performance-certified engines too.

10 As I mentioned previously, a manufacturer tests  
11 one engine in a SHED for performance certification and  
12 submits the data to ARB in a certification application.  
13 Once certified, ARB may conduct compliance testing.  
14 However, compliance testing requires five engines compared  
15 to the one engine required for certification. This  
16 imbalance between certification and compliance testing  
17 limits the amount of compliance testing ARB can perform  
18 with existing resources. The imbalance is made worse by a  
19 provision that allows engines to have emissions up to 50  
20 percent above the emission standard before they fail a  
21 compliance test.

22 --o0o--

23 AIR POLLUTION SPECIALIST DILBECK: Another item  
24 requiring regulatory action is the current certification  
25 test fuel, which does not reflect gasoline currently sold

1 in California. When the SORE evaporative emissions  
2 regulations were adopted in 2003, Phase 1 California  
3 reformulated gasoline sold at California service stations  
4 contained no ethanol.

5 From 2004 through 2009, Phase 2 reformulated  
6 gasoline contained 6 percent ethanol; and since 2010,  
7 Phase 3 reformulated gasoline has contained 10 percent  
8 ethanol.

9 Fuel containing ethanol has a greater tendency to  
10 permeate fuel tanks and fuel hoses than fuel without  
11 ethanol. So the use of E10 fuel can increase evaporative  
12 emissions.

13 Since the regulations went into effect in 2006,  
14 ARB's SORE certification test fuel has contained no  
15 ethanol. As a result, the fuel currently used for SORE  
16 evaporative emission certification testing is no longer  
17 representative of the current fuel used in SORE statewide,  
18 potentially leading to an underestimate of emissions.

19 --o0o--

20 AIR POLLUTION SPECIALIST DILBECK: The fourth  
21 issue staff has identified that requires regulatory action  
22 is the difference in ARB and U.S. EPA fuel tank testing  
23 requirements. Here we compare those requirements, which  
24 are similar but result in separate testing and higher  
25 costs for manufacturers. Differences between the

1 requirements include the number of tanks that must be  
2 tested, preconditioning temperature, the test fuel, and  
3 the durability tests. Another difference is that fuel cap  
4 emissions have to be considered for U.S. EPA either by  
5 testing fuel cap -- fuel tanks with fuel caps, testing  
6 fuel caps separately, or using a default permeation rate  
7 for the fuel caps. But fuel cap emissions are not  
8 currently accounted for in ARB certification.

9 --o0o--

10 AIR POLLUTION SPECIALIST DILBECK: Now we will  
11 walk through these four elements of staff's proposal,  
12 mentioned previously, to address the issues identified  
13 with the current regulations.

14 --o0o--

15 AIR POLLUTION SPECIALIST DILBECK: Staff believes  
16 the most important provision in the proposed amendments is  
17 requiring all SORE with engine displacement greater than  
18 80 cubic centimeters, including design-certified engines,  
19 to comply with the existing diurnal emission standards.  
20 Adoption of this provision will ensure that ARB can  
21 uniformly enforce diurnal emission standards for all  
22 greater than 80 cc SORE under its authority in California.

23 Staff's proposal will retain the two  
24 certification pathways, preserving the flexibility that  
25 manufacturers desire to choose the method by which they

1 certify their engines will meet the diurnal emission  
2 standards. The proposal will also maintain the existing  
3 diurnal emission standards.

4 Bond requirements are needed for manufacturers  
5 who do not have sufficient long-term U.S. assets to ensure  
6 that ARB can collect penalties when noncompliant  
7 evaporative families are identified, even if the  
8 manufacturer stops selling SORE in California or goes out  
9 of business. Requiring all greater than 80 cc SORE to  
10 meet the diurnal emission standards, together with the  
11 strength and enforcement provisions I will discuss next,  
12 will greatly increase compliance with the diurnal emission  
13 standards.

14 --o0o--

15 AIR POLLUTION SPECIALIST DILBECK: Staff proposes  
16 to strengthen the current enforcement provisions by using  
17 SHED testing to determine compliance for all greater than  
18 80 cc SORE. The proposal will expedite compliance testing  
19 in a number of ways. It will correct the imbalance  
20 between certification and compliance testing requirements  
21 by allowing ARB to test one engine for compliance. ARB  
22 would retest an engine if compliance testing results  
23 exceed the diurnal emission standard by less than 5  
24 percent. If the engine passes the retest, those results  
25 will replace the first test. However, if the engine fails

1 a second time, it will trigger a process requiring the  
2 manufacturer to test five engines randomly selected by  
3 ARB, after which a compliance determination will be made.

4 Staff also proposes to expedite compliance  
5 testing by omitting the 140-day preconditioning period  
6 prior to testing.

7 These time-saving measures, along with the  
8 screening program staff will begin, will allow ARB to  
9 conduct compliance testing on a greater number of  
10 evaporative families with the same amount of resources,  
11 identify noncompliant evaporative families more quickly,  
12 and halt excess emissions from engines that do not meet  
13 the diurnal emission standards.

14 --o0o--

15 AIR POLLUTION SPECIALIST DILBECK: One of the  
16 guiding principles for staff while developing a proposal  
17 to address the issues with the current regulations has  
18 been ensuring the proposed amendments will enable the  
19 expected emissions reductions to be achieved without  
20 imposing unnecessary costs on compliant manufacturers.

21 While we have said much about the failures  
22 observed in the validation studies, approximately 50  
23 percent of the manufacturers represented in the validation  
24 studies had compliant equipment. The proposed amendments  
25 minimize additional testing costs for these manufacturers



1 and retain the two certification pathways to allow  
2 compliant manufacturers flexibility when certifying their  
3 evaporative families.

4 Compliant manufacturers can also carry over data  
5 for an evaporative family from one year to the next with  
6 Executive Officer approval when the family has not  
7 changed. This allows for faster recertification and  
8 reduces testing costs.

9 --o0o--

10 AIR POLLUTION SPECIALIST DILBECK: Staff proposes  
11 to require certification test fuel that contains 10  
12 percent ethanol beginning in model year 2020. This will  
13 provide three years of lead time, which is consistent with  
14 other ARB regulations.

15 Certification test fuel containing 10 percent  
16 ethanol is already required for exhaust certification  
17 starting in model year 2020. So beginning in 2020, the  
18 certification test fuel for all SORE emissions will be  
19 consistent with Phase 3 gasoline currently sold at  
20 California service stations.

21 --o0o--

22 AIR POLLUTION SPECIALIST DILBECK: Because fuel  
23 that contains ethanol may produce higher diurnal emissions  
24 than fuel that does contain ethanol, staff tested SORE  
25 purchased at retail stores in 2014 using the proposed E10

1 certification test fuel. The equipment includes various  
2 types of lawn and garden equipment and generators.  
3 Seventeen greater than 80 cc units were tested, including  
4 some model year 2013 and 2014 units from the validation  
5 studies. Overall, 13 of the 17 units met the diurnal  
6 emission standards.

7 Not surprisingly, passing rates for  
8 performance-certified equipment were higher than for  
9 design-certified equipment. These test results suggest  
10 both the requirement to use E10 fuel for certification  
11 testing, and the proposed phase-in period for its use are  
12 reasonable.

13 --o0o--

14 AIR POLLUTION SPECIALIST DILBECK: To resolve the  
15 differences between ARB's and U.S. EPA's fuel tank test  
16 procedures, staff proposes an optional streamlined fuel  
17 tank testing process that could allow one set of fuel  
18 tanks to be tested for certification by both ARB and U.S.  
19 EPA.

20 This optional streamlined process would combine  
21 elements of the two sets of requirements to ensure there  
22 is no decrease in stringency versus testing for either  
23 ARB or U.S. EPA.

24 This proposed process could save both time and  
25 money for fuel tank manufacturers, and will better

1 represent real-world emissions from SORE fuel tanks.

2 --o0o--

3 AIR POLLUTION SPECIALIST DILBECK: There will be  
4 direct costs associated with the proposed amendments for  
5 manufacturers. Individual tests may cost more and  
6 additional testing will be required under the proposed  
7 amendments.

8 Other costs associated with certification are  
9 those for securing bonds. Staff estimates the maximum  
10 retail price increase per unit to be \$3.68, assuming all  
11 costs over five years are averaged across all engines.

12 This price increase also includes manufacturer,  
13 distributor, and retailer markups totaling 75 percent on  
14 top of the direct costs to manufacturers.

15 In terms of a percent increase versus the current  
16 retail price, an increase of \$3.68 would range from a 0.1  
17 percent increase for a \$5,000 commercial zero-turn riding  
18 mower to a 5.3 percent increase for a low-end \$70 string  
19 trimmer.

20 The proposed amendments will capture the  
21 originally projected evaporative emissions reductions from  
22 the 2003 regulations through increased compliance,  
23 resulting in environmental and health benefits.

24 --o0o--

25 AIR POLLUTION SPECIALIST DILBECK: The proposed

1 amendments are the result of extensive discussion between  
2 ARB staff and stakeholders. The amendments being proposed  
3 today reflect eight years of collaborative ARB-industry  
4 testing and over a year of public rule development. Staff  
5 held two public workshops to discuss the proposed  
6 amendments, formed a working group to discuss emissions  
7 mitigation opportunities, and met with individual  
8 manufacturers and trade associations on more than 20  
9 occasions to share the validation study results and  
10 discuss staff's proposal and their ideas and concerns.

11           Throughout the rulemaking process, industry has  
12 expressed numerous concerns with staff's proposal. A  
13 number of ideas from industry are incorporated in the  
14 proposed amendments, and staff made numerous changes to  
15 the proposal presented at the most recent workshop based  
16 on concerns expressed by manufacturers and trade  
17 associations.

18           Despite these changes, industry continues to have  
19 concerns with staff's proposal, and have asked staff to  
20 make additional changes, including the removal of key  
21 elements of the proposal. Staff was proposing 15-day  
22 changes to further accommodate industry's requests, but  
23 must retain the proposed requirement for all greater than  
24 80 cc SORE to meet the diurnal emission standards.

25           The accountability this requirement provides is

1 critical for achieving not only expected emissions  
2 reductions, but also further reductions in the future.

3           Industry may testify today to express how  
4 difficult it will be for them to comply with staff's  
5 proposal, and we know those concerns are sincere.  
6 However, we have to ensure compliance with existing  
7 emission standards before we can pursue further reductions  
8 from this category.

9   --o0o--

10           AIR POLLUTION SPECIALIST DILBECK: Staff received  
11 approximately 46 suggestions for changes to the proposal  
12 from industry during the 45-day comment period, and had  
13 nine meetings with industry in the past several weeks to  
14 discuss their suggestions. Staff proposes to make changes  
15 to the proposal or provide clarification based on 40 of  
16 industry's 46 suggestions. The proposed 15-day changes  
17 include modification to the requirements for fuel caps,  
18 fuel lines, and carbon canister purging; editorial  
19 changes; and clarification of elements of staff's  
20 proposal. These changes will reduces costs for  
21 manufacturers, resulting in an estimated \$2.00 per unit  
22 retail price increase.

23           Staff also proposed to make changes to the  
24 reporting requirements to include quarterly sales reports  
25 for zero-emission SORE equipment, quarterly sales by

1 engine family and fuel tank volume for spark-ignited  
2 engines, and component and equipment manufacturers'  
3 quality assurance and quality control plans.

4 Staff believes the 15-day changes outlined here  
5 will improve aspects of the proposed amendments and reduce  
6 costs without hindering ARB's ability to ensure emissions  
7 reductions are achieved.

8 --o0o--

9 AIR POLLUTION SPECIALIST DILBECK: Because of  
10 California's ongoing air quality challenges, additional  
11 emissions reductions will be needed from SORE beyond those  
12 projected in 2003.

13 --o0o--

14 AIR POLLUTION SPECIALIST DILBECK: ARB's Mobile  
15 Source Strategy, released in May of this year, outlines  
16 several targets to help California achieve its air  
17 quality, climate, and health risk goals. Those targets  
18 include an 80 percent reduction in hydrocarbon and oxides  
19 of nitrogen emissions from all mobile sources in the South  
20 Coast Air Basin by 2031, and a 40 percent reduction of  
21 greenhouse gas emissions by 2030.

22 --o0o--

23 AIR POLLUTION SPECIALIST DILBECK: SORE are a  
24 significant source of ROG and NO<sub>x</sub> emissions, as shown in  
25 this chart. In 2016, SORE emissions are about 73 percent

1 of those from light-duty passenger cars in the South Coast  
2 Air Basin. While emissions from passenger cars are  
3 expected to decrease as a result of existing regulations,  
4 including California's Advanced Clean Cars regulation,  
5 SORE emissions are not expected to change significantly  
6 without new, tighter emission standards. SORE emissions  
7 are projected to exceed those from passenger cars in the  
8 early 2020s and to be about 2.3 times those from passenger  
9 cars in 2031.

10 --o0o--

11 AIR POLLUTION SPECIALIST DILBECK: The amendments  
12 being proposed today are needed to increase compliance  
13 with existing evaporative emission standards. Meanwhile,  
14 staff has begun acquiring engines from manufacturers for  
15 compliance testing. There are currently six evaporative  
16 families being tested or scheduled for testing.

17 Staff will also begin an active screening program  
18 to identify gross emitters, and will begin streamlined  
19 compliance testing when the amendments become effective.

20 --o0o--

21 AIR POLLUTION SPECIALIST DILBECK: There is  
22 significant work that remains to further reduce exhaust  
23 and evaporative emissions from SORE beyond the levels  
24 expected based on the existing standards.

25 Staff believes a transition to quiet,

1 zero-emission SORE equipment, like that shown here and in  
2 the showcase outside the auditorium, will be an essential  
3 part of meeting the hydrocarbon and NO<sub>x</sub> emission reduction  
4 goal in the Mobile Source Strategy and the ambitious new  
5 greenhouse gas emissions target set by Senate Bill 32.

6 Staff will perform a technology assessment to  
7 study the availability, cost, and performance of  
8 zero-emission equipment as compared to spark-ignited  
9 equipment, building on an earlier assessment conducted by  
10 staff in 2004, and using information garnered from lawn  
11 and garden equipment exchange programs conducted by air  
12 districts over the past 20 years.

13 Staff will return to the Board in 2018 to report  
14 on this technology assessment.

15 --o0o--

16 AIR POLLUTION SPECIALIST DILBECK: Staff will  
17 also return to the Board to propose amendments to achieve  
18 the needed emissions reductions from SORE. Staff will use  
19 the findings of the zero-emissions technology assessment,  
20 an updated population and activity and emissions  
21 inventory -- excuse me -- an updated population and  
22 activity survey and emissions inventory, and a technology  
23 assessment for spark-ignited engines to determine whether  
24 cleaner spark-ignited engines can contribute significantly  
25 to achieving necessary emissions reductions from SORE.



1 Staff will begin -- or will develop tightened exhaust and  
2 evaporative emissions standards and develop strategies to  
3 ensure a significant increase in introduction of  
4 zero-emission SORE equipment in California.

5 Staff are committed to return to the Board by  
6 2020 with these amendments.

7 --o0o--

8 AIR POLLUTION SPECIALIST DILBECK: To summarize  
9 today's presentation, the proposed amendments will  
10 increase accountability for manufacturers to produce  
11 engines that are compliant with current SORE evaporative  
12 emission standards. Increased compliance testing by ARB  
13 will ensure that SORE sold in California are compliant  
14 with the standards, and the updated certification test  
15 fuel will reflect gasoline currently sold in California.

16 Additionally, the proposed amendments will not  
17 unfairly penalize manufacturers currently producing  
18 emissions-compliant SORE. The costs of the proposed  
19 amendments are expected to be modest, with an estimated  
20 retail price increase of \$2.00 per unit.

21 Therefore, staff recommends adoption of the  
22 proposed amendments with 15-day changes.

23 CHAIR NICHOLS: Okay. Thank you.

24 We have a list of 15 witnesses who signed up on  
25 this item. So are we projecting it on the screen? I know

1 sometimes we do, so people can see where they are on the  
2 list.

3 Henry Hogo is first. And we have a couple people  
4 who've asked to organize a presentation and yield time.  
5 So we'll do that when we get there.

6 Mr. Hogo.

7 MR. HOGO: Good morning, Chair Nichols and  
8 members of the Board. Henry Hogo with the South Coast Air  
9 Quality Management District.

10 The South Coast District staff is in full support  
11 of the proposed amendments to the -- and I have to say  
12 small off-road engine because we use SORE a lot.

13 (Laughter.)

14 MR. HOGO: As you're aware, we're focused on NO<sub>x</sub>  
15 reductions to meet air quality standards. However, in our  
16 analysis for attainment of the ozone standards, we still  
17 need some VOC reductions in order to get there. But more  
18 importantly, we're -- we want to continue to see reduction  
19 in gasoline evaporative emissions, because there's air  
20 toxics exposure to the public and continue to see that.

21 When we had our air measurements program as part  
22 of our multiple air toxics exposure study, we found that  
23 benzene and butadiene, two of the key components of  
24 gasoline emissions, are about 16 percent of the total risk  
25 in the South Coast Basin. So it's very important that we

1 see further reduction from VOC emissions.

2           And I know the industry is asking that you  
3 consider this item as part of the 2018 proposed set of  
4 amendments to the overall regulation. Because of the  
5 first-line exposure we believe that we need to adopt these  
6 amendments today. So we urge your board to adopt the  
7 regulations -- or proposed amendments as they're proposed  
8 today.

9           And we look forward to working with you on the  
10 future regulations.

11           Thank you.

12           CHAIR NICHOLS: Thank you.

13           Mr. Mabe.

14           MR. MABE: Good morning, Chair Nichols and ARB  
15 Board. My name is Daniel Mabe, and I am the founder and  
16 president of the American Green Zone Alliance. And we are  
17 in support of 16-10-2.

18           I just want to introduce who the American Green  
19 Zone Alliance is. Our mission is to reduce carbon  
20 emissions from the grounds maintenance industry and  
21 improve working conditions for the landscape maintenance  
22 workforce and surrounding communities. AGZA helps  
23 transition traditional carbon-powered grounds maintenance  
24 operations to zero and near-zero operations.

25           A few ways that we do this: We advocate for

1 policies and practices that address the many health and  
2 environmental issues of small off-road engines; we train,  
3 educate, and accredit grounds crews and managers as  
4 AGZA-accredited service providers; and we also partner  
5 with private and city property owners to establish  
6 dedicated areas maintained zero- to near-zero-emission  
7 operations as certified green zones.

8           Most recently, we celebrated the creation of the  
9 nation's first AGZA green zone city down in South  
10 Pasadena. This is dedicated all-electric, zero emissions  
11 for routine maintenance, and it's a total of 41  
12 serviceable acres.

13           And we are also putting the finishing touches on  
14 the nation's first AGZA-certified golf course using  
15 electric equipment; and then ARB's own Tier 4 compliant  
16 tractor options.

17           We just want everyone to know that the equipment  
18 out there is actually up to the task of scaling to  
19 multi-acre operations.

20           AGZA applauds the advances in batteries and  
21 industrial design that parallels the electric car industry  
22 from all of the manufacturers represented here today. But  
23 most notably we've been able to work with all-electric  
24 manufacturers such as Mean Green, Green Works, and have  
25 done some really good work with the Stihl equipment for

1 our dedicated green-zone areas. We can definitely confirm  
2 that the latest battery-electric tools have commercial  
3 power, performance, and run times.

4 We also want to introduce a technology working  
5 with an aerospace company. It's a software that actually  
6 monitors the battery, motor, power, speeds, and run times  
7 of the equipment. It also tracks in real-time emission  
8 reductions and will give you a readout of how much it  
9 costs to operate the equipment on that very same day.

10 We hope that this technology will be adopted some  
11 day to incentivize participation in the California  
12 cap-and-trade economy. We are very honored to be here and  
13 we really thank you for your dedication to zero-emission  
14 and near-zero-emission technology for the grounds  
15 maintenance industry.

16 Thank you.

17 CHAIR NICHOLS: Thanks. And thank you for  
18 telling us about the work of your organization. It's very  
19 interesting.

20 Gregg Knott, representing the Association of  
21 Outdoor Power Equipment, is next up. And you are also  
22 speaking on behalf of at least two other people, I guess.  
23 So --

24 MR. KNOTT: That's correct, Madam Chair.

25 CHAIR NICHOLS: -- I assume you're asking for all

1 of their time. So that would be nine whole minutes if you  
2 wish to use it.

3 MR. KNOTT: Yes, Ma'am, they're prepared to yield  
4 their time, if that's okay.

5 CHAIR NICHOLS: Okay. Thank you.

6 MR. KNOTT: Thank you.

7 Good morning, Madam Chair and Board members.  
8 Thank you for the opportunity to present these comments be  
9 today on behalf of OPEI. My name's Gregg Knott.

10 OPEI is an international trade association  
11 representing more than 100 manufacturers and their  
12 suppliers of small spark-ignited engines and outdoor power  
13 equipment.

14 Outdoor power equipment is ubiquitous in America  
15 households and is an important part of the California  
16 economy. As manufacturers of SORE powered equipment, OPEI  
17 members will be directly affected by the proposed  
18 amendments. In addition to these comments, OPEI strongly  
19 supports the comments of the Truck & Engine Manufacturers  
20 Association.

21 OPEI is deeply concerned with today's proposed  
22 amendments for a number of reasons.

23 Foremost, procedurally the rulemaking is  
24 deficient because the record lacks the required economic  
25 impact analysis and assessment for the proposed compliance

1 strategy changes. Specifically the record fails to  
2 account for an estimated 64 million to 224 million related  
3 to new SHED testing due to increased stringency directly  
4 related to compliance being determined by diurnal  
5 performance testing and limits.

6           Additionally, OPEI is concerned that the proposal  
7 looks to eliminate stand-alone design-based certification  
8 and compliance strategy that the majority of SORE  
9 equipment manufacturers rely on. OPEI is concerned that  
10 the conclusions, support, and rationale for the proposal,  
11 as outlined in the September staff report, are rooted in  
12 widely variable and unreliable test data and based largely  
13 on unrepresentative sample size.

14           In light of these new concerns, OPEI requests the  
15 Board to postpone a decision on today's proposed  
16 amendments until a new required cost analysis can be  
17 completed, a new validation study can be commissioned with  
18 more reliable data and more representative sample  
19 population, and the new data is applied to the off-road  
20 model in order to understand the effectiveness of today's  
21 regulations in meeting ARB's overall air quality goals.

22           In 2015, 84 manufacturers certifying more than  
23 600 greater than 80 cc evaporative families relied on  
24 design-based certification, due largely to the  
25 non-integrated nature of their products, the cost

1 associated with diurnal emissions testing, and low  
2 California production volumes for equipment in this  
3 category.

4 Contrary to ARB staff's beliefs that most  
5 certification will be conducted by engine manufacturers,  
6 and engine manufacturers will most likely supply engines  
7 with complete fuel systems to equipment manufacturers,  
8 thereby saving equipment manufacturers testing costs, only  
9 20 manufacturers are SHED testing certified any product to  
10 the performance-based standard. In other words, more than  
11 75 percent of manufacturers rely exclusively on the  
12 design-based certification strategy without SHED testing  
13 for a small percentage of the SORE population.

14 In similar situations, California and federal  
15 cases have ruled that changes to the compliance  
16 enforcement procedures made the existing certification  
17 standards dramatically more stringent. This is the case  
18 today. Today's proposal is a major change, with strategy  
19 reconsiderations and significant cost impacts.

20 Our complete legal analysis has been prepared by  
21 OPEI counsel and it's included in OPEI's formal written  
22 comments.

23 In 2003 industry estimated the costs for an  
24 individual manufacturer to build and operate a SHED for  
25 seven years was \$3.5 million. ARB staff deemed the



1 absolute cost reasonable. Therefore, if 64 manufacturers  
2 invested in SHEDs, industry costs would be at least \$224  
3 million.

4 In September 2016, the staff report, ARB staff  
5 estimated that eliminating the design-based certification  
6 and compliance strategy would require ten additional  
7 SHEDs, at least -- at test labs and would cost industry  
8 more than \$67 million.

9 However, these costs were not included in the  
10 cost impact analysis. In order to meet its regulatory  
11 requirements, ARB must analyze these costs across the less  
12 than 19 percent of the SORE population that the proposed  
13 changes would impact.

14 ARB staff proposed amendments rely largely on the  
15 validation study results. However, OPEI has identified  
16 several major concerns with the validation study that  
17 undermine the ability to make a broad-based compliance  
18 determination. Easily missed test-to-test variations such  
19 as the application of an auxiliary fan during testing and  
20 equipment handling throughout tests negatively influenced  
21 test results and produced widely variable data with high  
22 standard deviations.

23 Additionally the sample population was largely  
24 unreflected of California's SORE population or evaporative  
25 emissions inventory distribution.

1           2010 test unit 5AP3 was reported to have resulted  
2 in evaporative emissions ranging from 3.2 to 15.7 versus  
3 the 1.25 grams per day standard. Upon learning the  
4 results and the use of the auxiliary fan to circulate air  
5 in a SHED, the equipment manufacturer sent the test unit  
6 to a third-party lab for investigation. Working with the  
7 lab, the manufacturer was able to confirm that the fan  
8 position highly influenced the evaporative emissions  
9 results, duplicating ARB's test results with the fan  
10 blowing across the unit, but also duplicating certified  
11 limit values with the fan blowing underneath the unit when  
12 the unit was elevated.

13           ARB determined -- or it was determined that when  
14 the carburetor was exposed to the fan's constant air  
15 velocity, a Venturi effect drew fuel and vapors from the  
16 carburetor, resulting in large test-to-test standard  
17 deviation and artificially high evaporative emissions.

18           Coincidentally, the same model was selected by  
19 ARB for a five-piece compliant test shortly thereafter and  
20 was found compliant without the fan.

21           Unfortunately, no mention of the impact of the  
22 axillary fan was made and only the original validation  
23 study test results were reported in the 2016 staff report.  
24 Based on widely variable test results and large standard  
25 deviations for tests conducted by ARB, OPEI remains

1 concerned that the use of the fan throughout ARB's 2010  
2 validation study artificially and negatively influenced  
3 results.

4           Additionally -- our additional test concerns are  
5 outlined in OPEI's formal written comments.

6           Of additional concern, the validation study data  
7 set was highly unrepresentative of SORE population in  
8 inventory distributions. Despite accounting for less than  
9 2 percent of the 2016 inventory model, generators  
10 represented 42 percent of units tested. Other units,  
11 which would include generators, estimated to be 4 percent  
12 of the 2016 population and 13 percent of the inventory  
13 distribution, yet accounted for 64 percent of the units  
14 tested.

15           Additionally, ARB's proceeding E10 study, the  
16 most statistically reliable study to date, suggested 100  
17 percent compliance with walk-behind mowers and less than  
18 80 cc products, which account for greater than 81 percent  
19 of the SORE population.

20           In light of these new findings, ARB must  
21 commission a new validation study in order to determine if  
22 California's air quality goals are being met or if any  
23 changes are needed to the regulation order, test  
24 procedures and certification procedures.

25           Before I close I would like to take just a moment

1 to discuss the idea of the strategies being equivalent.  
2 The point of the validation study is clear, to confirm  
3 that the performance-based and design-based options are  
4 achieving ARB's overall air quality goals, not to audit  
5 units against the performance-based certification limit  
6 and determine if the strategies are equivalent in that  
7 nature. This could only be done by analyzing reliable  
8 data against the emissions model.

9 In order to appreciate the difference, I wanted  
10 to point out a few details about the emissions model.  
11 Number one, the emissions model accounts for liquid  
12 leakers. When testing and developing the model, ARB  
13 observed gasoline leaks in older units. ARB reported that  
14 lawn mowers and fuel leaks are not uncommon. Therefore  
15 staff found no compelling reason to exclude leaking units.

16 Hence, leakage is reflected in the model and  
17 leaking units cannot be discounted for the purpose of  
18 determining if SORE are meeting the overall emissions  
19 goals. This is clear in the case of walk-behind mowers,  
20 which have a certification limit of 1.0 but a model limit  
21 of 1.6.

22 Therefore, the model is not directly reflective  
23 of the performance-based certification limit.

24 Additionally, when developing the model, staff  
25 found generator test results to have high variability. As

1 a result, staff simply averaged the results across the  
2 new -- may I just summarize?

3 CHAIR NICHOLS: Finish your sentence at least.

4 MR. KNOTT: In closing, industry's been committed  
5 to working with ARB throughout the process, meeting with  
6 staff on more than ten occasions.

7 OPEI appreciates staff efforts, and is committed  
8 to working with industry and committed to working with ARB  
9 staff. This is especially true for the less than 80 cc  
10 category where we have found common ground on most issues.  
11 Thank you, staff.

12 However, in the absence of a complete cost  
13 analysis, in light of new concerns surrounding the  
14 validation study, several challenges remain with the  
15 proposed amendments and more time is needed.

16 We ask the Board to postpone a decision on the  
17 SORE evaporative emissions rulemaking today.

18 CHAIR NICHOLS: Okay. That's a pretty  
19 comprehensive set of criticisms. Obviously I will allow  
20 staff to respond later. But we'll take this under  
21 consideration at the moment and then we'll have some  
22 responses later.

23 Thank you.

24 MR. KNOTT: Thank you, Madam Chair.

25 MR. GAULT: Good morning. I'm Roger Gault with

1 the Truck & Engine Manufacturers Association, otherwise  
2 known as EMA.

3           EMA is a trade association that represents the  
4 world's leading manufacturers of non-handheld small  
5 spark-ignition engines. And more specifically, EMA's  
6 members are the manufacturers of engines that CARB  
7 regulates directly or indirectly through their equipment  
8 manufacturer customers under the SSI, as opposed to SORE,  
9 evaporative regulation for engines greater than 80 CCs.

10           Accordingly, EMA and its members have a direct  
11 and significant stake in the regulatory proposal at issue.

12           EMA strongly supports the comments provided by  
13 OPEI for engines less than or equal to 80 CCs not included  
14 in EMA's comments and OPEI's comments for engines greater  
15 than 80 CCs covered by both organizations.

16           EMA has worked with CARB staff and the Board  
17 since the origin of CARB regulations for SSI engines,  
18 including the original evaporative regulations being  
19 revised in this rulemaking.

20           EMA has three areas of significant concern with  
21 the proposed regulation and several technical concerns,  
22 all of which are identified in the written comments  
23 submitted earlier this week.

24           Despite EMA's efforts to work with CARB staff,  
25 the three areas of significant concern remain, and EMA

1 strongly requests the Board reject staff's proposed  
2 regulatory changes until such time as those concerns can  
3 be addressed.

4           EMA supports CARB's objective to align test fuel  
5 utilized for evaporative compliance with test fuel  
6 utilized for exhaust emission compliance. That said, the  
7 majority of the changes being proposed under the SSI  
8 evaporative regulation amendments are ill-conceived  
9 attempts to improve compliance. Many of the changes  
10 proposed will shift manufacturers' R&D focused away from  
11 the development of products meeting future regulatory  
12 requirements to develop products that meet the proposed  
13 regulatory changes.

14           The three major categories of change are:

15           The certification test fuel change;

16           The certification process and test methods  
17 associated with demonstrating compliance; and

18           The changes to the compliance determination.

19           First, the change to the E10 certification test  
20 fuel results in a significant standard stringency impact.  
21 EMA members recommend the applicable permeation and  
22 diurnal emission limits be increased 20 percent to adjust  
23 the standard stringency for test fuel changes based on  
24 CARB's test data that demonstrates up to a 50 percent  
25 increase.

1           Secondly, the change is a certification  
2 procedure, and related test methods are claimed to improve  
3 compliance with diurnal emission standards. However,  
4 there's no supporting information and in some cases  
5 counter-information used to justify the proposed changes.

6           One fundamental assumption made by the staff is  
7 that the compliance rate will improve by requiring  
8 directly or indirectly testing by the SHED performance  
9 option. However, the compliance rates for both options in  
10 place today were similar in the most recent validation  
11 study.

12           In addition, changes being proposed to the test  
13 methods have not been validated or utilized for any  
14 testing that is utilized in any other data reported by the  
15 staff.

16           Third, the compliance determination changes  
17 proposed significantly reduce the burden on the agency but  
18 result in significant potential for manufacturers to be  
19 deprived of due process. CARB staff indicates the Initial  
20 Statement of Reasons: A significant increase in  
21 penalties, recall obligations, and future certification  
22 testing burden. But does not address these costs in the  
23 regulatory analysis.

24           The process associated with CARB testing one unit  
25 and declaring an Executive Order revoked, resulting in



1 fines, recall, and significant increases in certification  
2 testing, is both unfair and unprecedented.

3 At a minimum, the information the Executive  
4 Officer must consider associated with suspension or  
5 revocation of an Executive Order off -- Executive Order  
6 that provides due process is required.

7 EMA and our member companies have and will  
8 continue to work with CARB staff and the Board to achieve  
9 California's air quality goals. But that needs to be a  
10 cooperative process involving both parties.

11 Also, in the staff presentation is the first time  
12 we've heard of newly announced reporting requirements on a  
13 quarterly basis for product that apparently is not  
14 currently regulated or documented with ARB. And we wonder  
15 how this will possibly be accomplished.

16 I'm happy to answer any questions the Board may  
17 have regarding EMA's written comments or my testimony here  
18 today.

19 CHAIR NICHOLS: And what are you talking about  
20 with respect to this quarterly report on something that  
21 didn't --

22 MR. GAULT: In the staff PowerPoint they talked  
23 about quarterly reporting of zero-emission equipment  
24 that's not currently -- there's no certification process,  
25 there's no reporting process. So how are you going to get

1 those reports -- and all of the other reports that they  
2 talk about are currently submitted annually for engines.  
3 And to change it to quarterly is a big deal.

4 CHAIR NICHOLS: I see. I understand. Thank you.

5 MR. GAULT: Sure.

6 CHAIR NICHOLS: Okay. I guess we go -- it would  
7 be -- Ms. Somorai would be next.

8 Yes. Hi.

9 MS. SOMORAI: Like to say good morning to the  
10 Board and to the ARB staff.

11 First off, thank you for giving me the  
12 opportunity to speak today. My name is Sarah Somorai and  
13 I'm the senior certification engineer at American Honda  
14 Motor Company for small off-road engines.

15 Honda is a member of EMA and OPEI and we are in  
16 support of both their comments.

17 Honda is the largest manufacturer of engines  
18 worldwide. In the U.S. alone, we sell over 1 million  
19 small spark-ignited engines, and we sell to over 1,000  
20 equipment manufacturers which are using a variety of  
21 applications.

22 My comments are in regards to the ARB proposed  
23 amendments to the diurnal emission test procedure, TP902  
24 section 4.

25 We have been engaged with ARB staff since

1 September of last year starting with the validation study  
2 results, and soon thereafter with the 2016 proposed  
3 amendments. The draft proposal was released to industry  
4 May of this year.

5 We greatly appreciate ARB staff's engagement with  
6 industry. However, we do still have some concerns.

7 In the diurnal test procedure, the carbon  
8 canister purge requirement has been removed, which has  
9 caused concern with Honda. By removing the purge  
10 requirement, the test will begin with a fully charged  
11 canister. Because of this, we are concerned that the  
12 equipment will not pass the evaporative test as it stands  
13 today.

14 ARB's intent was to better replicate real-world  
15 use. However, they have made arbitrary determination of  
16 what occurs in the real world without conducting any tests  
17 or presenting any supporting data. The proposal simply  
18 removes the carbon canister purge requirement. This  
19 assumes that 15 minutes of engine operation will  
20 completely purge the carbon canister.

21 I like to point out that passive purge canisters  
22 are not affected by engine operation, as they purge in  
23 cooler temperatures. For example, when you leave a lawn  
24 mower in a garage overnight.

25 Active purge canisters are purged by engine

1 operation. However, there are many different types and  
2 sizes of carbon canisters, in addition to many different  
3 types of equipments and models. It is not conclusive at  
4 this time if 15 minutes is enough to completely purge the  
5 canister in all cases.

6 We would like to engage dialogue with ARB staff  
7 to best determine what would be a real-world test. We  
8 feel that this would be -- this would need to be a  
9 collaborative effort with industry and ARB. Therefore, we  
10 encourage the Board to direct the staff to open up that  
11 dialogue with us and the rest of industry.

12 Again, I thank you for your time.

13 CHAIR NICHOLS: Thank you.

14 MR. MERSCH: Good morning. Thank you for having  
15 me out. I'm Zach Mersch with Mean Green Mowers. And I  
16 want to thank ARB for inviting me to speak at this.

17 Mean Green Mowers is a manufacturer of  
18 all-electric commercial products. We range anywhere from  
19 zero turns, the big ride-on's, the stand-on's, all the way  
20 down to the handheld equipment.

21 We're a U.S. manufacturer. We manufacture  
22 everything in Cincinnati, Ohio. We've recently started  
23 selling to Canada, the United Kingdom, and Australia as  
24 well.

25 We went through a stringent CE certification on

1 all of our equipment, so all of our bigger equipment is  
2 now CE certified. They didn't know how to certify our  
3 equipment, so we had to go through the electrical  
4 certification and the mower certification.

5 We've recently partnered with one of the largest  
6 landscape companies in the country, with a purchase of  
7 over 200 mowers to be delivered this spring.

8 And we've also had programs with South Coast and  
9 the Bay Area districts as well over the past three years.

10 We also -- Mean Green's proud to bring the  
11 electric advantage across the country. The electric  
12 advantage doesn't only include zero emissions, but also  
13 includes zero gas, low noise, and low maintenance. So not  
14 only does it have to do with zero emissions but the  
15 operator, vibrations - there's a lot of different things  
16 involved in this as well.

17 So you can reduce, you know, operator health as  
18 well with going with electric equipment.

19 So with that being said, CARB is looking to make  
20 a commitment to reduce lawn-care equipment by 80 percent  
21 by 2030. I think with tax credits and green incentives,  
22 Mean Green believes together we can make this goal much  
23 sooner.

24 I'd like to thank you for having me out. If you  
25 have any questions, I'd be happy to answer them.

1 CHAIR NICHOLS: Thank you.

2 MR. GELLER: Good morning, Chair Nichols and  
3 members of the Board. My name is Michael Geller. I'm the  
4 deputy director for the Manufacturers of Emission Controls  
5 Association. MECA members represent -- we represent  
6 manufacturers of a variety of emissions control components  
7 for both criteria and greenhouse gas emissions, including  
8 evaporative emissions from small off-road engines.

9 We'd like to say that we support these proposed  
10 amendments and thank staff for its diligent work in this  
11 area. We believe that the proposed changes to the SORE  
12 regulations, including improving the certification  
13 procedures, revising the compliance testing procedure, and  
14 updating certification test fuel to be more representative  
15 of commercial available gasoline, and aligning aspects of  
16 the SORE requirements with those of the U.S. EPA are an  
17 important step forward in helping to ensure that existing  
18 evaporative standards are met and real-world emissions  
19 reductions are achieved.

20 MECA supports ARB's proposed changes to the  
21 design certification option, to require testing of  
22 evaporative emission control components and a  
23 configuration that represents their real-world operation,  
24 which will ensure robustness of these technologies.

25 In addition, testing to make sure components are

1 assembled and connected correctly will result in greater  
2 certainty that evaporative emissions will be controlled  
3 throughout the engine's full useful life.

4 MECA members that manufacture evaporative  
5 emission controls have responded to the challenge of  
6 reducing hydrocarbon evaporative emissions from mobile  
7 sources.

8 A wide range of cost-effective technologies have  
9 been developed to reduce hydrocarbon evaporative  
10 emissions, such as permeation emissions, diurnal, hot  
11 soak, and refueling hydrocarbon emissions. These are used  
12 on passenger cars. And these can also benefit SORE  
13 equipment.

14 MECA remains committed to supporting staff's  
15 continuing effort to demonstrate the potential for  
16 achieving additional emissions reductions from small  
17 off-road equipment, small off-road engines through the use  
18 of advanced engine and catalyst technology in the future.

19 We believe that the use of advanced catalysts,  
20 three-way catalyst technology, which is derived from 40  
21 years of experience on passenger cars and motorcycles, can  
22 help SORE to meet tighter exhaust emission controls.

23 The types of issues that have been raised in the  
24 past such as heat management, packaging, poisoning, as  
25 well as durability, have been readily addressed.

1           To conclude, MECA would like to thank staff for  
2 their diligent work and also for bringing this proposal  
3 today. We look forward to working with staff in the  
4 future and looking for additional opportunities to help  
5 reduce emissions from SORE, small off-road engines, and  
6 also to help California meet their air quality goals.

7           Thank you very much.

8           CHAIR NICHOLS: Thank you.

9           MR. BARNABY: Hello. My name is Gerry Barnaby  
10 and I'm with EGO. I want to thank everybody for inviting  
11 us in from Michigan. That's where our design studio is  
12 based in large part.

13           We represent EGO, as I mentioned. I have in my  
14 hand the gas tank of the future. It is a battery that  
15 will run a string trimmer. And this is for residential at  
16 this point. We're engaging in research into the  
17 commercial realm. But this will run a string trimmer for  
18 about an hour, it will run a chainsaw that can cut down 25  
19 trees of my circumference on a single charge. It will run  
20 a blower for over an hour. So the future is here now.

21           And as Dr. Sperling mentioned in his remarks, as goes  
22 California, so goes the world as far as the attitudes  
23 towards emissions and environment. And I'm happy to  
24 report -- we're exclusive to Home Depot. And at least in  
25 the Home Depot realm, we are part of the fastest growing



1 segment of outdoor power, and that is battery power. So  
2 the appetite on the part of the consumer is certainly  
3 here.

4           You'll hear from a gentleman a couple speakers  
5 hence who runs a lawn and garden service, Completely  
6 Green. He says he's turning customers away. And he's in  
7 the commercial application.

8           So I think that your work is honorable. Your  
9 mission is clear.

10           And I want to end with a quick story about a kid  
11 I just met down Louisville, Kentucky. We're at GIE, and  
12 he came up. He's a 10-year-old kid. And for the effort  
13 of getting straight A's in a year at school, his dad took  
14 him to GIE because since the age of 6 the kid has been a  
15 lawn and garden nut. He pulls all of his gas-powered  
16 equipment behind him in a cart behind his bicycle. He's  
17 got what he said were six solid accounts, two floaters.

18           And I turned him onto the battery power. And he said,  
19 "Sir, this is every bit as powerful as gas." And I said,  
20 "Well, what does that mean to you as a kid?" And he goes,  
21 "Well, the environment is my workplace. I'm in charge of  
22 tidying it up. And if I continue with gas, my thought is  
23 at the age of 10" - and I thought this was so profound -  
24 "I will not have a workplace in the future. And so it is  
25 my job to keep it clean, keep it green."

1           So thank you for doing the work that you do. And  
2 I fully support the bill in front of you today.

3           Thank you.

4           CHAIR NICHOLS: Thank you.

5           Mr. Serna.

6           Hold on just a second. A question for you, I  
7 think.

8           BOARD MEMBER SERNA: Thank you, Chair Nichols. I  
9 just had a quick question.

10           Do you have any information available about  
11 comparable decibel levels on --

12           MR. BARNABY: Yeah, we -- everybody anecdotally  
13 says we are less loud than a vacuum cleaner. So we have  
14 headlights on our mowers because you can mow first thing  
15 in the morning, late at night. So it is less than 80 dB;  
16 and that's on full power.

17           BOARD MEMBER SERNA: And you had that for --  
18 especially for the leaf blower comparison?

19           MR. BARNABY: Yeah. You know, I could probably  
20 give you a new hairdo from here with my leaf blower --

21           (Laughter.)

22           MR. BARNABY: -- and it would not -- I mean, I  
23 could talk over it.

24           BOARD MEMBER SERNA: It will blow off.

25           MR. BARNABY: Well, there's a secret that needed

1 to be told.

2 BOARD MEMBER SERNA: Thank you.

3 MR. BARNABY: Okay.

4 CHAIR NICHOLS: Thank you.

5 MR. BARNABY: Well, you can actually check out  
6 the equipment out front. And that's the value of us being  
7 here today is hands-on stuff for all you folks.

8 Thanks so much.

9 CHAIR NICHOLS: Thank you.

10 MS. PHILLIPS: Kathryn Phillips with Sierra Club  
11 California.

12 Thank you, CARB staff, for working on this rule  
13 for as many years as you have. And thank you, Mary, for  
14 your calming and encouraging words at the beginning of the  
15 meeting.

16 Sierra Club California fully supports this  
17 measure as proposed. And we've submitted a letter with a  
18 number of our other colleagues outlining some of those  
19 reasons.

20 I just want to highlight two of them. And, that  
21 is, that most of these evaporative emissions occur while  
22 an engine is off and sitting in somebody's garage. And  
23 most garages in California homes are attached. They serve  
24 as -- do double duty as man caves, as family rooms, as  
25 children's playrooms. These are not places where we want

1 these kind of evaporative emissions to be available and to  
2 be exposing children and men and others.

3 So they have serious health effects. That  
4 includes lung disease, heart disease, cancer. So, again I  
5 just want to underscore the importance of this measure  
6 because of these sorts of health effects and the  
7 relatively close location to where people live.

8 Secondly, just to underscore. I know South Coast  
9 was up here, but there are other air districts that have  
10 to comply and submit plans to you. They go into the State  
11 Implementation Plan. It's very important for them to be  
12 able to depend on these rules to be enforceable, enforced,  
13 and effective, for them to be embraced and qualify for  
14 being included in their air quality plans.

15 Without these changes, the local air districts  
16 can't really rely on those rules to help meet their air  
17 quality goals. So, again, just to restate that Sierra  
18 Club California and a number of other environmental  
19 organizations, including some who will be testifying soon,  
20 support this rule.

21 Thank you.

22 CHAIR NICHOLS: Thank you.

23 MS. HOLMES-GEN: And good morning, Chair Nichols  
24 and members. Bonnie Holmes-Gen with the American Lung  
25 Association in California. And I just have to say that

1 it's happy -- I'm very happy to be here with you all  
2 moving forward with good work to protect public health in  
3 California Today. And I'm here because the American Lung  
4 Association in California is supporting the proposed  
5 amendments today and urge you to move forward to adopt  
6 these evaporative emission requirements and updates for  
7 small off-road engines.

8 We appreciate the extensive studies and work  
9 that's been done by the Air Board over the years and  
10 coordination and in outreach to the regulated community.

11 It's clear at this point that there is a strong  
12 lack of compliance and the standards are failing to  
13 protect public health as is. So we've -- these updates  
14 are required.

15 We are of course very concerned about the  
16 substantial health impacts of these emissions, the  
17 contribution to elevated smog levels across the State,  
18 particularly in extreme nonattainment areas like the San  
19 Joaquin Valley and the South Coast Air District.

20 And just as with other combustion sources, we  
21 believe it's critical to move forward to cleaner and  
22 cleaner options and zero emissions. That's the ultimate  
23 goal here.

24 So my quick summary would be, SORE is core to our  
25 State's air quality strategy. There are many green and

1 economical options available. And, in fact, from my  
2 experience, the green options are much preferable to use.

3 The State and the air districts need these  
4 standards to progress toward attainment. The breathers  
5 need these standards to reduce the burden of air pollution  
6 and lung disease. So its a win-win on multiple fronts and  
7 we urge you to move ahead.

8 CHAIR NICHOLS: Thank you.

9 MR. WALSH: Good morning. My name is Kevin  
10 Walsh. I operate a small landscape service company here  
11 in the Sacramento area that services residential and  
12 commercial customers. We use only battery- or  
13 people-powered equipment. I am here in support.

14 Using this type of equipment has both advantages  
15 and disadvantages. Some of the advantages are obviously  
16 their lack of fumes, emissions, no -- no emissions. The  
17 equipment that we experience requires little or no  
18 service, so there's a -- little maintenance costs.

19 And the disadvantages, I would say, in my  
20 experience, is that the equipment using battery power has  
21 limited capability in that the cutting quality is not as  
22 good as a -- as a gas-powered mower.

23 For example, I would have to mow, in my opinion,  
24 two or three times in once -- over -- take one pass as  
25 compared to a gas-powered mower with using the equipment

1 that I have.

2 And the battery life. And the cost of the  
3 batteries is -- the initial cost is high compared to  
4 obviously gas powered.

5 And also, using -- I have -- it's difficult to  
6 find quality -- I know there are a few manufacturers, but  
7 quality equipment in particular lawn mowers larger than 21  
8 inch.

9 So what I would like to see going forward is an  
10 improvement in the performance, in the batteries, the  
11 cutting quality, the battery life. And also if I go to an  
12 automobile or -- automobile dealership and walk in and  
13 tell them I want to buy an electric vehicle, I will be hit  
14 with rebates from -- at least here, from the state,  
15 federal, and local level. You don't get that same  
16 experience when you buy an electric mower. There are --  
17 from what I have experienced, there was no -- very -- no  
18 rebates or no incentives.

19 So going forward, the success of our company,  
20 Fresh Air Yard Care, is dependent on the quality and the  
21 breadth of equipment that uses electric or battery power.

22 Thank you.

23 CHAIR NICHOLS: Thank you. And thanks for  
24 raising that issue, because it's a question that I was  
25 going to bring up at the end about incentives. So good.

1 Mr. Magavern, you are the last on the list.

2 MR. MAGAVERN: Thank you, Madam Chair, and good  
3 morning, Board members. I don't know if I should call  
4 this a SORE subject, but certainly --

5 (Laughter.)

6 CHAIR NICHOLS: No, don't do that.

7 (Laughter.)

8 MR. MAGAVERN: But clearly it is an important  
9 subject, and we support the proposal from the staff. We  
10 know that the emissions from this sector are really  
11 significant. In fact, I was really struck by the slide in  
12 the staff presentation that showed emissions from this  
13 sector actually passing -- surpassing emissions from  
14 light-duty vehicles in the South Coast in a fairly short  
15 time frame. So we really need to get this under control  
16 both for local and regional air quality. And also I think  
17 we have to keep in mind the health of the workers who are  
18 operating this equipment in many cases all day long and  
19 exposed to those emissions.

20 The compliance rates that we're seeing currently  
21 are absolutely unacceptable. So certainly there's a very  
22 need for this proposal brought forward by the staff to fix  
23 that. And we need in this sector to see that real-world  
24 emissions are what has been promised, just the same as we  
25 need to see that in the motor vehicle sector.



1           And, finally, I think ultimately what we need to  
2 do is move to zero-emission equipment. And therefore, I  
3 really want to thank all the companies that have come here  
4 today with their zero-emission equipment for these  
5 off-road engines.

6           Thank you.

7           CHAIR NICHOLS: Thank you very much.

8           I believe that concludes the public testimony.  
9 And so I can close the record at the point. Any written  
10 or oral comments received after this will not be accepted  
11 as part of the official record on this item.

12           Before we proceed, however, to a decision-making  
13 point we need to make sure we have an opportunity for the  
14 Board to ask some questions of the staff or make comments.

15           So does anybody want to start?

16           Ms. Mitchell, I'll start with you.

17           BOARD MEMBER MITCHELL: Thank you.

18           We heard from some of the manufacturers of their  
19 concern about the reliability of the testing, the need for  
20 a new validation study. So some of these things were  
21 brought up. I'd just like to hear staff's response on  
22 that first.

23           DEPUTY EXECUTIVE OFFICER AYALA: We'd be happy  
24 to -- we prepare a list of detailed comments, and we'd be  
25 happy to go one by one and provide the initial staff

1 response for the Board's benefit if you'd like us to do  
2 that.

3 CHAIR NICHOLS: How extensive is this?

4 DEPUTY EXECUTIVE OFFICER AYALA: It's not very  
5 extensive. But we do want to provide you a response from  
6 our perspective.

7 CHAIR NICHOLS: Yeah, I would imagine so, because  
8 they were pretty fundamental charges about the study.

9 DEPUTY EXECUTIVE OFFICER AYALA: Correct.

10 CHAIR NICHOLS: So why don't we just go ahead and  
11 do that right now then.

12 DEPUTY EXECUTIVE OFFICER AYALA: A couple of  
13 framing points before we go in detail. One is to  
14 underline the point that the staff presentation made for  
15 the Board; and, that is, when the Board first approved  
16 this regulation, the design-based approach was not a  
17 given. The Board reluctantly approved it as an  
18 opportunity as a flexibility, but they very clearly  
19 directed the staff to examine it, to actually go and get  
20 some experience with it. And that is really what we are  
21 doing.

22 The second point I want to make as an overall  
23 framing is -- industry has a number of detailed comments  
24 that are very technical and we'd be happy to address them.  
25 But they don't get to the key point why we're here; and

1 that is what Mr. Magavern just pointed out, and that is  
2 the key issue is noncompliance and certification. And if  
3 we have learned anything from the VW scandal is how  
4 important certification processes and compliance and the  
5 ability for us to make sure that this equipment are  
6 meeting the expected standards is. The validation study  
7 that you heard a lot about was developed in concert with  
8 industry. And as Dr. Geller from MECA pointed out, SHED  
9 testing in the process that we are using to determine  
10 these emissions are well established. We have been using  
11 these approaches in the automobile industry for years. So  
12 we're not necessarily doing anything that we don't have  
13 confidence in terms of how we are approaching the  
14 emissions, how we're preparing the equipment, how we are  
15 measuring those emissions.

16 So we think what we are bringing you is a number  
17 of sensible updates. For example, updating the fuel. We  
18 are updating the regulation to require the fuel that you  
19 and I and others would use. Not necessarily a fuel that  
20 is mythical, that it doesn't exist in real life.

21 So we have a number of points that we have been  
22 working with industry on. But, again, from the staff  
23 perspective, we feel confident that what we're bringing  
24 for you is the right approach to improve the regulation.

25 And now I want to turn it over to Dr. Benjamin,

1 who's going to go in a little bit more detail in some of  
2 the questions that industry raise.

3 CHAIR NICHOLS: That would be great. I do want  
4 to though build off of your point, Dr. Ayala, and that is  
5 that some of the criticisms appear to me based on my  
6 review of this issue to be, even if correct, irrelevant to  
7 the issues that are before us. That is, that you can  
8 critique the studies, perhaps even if successfully, in  
9 ways that don't actually make any difference to the basic  
10 point of these engines complying with the regulations or  
11 not. And I just want to make sure that we try to sort of  
12 distinguish how the -- even if correct, if the criticisms  
13 affect the conclusions that the staff has come to.

14 Go ahead, please.

15 MONITORING AND LAB DIVISION CHIEF BENJAMIN: So,  
16 yes, industry has raised a number of concerns, and the  
17 concerns that you've heard today are ones that we have  
18 heard throughout the rulemaking process. So this is  
19 nothing new to us. And we have worked -- as Dr. Dilbeck  
20 has mentioned, we have met with them more than 20 times  
21 over the past year, and we have made major concessions in  
22 the rule that you have before you today.

23 But let me speak to specific concerns that were  
24 raised by industry in today's testimony.

25 The first had to do with the inference or

1 implication that this rulemaking would eliminate the  
2 design certification pathway. That is quite simply false.  
3 We will retain the certification and performance pathways.  
4 We simply expect industry to meet the same emission  
5 standard regardless of the certification pathway selected.  
6 And that is a very important element for you to consider  
7 and to remember.

8           There were a lot of questions raised in the  
9 testimony today about this validation study. Let me start  
10 by saying that the validation study, which took place over  
11 eight years, was a collaborative ARB industry study that  
12 was agreed to by the Board in 2003 as a condition of  
13 allowing the design certification pathway.

14           There are very few sectors in which design  
15 certification is allowed either by ARB or U.S. EPA. In  
16 fact, the design certification option was not even on the  
17 table until 2003 when industry came to ARB in the initial  
18 rulemaking and said we would like this option.

19           Staff in the ISOR in 2003 did not support the  
20 design certification pathway because of many of the  
21 concerns that I think are now starting to show themselves  
22 in the results of the validation study. Staff said, "No,  
23 we do not think this is a good option." However, in the  
24 last hours of the 45-day comment period staff decided to  
25 move forward with allowing that. And that is what you see

1 today in the 2003 regulation.

2           However, wisely, the Board did decide that it  
3 would make sense to have this validation study to ensure  
4 that the design certification pathway provided the same  
5 emission reduction benefits as the performance  
6 certification pathway.

7           And in fact it is written into the regulation  
8 that the Executive Officer based on the results of the  
9 validation study has the opportunity to determine -- he  
10 may decide to discontinue that pathway. So that is an  
11 option before the Board.

12           Now, the data in the validation study. The  
13 validation study was conducted over eight years. Sixty  
14 pieces of equipment were tested over that eight-year  
15 period. Thirty pieces of equipment in the first phase, 30  
16 pieces of equipment in the second phase. This is the  
17 largest testing program of small off-road equipment  
18 conducted by government and industry in the world. This  
19 is -- there is no need to do additional testing.

20           Now, when we first started the testing in this  
21 first phase, one of the things we wanted to ensure, as we  
22 do with all evaporative testing of equipment in the SHED -  
23 this is the enclosure - is to make sure that there is  
24 decided to use a fan to make sure that there is  
25 homogeneous mixing of the hydrocarbons.

1           This is in fact something that some industry  
2 manufacturers do themselves. And we have received  
3 correspondence from one of the major manufacturers today  
4 back in 2010 where they indicated they did indeed use a  
5 fan themselves in the SHED.

6           But the concerns that they raised about the first  
7 phase of testing in the use of the SHED, we looked at  
8 those results after that first study and we said we hear  
9 you; and we went back, and in the second part of the  
10 validation study, the next 30 pieces of equipment, we did  
11 not use a fan.

12           And the results that you see on the slide before  
13 you that we showed you today is based only on that second  
14 set of testing where there was no fan used. So this is  
15 the controversial fan that you see in the testimony, in  
16 the written testimony.

17           So we are focusing our staff presentation on what  
18 we believe to be the most robust elements of the  
19 validation study, which in itself is the most robust  
20 industry-government study conducted of this equipment.

21           To give you a sense of "Did it really make a  
22 difference whether a fan was used or not?"; in the first  
23 phase of testing, of the 30 pieces of equipment, 12 passed  
24 and 18 failed. That was for 2008 through 2010. The  
25 latter phase of testing, in which we believe we've reached

1 agreement with industry on the test method, 15 failed and  
2 15 passed. So there's a slight difference. But the  
3 story, going back to what Chair Nichols said, the message  
4 is the same, is that clearly the validation study  
5 indicated that there are serious noncompliance problems.

6 Another issue that was brought up by commenters  
7 related to costs and how the amendments that we are  
8 proposing today do not properly take into account the  
9 costs of installing and operating SHEDs. The 2003  
10 regulation assumed and accounted for the fact that all the  
11 manufacturers would install SHEDs.

12 One thing that I want to educated the Board on is  
13 even though industry has indicated that there are over 100  
14 manufacturers, in fact only 12 manufacturers account for  
15 95 percent of the sales in California. And almost all of  
16 those manufacturers have SHEDs currently. And if they  
17 don't, they should have installed SHEDs as a result of the  
18 requirements of the 2003 regulation.

19 And the cost of the SHEDs, the installation and  
20 operation of those SHEDs was fully accounted for in the  
21 2003 regulation.

22 Therefore, the costs that were accounted for in  
23 today's amendments are only for some incremental costs  
24 related to additional testing, not the installation and  
25 operation of the SHEDs themselves.



1           There is also concerns raised about the  
2 requirement for E10. E10 results in more permeation of  
3 hydrocarbons. Industry feels that by aligning the  
4 certification fuel with real-world fuel, this E10 fuel,  
5 that in a sense we are making the standards more  
6 stringent. We are not. The standard is the standard, and  
7 we are simply having the certification fuel align with  
8 what is sold in the real world.

9           ARB has never in any of its regulations, when we  
10 have -- and this is -- this requirement to transition to  
11 E10 as part of the certification of fuel is not new. It's  
12 not unique. We do that all the time, in light duty and  
13 other sectors. And every time we do that, we do not relax  
14 the standard. In fact, in those cases we tighten the  
15 standard. And so this request to relax the standard by 20  
16 percent to account for a change to -- of the certification  
17 fuel to E10 is simply inconsistent with what ARB and the  
18 Board has done in the past.

19           There are concerns about compliance, about the  
20 fact that our request in these amendments to change the  
21 number of units needed for compliance purposes from five  
22 to one will suddenly trigger a process by which, if we  
23 test a unit, that we will be revoking executive orders for  
24 manufacturers. That is untrue. Quite honestly, untrue.

25           What it will do is it will trigger a process.

1 And that process will consist of ARB then going back and  
2 testing an additional five units obtained from the  
3 manufacturer at an independent lab. And that will then  
4 give us an assurance that that piece of equipment is  
5 indeed noncompliant.

6 But it is absolutely critical that you approve  
7 the amendments today in which we go from five units for  
8 compliance to one in order for us to be able to have the  
9 resources to really do an exhaustive and ongoing  
10 assessment of compliance of this equipment going forward.

11 And so, those are really the key elements, I  
12 think the key concerns that I heard from industry, and  
13 staff's response.

14 CHAIR NICHOLS: Thank you.

15 Does that satisfy your questions?

16 BOARD MEMBER MITCHELL: Yes, if I could follow up  
17 with that then.

18 I wanted that response because they raised so  
19 many issues, the industry did, as they came forward.

20 But what I will say is that I have the highest  
21 regard for our staff and for our testing capability. We  
22 run very efficient laboratories, and I am quite sure that  
23 what our staff has done is reliable and we can trust those  
24 results.

25 I want to say also that this issue is very

1 important in the South Coast Basin. And it's been an  
2 issue that has come forward to our board in some rather  
3 interesting ways. One of my colleagues on the South Coast  
4 Board is Mike Cacciotti. He is the councilman in South  
5 Pasadena. And we have on many occasions started our  
6 meetings with this green equipment right there in the  
7 chamber and with Mike running around in front of us  
8 showing it off and demonstrating it.

9 (Laughter.)

10 BOARD MEMBER MITCHELL: And it is really a  
11 wonderful step forward to move into all-electric equipment  
12 of this type.

13 One thing that we've noticed is those terribly  
14 noisy leaf blowers are absolutely -- well, almost silent,  
15 but certainly a big improvement over what you normally  
16 here when you're at home and the neighbor's gardener  
17 comes.

18 My preference on this would be to see us move  
19 very quickly to a requirement for all-electric off-road  
20 equipment like these, this lawn -- lawn mowers and leaf  
21 blowers and landscaping equipment.

22 And also, as was suggested, to perhaps consider  
23 rebates or some kind of incentive program for this  
24 equipment.

25 In the South Coast, we run annually a lawn mower

1 exchange program where you can bring in your old  
2 gas-powered lawn mower and exchange it for an electric  
3 mower.

4 Now, we've been doing that for quite a few years,  
5 and now we've also included leaf blowers as well in that  
6 exchange.

7 So we have a pretty good history in the South  
8 Coast of using this equipment and knowing that it is  
9 serviceable, superior to the gas-powered equipment, and  
10 provides very significant benefits to air quality and to  
11 health.

12 So, I'm fully in support of the amendments that  
13 are proposed here today and would like to see us move  
14 forward with these as quickly as possible.

15 Thank you.

16 CHAIR NICHOLS: Thank you.

17 Other comments or questions?

18 Yes, Ms. Takvorian.

19 BOARD MEMBER TAKVORIAN: Thank you.

20 And thank you, Ms. Mitchell, for your comments.  
21 Those were -- I had those same questions. And thank you  
22 to staff for your comprehensive response.

23 I support the measure, and I too am interested in  
24 where we go from here. I was interested in  
25 Mr. Magavern's -- excuse me. Still getting over a

1 post-election something, I think.

2 (Laughter.)

3 BOARD MEMBER TAKVORIAN: Sorry. I am -- now it  
4 has a name. I'm afraid it's going to last a while.

5 Sorry. I was not going to go here.

6 But I am interested in the impacts to workers, to  
7 landscape and gardener -- gardening workers. And I am  
8 concerned about the -- and wonder if you might comment  
9 on -- I know it isn't directly applicable to the rule, but  
10 on the comments that were made in regards to their  
11 applicability in a more commercial setting. Because I  
12 think those are the workers whose health and safety we  
13 are -- we have strong concerns about. So that's a  
14 question.

15 And then I also have a question about the  
16 incentives and how those might be able to come into  
17 practice.

18 Thank you.

19 DEPUTY EXECUTIVE OFFICER AYALA: So let me  
20 address the first question, to make sure we clarify.

21 What we are trying to do today - and we are  
22 hoping that you agree with the staff recommendation - does  
23 not change in any way the availability of product to  
24 anybody, the personal gardener or the commercial entities.  
25 You may be thinking of -- in the future our vision is to

1 come back to the Board and share with you what we think  
2 the potential of sheer emissions in this particular sector  
3 is.

4           So at this time point in time we're not proposing  
5 anything that would change in any way the product  
6 availability for the current user. I think eventually -  
7 and the point that Mr. Walsh made is well taken - one of  
8 the things that we want to do with our technology  
9 assessment is understand, you know, where are the areas  
10 where we still need to see some improvement? Perhaps not  
11 for private use, but most importantly commercial use;  
12 where, you know, you've got major operations that are  
13 running, you know, 8, 10 hours a day, 7 days a week in  
14 some cases. So I think that's why we want to come back to  
15 you.

16           We hear you loud and clear. Clearly we're all  
17 interested in zero emissions. What you're going to see  
18 outside is going to be indication that the sector is ready  
19 for a transition as well. But we need to be deliberate.  
20 We need to make sure that we understand what the  
21 implications of that is. And we could very well be  
22 looking at a phased approach where some of the solutions  
23 that Dr. Geller pointed out -- Dr. Geller from MECA -- in  
24 terms of maybe in the interim we're going to see some  
25 opportunities to reduce conventional emissions as a

1 transition towards zero.

2           So I just want to make that clear that what we  
3 are proposing to you today is -- it's essentially a better  
4 mechanism to make sure that we have clean products for  
5 everyone out there, products that are actually fully  
6 compliant with the standards that this Board has approved.

7           CHAIR NICHOLS: Thank you.

8           Dr. Sperling.

9           MONITORING AND LAB DIVISION CHIEF BENJAMIN: I  
10 just wanted to -- this is Michael Benjamin. I just  
11 wanted --

12           CHAIR NICHOLS: Oh, sorry. Please.

13           MONITORING AND LAB DIVISION CHIEF BENJAMIN:  
14 -- to follow up and make sure.

15           Board Member Takvorian, I believe you asked a  
16 question about potential health impacts.

17           BOARD MEMBER TAKVORIAN: For -- especially for  
18 workers, yes.

19           MONITORING AND LAB DIVISION CHIEF BENJAMIN: Yes.  
20 And I can respond to that.

21           That is a concern that we have; and actually we  
22 have undertaken a pilot study on looking at near-source  
23 exposure, using exposure badges on operators of lawn and  
24 garden equipment with our Research Division. And, in  
25 fact, Research Division staff recently completed testing

1 in the past couple of weeks where we measured a range of  
2 pollutants of operators of this equipment. And what we  
3 are seeing in these preliminary results is ultrafine  
4 emissions, factors of 10 or more higher than what you see  
5 on the roadway. And this is extremely alarming, and we  
6 are going to be expanding that health assessment going  
7 forward into a larger scale program where we actually do  
8 benzene ultrafine, another exposure, measurements of  
9 workers. And those results will be incorporated into our  
10 2020 rulemaking package.

11 But our initial assessment and measurements are  
12 that emissions from these pieces of equipment are  
13 currently extremely high and would pose a risk we believe  
14 to commercial users of equipment.

15 CHAIR NICHOLS: Well, anecdotally you see the  
16 gardening service guys - they are always guys - you know,  
17 walking around with these pieces of equipment with --  
18 wearing face masks because it's pretty obvious that  
19 they're breathing a lot of dusts.

20 Dr. Balmes.

21 BOARD MEMBER BALMES: Well, if it's the right  
22 kind of face mask, it would protect against the particles.  
23 But benzene, which is a carcinogen, would not be protected  
24 by that dust mask.

25 So I thank you, Ms. Takvorian, for bringing up



1 the occupational health aspects of this.

2 CHAIR NICHOLS: Yeah, thank you.

3 Dr. Sperling.

4 BOARD MEMBER SPERLING: The -- I think this  
5 is -- I think we all understand this is going in the right  
6 direction. And that graph about comparing cars to these  
7 small equipment, that was kind of eye opening that the  
8 cars are going to be -- have less emissions in a few years  
9 than all this equipment, which highlights the need to stay  
10 on this path.

11 So I think the question's only about process  
12 here. And, you know, it was disconcerting to hear so many  
13 concerns. And I kind of apologize. I didn't realize this  
14 was going to be so controversial so I didn't delve into it  
15 beforehand to understand it as well. So I was just trying  
16 to pay attention.

17 One part of it is, as I understand, in 2018 we're  
18 going to be adopting new exhaust emission standards; is  
19 that right?

20 DEPUTY EXECUTIVE OFFICER AYALA: (Nods head.)

21 BOARD MEMBER SPERLING: Are we going to do it in  
22 2018 or we're going to start the process in 2018?

23 MONITORING AND LAB DIVISION CHIEF BENJAMIN: No,  
24 we are not. So in the original -- in the ISOR that is  
25 what we proposed, was to adopt more stringent exhaust and

1 evaporative standards in 2018. However, in the course of  
2 discussions during the 45-day comment period and  
3 previously to that, industry made the point that they felt  
4 that they needed additional time in order to comply with  
5 what are going to be really quite stringent requirements  
6 going forward. So we have agreed to delay the 2018  
7 rulemaking until 2020. And that will provide both  
8 ourselves and industry additional time to do the studies  
9 necessary to develop those new standards. So it'll be  
10 2020, not 2018.

11 BOARD MEMBER SPERLING: Oh. Okay. How do -- so  
12 here we're just talking about evaporative emissions. And  
13 I tried -- in the graphs try to figure out how many  
14 evaporative emissions there are relative to exhaust, and I  
15 couldn't figure that out. What -- how big -- you know,  
16 what proportion of total emissions from these devices are  
17 from exhaust -- are from -- are evaporative emissions.

18 MONITORING AND LAB DIVISION CHIEF BENJAMIN: So  
19 that the graph that everybody is talking about on --  
20 towards the end of the presentation is both exhaust and  
21 evaporative emissions of hydrocarbon and NO<sub>x</sub>. So it's the  
22 total impact in a sense from --

23 BOARD MEMBER SPERLING: Right. And so what  
24 proportion of those are evaporative?

25 MONITORING AND LAB DIVISION CHIEF BENJAMIN: So

1 of -- about 45 out of 110 tons. So about 40 percent is  
2 evaporative and 60 percent is exhaust.

3 BOARD MEMBER SPERLING: Okay. And so all the  
4 reductions that we're talking about from this equipment is  
5 only from evaporative emissions?

6 MONITORING AND LAB DIVISION CHIEF BENJAMIN:  
7 Correct.

8 BOARD MEMBER SPERLING: And it's going to be for  
9 quite a few years, right? Because if we don't do  
10 rulemaking till 2020, that means -- I mean, we're talking  
11 six, seven years before we're going to see any  
12 improvements on the exhaust emission side --

13 MONITORING AND LAB DIVISION CHIEF BENJAMIN:  
14 Correct.

15 BOARD MEMBER SPERLING: -- is that right?

16 CHAIR NICHOLS: We should do better.

17 (Laughter.)

18 BOARD MEMBER SPERLING: Yeah.

19 CHAIR NICHOLS: We should do better.

20 BOARD MEMBER SPERLING: You know, especially  
21 because all of this, as -- I think it was Dr. Ayala said,  
22 you know, all of this technology has been with us, not for  
23 years, for decades now. And -- but it does raise -- you  
24 know, I am struggling with this, because -- you know,  
25 Honda also raises the question about the carbon canisters.

1 Why is there -- I mean, we've been working with carbon  
2 canisters also for decades. Why is there an issue there?

3 MONITORING AND LAB DIVISION CHIEF BENJAMIN: The  
4 concerns raised by Honda are quite technical in nature,  
5 but I can speak to that.

6 The current test procedure requires that before a  
7 piece of equipment is tested in the SHED, that the carbon  
8 canister is purged to make sure there is no hydrocarbons  
9 in it before the test starts.

10 And so the way the current process or test  
11 procedure, what that requires, is that the canister is  
12 removed from the piece of equipment and purged with 400  
13 bed volumes of nitrogen gas to ensure that it's completely  
14 clean. The canister's then put back on the piece of  
15 equipment and the piece of equipment is put in the SHED  
16 for the testing.

17 Staff feels that that is not representative of  
18 what happens in the real world. In the real world  
19 canisters are not removed and purged with nitrogen, and  
20 then -- before diurnal emissions occur. So what we are  
21 proposing is that the canister remains on the piece of  
22 equipment and that the piece of equipment is run and  
23 operated, and that that operational process purges the  
24 canister just like it's designed to do in the real world.

25 The concern that Honda has is that staff proposed

1 a 15-minute engine run time, and they felt that that might  
2 not be sufficient to purge the canister properly.

3           So we've actually had discussions with Honda in  
4 the past week about what would be an appropriate run time.  
5 And we're open to that discussion, and that discussion is  
6 actually ongoing. So what we don't want to do is have  
7 this test procedure where we have an arbitrary 400 bed  
8 volumes of purging. We would prefer to have a more  
9 representative purging of the carbon canister before  
10 testing occurs. And we believe that that can happen  
11 during the 15-day comment process.

12           BOARD MEMBER SPERLING: Okay. So that kind of  
13 leads me to where -- I mean, I would -- somehow -- I think  
14 we need a better response to industry concerns and, you  
15 know, I -- I assume we can do that in the, you know,  
16 15-day -- extended 15-day period. I never understood  
17 15-day periods that are months long, but...

18           (Laughter.)

19           BOARD MEMBER SPERLING: But I think that -- I  
20 think -- you know, I haven't heard quite so many small  
21 complaints in a while, and I think I -- at least I would  
22 feel more comfortable if there was a reengagement with  
23 industry and kind of working through it. There shouldn't  
24 be so many differences.

25           DEPUTY EXECUTIVE OFFICER AYALA: We certainly can

1 continue to work with industry on these detailed technical  
2 comments. And -- I mean, just to give you some  
3 reassurance.

4           Even beyond the approval of the regulation and  
5 the Board taking action -- and we do this with every other  
6 sector, and the automotive sector is a perfect example --  
7 the fact that the Board takes action today doesn't mean  
8 we're going to shut the doors and then we're off on our  
9 round. We will continue to work with industry. We have  
10 very extensive collaborations because we too are  
11 interested in better procedures and better approaches to  
12 developing emission measurements. So this is by no means  
13 saying we're not going to be interested in hearing from  
14 industry and making improvements to our own process. To  
15 the extent that we can do it administratively, we will do  
16 that. If we need to come back to the Board with minor  
17 adjustments, we can certainly do that.

18           But separating the highly technical issues from  
19 the big issue we're bringing before you today I think is  
20 critically important.

21           CHAIR NICHOLS: I agree. I think that's a good  
22 response. And I see Dr. Sperling nodding as well. So  
23 let's not hold up a decision on what's in front of us.

24           But I think the message that you're hearing from those  
25 of us who have spoken at least - and I hope I'm speaking

1 for the rest of the Board - is that this turns out to be  
2 as a sector a more significant and growing part of the  
3 emissions profile of California. It's more difficult in  
4 many ways because we're dealing with multiple small  
5 engines and pieces of equipment with different  
6 applications. But the fact is that they share some  
7 characteristics. And one of them is that in every single  
8 product there is some zero emission alternative available.  
9 They may not be as durable, they may not be as tough or  
10 effective as they should be. But we have a history of  
11 finding ways to create a market for zero-emission  
12 equipment, and we should be trying to do that more  
13 aggressively than we have up until now.

14           And so that would include both looking on the  
15 regulatory side, which of course is our particular area of  
16 expertise, but also we have some experience with incentive  
17 programs now as well. And it may be that we should be  
18 looking at our existing pots of available funding or at  
19 others that might become available and doing a better job  
20 in partnership with South Coast of course, which has  
21 really led the way on this.

22           Talking about better public outreach too, because  
23 again we're dealing with equipment that's very widespread,  
24 many small businesses, very, very small businesses, and  
25 individuals who purchase this equipment, and a need to

1 find the ways to communicate with them more effectively as  
2 well.

3           Yeah, Dan, do you have another comment?

4           BOARD MEMBER SPERLING: Yeah, and to add to -- I  
5 agree with that totally. And maybe to add to that, even  
6 in the regulatory process we can think of incentives. You  
7 know, we -- we've gotten very creative at that, and maybe  
8 we can for -- you know, if they're going to do  
9 zero-emission equipment, they get some special credits for  
10 that. I mean, we want -- I mean, I think that's worked  
11 effectively in other sectors. So maybe think about that  
12 also.

13           CHAIR NICHOLS: So in case the team that's been  
14 working on this reg thinks that, you know, you're going to  
15 go out and celebrate and then go do something else, no.

16           (Laughter.)

17           CHAIR NICHOLS: You're going to be working on  
18 these issues for quite some time to come.

19           Dr. Balmes.

20           BOARD MEMBER BALMES: I just want to add my voice  
21 to exploring incentive options. Because if this is going  
22 to be as big of a source of emissions as motor vehicles -  
23 we have incentives for motor vehicles - we need to look at  
24 this sector as well.

25           CHAIR NICHOLS: Okay. With that, are we prepared



1 to move forward with the resolution?

2 BOARD MEMBER MITCHELL: I will move adoption of  
3 the resolution.

4 CHAIR NICHOLS: There's a motion from Ms.  
5 Mitchell.

6 BOARD MEMBER BALMES: Second.

7 CHAIR NICHOLS: Second from Dr. Balmes.

8 All in favor please say aye.

9 (Unanimous aye vote.)

10 (Mr. De La Torre not present.)

11 CHAIR NICHOLS: Opposed?

12 Abstentions?

13 Okay. Thank you.

14 Good work. Thank you.

15 It's a quarter of 12. I suspect our court  
16 reporter would like a break.

17 (Laughter.)

18 CHAIR NICHOLS: And I think we should probably  
19 take a brief break, but then go onto the next item before  
20 lunch.

21 So let's take 5 minutes literally and get back.

22 Thank you.

23 (Off record: 11:43 a.m.)

24 (Thereupon a recess was taken.)

25 (On record: 11:55 a.m.)

1 CHAIR NICHOLS: A slightly extended concept of 5  
2 minutes. We are ready to get onto the next item.

3 Okay. And we have quite a number of witnesses  
4 who've signed up to speak on this item. And for that  
5 reason we may break for lunch. But in any event, I think  
6 what we will need to do is to actually shorten the comment  
7 time. This is not a rulemaking item. There are plenty of  
8 other opportunities for interested parties to make their  
9 views known, including workshops that are ongoing. And so  
10 for that reason, I'm going to make the public comment  
11 period time 2 minutes instead of 3 minutes per speaker.

12 So, this is a discussion here on how we're  
13 proceeding with the scoping plan that the Board needs to  
14 develop for meeting our 2030 targets, and building on our  
15 earlier discussion including the legislative update, as  
16 well as the other items that we're going to be dealing  
17 with here.

18 Am I in the right order here?

19 This is the scoping plan, right? Yes.

20 Okay. Good. I'm just double checking. Okay.

21 So what we need to do here is to get an update  
22 from the staff on the progress that they're making in  
23 quite a complicated undertaking here, because we need to  
24 both update the work that's already ongoing and also to  
25 extend and expand our coverage from our previous scoping

1 plan to include elements that were not really addressed  
2 the first or second time around.

3           When AB 32 was first passed - and we just did  
4 celebrate the 10-year anniversary - it was the first  
5 program in the country, and as far as I know first sort of  
6 comprehensive program anywhere, to require a comprehensive  
7 binding approach to overall reduction in greenhouse gas  
8 emissions.

9           At the time, most people didn't have a clear  
10 framework in mind for what policies should adopt or how to  
11 prioritize efforts to meet the target, and many indeed  
12 thought that AB 32 was going to lead quite quickly to  
13 federal legislation, which California would then fold our  
14 efforts into.

15           Obviously that didn't happen. And California  
16 moved ahead with a process that built on very technical,  
17 detailed economic and technical market assessments with  
18 input from various experts, including those from industry,  
19 from NGOs, from academia, and we spent thousands literally  
20 of hours in public workshops, stakeholder meetings,  
21 dialogue with experts. And it turns out that it was a  
22 very good thing that we did that, because we don't have  
23 congressional action yet at the federal level, but we in  
24 fact have delivered a program which is providing  
25 foundation for policies, many of which are being adopted

1 at least in part in other states and countries. Clearly  
2 formed part of the important backdrop for the Paris  
3 agreement and for ongoing commitments and discussions in  
4 the latest conference of parties in Marrakech. We've  
5 actually been able to measure declines in emissions and  
6 growth in our own economy that is outpacing the growth of  
7 the rest of the country.

8           And we also have been able to tie our work on  
9 climate change back to the original mission of the Air  
10 Resources Board with its primary focus on air quality and  
11 specifically air quality as it relates to public health;  
12 and to the particular injustice of the way that air  
13 pollution affects people, because it does hit hardest at  
14 those who are poor and those who are in positions where  
15 they are not in a situation where they can fight back on  
16 their own, including of course children.

17           So this scoping plan is going to be and already  
18 is a focus of a lot of attention and interest from all  
19 over the world. And we in turn have an opportunity,  
20 because of our clearer understanding and experience, of  
21 how we can improve upon our original program and, in  
22 particular, to respond to the directions that we've been  
23 given by the Legislature in terms of priorities that  
24 should be included in our planning.

25           So that's what the updated scoping plan is going

1 to reflect. And I think that it's important to assure  
2 anybody who's listening here today that in the process of  
3 developing this scoping plan, the ARB is committed to  
4 undertaking a very thorough and fair process in which we  
5 will consider the economic and the health as well as the  
6 environmental aspects of the program; and that our  
7 decision-making process will be guided by an understanding  
8 that what we need to do is to develop a program that  
9 benefits all the residents of our state including those in  
10 disadvantaged communities.

11 So the way we will do that is through a plan that  
12 presents alternatives, that builds on very detailed  
13 science-based analyses, and to give the Board itself an  
14 opportunity to weigh the choices that are available and to  
15 craft the best decision that we can.

16 I am particularly grateful right now for the  
17 wisdom of the Legislature in requiring that the scoping  
18 plan be reconsidered every few years as well as for the  
19 opportunity for the Air Resources Board to guide this  
20 process.

21 It really is enormously helpful for California  
22 that we are able to insulate our climate policies and our  
23 investments from some of the other forces that may be  
24 shaking our country at the moment, and that we're going to  
25 be able to move forward with a stable and comprehensible

1 and comprehensive effort to deal with the tremendous issue  
2 of global climate change. It certainly is important. And  
3 I've heard from many people, not just from those who are  
4 traditionally our supporters but from many in the  
5 regulated community as well, about how concerned they are  
6 about disruptions in the market, disruptions in  
7 expectations of programs that were moving forward. And  
8 that only adds I think to the importance of what we're  
9 doing.

10           So with that - no stress - I would like to turn  
11 the presentation over to our Executive Officer.

12           Mr. Corey.

13           EXECUTIVE OFFICER COREY: Yes, thanks Chair  
14 Nichols.

15           California's current climate strategy has driven  
16 down statewide greenhouse gas emissions and helped us move  
17 steadily in the direction of a cleaner energy economy.

18           From the renewables portfolio standard to low  
19 carbon fuel standard to energy efficiency to  
20 cap and trade, California has shown leadership in  
21 implementing groundbreaking programs. And collectively  
22 these actions are evidence that it's possible to break the  
23 historical connection between economic growth and  
24 associated increases in energy demand, combustion of  
25 carbon-intensive resources, and air pollution. We've

1 shown it's possible to break this chain by relying on  
2 cleaner technologies, more efficiency, and more renewable  
3 energy sources.

4           The process to develop the updates that will be  
5 heard today includes several Environmental Justice  
6 Advisory Committee meetings, public meetings to discuss  
7 the greenhouse gas modeling and economic analyses, and  
8 other sector-specific workshops, and opportunities for  
9 stakeholder engagement. And that process will continue  
10 through the remainder of this year and into the early 2017  
11 in terms of a number of public exchanges as we refine and  
12 craft the recommended or the scoping plan.

13           So through coordination and collaboration, we're  
14 confident that the plan will help California to achieve  
15 its climate change goals, while also ensuring the vibrant  
16 economy and workforce, while being consistent with the  
17 legislative direction that was referred to.

18           So with that, I'll ask Rajinder Sahota to give  
19 the staff presentation.

20           Rajinder.

21           (Thereupon an overhead presentation was  
22 Presented as follows.)

23           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

24 SAHOTA: Thank you, Mr. Corey. And good afternoon,  
25 Chairman Nichols and members of the Board.

1           This next item is an informational update on the  
2 scoping plan. At times it'll seem pretty dense in details  
3 and technical information. But we're hoping that we can  
4 all get through that together.

5           We have tried to add some animations to help walk  
6 through that process for everyone's benefit.

7           (Laughter.)

8                           --o0o--

9           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

10 SAHOTA: Like Mr. Corey mentioned, the scoping plan update  
11 on this item itself has been informed by several  
12 stakeholder meetings and legislative direction from summer  
13 with AB 197 and with technical analyses related to  
14 greenhouse gas modeling. And it should go without  
15 saying -- should not go without saying that we've had a  
16 lot of interagency communication and work in developing  
17 the scoping plan, draft scenarios that you will be seeing  
18 today. These are very preliminary, and we will be  
19 revising them over the next couple of months with more  
20 input from State agencies, potentially the Governor's  
21 office, and with stakeholders and the Environmental  
22 Justice Advisory Committee.

23           So the outline for today includes an overview of  
24 the scoping plan. It will help provide some overall  
25 legislative and directive context in which we are



1 operating and developing this update, a brief discussion  
2 about climate change and public health, some exciting  
3 updates on the natural and working land sector, and  
4 preliminary policy scenario valuations that are really  
5 related to the technical work that we've been doing with a  
6 contractor on the greenhouse gas modeling.

7           One of the pieces that Chairman Nichols alluded  
8 to that we really want to try and incorporate this time is  
9 local action, especially in the context of CEQA. We have  
10 the 2008 scoping plan, and that scoping plan had been  
11 picked up and utilized in the context of CEQA, but we feel  
12 like we can provide additional guidance, which is being  
13 requested by local agencies and stakeholders.

14           I will conclude with a slide on Next Steps and a  
15 calendar for the next few months.

16                           --o0o--

17           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
18 SAHOTA: For directives and legislation it's important to  
19 remember that the scoping plan was required by Assembly  
20 Bill 32. AB 32 also requires the plan to be updated every  
21 five years.

22           Last year Executive Order B-30-15 was introduced  
23 by the Governor. It establishes a mid-term greenhouse gas  
24 emissions reduction target of 40 percent below 1990 levels  
25 by 2030. It also asks that the AB 32 scoping plan be

1 updated to incorporate the 2030 greenhouse gas target.

2 Because of the requirements in the Executive  
3 Order, this update is actually off schedule for a  
4 five-year update. And you'll see that when we talk about  
5 how this update will subsume some additional work that's  
6 already underway, and specifically other plans that are  
7 being developed.

8 Senate Bill 32 was passed this summer, and it  
9 codifies the 2030 mid-term greenhouse gas target. AB 197  
10 also passed this summer, and it asks the scope -- it  
11 directs ARB to consider the societal costs of greenhouse  
12 gas reductions in developing the measures in the scoping  
13 plan, prioritize measures resulting in direct emission  
14 reductions. It also references back to AB 32 requirements  
15 that include considering cost effectiveness of the  
16 measures and minimizing emissions leakage.

17 --o0o--

18 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
19 SAHOTA: This slide lists some key objectives against  
20 which we are assessing different scenarios to achieve the  
21 2030 target. A primary goal of the scoping plan is to  
22 achieve the 2030 limit and put us on the path to achieving  
23 the long-term 2050 limit of 80 reductions below 1990  
24 levels.

25 We want to provide direct greenhouse gas emission

1 reductions in our largest economic sectors to ensure our  
2 economy is transitioning to more sustainable production  
3 and energy.

4           The plan should also minimize emissions leakage  
5 and ensure any reductions in California are not just the  
6 result of those sources and emissions moving out of the  
7 state but are real reductions from the perspective of the  
8 atmosphere.

9           We want to make sure we are able to work at  
10 subnational and national levels to ensure greater  
11 greenhouse gas reductions through collaboration. For  
12 example, our Cap-and-Trade Program is currently linked  
13 with Quebec's program and proposed to be linked with the  
14 emerging Ontario program.

15           The final plan should also be cost effective and  
16 provide compliance flexibility so that the economy can  
17 grow and support a robust workforce while still reducing  
18 emissions.

19           It is also desirable to have a scoping plan that  
20 readily meets the mandates in U.S. EPA's Clean Power Plan.

21           Further, the scoping plan must also include a  
22 mechanism to support climate investments for programs in  
23 disadvantaged communities to ensure that these communities  
24 can benefit from the clean technology, fuels, and become  
25 more resilient in the face of climate change. To date

1 approximately \$470 million from the Cap-and-Trade Program  
2 auction proceeds are being used for projects to benefit  
3 disadvantaged communities.

4           Importantly, the plan must also provide air  
5 quality co-benefits and protect the public health. This  
6 is a lot for one plan, but it's not impossible.

7           CHAIR NICHOLS: Well, Supervisor Gioia just  
8 whispered, sotto voce, there's not going to be a Clean  
9 Power Plan anymore, so you can eliminate one item from  
10 your list. Maybe it needs to be updated.

11           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
12 SAHOTA: We conferred with the Legal staff, and we were  
13 notified that it's still the law of the land, and so we're  
14 still reflecting it. But we understand there may be  
15 challenges moving forward.

16           CHAIR NICHOLS: All right. Sorry for the  
17 interruption.

18           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
19 SAHOTA: Okay. This next slide is about climate change  
20 and public health.

21           Like other state agencies, the California  
22 Department of Public Health has been active in helping us  
23 with this plan update. We know that climate change  
24 impacts everyone, but the most vulnerable suffer the most.  
25 Climate change amplifies existing risks for things such as

1 asthma and other respiratory illnesses.

2           There are several key steps that can be taken to  
3 address climate change impact inequities. These include  
4 climate investments to promote economic development and  
5 health equity. Examples of these include climate  
6 investments in urban forests and sustainable communities  
7 that promote active lifestyles. Both of which lead to  
8 direct health benefits but also enhancements at the  
9 community level that result in attractive and sought out  
10 housing markets.

11           Another way to address inequities is to support  
12 access to clean technology. Providing solar panels for  
13 low income households and financial support for cleaner  
14 vehicles ensures that all residents, especially those in  
15 vulnerable communities, get to experience the benefits of  
16 green technology without having to pick between clean  
17 technology and other essential household expenses.

18                           --o0o--

19           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
20 SAHOTA: This next slide begins a detailed discussion  
21 getting into the technical merits of the policy analyses  
22 the we are doing.

23           This pie chart is actually reflective of the 1990  
24 level and sector emissions that underpin the 2020 target  
25 an 2030 target. You'll see the target of 431 million

1 metric tons off to the right-hand side. And you'll see  
2 that transportation, industry, and electricity are the  
3 largest sources of emissions.

4           What is not in the pie chart is the natural and  
5 working lands sector. This sector is challenging to  
6 quantify due to the complex nature of biological systems.  
7 It is also not included in the statewide limit except for  
8 some agricultural emissions.

9           However, this sector has a significant role to  
10 play in climate change mitigation. The sector is  
11 estimated to have approximately 898 metric tons of carbon  
12 stored in just above-ground carbon livestock --  
13 live -- carbon stocks. And that includes forest, grasses,  
14 and scrub.

15           In this scoping plan we are approaching the large  
16 sectors and some integrated system, which means  
17 understanding and considering impacts to the natural  
18 working land sector, just as with any other sector. For  
19 example, the sector can provide sequestration benefits and  
20 be a source of biofuels. In an exciting development, this  
21 scoping plan will include new information on inventory  
22 updates and new progress on modeling of scenarios or  
23 practices in managing our lands.

24           These are the same type of technical updates we  
25 usually include for the industrial and energy sectors.

1                   --o0o--

2                   INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: This is a familiar slide. It provides the trend  
4 in greenhouse gas emissions from 2000 through 2014. The  
5 yellow dashed line is the 2020 limit of 431 and the blue  
6 line is the actual emissions for each year.

7                   You can clearly see how the economic recession is  
8 reflected in the drop in greenhouse gas emissions from  
9 2008 to 2009.

10                  Another interesting point is 2012. Emissions  
11 increased for that year, mostly due to increases in  
12 natural gas electricity generation in response for  
13 decreases in hydro power. This is not surprising as we  
14 have been in a multi-jeer drought.

15                   --o0o--

16                  INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

17 SAHOTA: Now I'd like to focus for a bit on the natural  
18 lands sector. For this sector the overarching goal is to  
19 manage our natural working lands to be a net sink for  
20 carbon through 2030 and beyond. And when we think of  
21 natural working lands, that includes our oceans and green  
22 space in our urban environments, not just forests or ag  
23 lands.

24                  We know that we need to protect the existing land  
25 base and carbon stock, enhance carbon sequestration, and





1 SAHOTA: This slide provides some background information  
2 related to the modeling tools we were using in the scoping  
3 plan update. Models play an important role as they allow  
4 us to analyze the impacts of policies and measures over  
5 time and estimate the costs associated with these policies  
6 and measures. There are several models that could be used  
7 for this purpose. I will provide a brief description of  
8 the two models we are using for this scoping plan update  
9 for the industrial and energy sectors.

10 The California PATHWAYS model can be used to  
11 assess and compare the implications of different  
12 greenhouse gas reduction scenarios across a range of  
13 potential future technology costs and fossil fuel prices.  
14 This model also allows us to assess the impacts of  
15 policies across the large industrial and energy sectors  
16 and treats those as an integrated system where one sector  
17 may have an interactive effect on another. For example,  
18 an increase in electric vehicles for the transportation  
19 sector will lead to an increase in load demand in the  
20 energy sector.

21 Along with direct costs, implementing different  
22 scenarios to achieve the 2030 target will be reflected  
23 throughout the California economy. The REMI model is used  
24 to estimate the macroeconomic impacts of different  
25 greenhouse gas reduction scenarios on the California

1 economy including impacts to industry and individuals.

2 --o0o--

3 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

4 SAHOTA: This next graph shows the State is expected to  
5 achieve the 2020 target, but additional effort is needed  
6 to maintain and continue the greenhouse gas reductions to  
7 meet the 2030 mid-term target and 2050 long-term target.

8 The darker blue line at the top is the reference  
9 for business-as-usual case. If we took no new action, our  
10 emissions would hover around the black dotted straight  
11 line at about 400 million metric tons.

12 The horizontal light blue line intersects with  
13 the with the 2030 limit of 260 million metric tons.

14 The blue triangle represents the sum of emissions  
15 needed each year between 2021 and 2030 to achieve the 2030  
16 limit. The cumulative emission reductions needed between  
17 2021 and 2030 is 671 million metric tons if we chart a  
18 straight-line path between 2020 and 2030.

19 --o0o--

20 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

21 SAHOTA: Before we get too much into the details, it's  
22 worth taking a few minutes to understand the difference  
23 between the 2030 limit and cumulatively reductions.

24 SB 32 states the 2030 limit is 260 million metric  
25 tons. That is a limit in a specific year.

1           The 671 cumulative number is the estimated total  
2 reductions needed between 2021 and 2030 to achieve the  
3 2030 single-year limit. There is no cumulative limit even  
4 though our analyses presents some results in cumulative a  
5 form.

6           There are several reasons to evaluate the scoping  
7 plan measures using the cumulative context.

8           Measures may perform differently over time. For  
9 example, in early years a measure of technology may be  
10 slow to be deployed, but over time has greater deployment  
11 and greater impact on emission reductions. If you were to  
12 look at its performance in 2021 versus 2030, you would see  
13 that it may not seem important in the early years but is  
14 critical for the later years. Using a cumulative concept  
15 allows for flexibility in evaluating the effectiveness of  
16 any measure over time instead of a snapshot for a single  
17 year.

18                           --o0o--

19           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

20 SAHOTA: The challenge before us is to determine the suite  
21 of policies needed to close the gap between the  
22 business-as-usual future and 2030 target.

23           For every greenhouse gas reduction scenario there  
24 will be a set of core complementary policies that will be  
25 common to each scenario known as the baseline policies and

1 measures.

2           The modeling shows that the baseline measures and  
3 policies do not achieve the 2030 limit of 260 and instead  
4 get us to about 301 million metric tons in 2030.

5           Some baseline policies and measures are  
6 explicitly required in statute, such as SB 350 requiring a  
7 50 percent RPS standard and a doubling of energy  
8 efficiency by 2030.

9           Other policies in the baseline include  
10 implementation of the currently proposed short-lived  
11 climate pollutant strategy, implementation of the mobile  
12 source strategy to help the State achieve its federal air  
13 quality standards, continuation of the LCFS to 2030 in  
14 order to reduce dependence of fossil fuels, and improving  
15 the efficiency of the freight system and deploying freight  
16 vehicles and equipment that are capable of zero-emission  
17 operations.

18                           --o0o--

19           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
20 SAHOTA: Our main focus then shifts to identifying how  
21 best to reduce the remaining emissions and achieve the  
22 2030 target to close the gap between the baseline policies  
23 and measures and the limit.

24           Options include enhancing and extending existing  
25 programs, or new policies and prescriptive regulations in

1 various sectors. Examples of policies include the RPS Low  
2 Carbon Fuel Standard; and examples of prescriptive  
3 regulations include command and control style measures,  
4 such as industrial facility regulations.

5 To date, staff has constructed three policy  
6 scenarios - informed by the concept paper, public  
7 workshops and comments, and legislative direction from AB  
8 197 and EJAC recommendations. These three scenarios  
9 include the scoping plan scenario that has a cap-and-trade  
10 program; a no cap-and-trade scenario, which is referred to  
11 as Alternative 1; and the carbon tax scenario, which is  
12 referred to as Alternative 2.

13 The no cap-and-trade scenario and carbon tax  
14 scenario were included in comments made by the EJAC and  
15 other EJ organizations. Each of the three scenarios rely  
16 on a mix of measures, including the 2030 baseline policies  
17 and measure discussed earlier.

18 --o0o--

19 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
20 SAHOTA: We will go over each of the scenarios in detail.

21 This is the Draft Scoping Plan Policy Scenario or  
22 Cap-and-Trade Scenario. It includes the direct regulation  
23 of emissions at refinery facilities equating to about 20  
24 percent greenhouse gas reduction in the sector by 2030.  
25 It is not proposed as a cap on the refineries but rather

1 the development of a measure that would increase  
2 production efficiency that would result in less emissions  
3 for production of refined products.

4 In conformance with AB 197, this measure will in  
5 emission reductions at the largest stationary sources of  
6 emissions in the largest sector of greenhouse gas sources,  
7 the transportation sector.

8 This scenario includes a post-2020 cap-and-trade  
9 program with reclining caps that covers the shortfall of  
10 emissions that the 2030 baseline policies and measures and  
11 refinery measures aren't able to deliver. The  
12 Cap-and-Trade Program will deliver the reductions in the  
13 covered entities to ensure the State achieves its 2030  
14 limit.

15 --o0o--

16 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
17 SAHOTA: Alternative 1 includes enhanced 2030 baseline  
18 policies and measures. Similar to the Scoping Plan  
19 Scenario, this scenario also includes a refinery measure.  
20 But instead of a 20 percent reduction, this alternative  
21 relies on a 30 percent reduction in greenhouse gas  
22 emissions at the refineries.

23 This alternative does not include a post-2020  
24 cap-and-trade program and therefore many of the existing  
25 baseline measures must be enhanced and new incentive

1 programs must be added in order to ensure the State  
2 achieves its climate goals.

3           Specifically the RPS would be increased from 50  
4 percent to 60 percent. The Low Carbon Fuel Standard would  
5 be increased from 18 percent to 25 percent. And  
6 additional light-duty vehicle ZEVs amounting to 500- to  
7 600,000 would be deployed in South Coast, and there would  
8 be accelerated retirement and replacement of 1 million  
9 gasoline light-duty older vehicles.

10           Industrial sector direct measures would include  
11 efficiency measures to result in 25 percent reduction in  
12 greenhouse gas emissions by 2030. There would be a  
13 renewable natural gas standard for end users that would  
14 mandate natural gas suppliers to acquire and supply at  
15 least 5 percent renewable natural gas to residential,  
16 commercial, and industrial end users.

17           And heat pumps would be required in buildings in  
18 addition to the doubling of energy efficiency in existing  
19 buildings as required by SB 350. The heat pump's measure  
20 would require the replacement of about 1.2 million  
21 existing furnaces in existing buildings.

22           --o0o--

23           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
24 SAHOTA: A second alternative is the carbon tax  
25 alternative. This is essentially the same as the scoping

1 plan scenario, but rather a carbon tax takes the place of  
2 the Cap-and-Trade Program. So it also has the refinery  
3 measure of 20 percent with fewer emissions per barrel of  
4 refined product.

5 --o0o--

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: This table helps to understand how the draft  
8 scoping plan scenario with a cap-and-trade program and  
9 Alternative 2, the carbon tax scenario, would change the  
10 emissions in each of the major sectors over time.

11 The left-hand column lists the major sectors.  
12 The column with 1990 provides the greenhouse gas emissions  
13 estimated for that sector in the year 1990. The sector  
14 greenhouse gas emissions in 2030 indicates the sector's  
15 estimated greenhouse gas emissions in 2030.

16 The last column tells you the percent of change  
17 from 1990 to 2030 for the sector.

18 It helps to focus on one sector to really  
19 understand what is happening. We can first focus on the  
20 electric power sector. Here you can see the 1990 level of  
21 emissions for the sector was 108 million metric tons.  
22 Once you model for the scoping plan on Alternative 2  
23 scenarios, you can see the 2030 greenhouse gas estimated  
24 level is 36 million metric tons. This equates to a 67  
25 percent reduction in emissions from the sector from 1990



1 levels to 2030.

2 We can look at another sector, the high global  
3 warming gases sector. These substances are usually found  
4 in refrigerants and some industry. This sector actually  
5 grows from 3 million tons in 1990 to 10 million in 2030,  
6 resulting in a 217 percent increase over time.

7 And finally you can see the total emissions in  
8 2030 in the highlighted square that demonstrates this  
9 scenario achieves the 2030 target for the mass limit and  
10 also results in a 40 percent decrease from 1990 levels as  
11 required by SB 32.

12 --o0o--

13 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

14 SAHOTA: The second table helps to understand how  
15 Alternative 1, the no cap-and-trade scenario, would change  
16 the emissions in each of the major sectors over time.

17 Again, the left-hand column was the major  
18 sectors. The column with 1990 provides the greenhouse gas  
19 emissions as estimated for that sector in 1990. The  
20 Sector Greenhouse Gas Emissions in 2030 indicate the  
21 sector's estimated greenhouse gas emissions in 2030. The  
22 last column again tells you what the percent of changes  
23 from 1990 to 2030.

24 We can focus on the Electric Power sector again.  
25 Here you can see the 1990 level of emissions for the

1 sector was 108 million metric tons. Once you model for  
2 the policies in Alternative 1, you see the 2030 greenhouse  
3 gas estimated level is 30 million metric tons. This  
4 equates to a 73 percent reduction in emissions from the  
5 sector from 1990 levels to 2030. These increased  
6 reductions for this sector result from the higher RPS of  
7 60 percent and the addition of more energy -- of energy  
8 efficiency measures.

9 We can also look again at the high global warming  
10 sector. In this scenario the sector grows from 3 million  
11 tons in 1990 to 10 million in 2030, again resulting in a  
12 217 percent increase. Since this measure was not enhanced  
13 for Alternative 2, the results are the same for the sector  
14 for all three scenarios modeled.

15 And, finally, you can see the total emissions in  
16 2030 in the highlighted square. And that demonstrates  
17 this scenario almost achieved the 2030 target for the mass  
18 limit and is 1 percent short of the 40 percent reduction  
19 needed for 2030.

20 --o0o--

21 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
22 SAHOTA: Beginning with this slide we will now examine the  
23 estimated cumulative reductions from 2021 to 2030 for the  
24 programs in the draft scoping plan scenario. The two bar  
25 charts on the slide represent scenario outcome bookends.

1 Each bar contains the contribution of the measures listed  
2 on the right-hand side.

3 So you'll see the list of measures and then  
4 you'll see the corresponding amount of cumulative  
5 reductions within each of the bar charts.

6 The left bar represents an ideal scenario where  
7 current and proposed greenhouse gas reduction programs  
8 begin today. Technology materializes and is deployed on  
9 schedule and meets expected emission reduction estimates,  
10 and sources meet all their compliance deadlines.

11 The right bar estimates uncertainty surrounding  
12 the measure of performance. This uncertainty was modeled  
13 by delaying the start for all measures until 2021, and  
14 represents implementation technology and other  
15 uncertainties with the scenario.

16 The green box highlights the contributions from  
17 the core baseline policies. These baseline policies  
18 achieve about 543 million metric tons of cumulative  
19 reductions, with 40 million metric tons attributed to the  
20 refinery measure.

21 While the baseline policies achieve the majority  
22 of reductions to get to the 2030 target, there is still a  
23 gap of about 98 million metric tons in the ideal scenario.  
24 And that gap would be closed by the Cap-and-Trade Program  
25 to ensure that we get all the cumulative reductions to

1 achieve the 2030 limit.

2           What is also worth noting is that in this  
3 scenario if there is any uncertainty or measures don't  
4 perform as expected, the Cap-and-Trade Program would scale  
5 to limit emissions and make sure that we achieve that  
6 target.

7   --o0o--

8           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
9 SAHOTA: This slide shows the same information as the  
10 previous slide but shows the estimated cumulative  
11 reductions from 2021 to 3030 for the programs modeled as  
12 Alternative 1, which is the no cap-and-trade scenario.

13           Each bar contains the contribution of the measures  
14 listed on the right-hand side. And there are more  
15 measures in this one, so I apologize for the very small  
16 writing on the screen.

17           A key difference to note from the draft scoping  
18 plan scenario is that even though under the ideal scenario  
19 Alternative 1 misses the numerical 2030 target, it could  
20 produce more cumulative greenhouse gas reductions than the  
21 needed 671 as highlighted by the green box.

22           If programs underperform and trend towards the  
23 uncertainty bookend in the right bar chart, then we could  
24 be left with a deficit represented by the red arrow.

25           In this scenario, if measures fall short of

1 projections, there is no program to replace -- in place to  
2 close that gap. Therefore, additional action will be  
3 required to meet the 2030 target.

4 --o0o--

5 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

6 SAHOTA: That concludes the review of the preliminary  
7 modeling results. We can now look at the different  
8 scenarios on how they compare against the objectives  
9 discussed in an earlier slide in terms of benefits and  
10 drawbacks.

11 For the Draft Scoping Plan Scenario, which  
12 includes a cap-and-trade program, this slide begins to  
13 list some of the benefits.

14 As depicted in the prior bar charts, this  
15 scenario delivers a majority of the total cumulative  
16 reductions from baseline policies and measures that are  
17 required by statute or mapped out in other plans that are  
18 being subsumed into the State's overall climate policy.

19 Consistent with AB 197 and prioritizing direct  
20 emission reductions from the largest stationary sources,  
21 this scenario contains a new measure facility-level  
22 refinery greenhouse gas emission reductions.

23 While uncertainty is part of any path forward,  
24 this scenario has the benefit of a post-2020 Cap-and-Trade  
25 Program with a declining cap that can deliver additional

1 greenhouse gas reductions beyond the baseline policies and  
2 measures to close the gap and ensure we achieve the 2030  
3 limit.

4           Where certain industries are vulnerable to trade  
5 exposure, the Cap-and-Trade Program incorporates free  
6 allocation to help minimize emissions leakage.

7                           --o0o--

8           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
9 SAHOTA: Continuing with the benefits. The inclusion of a  
10 market mechanism to incentivize reductions provides  
11 options and compliance flexibility for sources that are  
12 covered, and will enable continuation and expansion of  
13 program linkages both at the international and subnational  
14 level towards promoting a clean energy future.

15           Because this scenario retains the Cap-and-Trade  
16 Program, the corresponding auction proceeds will continue  
17 the support the GGRF to help support various emission  
18 reduction projects, many of which have directed benefits  
19 to disadvantaged communities.

20           And the scenario was consistent with the State's  
21 proposed measures plan for compliance with the Clean Power  
22 Plan.

23           The primary drawback of this scenario is the  
24 ongoing differing legal interpretations about authority  
25 for post-2020 Cap-and-Trade Program.

1 --o0o--

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: In addition to looking for new policies and  
4 measures to reflect the direction in AB 197, staff is also  
5 evaluating changes to the design of the Cap-and-Trade  
6 Program to induce greater onsite reductions at covered  
7 facilities.

8 For example, possible design changes that could  
9 induce greater greenhouse gas reductions at a faster rate  
10 may include:

11 Further limiting offsets in a post-2020 program;  
12 Changing allocation methods to reflect a  
13 declining compliance obligation with the expectation that  
14 onsite action is being taken each year to reduce  
15 emissions;

16 And decreasing allocations if a covered  
17 facility's emissions of criteria pollutants and toxic air  
18 contaminants increase.

19 Such program adjustments would apply to the  
20 compliance period starting in 2021. The specific  
21 amendments and potential design changes would be developed  
22 outside of the scoping plan in a separate regulatory  
23 process to meet all requirements of the Administrative  
24 Procedure Act and ensure a robust public process with an  
25 associated economic analyses.

1 --o0o--

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: This graph depicts the estimated emission  
4 trajectory for the Draft Scoping Plan Scenario and  
5 Alternative 2 - or the Carbon Tax scenario - which is  
6 represented by the solid green trend line out to 2030.

7 As you can see, in the initial years the green  
8 line from today trends below the straight-line dotted 2030  
9 target path as programs are implemented and emission  
10 reduction benefits are realized. This is represented by  
11 the shaded green area.

12 Around 2025, the scenario trend line starts to  
13 migrate back up and crosses the dotted 2030 target line  
14 due to population and energy demand growth overtaking the  
15 rate of reduction.

16 The post-2025 shaded green area represents the  
17 greenhouse gas reductions that would be delivered by the  
18 Cap-and-Trade Program or a carbon tax to close the gap and  
19 meet the 2030 target.

20 --o0o--

21 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

22 SAHOTA: For Alternative 1, the no cap-and-trade scenario,  
23 potential benefits include the following:

24 As depicted in the prior bar charts, this  
25 scenario delivers a majority of the total cumulative



1 reductions from baseline policies and measures that are  
2 required by statute or mapped out in other plans that are  
3 being subsumed in the climate strategy.

4           Consistent with AB 197, this scenario contains  
5 new measures to deliver greenhouse gas reduction for all  
6 industrial sectors and all facilities in those sectors.

7           The drawbacks of this scenario include the  
8 following:

9           Current law does not provide all the necessary  
10 authority for certain policies and measures. For example,  
11 there is no statutory authority to fund and implement a  
12 program to retire and replace the additional 1 million  
13 older light-duty vehicles.

14           With prescriptive regulations, there are fewer  
15 options to minimize emissions leakage. To address this  
16 each regulation would need to evaluate the specific sector  
17 concerns and unique design elements to address leakage.

18           --o0o--

19           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

20 SAHOTA: Continuing, the additional drawbacks include:

21           Few opportunities to link subnationally or  
22 internationally.

23           The absence of a GGRF to help support further  
24 investments in green technology and other  
25 emission-reducing projects including those that benefit

1 disadvantaged communities.

2           And since the current State strategy from  
3 compliance with CPP is a state-measures-based plan that  
4 includes the Cap-and-Trade Program, California would need  
5 to identify other measures to meet the federal  
6 requirements for electricity-generating units.

7           And since this scenario includes new  
8 incentive-driven measures aimed at additional light-duty  
9 vehicle replacement and gas heating unit electrification  
10 that do not have a current funding source, going forward  
11 with this scenario would require additional funding to  
12 ensure the success of these new programs.

13   --o0o--

14           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
15 SAHOTA: This graph depicts the estimated emission  
16 trajectory for Alternative 1 or the No Cap-and-Trade  
17 Scenario, which is shown as a solid green trend line out  
18 to 2030.

19           Similar to the other two scenarios, a portion of  
20 the reductions are realized in the earlier years as the  
21 green line from today is below the straight-line dotted  
22 2030 target path.

23           Some time after 2025 the scenario emissions creep  
24 back up over the dotted 2030 target line; and due to --  
25 again due to population growth and associated energy

1 demand overtaking reductions.

2           While this scenario has the potential to generate  
3 more cumulative reductions than the other two scenarios in  
4 the ideal case, the current set of programs modeled  
5 actually misses the numerical 2030 target by about 3 to 4  
6 million metric tons in 2030.

7           The January draft scoping plan document will  
8 contain updated results to demonstrate how we will close  
9 that gap and actually achieve the 2030 limit for the  
10 alternative without a cap-and-trade program.

11                           --o0o--

12           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
13 SAHOTA: Alternative 2 is the Carbon Tax Scenario. It  
14 shares similar benefits as the Draft Scoping Plan  
15 Scenario.

16           This scenario delivers most of the total  
17 cumulative reductions from baseline policies and measures  
18 that are acquired in statute or contained in other state  
19 plans.

20           The new refinery efficiency measure will deliver  
21 greenhouse gas emission reductions at the source and  
22 consistent with the priorities to reduce direct emissions  
23 per AB 197.

24           The existence of a carbon tax to close any gap  
25 not realized with the baseline policies and measures

1 provides options for compliance and thus promotes  
2 flexibility that can be tailored to an individual  
3 facility's circumstances.

4           And the carbon tax could provide revenue to the  
5 GGRF or other incentive programs or be used for other  
6 purposes.

7           While the scenario does have a number of  
8 benefits, there are several observed drawbacks. A  
9 fundamental difference between a carbon tax and  
10 cap-and-trade system is that the carbon tax sets known  
11 price on emissions, but does not constrain or limit  
12 emissions through a strict cap. The carbon tax sets the  
13 price and lets the market determine the environmental  
14 outcome.

15           There are always challenges in setting the  
16 appropriate tax rates that will incent action and produce  
17 the desired emission reductions. If the price fails to  
18 produce the desired result, then additional measures will  
19 have to be implemented quickly to generate those  
20 unrealized reductions and make up for that time.

21                           --o0o--

22           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
23 SAHOTA: Additional drawbacks include the need for new  
24 statutory authority to adopt a carbon tax, including how  
25 the tax would be structured and who would pay.

1 Options for reducing emissions leakage may  
2 include exemptions for certain trade exposed sectors,  
3 putting a higher burden on those that remain subject to  
4 the tax.

5 Uncertainty surrounding the right carbon price  
6 ultimately means that this scenario may fail to achieve  
7 reductions beyond the known baseline policies and  
8 measures.

9 The tax option provides no clear path to continue  
10 linkages and expansion of climate goals with international  
11 and subnational parties.

12 And because this option does not include a  
13 built-in emissions limit guaranteed by either economy-wide  
14 cap or stack-based emissions limit at each generating --  
15 electricity-generating plant, other measures for  
16 compliance with CPP would need to be developed.

17 --o0o--

18 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
19 SAHOTA: This slide should look familiar. It is exactly  
20 like the slide for the draft scoping plan scenario and  
21 shows the same shaded regions of emission reductions that  
22 would result per the policy scenario but with a carbon tax  
23 instead of a cap-and-trade program. This assumes we have  
24 set the carbon tax at the right value to drive the  
25 reductions that we need to close the gap and achieve the

1 2030 limit.

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: There is still a lot of work to be done and we're  
4 looking for input from stakeholders and the economic  
5 reviewers. Specifically ARB requests input on the  
6 structure of the carbon tax in Alternative 2. The Scoping  
7 Plan Concept paper and the economic analysis for the  
8 Cap-and-Trade Program amendments have included a carbon  
9 tax at the U.S. EPA social cost of carbon. However, the  
10 specific implementation of that tax has yet to be defined  
11 for the scoping plan modeling.

12 We also request input on the return of value  
13 under a carbon tax and how and whether administrative or  
14 program costs should be included in the economic modeling.  
15 An example would be a 5 percent administrative adder to  
16 each measure to estimate the cost of implementing the  
17 measures outlined in the greenhouse gas reduction  
18 scenarios.

19 We will continue to refine the costs of various  
20 measures and ensure they are represented appropriately in  
21 the models.

22 ARB will also work to incorporate the AB 197  
23 requirements into the analysis and estimate the economic  
24 impact of the greenhouse gas reduction scenarios on  
25 disadvantaged communities. Work has already begun to

1 disaggregate the macroeconomic preliminary modeling  
2 results by geographic region which can help identify  
3 impacts on different populations throughout California.  
4 That work will also be included in the draft scoping plan  
5 in January.

6           Also, as part of the draft scoping plan, we will  
7 present results for each final scenario for the greenhouse  
8 gas reductions, costs, sensitivities and uncertainties for  
9 the models, and documentation that describes all of our  
10 work.

11                           --o0o--

12           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

13 SAHOTA: And now I'm going to switch gears to local  
14 action.

15           Local governments are uniquely positioned to  
16 reduce emissions because they have broad influence over  
17 activities that contribute to significant direct and  
18 indirect greenhouse gas emissions. This includes their  
19 planning and permitting processes, discretionary actions,  
20 local ordinances, outreach and education efforts, and  
21 municipal operations.

22           And given the 2030 target, we recognize that  
23 climate action must occur at all levels for us to be  
24 successful.

25           Fortunately, many local governments are already

1 leading efforts to address climate change through regional  
2 Climate Action Plans. In addition, many local air  
3 district rules and regulations aimed at reducing criteria  
4 and toxic pollutants generate concurrent greenhouse gas  
5 reductions.

6           Nevertheless, recent court proceedings and case  
7 law as well as other stakeholder feedback have highlighted  
8 the need for the scoping plan to provide guidance on how  
9 to address greenhouse gas emissions from local projects  
10 under actions such as CEQA, and to ensure that those  
11 actions are consistent with the State's climate action  
12 goals.

13                           --o0o--

14           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
15 SAHOTA: In response to the request for more specific CEQA  
16 guidance consistent with the scoping plan targets, ARB  
17 staff is recommending a per-capita goal of 6 metric tons  
18 by 2030 and a 2 metric tons by 2050, that would be  
19 implemented through a regional Climate Action Plan or  
20 General Plan. This goal was presented at a November 7th  
21 workshop, and staff is currently taking comments on these  
22 values.

23           The values represent the 2030 and 2050 targets  
24 divided by the Department of Finance population  
25 projections, and are therefore consistent with the



1 statewide greenhouse gas limits in AB 32 and SB 32. They  
2 also provide parity with the Under 2 MOU "fair share" and  
3 Paris Agreement, as well as demonstrate local level  
4 leadership in supporting the State's climate strategy.

5           The per capita approach does not limit regional  
6 growth, but does facility the concept that growth should  
7 occur in a sustainable manner.

8           The recommended goals may not be possible for  
9 some regions due to the types of sources. Therefore, the  
10 scoping plan would propose that as part of a climate  
11 action plan, the local agency identify what unique  
12 circumstances may result in a climate action plan with a  
13 different 2030 or 2050 goal.

14                           --o0o--

15           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
16 SAHOTA: Beyond plan-level actions local governments can  
17 also support the State's climate goals when considering  
18 discretionary approvals and entitlements of individual  
19 projects through CEQA.

20           Absent conformity and an adequate regional  
21 climate plan, ARB staff is recommending that all new  
22 land-use development projects implement all feasible  
23 measures to reduce greenhouse gas emissions to ensure that  
24 they do their share in supporting the State's goals.

25           ARB staff believes that achieving a no-net

1 increase in greenhouse gas emissions is the overall  
2 objective, but understands it may not be feasible for  
3 every project. Lead agencies may develop an  
4 evidence-based numeric threshold consistent with the  
5 Scoping Plan and the State's long-term goals. Projects  
6 with emissions over that threshold may be required to  
7 incorporate on-site design features and mitigation  
8 measures to avoid or minimize emissions to the extent  
9 possible.

10           If a project requires additional mitigation, ARB  
11 staff is recommending the lead agencies prioritize on-site  
12 design features first, followed by with mitigation within  
13 the air basin, and then elsewhere.

14           If all on-site mitigation cannot be achieved, we  
15 would propose the establishment of a green fund.  
16 Developers would pay into this fund for any unmitigated  
17 GHGs at the social cost of carbon. This fund could be  
18 used to implement energy efficiency or other projects in  
19 the region to support state goals and provide jobs in the  
20 region. These projects could be directed in EJ  
21 communities.

22           Where further project design or regional  
23 investments are infeasible, it may be appropriate to  
24 mitigate project emissions through purchase and retirement  
25 of offset credits from a voluntary registry.

1    --o0o--

2    INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: This slide provides the next steps in work on  
4 this update to the Scoping Plan. ARB staff will hold  
5 additional topic-specific workshops to obtain stakeholder  
6 feedback on the preliminary policy scenarios and modeling  
7 results, the measures modeled to close the gap, and other  
8 related topics.

9    As mentioned, ARB staff will also continue to  
10 work with stakeholders and the economic advisors to refine  
11 the economic analyses.

12    We are targeting an end-of-November release of a  
13 discussion draft for the Scoping Plan.

14    We anticipate that the complete draft for the  
15 2030 Scoping Plan, including the full environmental and  
16 economic analyses, will be released in early January 2017  
17 and will be accompanied by a 45-day formal comment period.  
18 The Draft Scoping Plan will be presented to the Board  
19 later that month for initial consideration.

20    Staff is targeting the release of the Final  
21 Scoping Plan, along with the formal written responses to  
22 comments received on the Draft Environmental Analysis,  
23 during the first quarter of 2017. The Final Scoping Plan  
24 will be presented to the Board for consideration in Spring  
25 2017.

1           There are also additional EJAC and community  
2 meetings that will be taking place throughout this time.

3           This concludes the presentation. At this stage I  
4 would invite the EJAC members up to testify. But I  
5 believe we have an update on their status for their  
6 attendance at this meeting.

7           INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA:

8           Yes, I'd be happy to update the Board.

9           At this point, like Rajinder said, the EJAC  
10 members would normally come up and provide some testimony.  
11 And a couple of them were planning to attend today but  
12 came down sick or otherwise had conflicts come up. So  
13 they do apologize for not being able to come.

14           They did want me to point out that they  
15 participated in last week's workshop and provided their  
16 comments at that point. The Committee is looking forward  
17 to discussing the Scoping Plan further at its next meeting  
18 and reviewing the next draft of the -- the discussion  
19 draft that Rajinder just pointed out when it hits the  
20 streets.

21           They also wanted me to point out that the EJAC  
22 will be looking for an EJ analysis of the scenarios that  
23 were discussed earlier. As you heard Rajinder say, we are  
24 doing that. And we'll be focused on the options -- they  
25 will be focused on the options that provide the strongest

1 air quality improvements at EJ communities. So definitely  
2 something we're looking forward to working with them on  
3 that.

4 CHAIR NICHOLS: We do have a letter from them  
5 also outlining their interest and concerns - am I right -  
6 on that specific issue or --

7 INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA: I  
8 don't think they provided a letter for this hearing.

9 CHAIR NICHOLS: Okay. I must be confusing it  
10 with something else then.

11 INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA:  
12 Yeah.

13 CHAIR NICHOLS: Thanks.

14 Okay. I think we should probably just move to  
15 the people who have asked to speak to us then, unless we  
16 want to break now. Because I'm going to suggest that we  
17 probably should break at 1 for half an hour just for  
18 lunch.

19 So we could break till 1:15 if we're really  
20 serious about keeping it short. Let's do that. All  
21 right.

22 People are beginning to fade, I can tell.

23 (Laughter.)

24 CHAIR NICHOLS: There's a need for calories here.  
25 Okay. We will break until 1:15; and we'll try to

1 be back promptly. Thank you.

2 (Off record: 12:46 p.m.)

3 (Thereupon a lunch break was taken.)

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1                   A F T E R N O O N   S E S S I O N

2                   (On record: 1:23 p.m.)

3                   CHAIR NICHOLS: So I think we should get started  
4 with the witnesses, beginning with Shelly Sullivan.

5                   Good morning -- good afternoon.

6                   MS. SULLIVAN: Good afternoon, Chair Nichols and  
7 Board, and Board out in space.

8                   (Laughter.)

9                   CHAIR NICHOLS: Board members are unseen. But,  
10 you see, they're beginning to move in.

11                  MS. SULLIVAN: I know you're there.

12                  My name's Shelly Sullivan. I represent the  
13 Climate Change Policy Coalition. And we were formally the  
14 AB 32 implementation group. But we're a group made up of  
15 organizations representing the building industry,  
16 retailers, manufacturing, agriculture, taxpayer, and  
17 forestry sectors.

18                  We are here to talk to you today about the  
19 scoping plan and raise a couple of concerns with some of  
20 the recent issues that were raised during the November 7th  
21 workshop. We will definitely be submitting comments for  
22 the Monday deadline that go into further detail. But we  
23 wanted to talk to you about a couple of issues right now;  
24 specifically the policy scenarios presented.

25                  With the lens of developing a program that

1 minimizes leakage, we urge the Board to direct the staff  
2 to conduct individual workshops on each of the policy  
3 scenarios to assure we're reaching GHG emission reduction  
4 goals in a cost-effective and technologically feasible  
5 manner.

6 CCPC is also concerned with the proposal of  
7 facility-specific caps. And we believe that those will  
8 result in less efficient and more expensive design  
9 concepts. So we really urge the Board to take a look at  
10 that and see what we can do to minimize leakage.

11 And then, finally, we continue to advocate  
12 that -- within the updated scoping plan actually, that we  
13 have an industrial advisory board so that industry and  
14 manufacturing can play a more significant role in the  
15 State's efforts in its 2030 and beyond goals.

16 So those are our three top-line comments. And  
17 again, we've made more in the letter, but we're just  
18 hoping that you take a look at those.

19 CHAIR NICHOLS: I just wanted to follow up on --  
20 quickly on your question or your point about separate  
21 workshops on each scenario.

22 MS. SULLIVAN: Yeah, it just seemed that -- you  
23 know, that there was a lot of information covered on the  
24 November 7th workshop. And then we got a couple of those  
25 scenarios that were very different from the scenarios, the



1 concept paper scenarios. And we just think that a lot of  
2 those really need more time and more analysis and more  
3 reflection.

4 CHAIR NICHOLS: Okay.

5 MS. SULLIVAN: So that's our plan.

6 BOARD MEMBER GIOIA: I have a question.

7 CHAIR NICHOLS: Yes.

8 BOARD MEMBER GIOIA: What I don't understand is  
9 since there was a lot of overlap in those different  
10 scenarios, it would seem that for the public that it would  
11 make sense to see all those scenarios compared against  
12 each other at one time in one workshop, so you could look  
13 at -- as the different pieces were scaled up or down or  
14 different elements were added, that you have -- I  
15 don't -- I guess it doesn't seem to me to make sense why  
16 we would have separate workshops on a different scenario  
17 and not just comprehensively deal with them in one.

18 MS. SULLIVAN: And maybe that's --

19 BOARD MEMBER GIOIA: Because all your members re  
20 smart people.

21 MS. SULLIVAN: Maybe that's the solution. But  
22 what we are asking for is a workshop on the different  
23 scenarios so that we are able to look at them and compare  
24 and contrast and try and figure out which are the most  
25 cost-effective technologically feasible ways to move

1 forward.

2 CHAIR NICHOLS: So what I understood was that  
3 just you felt that all of them were covered too fast  
4 and --

5 MS. SULLIVAN: Exactly.

6 CHAIR NICHOLS: -- and there wasn't enough time  
7 to dig into --

8 MS. SULLIVAN: Exactly.

9 BOARD MEMBER GIOIA: Oh, okay. Not separate  
10 workshop on each separate --

11 MS. SULLIVAN: No, a separate workshop that  
12 covers the policy scenarios.

13 BOARD MEMBER GIOIA: Okay.

14 MS. SULLIVAN: So thank you.

15 CHAIR NICHOLS: Thank you.

16 MS. ROBERTS: Good afternoon, Madam Chair and  
17 Board members. My name is Tiffany Roberts from Western  
18 States Petroleum Association.

19 And I'd like to just say that WSPA continues to  
20 hope that we can find a workable pragmatic approach to  
21 California's post-2020 climate policy. I think everybody  
22 recognizes that reducing greenhouse gas emissions 40  
23 percent below 1990 levels is going to be difficult and is  
24 going to come at a cost. And in fact at the November 7th  
25 workshop, there was economic analysis that was presented

1 which shows that a post-2020 path would cost the State in  
2 terms of jobs as well as gross state product. Moreover,  
3 that analysis did show that direct regulations will cost  
4 nearly 6 times as much as the State's Cap-and-Trade  
5 Program. That analysis really demonstrates that there's  
6 an urgent need to balance economic vitality and  
7 environmental regulation and integrity.

8           You know this. Economists have long recognized  
9 that market mechanisms such as a well designed  
10 cap-and-trade program can provide the most cost-effective  
11 approach to reducing emissions. And it's imperative that  
12 ARB go further to embrace a well functioning market  
13 mechanism that moves the State in the right direction.

14           However, the paths that we've seen presented seem  
15 to be going in the wrong direction. And specifically when  
16 it comes to a couple of different measures that were  
17 offered up, specifically the refinery measure that would  
18 have a 20 to 30 percent greenhouse gas emission reduction  
19 by 2030 and an 18 to 25 percent LCFS target by 2030, let  
20 me just quickly delve into the refinery measure and give  
21 you a little bit of information.

22           So it really does single out refineries for those  
23 direct emission reductions. And there's not a lot of  
24 explanation as to how it was determined that a 20 or 30  
25 percent reduction would actually be feasible. So we'll

1 follow up with information, but we would like to ask that  
2 we can work with you and your staff to delve into that a  
3 little bit more so that we can try to understand the  
4 feasibility of that.

5 Thank you.

6 CHAIR NICHOLS: Okay.

7 MR. PATNEY: Arjun Patney with the American  
8 Carbon Registry. I'll try to abbreviate my comments.

9 Thank you, Chair Nichols and the Board for the  
10 opportunity to speak today.

11 The issue we'd like to place front and center  
12 when we talk about environmental justice in the context of  
13 the Scoping Plan is specifically climate justice. For  
14 when we think back to Hurricane Katrina, we must remember  
15 who in our society was most hurt, who lost their homes and  
16 their lives?

17 When heat waves strike, the most vulnerable are  
18 those without the means to escape dangerously high  
19 temperatures.

20 Looking at other parts of the world, when there's  
21 a drought and crops are devastated, we know that some eat  
22 and some go hungry.

23 Climate risk is what we should be talking about  
24 when we talk about environmental justice in this room  
25 today with respect to the Scoping Plan. The moral

1 imperative is to reduce greenhouse gas emissions  
2 dramatically. And the only way to achieve that is by  
3 ensuring the resources we dedicate to this crisis are used  
4 to maximum effect. Every dollar spent must buy as much  
5 greenhouse gas mitigation as possible. And that is what  
6 cap and trade does.

7           Offsets accelerate our progress further. Every  
8 offset credit represents a real emissions reduction. That  
9 was written into AB 32 and the Cap-and-Trade Regulation.  
10 And anyone who doubts ARB staff's commitment to upholding  
11 that standard is misinformed.

12           Allowances on the other hand are permits granting  
13 the right to warm the atmosphere we all share. But every  
14 time an offset is used instead of an allowance, our  
15 atmosphere warms a little bit less, and the disadvantages  
16 in our society are a little bit safer from the destructive  
17 weather events brought about by climate change.

18           That is why questions raised about cap and trade  
19 and offsets are misguided. We should want as much as  
20 climate protection as we can get for every dollar spent,  
21 and we should want the credits used to represent emissions  
22 reductions. We need more greenhouse gas mitigation and  
23 more offsets. The current offsets use limit of 8 percent  
24 is in fact too low. It should be increased. It's a limit  
25 that unnecessarily impedes our ability to fight climate

1 change and protect our most vulnerable from climate risk.

2 And thank you for the opportunity to share our  
3 thoughts.

4 CHAIR NICHOLS: Thank you Mr. Patney.

5 MR. SMITH: Hi, Chair Nichols and members of the  
6 Board. My name's Adam Smith. I'm the manager of climate  
7 policy with Southern California Edison.

8 I'd like to just touch on three topics:

9 First, voice our support for the Cap-and-Trade  
10 Program.

11 Second, discuss the importance of the Scoping  
12 Plan to future utility planning efforts.

13 And then finally just touch upon the important  
14 role of electrification.

15 Southern California Edison continues to support  
16 the State's Cap-and-Trade Program, and therefore we  
17 support the Draft Scoping Plan scenario that explicitly  
18 includes the extension of cap and trade.

19 A well-designed market, as you've kind of already  
20 heard, can deliver and actually find maybe in the first  
21 instance least cost abatement opportunities across cap  
22 sectors. I think ARB staff has come up with a pretty good  
23 list of those benefits of the Cap-and-Trade Program  
24 already. I think when you guys do the speaking tour and  
25 further economic analysis, you're going to reaffirm and

1 probably expand that list.

2           Pivoting quickly to utility planning. The  
3 Scoping Plan will be critically important to utility  
4 planning in the future, in a way I don't think other  
5 scoping plans have, as it will likely set a range of  
6 emissions that the State wishes to see come from the  
7 electric sector out to the year 2030. This is because of  
8 SB 350 and the creation of the integrated resource plans.  
9 That range will be taken by the CPUC and CEC and used to  
10 inform electric utilities in those IRPs.

11           So it is crucial to ensure that any electric  
12 sector targets or ranges that come out of this scoping  
13 plan update don't just consider the appropriate abatement  
14 effort of our sector, but also include the appropriate  
15 abatement effort of other sectors as well.

16           I'm especially thinking about here the  
17 transportation sector, which has its own executive order  
18 mandating that it achieve 80 percent below 1990 levels by  
19 the year 2050.

20           If you look at ARB's proposed draft scenario, you  
21 see that the electric sector would achieve something like  
22 67 percent reduction from 1990 levels by the year 2030,  
23 while the transportation sector would only achieve  
24 something like, you know, a 30 percent decrease.

25           With that, I'll let it go. But thank you for the

1 time.

2 (Laughter.)

3 CHAIR NICHOLS: Thank you.

4 It's amazing how much you can do to squeeze three  
5 minutes into two.

6 (Laughter.)

7 MR. SHILLINGLAW: I'll try to continue that  
8 tradition here.

9 My name is Brian Shillinglaw. I direct the U.S.  
10 operations for NewForests Timberland, an environmental  
11 market investor and a supplier of offsets into the system.  
12 We located an office and have increased hiring in the  
13 State of California precisely because of the passage of AB  
14 32.

15 I'd like to make a few brief points.

16 First, as we consider post-2020 options I'd urge  
17 the Board to direct staff to evaluate empirical evidence  
18 around the efficacy of carbon taxes now that we have some  
19 empirical data coming in from British Columbia where that  
20 system has had some difficulty in achieving the targeted  
21 emissions reductions, and they're reconsidering. So I  
22 think that should be part of the Scoping Plan analysis.

23 Second, I think there's broad consensus that the  
24 post-2020 program should be designed to ensure the maximum  
25 possible criterion pollutant reductions. I urge the Board



1 to ask staff to develop a menu of policy interventions  
2 both within the program design and uses of auction  
3 revenues that would deliver the most criterion pollutant  
4 reductions and also the cost of those. And that would  
5 inform which of those tweaks and which of those policy  
6 designs are chosen both with -- between alternatives and  
7 within alternatives. And I suggest that once that menu is  
8 developed, the elimination or reduction of offsets will  
9 not be a top priority for reducing criterion pollutants.

10 Finally, the offset program should not just be  
11 viewed as cost containment. This a program of economic  
12 diplomacy for climate mitigation. There are landowners  
13 and businesses around the country that are seeing that  
14 society values climate mitigation because they are getting  
15 paid for taking action to reduce greenhouse gas emissions.  
16 And that's vitally important. And it's even more  
17 important to deliver on the mandate of California  
18 leadership on climate under AB 32.

19 Finally, I note that as we look at the offset  
20 program, it should be noted that tens of millions of  
21 dollars have flowed to rural landowners often with  
22 environmental justice concerns, including Native American  
23 tribes around the country; and that as we consider the  
24 post-2020 plan, that should also be factored in.

25 Thank you for your time.

1 CHAIR NICHOLS: Thank you.

2 MR. MOONIN: Good afternoon. My name's Elmer  
3 Moonin. I am Sugpiaq from Port Graham, Alaska, and I'm  
4 the chief operating officer for Port Graham Corporation.  
5 I'd like to take a quick second to thank you for the  
6 opportunity to share my thoughts and our Port Graham  
7 Corporation Board for the same.

8 Today I'd like to talk a little bit about Port  
9 Graham Corporation and the community before touching on  
10 our anticipated participation in the program and the  
11 positive impact it already has on the community.

12 Port Graham is a small Sikwiup subsistence  
13 village located on the tip of the Kenai Peninsula in south  
14 central Alaska and has a population of 170 people.

15 Port Graham Corporation is a village corporation that was  
16 created under the Alaskan Native Claims Settlement Act in  
17 1971. When the United States Congress passed ANCSA, Port  
18 Graham Corporation has conveyed over 106,000 acres of  
19 ancestral lands surrounding the community and the Gulf of  
20 Alaska for future economic development.

21 Our ancestors carved off a subsistence lifestyle  
22 on these lands for generations. As a matter of fact, our  
23 current chairman's grandfather was born on these lands in  
24 Yalik Bay.

25 The Port Graham Corporation is currently in the

1 process of enrolling in an improved forest management  
2 project into the Cap-and-Trade Program. These efforts  
3 have contributed to ten seasonal jobs in the community  
4 that has a nearly 30 percent unemployment rate. And with  
5 proper training and education, if all goes well, can  
6 provide stable income to shareholders for the next  
7 century. Through these activities during the 2016 field  
8 season our shareholders were able to spend time connecting  
9 with their ancestral lands while earning a wage.

10 As the project moves forward, Port Graham  
11 Corporation is working to ensure shareholders and  
12 descendants will benefit from our participation.

13 This includes increasing shareholder hire,  
14 creating a settlement trust, and preserving our cultural  
15 heritage for future generations.

16 Port Graham Corporation supports extending the  
17 Cap-and-Trade Program through 2030 that can provide other  
18 ANCSA corporations the opportunity to realize the same  
19 benefits we're anticipating.

20 Thank you for your time.

21 CHAIR NICHOLS: Thank you.

22 MR. KOMPKOFF: Good afternoon.

23 CHAIR NICHOLS: We're giving you two people's  
24 time, right?

25 MR. KOMPKOFF: Two people's time.

1 CHAIR NICHOLS: You and Mr. LaBelle.

2 MR. KOMPKOFF: Yes, he's a shareholder that  
3 yielded some time to me.

4 So my name is Gabe Kompkoff. And if I look like  
5 I'm sweating, it's because it's so darn hot in here  
6 compared to Alaska, where I came from.

7 (Laughter.)

8 MR. KOMPKOFF: I am both the CEO and a  
9 shareholder of Chugach Alaska Corporation. I'm originally  
10 from a small town called Cordova of about 2,000 people,  
11 which is a big city compared to my friend Elmer's town in  
12 the village that my father grew up in.

13 We are a for-profit Alaska native corporation  
14 that was established under the Alaskan Native Claims  
15 Settlement Act of 1971. We're unique in our indigenous  
16 ownership, but we're just like every other corporation.  
17 We're regulated and taxed and operate just like any other  
18 corporation.

19 We represent more than 2500 Alaskan Native  
20 shareholders. And you heard and you can see some of our  
21 shareholders here today.

22 We're deeply committed to preserving the economic  
23 well-being of our shareholders preserving our heritage,  
24 and our lands are at the very core of our mission and our  
25 assets. Our land holdings include 5,000 miles of coast

1 land that go from the tip of Kenai Peninsula where Port  
2 Graham is all the way up through almost to Yakutat.  
3 Beautiful Kenai Fjords, Prince William Sound. Who's been  
4 on a cruise in that area, it's just -- I recommend it to  
5 everybody. Our lands are filled with timber and minerals  
6 and wildlife, which we manage to the benefit of our  
7 shareholders.

8           We plan on participating -- Chugach plans on  
9 participating in the Cap-and-Trade Program through an  
10 improved forestry management project over the Bering River  
11 Coal Field. We think it will supply offsets into the  
12 system in 2018.

13           As a side note, it will also forever retire our  
14 rights to develop the coal.

15           The carbon offset project is a unique opportunity  
16 to create long-term sustainable economic benefits for our  
17 shareholders and our region. We provide professional  
18 development opportunities, jobs, scholarships, cultural  
19 preservation programs. And our job is to produce these  
20 benefits for multiple generations.

21           As I said before, our land holdings are the  
22 single largest asset of the corporation. Managing our  
23 land's responsibly means finding a balance between  
24 extracting resources and taking care of our land for  
25 generations to come.

1           We've harvested our timber before, and we  
2 continually evaluate and explore our lands for additional  
3 mineral resources.

4           If we participate in this program, it allows us a  
5 unique opportunity to meet our mission and our goals of  
6 economic development, while maintaining land for  
7 traditional uses for many generations to come.

8           So on behalf of our corporation, our shareholder  
9 community, we applaud your leadership here in California.  
10 As you know, you're having a huge impact beyond your  
11 borders.

12           As you evaluate your Scoping Plan, we urge you to  
13 keep in mind the positive impact you're having on  
14 communities outside of your lovely state and support  
15 continuation of the Cap-and-Trade Program beyond 2020.

16           Thank you.

17           CHAIR NICHOLS: Thank you.

18           Feel free to take off your jacket if you want.

19           (Laughter.)

20           MR. VAN AELSTYN: Good afternoon, Madam Chair,  
21 and members of the Board. I'm Nico Van Aelstyn here on  
22 behalf of Sealaska Corporation.

23           Sealaska supports the Cap-and-Trade Program in  
24 ARB's proposed 2020 Scoping Plan over the two  
25 alternatives.

1           Sealaska is the Alaskan Native Regional  
2 Corporation for southeast Alaska, south of Chugach.

3           These forests and coast lines are the traditional  
4 homelands of the Tlingit, Haida, and Tsimshian peoples.  
5 Sealaska represents the interests of 22,000 shareholders  
6 of native descent.

7           Sealaska shares the concerns of the environmental  
8 justice communities. Its shareholders know about the  
9 public health consequences that can result when decisions  
10 are driven by economic concerns alone. At times their  
11 ancestral forests have been overlogged and their coasts  
12 overfished.

13           For people so deeply rooted in these lands, this  
14 can and has had adverse health effects. It also bears  
15 mention that Alaska rural villages are some of the most  
16 disadvantaged in the U.S.

17           While Sealaska has engaged in natural resources  
18 extraction, it supports California's commitment to  
19 addressing climate change. Northern communities are  
20 amongst the most impacted by climate change. Sealaska  
21 therefore supports extending the Cap-and-Trade Program  
22 beyond 2020, and specifically the Forest Offset Program.  
23 It has enabled the conservation of hundreds of thousands  
24 of healthy forests both within California and outside the  
25 State. It has locked up millions of tons of greenhouse

1 gases. It helps to contain costs. It also provides  
2 economic and environmental co-benefits.

3 Sealaska's forest project will bring important  
4 economic improvements to the native peoples of southeast  
5 Alaska and will do so in a way that will promote public  
6 health.

7 It also will preserve and protect large forests,  
8 including some selected because of the marine -- sent to  
9 the marine habitat and protecting them too.

10 Alaska's project -- Sealaska's project also  
11 demonstrates another important benefit, what Brian  
12 Shillinglaw called economic diplomacy. The results of the  
13 elections last week demonstrated the need for California  
14 to continue to provide leadership in addressing climate  
15 change.

16 As Rajinder noted earlier, cap and trade is  
17 unique among the three scenarios in that it provides for  
18 collaboration with other jurisdictions via linkage and via  
19 offsets, enabling projects like Sealaska and in places  
20 like Alaska, Pennsylvania, and West Virginia demonstrates  
21 defining climate change need not be an environment versus  
22 economy battle. In parts of the country that may not  
23 appear to share California voters values, these projects  
24 demonstrate that people there too have an interest in  
25 fighting climate change.



1 Sealaska supports extending the program and asks  
2 the Board to consider raising rather than lowering the 8  
3 percent limit on offsets.

4 Thank you.

5 CHAIR NICHOLS: Thank you.

6 MR. VILLEGAS: Good afternoon, Madam Chair and  
7 Board members. I'll try to squeeze this three-minutes  
8 presentation into the two.

9 My name's Ernie Villegas and I live in Fillmore,  
10 California, a small agricultural town of 14,000 residents  
11 in Ventura County. Much of our community is comprised of  
12 Hispanic families, many living on low income salaries.

13 Although I do represent myself today, I am the  
14 former mayor and city councilman of Fillmore and was a  
15 29-year employee of Southern Cal Edison serving as a  
16 public affairs manager and supervisor of our energy  
17 efficiency programs.

18 I come before you because I have some concerns on  
19 what unintended consequences may arise if there are even  
20 more stringent regulations put upon AB 32 Scoping Plan  
21 update. This may have some impacts placed upon our  
22 families and our businesses.

23 During my time as a mayor and councilman, I was  
24 also a board member of the Ventura County Air Pollution  
25 Control District, having served there for four years,

1 including as chair of the board.

2 I was very proud of being a member of the board  
3 because we worked hard at engaging with all of our  
4 community advocates from all sectors and including them in  
5 the process so we can make the best decisions possible to  
6 maximize our positive outcomes and minimize our negative  
7 results.

8 My fear is that some of the recommendations from  
9 the advisory committees will be much more difficult to  
10 achieve and could come at a price which means or could  
11 mean a loss of jobs, production, and increased energy  
12 costs. These are important factors we cannot afford.

13 As I understand it, at the ARB workshop last week  
14 there was an acknowledgement that any climate policies  
15 that the State does pass will be tough and will have an  
16 economic impact. There is a need to make these policies  
17 as cost effective as possible. Let me be clear. These  
18 policies should have and continue to have an emphasis on  
19 cost effectiveness. Our citizens depend on it.

20 Thank you for your time.

21 CHAIR NICHOLS: Thank you.

22 MR. GONZALES: Madam Chair, members of the Board.  
23 My name is Bob Gonzales and I come from the small town of  
24 Santa Paula in the County of Ventura, population of about  
25 30,000.

1 I come here to share my thoughts with you related  
2 to some of the Environmental Justice Advisory Committee  
3 recommendations made to the ARB on how they may impact a  
4 city -- bless you -- on how they may impact a city like  
5 mine including the members of my community.

6 First of all I want to share with you that my  
7 community's known for its lemons, oranges, avocados. And  
8 Unocal 76 opened their doors 126 years ago last month.

9 I was a police officer in the city for 33 years,  
10 the last seven serving as the chief of police. After I  
11 retired I became a council member and served for eight  
12 years, two years as the mayor. I also served eight years  
13 on the local community college board and 11 years on the  
14 local school boards. I believe I have a good pulse and a  
15 read on the community.

16 I mentioned there are 30,000 people in the city  
17 of Santa Paula. Unfortunately the medium income for a  
18 citizen in Santa Paula is just over \$20,000. And if my  
19 math is right, that's like \$1,500 plus a month.

20 The unemployment rate stands at 7.1 percent, and  
21 the national average of unemployment I think is about 4.9,  
22 maybe 5.

23 The recommendations submitted by the  
24 Environmental Justice Advisory Committee are very good.  
25 However, many are pie in the sky. Some have much merit,

1 but yet some are very expensive. And it will be the  
2 people that live in my community that will have to pay to  
3 implement a lot of the recommendations, as well as other  
4 people who are going to be having to travel and buy  
5 energy.

6 Many of the recommendations that have been  
7 submitted by the Environmental Justice Advisory Committee  
8 will make things worse for the community of Santa Paula.  
9 When the Environmental Justice Advisory Committee makes  
10 recommendations but -- to not build more gas stations or  
11 when they extol the benefits of higher gas prices, let me  
12 say we are not speaking for the people of my community or  
13 like communities.

14 Let me be clear and emphasize the fact that we  
15 too believe in clean air and clean water in Santa Paula.  
16 But there must be a balance between environmental  
17 integrity and economic vitality.

18 And I thank you for your time.

19 CHAIR NICHOLS: Thank you. Thanks, Mr. Gonzales.  
20 I appreciate people shortening their time just in the  
21 interests of hearing everybody.

22 Bonnie Holmes-Gen.

23 MS. HOLMES-GEN: Madam Chair and Board members.  
24 Bonnie Holmes-Gen with the American Lung Association in  
25 California.

1           The American Lung Association and health  
2 community throughout California believe the Scoping Plan  
3 is a critical opportunity for California to continue as a  
4 climate leader for the country and the world, and  
5 demonstrate that we can and will achieve clean air and a  
6 healthy climate and improve the health of millions of  
7 people.

8           We know Californians today face the most  
9 difficult air pollution challenges in the United States,  
10 with health impacts falling disproportionately on our most  
11 vulnerable populations. And we also understand that  
12 climate change is already upon us and worsening our air  
13 quality. Drought-related impacts, for example, have  
14 worsened particle pollution levels in the San Joaquin  
15 Valley.

16           Clearly we need a plan that will meet and exceed  
17 our GHG reduction targets, while building in protections  
18 for communities.

19           I'm glad to see the repeated mention of the need  
20 for refinery and industrial efficiency measures to reduce  
21 community impacts. But I want to focus for one minute on  
22 transportation that represents more than a third of the  
23 GHG emission reductions -- or emissions in California and  
24 contributes to the majority of smog and soot emissions.

25           My focus and plea is that we need a strong

1 direction to push for deeper reductions in the  
2 transportation sector. This means moving away from  
3 combustion, driving down dependence on dirty petroleum  
4 fuels, and moving to zero emissions.

5 One key fact from our recent Clean Air Future  
6 Report, conservative estimate of passenger car impacts,  
7 climate and health impacts adds up to 15 billion in  
8 California, or about \$18 of health and climate impacts for  
9 every fill-up of gas. So we want to express the strong  
10 importance of reducing transportation emissions through  
11 transforming technologies, transforming fuels, and  
12 directing more focus and support on local land-use and  
13 transportation policies to reduce VMT.

14 Transforming technology and fuels is covered of  
15 course through clean cars, zero-emission vehicles, and low  
16 carbon fuel standard. But let's work together on SB 375  
17 and improving 375 targets and community strategies.

18 Thank you.

19 CHAIR NICHOLS: Thank you.

20 MR. MICHAELS: Madam Chair and members of the  
21 Board, I appreciate the opportunity to be here. My name's  
22 Ted Michaels with AJW. I'm here representing the Third  
23 Party Delivered Energy Efficiency Coalition. The  
24 Coalition's members include companies and organizations  
25 that provide a wide range of energy efficiency services

1 and technologies that help reduce greenhouse gas  
2 emissions, save energy, and provide a significant amount  
3 of economic benefit.

4           Examples of third party delivered energy  
5 efficiency include deep retrofits at public sector and  
6 private sector buildings that are most often provided by  
7 energy service companies under performance contracts. It  
8 includes energy -- industrial efficiency and optimization  
9 that are done in the manufacturing and industrial-based  
10 increase competitiveness and reduce energy consumption as  
11 well as material loss and other benefits.

12           In addition, it includes above-code energy  
13 efficiency approaches such as LEED that will provide large  
14 benefits in the commercial sector as well as other  
15 sectors.

16           As ARB noted in the previous scoping plan,  
17 buildings in California represent the second largest  
18 source of greenhouse gas emissions. And California has  
19 had a fair amount of -- a significant amount of success in  
20 addressing energy efficiency through utility and  
21 rate-payer programs.

22           Third party delivered efficiency is different.  
23 This is voluntary, private sector delivered, energy  
24 efficiency projects that can provide a significant amount  
25 of greenhouse gas savings, economic drivers, and high

1 quality jobs both in the service sector and the  
2 construction sector.

3           So as we -- as California continues its climate  
4 leadership, we encourage you to more effectively utilize  
5 third-party delivered energy efficiency. And we encourage  
6 you to work with your partners at the energy agencies such  
7 as the CEC and the CPUC and in other governments' agencies  
8 such as the Legislature and the Treasurer's office to make  
9 sure the third-party delivered efficiency contributes to  
10 the solutions that you're searching for here.

11           Thank you.

12           BOARD MEMBER GIOIA: Thank you.

13           Chair Nichols is out briefly. So I will just  
14 temporarily ensure this meeting is orderly run for a  
15 while.

16           Orderly.

17           MR. PENRITH: Good afternoon, members of the  
18 Board. My name is Sean Penrith. I'm the Executive  
19 Director for The Climate Trust. We're an NGO 19-years old  
20 based in Portland, Oregon. We've been heavily immersed in  
21 the carbon market world of protocol development and policy  
22 for all of those years.

23           One of the most central issues when you look at  
24 the global challenge of course is mobilizing the trillion  
25 dollars a year to combat the temperature ranges that we



1 want to maintain ourselves within. We cannot leverage  
2 public finance because those balance sheets are too thin,  
3 and so we have to rely on private capital.

4 To bring private capital to the market, we need  
5 to have certainty and we need to avoid as much risk as we  
6 can.

7 The Climate Trust launched at the beginning of  
8 the year Climate Trust Capital, which was an impact  
9 investment fund specifically designed to invest in  
10 land-based sectors to generate credits into the California  
11 system.

12 A lot of those investors are extremely concerned  
13 when they hear that certainty may be in jeopardy. We  
14 understand from Marrakech and the Paris Agreement that the  
15 cost of compliance can be reduced by 32 percent by using  
16 carbon trading. And so we would urge the Board to  
17 continue their pursuit of a cap-and-trade system post-2020  
18 that includes the allowance and the offset sector. Along  
19 with my colleagues, I would urge you to not consider  
20 reducing the offset limit but instead increasing it to 12  
21 percent, to further enable linkages, lubricate the market  
22 and stimulate much more innovation into the sectors.

23 Cost effectiveness is the prime consideration as  
24 far as we're concerned. It should be a central equity  
25 issue. And so the ability to reduce the containment and

1 compliance costs are first and foremost, and that should  
2 be the central equity issue. We do not dispute the issues  
3 that the EJ Advisory Committee raised at the workshop last  
4 week. We don't denigrate them or dismiss them whatsoever.  
5 But if the central purpose of the program is cost  
6 effectiveness, we urge you to consider moving forward with  
7 cap and trade and increasing the limit.

8 Thank you.

9 BOARD MEMBER GIOIA: Thank you.

10 MR. KRAUSSE: Good afternoon, Supervisor Gioia  
11 and Board members. I'm Mark Krausse here on behalf of  
12 Pacific Gas & Electric Company.

13 I'd like to start by repeating something you've  
14 heard us say many, many times before. Pacific Gas &  
15 Electric strongly supports California's efforts at climate  
16 change -- at reducing the impacts of climate change and  
17 the Cap-and-Trade Program in particular as a critical and  
18 cost-effective component for meeting our State's goals.

19 At a time when we've probably moved away --  
20 further away from a national approach to combating climate  
21 change, it's more important than ever that California  
22 demonstrate a renewed commitment to the path it embarked  
23 on a decade ago and one on which it has demonstrated  
24 significant success. Now is not the time to change  
25 course.

1           At the same time we must achieve these reductions  
2 while also addressing local air quality impacts. As a  
3 utility that serves some of the communities most impacted  
4 by air quality -- air pollution, we wholeheartedly agree  
5 that ARB must continue its important role in ensuring  
6 better health outcomes for all.

7           PG&E firmly believes that the draft scoping plan  
8 policy scenario, that first scenario that you heard with  
9 both Cap-and-Trade Program and program measures, is the  
10 best, most cost-effective approach to reducing carbon.  
11 Cost effectiveness is not only desirable but critical if  
12 California's approach is to serve as a model for national  
13 and international action in proving that environmental  
14 protection and economic success are not competing goals.

15           I'll add that the combination of cap-and-trade  
16 and program measures that has been proposed is consistent  
17 with AB 32, SB 32, SB 350, and AB 197. And I'll point out  
18 that the author of AB 197 himself, Eduardo Garcia,  
19 Assemblymember, testifying in the Natural Resources  
20 Committee, said, and I quote, he is -- that he is  
21 supportive of the Cap-and-Trade Program, the leadership of  
22 the Senate is supportive of the Cap-and-Trade Program, and  
23 leadership of the Assembly is in support of the  
24 Cap-and-Trade Program. So we join those authorities in  
25 saying we too at PG&E are supportive of the program.

1 I'll just finish by saying we stand ready to make  
2 reductions in transport -- in our own sector obviously,  
3 but also in transportation and any other areas we can.

4 Thank you.

5 BOARD MEMBER GIOIA: Thank you.

6 We have a list up, so I'll call the names.

7 Bishop Ron Allen, Brock Costalupes, Alex Jackson,  
8 Roger Williams.

9 Oh, there we go.

10 If those who are here on the list can appear.

11 Is Bishop Allen here?

12 No.

13 Is Brock Costalupes here?

14 Okay. So Bishop Allen is not here. All right.

15 MR. COSTALUPES: Hopefully, I'm not jumping up on  
16 the Bishop -- an actual Bishop.

17 BOARD MEMBER GIOIA: No.

18 MR. COSTALUPES: Brock Costalupes, representing  
19 the Modesto Irrigation District.

20 I would like to also lend our support to the  
21 Cap-and-Trade Program as an effective low-cost means of  
22 achieving our 2030 emissions goals.

23 I'd like to point out that our service territory  
24 in the Central Valley is classified almost entirely as a  
25 disadvantaged community. And as such, a cost is of

1 paramount importance to our ratepayers. I'd like to point  
2 out that the more expensive direct command and control  
3 measures contemplated by Alternative 1, and also it seems  
4 some potential adjustments to the Cap-and-Trade Program,  
5 would disproportionately affect our disadvantaged  
6 ratepayers simply by virtue of people have to keep the  
7 lights on, and electricity cost represents a large portion  
8 of these people's income. And by forcing them to base the  
9 cost of the additional direct control measures is a  
10 disproportionate effect on their rates.

11 Thank you.

12 BOARD MEMBER GIOIA: Thank you.

13 MR. JACKSON: Good afternoon. Alex Jackson with  
14 the Natural Resources Defense Council. And half of my  
15 testimony was an ode to the Chair. So since she's not  
16 here I will take only a minute, I presume.

17 BOARD MEMBER GIOIA: She's probably listening, so  
18 she can hear you.

19 MR. JACKSON: Well, then, Mary -- no, just  
20 kidding.

21 (Laughter.)

22 MR. JACKSON: I want to first and foremost be  
23 heard to support staff's preferred scenario, which rests  
24 on a strong and enhanced suite of performance standards,  
25 which has always been the foundation of our climate

1 policy. I think it's somewhat frustrating that these  
2 forms tend to devolve into fighting over the backstop of  
3 how we're closing a gap, when we lose sight of all the  
4 work that's been done on our RPS, low carbon fuel standard  
5 that have really been the engine of our progress and will  
6 continue to be the engine of our progress.

7 But we do support the preferred scenario and the  
8 continuation of the Cap-and-Trade Program as that  
9 backstop. As we move out to much more aggressive goals,  
10 that is the only pathway that provides that emission  
11 certainty that can ensure we hit our statutory goals.

12 And the other alternatives: The tax can only  
13 approximate that reduction certainty; and a pure direct  
14 measure approach cannot assure that certainty.

15 I think the staff's presentation analysis does a  
16 good job of outlining the advantages of, you know, not  
17 making it an either/or between a market-based approach and  
18 a suite of complementary measures.

19 But I think in light of the darkness that will be  
20 descending upon DC shortly, it is worth highlighting one  
21 additional benefit which we've heard from today, and that  
22 is I think the leadership role for California on a global  
23 stage will be more important than ever. Subnationals will  
24 emerge more than ever as the locus of change on climate  
25 policy. And we're facing an administration and even

1 throughout the west a broad turn towards isolationism. We  
2 can argue the merits of that as an economic policy, but it  
3 will surely fail as a climate policy. We need to  
4 demonstrate leadership that others can join. I think  
5 turning away from our linked partners would be a great  
6 mistake at this moment.

7 But, however, I do want to emphasize, I think the  
8 construction of the scenarios right now where a lot of the  
9 policy innovation is in that Alternative 1, we would ask  
10 be included in the scenario with a cap, as we know a  
11 carbon price alone will not overcome all these barriers.

12 BOARD MEMBER GIOIA: Thank you.

13 MR. JACKSON: Thank you.

14 BOARD MEMBER GIOIA: And we plan to continue to  
15 be that shining light in a sea of darkness.

16 (Laughter.)

17 MR. JACKSON: Thank you.

18 MR. WILLIAMS: Good afternoon. Roger Williams  
19 with Blue Source. I'd like to thank the Board for the  
20 opportunity to provide a couple of comments.

21 My company, we work with governments, companies,  
22 and nonprofit organizations to reduce and mitigate  
23 environmental impacts. And we have been very focused on  
24 providing offsets into the California program since its  
25 inception. And we've registered more credits than any

1 other company in the program so far. So we're very active  
2 participants in this market.

3 Just a couple of quick comments. The first one  
4 is in regards to the question of what we're solving for  
5 under AB 32. And there has been a lot of comments  
6 regarding local air quality issues, which are ones that  
7 definitely resonate with us and we agree with. I think  
8 we're proposing the question that, how much are we trying  
9 to solve for within the AB 32 legislation itself, which at  
10 its inception was geared towards reducing greenhouse gas  
11 emissions in a cost-effective way?

12 And I think it's our view that local air quality  
13 issues should be solved with local air quality regulation  
14 and legislation. That would be point number 1.

15 Number 2 is just to report a little bit from the  
16 field here that the offsets component of the program is  
17 working really well. We have registered dozens of  
18 projects and over 6 million credits into the program. And  
19 that is working with landowners here in California and in  
20 other states. And we've seen a shift in thinking around  
21 how you can fund and get rewarded for environmental  
22 stewardship, which is a huge benefit of this program.  
23 We've seen it with large conservation organizations that  
24 have -- are able to fund their work through participation  
25 in this program. And also seeing a shift in thinking from



1 other landowners that heretofore were not that interested  
2 in environmental stewardship but are based on this  
3 program.

4           Final comment I'd like to make is that more than  
5 ever California's leadership on a global scale is  
6 something that will be highlighted. So please stay the  
7 course, don't stutter-step, because the program is  
8 working.

9           Thank you very much.

10           BOARD MEMBER GIOIA: Thank you.

11           Jerry Green.

12           MR. GREEN: Jerry Green, Southern California  
13 Black Business Expo. And I came up this morning to speak  
14 on -- we hear a lot about disadvantaged communities and  
15 things like that. But my question is, where is the real  
16 outreach into these communities? I know you've done an  
17 event in Wilmington and San Bernardino. And I'm in the  
18 Inland Empire, so there's a lot of community out there  
19 that you're not reaching.

20           And to go -- and I'm going to give you some  
21 advice also. To go to the church and then go to community  
22 organizations is not how you reach the black community.  
23 You've got to go through the black press, who have the  
24 connections in the community to bring the community  
25 together. So the approach you took is not going to reach

1 the community and real dig -- dig down into what's going  
2 on, because that's how the information is disseminated to  
3 the black community.

4           Also, give you a quick story -- a couple stories.  
5 Working in the community with businesses, truckers. So  
6 after the housing disaster, now truckers who have lost  
7 their house was looking to now make a down payment to  
8 purchase a house. Now they had to buy more trucks,  
9 because of the new regulation. So the money they were  
10 going to use for a down payment now for a house had to be  
11 to buy a new truck. So now they go from going from one to  
12 two to three trucks back down to three to two. So many of  
13 them are disenfranchised, discouraged and saying that they  
14 feeling that this is a movement from big business, big  
15 trucking companies to put them out of business as small  
16 businesses. So something else to think about as you move  
17 forward.

18           BOARD MEMBER GIOIA: Thank you.

19           If folks can be ready to come up, this will go  
20 quicker if the -- when you see your name on the list, be  
21 ready to come right up.

22           MR. TUTT: Good afternoon. Tim Tutt representing  
23 Sacramento Municipal Utility District. I also want to  
24 express our strong support for the draft screening plan  
25 scenario, including the robust and well-designed

1 Cap-and-Trade Program. We know that it's an existing  
2 program that's successful and we want to continue that.  
3 It achieves the climate goals at lowest cost; will result  
4 in certain emission reductions at direct sources;  
5 establishes a carbon price which is important in resource  
6 and investment decisions, very important for that price to  
7 still be there; and it allows continued and expanded  
8 linkage with other places.

9 I'd like to point out that the modeling shows  
10 that at least 67 percent of the reductions in this  
11 scenario come from known commitments from direct emission  
12 sources, and that the Cap-and-Trade Program will also  
13 result in direct emission reductions from those sources.  
14 So it's going to be even greater on a cumulative basis.  
15 It's at least 85 percent from direct emission reductions.

16 Also like to point out that the 8 percent offset  
17 limit is proportional to compliance, not to reductions.  
18 So as the cap decreases and compliance decreases on a  
19 quantitative basis, there are fewer and fewer offsets that  
20 are going to be available or used in the market up to the  
21 limit.

22 But reductions will increase as we move forward.

23 And then the last thing I'd like to say is it's  
24 important as -- to have a robust and well-designed  
25 Cap-and-Trade Program. We're working with staff and other

1 stakeholders on doing that in another proceeding here.  
2 And we're not quite there yet. We're questioning a little  
3 bit whether some of the places we're at will result in  
4 increases in ratepayer costs in California. And so we  
5 need to work in that other area for that.

6 Thank you.

7 BOARD MEMBER GIOIA: Thank you.

8 MR. BIERING: Good afternoon, members of the  
9 Board. My name is Brian Biering. I'm here on behalf of  
10 Turlock Irrigation District.

11 Turlock, like Modesto, primarily serves  
12 disadvantaged communities. And we are very concerned  
13 about the potential for ratepayer impacts by pursuing one  
14 of the alternative scenarios to the referenced scenario.

15 So we'd like to express our strong support for  
16 the Cap-and-Trade Program. We believe it is the most  
17 cost-effective method of minimizing cost for ratepayers,  
18 particularly for disadvantaged communities.

19 We're supportive of the staff's efforts to redo  
20 the economic analysis and, in particular, look at the  
21 economic costs of some of the policy scenarios on  
22 disadvantaged communities. One of the goals of AB 197 was  
23 to include the social cost of carbon. As part of that in  
24 the statutory definition, that includes the system energy  
25 costs. So we would encourage you to look at those system

1 energy costs and at the various policy scenarios, and  
2 support the cap and trade going forward.

3 Thank you.

4 BOARD MEMBER GIOIA: Thank you.

5 MR. BREUNINGER: Good afternoon, Honorable Board.  
6 My name is Dan Breunigner. I'm the president of the  
7 Mescalero Apache Tribe. We are the descendants of Cochise  
8 and Geronimo, and our homelands are in the Sacramento  
9 Mountains of southern New Mexico.

10 Our tribe has one of the best and most productive  
11 commercial forests in the southwest. This resource is  
12 both sacred and financially vital to us. The Mescalero  
13 Apache Tribe has constantly been recognized for prudent  
14 management of our natural resources.

15 In 1983, we won a case in the United States  
16 Supreme Court that established our right to manage fish  
17 and wildlife on our own reservation. When it made its  
18 decision, the U.S. Supreme Court took note of how well we  
19 managed our resources. The Court reasoned that being able  
20 to effectively manage natural resources is one of the  
21 cornerstones of tribal sovereignty, and proper management  
22 of natural resources promotes the ideal of self-governance  
23 and self-determination.

24 The same is true for our forests. Proper  
25 long-term management of Mescalero forest is essential to

1 an effective tribal government. Mescalero would not  
2 participate in any program that did not protect the  
3 long-term health and sustainability and productivity of  
4 our forests.

5           With these considerations in mind, I'm very  
6 pleased to report the Mescalero Apache Tribe is  
7 participating in the California Cap-and-Trade system by  
8 developing an improved forest management project for  
9 Mescalero's forests. Our project will supply offsets in  
10 the system in 2017.

11           Mescalero's participation in California's  
12 cap and trade reflects our strong belief in the merits of  
13 your system. We would not have participated otherwise.  
14 Our forest is just too important for us to take chances.  
15 My tribal council and I believe that California's system  
16 as constituted has the potential of greatly improving the  
17 health of forests throughout indian country.

18           It would help bring about jobs, economic  
19 development to some of the poorest places in America.

20           In Mescalero's case, these offsets will help the  
21 tribe invest in the sustainability management of our  
22 forest. We will help reduce wild-fire risk and will  
23 improve our forest's health.

24           BOARD MEMBER GIOIA: Thank you.

25           MR. BREUNINGER: Thank you very much.

1 MR. CARMICHAEL: Good afternoon, members of the  
2 Board. Tim Carmichael today on behalf of both San Diego  
3 Gas & Electric and Southern California Gas Company.

4 San Diego Gas & Electric and Southern California  
5 Gas Company continue to support a well-designed  
6 market-based mechanisms for reducing greenhouse gas  
7 emissions such as the Cap-and-Trade Program. Both  
8 utilities also support the continuation of ARB's effective  
9 cost-containment mechanisms such as the steady increase of  
10 consigned allowances in the encouragement of offsets that  
11 reduce emissions in sectors not currently covered by the  
12 Cap-and-Trade Program.

13 The Cap-and-Trade Program is an effective way to  
14 reduce greenhouse gas emissions that can complement other  
15 equally important programs to reduce air pollution in  
16 communities throughout California.

17 Please don't assume that this is all of our  
18 comments on the Scoping Plan update. We're actively  
19 engaging with the staff and in the workshops, and we'll be  
20 presented more comments in writing.

21 Thank you.

22 BOARD MEMBER GIOIA: Thank you.

23 MR. HOCHSCHILD: Good afternoon, Board. My name  
24 is Lenny Hochschild from Evolution Markets representing  
25 IETA, which is a nonprofit representing over 150

1 corporations that believe that the use of market  
2 mechanisms is the most efficient way to reduce greenhouse  
3 gas emissions.

4 We cannot stress enough that California's  
5 entering a critical stage in its international climate  
6 action and leadership position. Now, more than ever,  
7 California is recognized globally as a climate leader.

8 California WCI market model is being watched and  
9 replicated globally, including China. And California and  
10 the other WCI member partners are receiving significant  
11 coverage from other regions around the world who are  
12 working on implementing their own programs in the most  
13 efficient -- cost-efficient manner possible.

14 On offsets, while I would hope that everyone in  
15 this room sympathizes with the genuine concerns over local  
16 particulates and associated health issues that numerous  
17 members of the environmental justice community have  
18 passionately voiced, I respectfully am here to suggest  
19 that the argument they have made to remove offsets as a  
20 way to reduce local particulates may not lead to that  
21 outcome.

22 We would suggest that in fact offsets provide  
23 numerous co-benefits to California's  
24 beyond-cost-containment and cross-border cooperation, and  
25 I'd like to share one example with you today.



1           And that example is jobs creation for the  
2 specific purpose of reducing emissions. Within Compton,  
3 California, is a facility owned by a company called  
4 Appliance Recycling Centers of America, or ARCA. For  
5 ARCA, carbon offset revenues have been a critical driver  
6 in the recycling of more than 1.5 million appliances at  
7 this location over the last number of years, which has  
8 resulted in the company currently employing between 25 and  
9 100 people at any given time depending on the rate of  
10 appliance recycling.

11           Substantial investments have been made at this  
12 location. These investments would not have been made  
13 without California's carbon offset signals.

14           BOARD MEMBER GIOIA: Thank you.

15           MR. HOCHSCHILD: And ARCA hopes to invite the  
16 Board and other interested parties to their facility in  
17 the coming months.

18           Thank you.

19           BOARD MEMBER GIOIA: Thank you.

20           MR. SANCHEZ: Hello. Good afternoon, members of  
21 the Board. I'm Jared Sanchez representing the California  
22 Bicycle Coalition. Thank you for your time.

23           So about a month ago we along with several other  
24 organizations submitted a letter detailing nine different  
25 issues. But in the sake of time, I just want to raise up

1 one issue right now, and that is regarding active  
2 transportation in regard to the Scoping Plan. This is  
3 brought up in several of the visionary documents up and to  
4 this point and a lot of the public workshops and meetings.  
5 But I just wanted to support that, and including the  
6 support for implementation of active transportation to  
7 reduce VMT.

8 I just wanted to stress that even more for future  
9 and ongoing investment in active transportation in all of  
10 its form, especially in low-income communities of color as  
11 a key strategy, not as an afterthought since many times  
12 it's just a fraction of total transportation funding.

13 This includes new investment also being discussed  
14 in special session in the Legislature, which is an  
15 additional 7 billion also to be regarded for active  
16 transportation, meant to ensure that all transportation  
17 funding and not just GGRF are invested in to meet our  
18 climate goals.

19 Beyond funding I also wanted to bring up social  
20 equity issues and also for it to be a strong focus for the  
21 plan. This is also an important part of the visionary  
22 documents and was pleased to see it, especially for  
23 cycling and active transportation as low-income  
24 communities walk and bike at higher rates than other  
25 groups and suffer disproportionately from injuries and

1 fatalities, and to ensure this is important for  
2 disadvantaged communities of color.

3 Thank for your time and for your ongoing  
4 commitment.

5 BOARD MEMBER GIOIA: Thank you.

6 MR. HELLER: Good afternoon. Miles Heller with  
7 Tesoro. Thanks to the Board for the opportunity to  
8 comment.

9 There have already been some concerns expressed  
10 on refinery measures. There's lots of concerns there. I  
11 just want to touch on a few items that are kind of --  
12 perhaps we're uniquely situated to comment on.

13 To the extent that the proposal will target the  
14 most efficient refinery in terms of a performance  
15 standard, we don't think that's necessarily a valid  
16 approach. We have probably one of the most efficient  
17 refineries in California, and we have other facilities  
18 that are not as efficient. But they're all unique and  
19 complex in their design. And it's hard to imagine how a  
20 one-size-fits-all approach would work in a refinery  
21 measure such as that.

22 Secondly, don't discount the effective  
23 cap and trade to provide direct emission reductions. We  
24 have a project for an optimization project in Southern  
25 California right now. It's a business optimization

1 project. But greenhouse gas reductions that come with  
2 that optimization play a key role in that business  
3 analysis.

4           Also on the refinery measure, I would ask that we  
5 examine the potential for conflicting policies. I've been  
6 in this room many times and heard encouragement that we as  
7 refiners ought to look at ways to comply with the low  
8 carbon fuel standard using our facilities. We've actually  
9 announced a couple projects using our facilities. But it  
10 gets difficult to invest in those projects at facilities  
11 for one policy when other policies are going to drive  
12 changes at those facilities or hamper those investments.

13           Okay. So the last comment I would have on the  
14 broader scenario issue. I would like to see a scenario  
15 that includes more cap and trade to balance out that mix.  
16 I think it's important from a cost-effectiveness  
17 standpoint and a leakability standpoint with other  
18 sectors. And I think all of the scenarios that are being  
19 considered now are diminished or eliminated -- or  
20 eliminating cap-and-trade proposals. So I think it would  
21 be more balanced if there was an additional scenario that  
22 looked at more cap and trade.

23           Thanks.

24           CHAIR NICHOLS: Thank you.

25           MR. GRIFFITHS: Good afternoon, Chair Nichols and

1 members of the Board. My name is Dan Griffiths for the  
2 California Municipal Utilities Association.

3 CMUA supports the continuation of the  
4 Cap-and-Trade Program and believes that it represents the  
5 most balanced and cost-effective approach to achieving  
6 California's long-term greenhouse gas goals.

7 In combination with the complementary measures,  
8 such as energy efficiency and 50 percent renewables  
9 portfolio standard, if the Cap-and-Trade Program will  
10 continue to lead to emissions reductions within  
11 California, the structure of the Cap-and-Trade Program  
12 ensures that California will meet statewide emissions  
13 reductions targets while allowing EDUs to minimize  
14 compliance costs. Any reduced role for cap and trade  
15 would likely lead to increased costs for consumers as well  
16 as negatively impact the programs that currently are  
17 supported by funds generated from the Cap-and-Trade  
18 Program.

19 CMUA appreciates ARB staff's efforts on the  
20 Scoping Plan and looks forward to reviewing the discussion  
21 draft.

22 Thank you.

23 MR. LARREA: Good afternoon, Board. John Larrea  
24 with the California League of Food Processors.

25 First of all I'd like to say that the food

1 processors are in support of continuing the cap and trade  
2 post-2020; however, it's kind of a qualified support.  
3 From what we've seen for the changes that are being  
4 contemplated for the cap and trade, it doesn't resemble  
5 the current one. We are very much in favor of the current  
6 one and would like to see that extended even further,  
7 especially since we are unsure what the federal policies  
8 associated with this are going to be, and see if there's  
9 some alignment that we can make there.

10           Secondly, on the development of the alternative  
11 proposals, we were somewhat disappointed again because  
12 we've been asking for an industrial advisory board, and  
13 they could have helped develop those alternative proposals  
14 and maybe just not limited them to those two. And we'd  
15 like to see you consider putting together an industrial  
16 advisory board that would be able to input to staff and to  
17 give them some legitimacy in terms of being able to put  
18 forth ideas, because we're all going to have to work  
19 together if we plan to meet that 2030 goal.

20           Finally, I can't say enough about cost  
21 effectiveness. We've heard a lot about that. However, it  
22 also comes with "technologically feasible." It doesn't do  
23 any good just to make it cheap if we can't get to where  
24 we're trying to go in terms of the actual emissions  
25 reductions. And for those companies that are subject to

1 the cap and trade, technology is going to be the route  
2 that we're going to have to take.

3           So we'd like to see some efforts to make more  
4 investment from the cap-and-trade funds back to the  
5 industries that are subject to the cap and trades so that  
6 they can actually apply those to technologies to help them  
7 reduce their emissions. And the benefit of that -- a  
8 co-benefit, if I could be so bold, is that direct  
9 emissions resulting from that also comply with AB 197. We  
10 don't need to go bend over backwards in order to try to  
11 work it in. We've got the ready-made solution right  
12 there. Direct those funds back to the facilities for  
13 direct investment into new technologies.

14           Thank you.

15           MS. VANDERWARKER: Good afternoon, Board members.  
16 My name's Amy Vanderwarker with the California  
17 Environmental Justice Alliance.

18           We believe environmental justice must be a  
19 central component overall goal of the Scoping Plan. And I  
20 encourage to see efforts from the ARB staff to include EJ  
21 community concerns and thank everyone for their hard work.

22           I want to reiterate the importance of an EJ  
23 analysis of which scenarios and programs bring the  
24 strongest air quality improvements and direct emission  
25 reductions in EJ communities. That continues to be a

1 priority.

2 I also want to emphasize the importance of  
3 rigorous analysis on carbon tax scenario and the social  
4 cost of carbon, both of which are quite complicated. I am  
5 a little concerned that in the timeline ARB is on that it  
6 will not allow for the best possible analysis or modeling  
7 of both those complicated concepts.

8 The staff presentation also included a lot of  
9 potential drawbacks to the carbon tax, and there are,  
10 without -- goes without saying, a range of benefits that  
11 the staff should further explore.

12 Another priority for CEJA is ensuring  
13 implementation of the data provisions in AB 197. It is  
14 incredibly important that the air quality management  
15 districts and other databases with criteria air pollutant  
16 information are linked to the ARB greenhouse gas data and  
17 reporting. And that data should be included in the  
18 scoping plan process as well.

19 I'd also like to echo comments earlier made that  
20 there should be more analysis on the transportation  
21 sector. Mobile sources continue to be one of the bigger  
22 sources of exposure for our communities. And our members  
23 have consistently struggled to ensure environmental  
24 justice issues are incorporated in the SB 375 process.  
25 But there is very little -- there is almost no mention of



1 transportation at all in the presentation.

2 I also would like to emphasize that more analysis  
3 needs to be done around what the program could look like  
4 without offsets. You've heard a lot about the benefits of  
5 offsets. However, there continue to be strong  
6 environmental justice concerns with the offset programs  
7 and also increasing evidence that maybe it is not  
8 functioning as well as many folks say, as shown in the  
9 Manuel Pastor report that was recently released. So want  
10 to see continued analysis around what it can look like to  
11 actually remove the offset program.

12 Finally, just wrapping up, I would echo the  
13 comments that California has an opportunity to continue  
14 national leadership in the face of a new federal  
15 administration, and in a time when both communities of  
16 color and the climate are going to be under attack. It is  
17 critical that ARB show that climate policy and justice for  
18 communities of color can go hand in hand.

19 Thank you.

20 MR. KENNY: Good afternoon, Board Chair Nichols,  
21 members of the Board. My name is Ryan Kenny with Clean  
22 Energy. We're the nation's largest provider of natural  
23 gas and renewable natural gas transportation fuel. And it  
24 is of course early right now, but we'd like to offer our  
25 initial support for extending Cap and Trade, the LCFS, and

1 for the Scoping Plan.

2           Concerning cap and trade, it of course would  
3 provide a steady revenue stream for the programs that  
4 would benefit both climate and the environment, and send a  
5 strong market signal to those that are engaged in such  
6 programs.

7           Also concerning program for greenhouse gas  
8 reduction -- greenhouse gas reductions, we do think that a  
9 greater emphasis should be on heavy-duty vehicles that  
10 meet a performance standard of a 0.02 NO<sub>x</sub> standard, and  
11 that it should be more expeditious because waiting too  
12 long is going to hurt the marketplace.

13           Regarding the LCFS, we do think that passage and  
14 extension passed 2020 is important as a market driver. As  
15 you may know, our company has 165 fueling stations here in  
16 California, and nearly all of our fuel is from renewable  
17 natural gas. And it's because of the LCFS. So we do want  
18 to see that passed post-2020 as soon as possible.

19           Thank you.

20           CHAIR NICHOLS: Simeon Gant, are you here?

21           Okay. Brent Newell.

22           MR. NEWELL: Good afternoon, Madam Chair and  
23 members of the Board.

24           I want to thank the Board for its incredible hard  
25 work, and all staff, and getting the Scoping Plan this

1 far, and in getting California this far in terms of  
2 reducing emissions. We have a long way to go with the  
3 2030 target. It's a huge endeavor and it will take all of  
4 us working together to get it done right. And we should,  
5 because we are now literally even more so the world leader  
6 in accomplishing this challenge.

7 I want to make two points about the presentation  
8 and about the scoping plan. The presentation talked about  
9 how the AB 197 elements including would be 20 percent  
10 reduction from the refinery sector through efficiency  
11 measures. AB 197 goes beyond just the refinery sector.  
12 It includes stationary sources and mobile sources. So I  
13 urge staff to make sure that we capture and prioritize  
14 direct emission reductions from cement, from power, and  
15 from mobile sources. That will allow us to deliver even  
16 more health benefits and even more localized reductions in  
17 communities of color that are suffering from a denial of  
18 benefits right now from cap and trade.

19 So let's make sure that happens.

20 The second thing is that the evaluation of the  
21 carbon tax assumed that a carbon tax operated without any  
22 type of cap or limit on emissions. And that's just a  
23 program policy choice. There's no reason why a carbon tax  
24 cannot operate together with a cap on emissions, both in  
25 the industrial sector and at the facility-specific level.

1 So I encourage staff to not proceed with their analysis  
2 assuming that a carbon tax is just something, you know,  
3 without anything else along with it. Because it can be.  
4 It can be something that protects local communities and  
5 delivers ensured reductions while a huge source of  
6 revenue.

7 Thank you.

8 CHAIR NICHOLS: Thank you.

9 MR. COSTANTINO: Good afternoon, Board members.

10 Jon Costantino on behalf of the Southern California Public  
11 Power Authority, here today to bring to your attention two  
12 points:

13 First is there's an open comment period on the  
14 Scoping Plan Workshop that happened a couple weeks ago, so  
15 we will be submitting detailed comments along the lines of  
16 what I'm about to say.

17 I want to highlight local action. As  
18 municipalities, the members have shown leadership in their  
19 fleets, their codes, the municipal operations, and are  
20 producing direct reductions while there's a Cap-and-Trade  
21 Program. So they're not mutually exclusive. I wanted to  
22 highlight that.

23 And then the second point is a support for  
24 cap and trade and a support for the scoping plan  
25 alternative, and to highlight that this is a policy choice

1 that was made seven years ago. All three of these options  
2 are very similar to what was on the table in 2007 and '8:  
3 A tax, solely direct regulation, or a Cap-and-Trade  
4 Program. And the benefits of the Cap-and-Trade Program  
5 which were highlighted by staff outweigh the benefits or  
6 the disadvantages of the other programs. So policies such  
7 as this that are big and long term really need to be  
8 thought about before they're reversed. And we're going to  
9 get into the weeds with cap and trade. But this is not a  
10 weedy issue. This is a big global issue.

11 So with that, thank you very much.

12 MR. JATKAR: Good afternoon, Chair Nichols and  
13 members of the Board. Shrayas Jatkar with Coalition for  
14 Clean Air.

15 I'd first like to start with a quick anecdote of  
16 the significance of California's climate laws beyond the  
17 Golden State. Before moving to California a few years ago  
18 I was working in New Mexico. And the environmental laws  
19 here had a direct effect and now are leading to millions  
20 of tons of fewer greenhouse gas emissions, fewer tons of  
21 carbon dioxide from coal-fired power plants in New Mexico.  
22 This is a direct result of SB 1386, Emission Performance  
23 Standard, a law that addresses utility investments that's  
24 not often mentioned in the context of our clean energy and  
25 climate laws but has had significant impact beyond the

1 State. And thanks to that law, people are breathing  
2 cleaner air in New Mexico as well.

3 Coalition for Clean Air supports and favors  
4 Alternative 2 of the scenarios that have been outlined in  
5 the scoping plan update.

6 And first we of course support and want to see a  
7 continuation of the measures and in some cases a  
8 strengthening of the measures that we know have proven to  
9 reduce emissions, such as our renewable electricity and  
10 building energy efficiency standards.

11 We strongly support the refinery measure, and  
12 want to see that achieve at least a 20 percent reduction.  
13 And the staff noted this is a -- the largest stationary  
14 source of emissions in the leading sector of our  
15 greenhouse gas emissions and also our criteria air  
16 pollutants in the state. So it's time to begin that  
17 measure.

18 And we also think that it's time to begin  
19 strengthening some of the transportation sector measures,  
20 including stronger targets for SB 375 for the MPOs, higher  
21 targets as we've mentioned before for cleaner freight  
22 vehicles and equipment, and swift action to move forward  
23 with the mobile source strategy in those measures.

24 And if cap and trade is continued, we definitely  
25 want to see AB 197 implemented to limit offsets, auction

1 off virtually all allowances, and decrease allocations if  
2 facilities report increased emissions of on-site criteria  
3 pollution.

4 Thanks.

5 MS. McCAIN: Good afternoon. I'm Christina  
6 McCain with Environmental Defense Fund. I want to thank  
7 you for this opportunity to provide comments this  
8 afternoon.

9 EDF recognizes that this effort to consider  
10 policy alternatives is an important one both to meet  
11 statutory requirements and to seek stakeholder input. We  
12 look forward to submitting comments.

13 That said, we do support ARB's effort to begin  
14 the process to extend cap and trade beyond 2020 because we  
15 believe that cap and trade is an essential part of  
16 California's climate package. It is the only policy that  
17 places an absolute limit of carbon pollution and ensures  
18 that California does not exceed the carbon budget that it  
19 has set for itself.

20 For many sectors the Cap-and-Trade Program  
21 represents the first time their carbon pollution has been  
22 regulated and has had a cost. That benefit of creating  
23 the reduction incentive is an important one, and so is  
24 providing some flexibility and the cost effectively to  
25 achieve our climate goals.

1           We also know that too many communities in  
2 California face serious air quality problems and we know  
3 those impacts are disproportionately borne especially by  
4 communities of color. We absolutely have to work to  
5 improve that. We should be able to find not an  
6 "either/or" but an "and" solution. And that incorporates  
7 the benefits of cap and trade but also reduces the real  
8 need to reduce pollution in communities.

9           These are complex issues, which is why this  
10 scoping plan process is so important. And we look forward  
11 to continuing to work with the Board, the Legislature, and  
12 engaging in dialogue with our colleagues who represent a  
13 range of stakeholder perspectives on these issues.

14           So thank you very much.

15           MS. BERLIN: Good afternoon. Susie Berlin for  
16 the Northern California Power Agency and the M.S.R. Public  
17 Power Agency. Both M.S.R. and NCPA are joint powers  
18 agencies comprised of municipal utilities that provide  
19 electricity to approximately 800,000 residents and  
20 businesses in northern and central California.

21           We support continuation of the Cap-and-Trade  
22 Program. When coupled with the remaining suite of  
23 measures that has proven to deliver emissions reductions,  
24 it is also the only program that will be able to  
25 immediately capture shortfalls that may occur when other



1 measures do not perform as expected. A program that  
2 includes this certainty is critically important to  
3 compliance entities.

4 In contrast, both of the alternatives are wrought  
5 with uncertainties. Electric utilities are already called  
6 upon to effect significant emissions reductions through  
7 existing programs and measures. Replacing the  
8 Cap-and-Trade Program with additional and enhanced  
9 mandates will only increase utility compliance costs; and  
10 for our customers, that means more expensive electricity.  
11 It also reduces the flexibility to tailor emissions  
12 reductions programs to the communities that we serve.

13 The lack of analysis and studies demonstrating  
14 the feasibility and cost effectiveness of the alternatives  
15 is problematic. Alternative 1, for example, would mandate  
16 60 percent RPS at a time when the CPUC and the CEC have  
17 not even completed their rulemaking to implement the 50  
18 percent RPS mandate that was prescribed by SB 350. The  
19 feasibility of these alternatives, and particularly  
20 Alternative 1, is far too speculative to form the basis  
21 for a sound policy decision.

22 We also want to echo Edison's comments regarding  
23 the impact that the Scoping Plan GHG targets will have on  
24 the long-term procurement planning obligations of the  
25 electric sector. They don't take into account the impacts

1 of increased electrification; and in a program that calls  
2 for 40 percent reduction by 1990 levels, preliminary  
3 estimates look at the electricity sector to reduce by an  
4 average of 70 percent.

5 This will have a significant impact on our  
6 long-term obligations, and we ask that that be considered  
7 with the other energy agencies before a final number is  
8 set.

9 Thank you.

10 MS. PASSERO: Good afternoon. I'm Michelle  
11 Passero of the Nature Conservancy. Thank you for the  
12 opportunity to speak. I guess the advantage of going this  
13 late on the list is that everybody covers your points.

14 We're pleased to see the inclusion of natural  
15 working lands in the Scoping Plan. I'm really happy that  
16 ARB is conducting a broader analysis to see the  
17 contribution that our landscape in California can make to  
18 meeting 2030 and 2050 goals.

19 We're doing an analysis as well and are finding  
20 that at least on a preliminary basis that the contribution  
21 our land base can make through management and conservation  
22 is material.

23 With respect to the scenarios that were  
24 highlighted today, we do support ARB staff preferred  
25 scenario. I just returned from the UN Climate Conference

1 yesterday. And it really became clear to me how important  
2 California's program is now more than ever. California's  
3 program really is a beacon for a number of its  
4 initiatives, including the Cap-and-Trade Program.

5 And as Rajinder I think highlighted very well  
6 earlier, the Cap-and-Trade Program in particular connects  
7 us directly with the rest of the world through our leakage  
8 agreements and through its offset provisions.

9 And the offset provisions do provide an  
10 opportunity to connect us to more rural areas who tend to  
11 be more resource dependent.

12 We do hope that you'll keep the door open to  
13 reductions from tropical forest communities as well. As  
14 you know or may know, that 12 to 15 percent of our overall  
15 global emissions are due to land degradation and forest  
16 loss. While California alone may not be able to solve  
17 this problem, there is tremendous power in providing proof  
18 of concept.

19 So in the end we hope that the Scoping Plan will  
20 maintain the Cap-and-Trade Program, its offset provisions,  
21 as well as leave an open door to including tropical forest  
22 reductions, and do this while we're also advancing  
23 investments in California communities. We think that  
24 these things are not exclusive.

25 Thank you.

1 MR. SKVARLA: Good afternoon. My name is Mikhael  
2 Skvarla. I'm here on behalf of the California Council for  
3 Environmental Economic Balance. Appreciate all your time.

4 Nature Conservancy really summed up some of the  
5 big points that we had with regards to offsets and the  
6 continuation of the Cap-and-Trade Program.

7 CCEEB does support cap-and-trade post-2020, with  
8 provisions such as offsets, linkage, and the leadership  
9 values that that extends beyond our border. Cap-and-trade  
10 truly is the only program in our suite that can link with  
11 other jurisdictions. You're not going to see other  
12 jurisdictions link with a carbon tax.

13 Additionally, we've noticed in north of the  
14 border in Canada carbon tax had some downfalls. Even at  
15 \$30 a ton, it's unable to achieve the emission reductions  
16 that we're seeing in the Cap-and-Trade program.  
17 Cap-and-Trade Program truly does drive emission reductions  
18 and provides investment opportunities with the revenues  
19 that it raises at auction.

20 CCEEB would urge the Board and staff to examine  
21 the other scenarios also in terms of dollars per ton per  
22 measure. Along this line, we need to know the costs for  
23 low-income households, medium and small businesses, as  
24 it's not just the compliance entities that have to conform  
25 to these policies. It does trickle down to the entire

1 economy. While it may seem right that, you know, at a  
2 hundred dollar a ton carbon tax, which might drive down  
3 emissions from some of the studies that we've seen with  
4 regard to the Canadian provinces, that at the pump would  
5 have significant impacts on say a small contractor. A  
6 business man who's out there trying to work, maybe has one  
7 or two pickup trucks, he's not able to drive a Nissan  
8 Leaf, it's going to cut down into his margins. And we've  
9 seen wages stagnate. The economy's not growing as  
10 robustly at that lower level. While traditional big  
11 businesses, Fortune 500, may have some growth right now.  
12 We're not seeing that with low and middle income  
13 households, nor are we seeing that with small businesses.

14 So, again, CCEEB supports cap and trade moving  
15 forward. We hope to engage staff in a more robust  
16 analysis as we look forward.

17 MR. STARK: Good afternoon, Chair and Board.  
18 Joshua Stark with Transform, an organization dedicated to  
19 sustainable and equitable transportation and land-use  
20 policy.

21 Thank you so much for this work. It's at this  
22 point, as you know, in light of last week's events, it  
23 takes on a new and profound urgency, and we really  
24 appreciate all the time and effort that you all and that  
25 advocates are putting into, you know, real -- real changes

1 for the world.

2 I'm going to keep my comments brief and focused  
3 on transportation policy. In the transportation realm,  
4 which is the State's single largest emitter, we urge the  
5 Board to consider a number of strategies in reducing  
6 greenhouse gas emissions by reducing vehicle miles  
7 traveled, such as lane pricing through, for example, high  
8 occupancy tolling, without building new road miles.

9 But also identifying and preparing for  
10 transportation infrastructure investments that  
11 will -- that can both reduce and increase VMT and  
12 identifying those projects that will reduce VMT over time,  
13 especially and directly connecting California's much  
14 larger state transportation funding sources. The GGRF is  
15 an important source of revenue for many really important  
16 projects. But in the end it's not going to solve all of  
17 our problems. And in the transportation world alone we're  
18 looking at huge backlogs in maintenance for transit  
19 operations and transit capital projects. And it is --  
20 it's absolutely vital that transit -- public  
21 transportation, active transportation, that these projects  
22 come to the front in all of our funding systems -- all of  
23 our funding sources, not just the GGRF but also in the  
24 larger transportation funding conversation that's  
25 occurring now before the Legislature and the Governor.

1 Thank you.

2 MS. FLETCHER: Good afternoon, Board and members  
3 of the -- or good afternoon, Chair, members of the Board.  
4 I am sick today, so I am going to try to get through this  
5 without coughing or sneezing.

6 So my name is Chanell Fletcher and I'm the  
7 associate director of Climate Plan. We are a network of  
8 over 15 nonprofit organizations, and we represent a broad  
9 range of interests. So it's in public health to  
10 conservation to environmental justice.

11 And so actually a number of our partners actually  
12 did come and testify to I think as staff at least about  
13 the transportation piece of this at the Transportation  
14 Workshop. And I think unfortunately a number of those  
15 couldn't attend this piece. So I'm going to attempt to  
16 speak on some of what they -- what we talked about in our  
17 letter that we submitted to that.

18 I also wanted to say that I really do echo the  
19 comments from Cal Bike and CEJA, the Nature Conservancy,  
20 Coalition for Clean Air, American Lung Association, and  
21 Transform. I think again these are all things that are  
22 very close to our network.

23 I think one of the things that's very close to  
24 Climate Plan's heart really is around the SB 375 targets.  
25 And so I really wanted to come here today and urge both I

1 think the Board and staff and the regions to really think  
2 about ambitious SB 375 targets as the key part of this  
3 scoping plan strategy. I think the presentation clearly  
4 stated that, you know, our 2030 baseline policies are not  
5 going to get us there. And one of the questions I had is,  
6 well, how do we know if we don't know what the targets  
7 are.

8           And so I think that that's something that we  
9 should be thinking about and taking into account, is that  
10 we have an opportunity right now to really push for these  
11 ambitious targets to really show like: This is where we  
12 need to get to. The gap is huge. How are we going to do  
13 it? These targets can help us get there.

14           And these targets don't just represent I think  
15 GHG reductions. That's the beautiful thing about VMT  
16 strategies, is that there's a number of co-benefits that  
17 come along with it, including in public health, including  
18 in conservation.

19           And I think that when we're talking about GHG  
20 targets, we need to be very explicit about what those  
21 co-benefits are. And so I'm asking that the scoping plan  
22 is clear and explicit in that, showing that there's a  
23 multitude of benefits that we can get from this in  
24 addition to GHG reduction.

25           Thank you so much.



1 MS. BUSSEY: Good afternoon, Board. My name's  
2 Julia Bussey. I'm with Chevron Corporation.

3 First of all, I want to echo what a lot of people  
4 have said today but I think is extremely important, which  
5 is that based on the policies that California's  
6 considering, a cap and trade is really the most cost  
7 effective and therefore is the best also for California  
8 families.

9 We also ask, however, that you do not needlessly  
10 hurt California industry. Free allowances don't affect  
11 your ability to make an environmental difference, and they  
12 also don't affect whether or not direct  
13 regulation -- direct emission reductions are made. But  
14 they can hurt companies that have invested in California.

15 We're also very concerned that the curve after  
16 2020 is so steep, that we need to increase how well we can  
17 link our program to other parties. We feel encouraged  
18 that there will be people to link to. But will they want  
19 to link with a very expensive program. So we ask that you  
20 think about that.

21 Lastly, we want to provide support for offsets;  
22 not only as cost containment, but also because it adds  
23 environmental benefits. For example, improving forest  
24 management practices reduces the chances of forest fires.

25 So thank you very much.

1 MR. TEMPLEMAN: Should I talk into this?

2 Good afternoon, Chair and Board and staff. I  
3 didn't see my name on the list and I figure I should say  
4 something, just because I always do.

5 So I was sitting here and I was thinking over the  
6 last couple of weeks about the theoretical basis for cap  
7 and trade, which in many cases was the SO<sub>x</sub> program, which  
8 was a very effective program that came out in the '80s.  
9 And I'm probably dating myself. But I remember when I was  
10 growing up in the '80s there was really this fear that  
11 acid rain was going to ruin all the trees where I was  
12 living in Canada. And when you look now, those fears are  
13 generally -- sort of seem to have been solved. And I  
14 think -- so I do is I look -- went back and looked at the  
15 SO<sub>x</sub> program, at their Cap-and-Trade Program, and there  
16 were many periods of time, including at the beginning and  
17 at different periods of time, where emission reductions  
18 were slow or not as fast as people expected.

19 But I think one of the things that people can  
20 look back at - and most experts will say - that that  
21 program was very effective, ended up reducing emissions  
22 dramatically and at a very low cost. In fact, much lower  
23 than most experts expected when they brought out the  
24 program.

25 And so basically my -- my recommendation would

1 be: Look, this program's been going for less than four  
2 years. It's a well-designed program. CARB has put an  
3 awful lot of time and science into coming up with it.  
4 It's the right program to do. It's working. But it must  
5 be given time to fully meet its potential. And so I would  
6 advocate at this time really not to give up on a program  
7 that has just started, but to give it the time to fulfill  
8 everything that we all know it can do.

9 Thank you.

10 CHAIR NICHOLS: Thank you, Mr. Templeman.

11 That concludes the list of witnesses that I have.  
12 So that was 44 people. They got through that pretty  
13 quick. But we still have two more items ahead of us  
14 today. So it just tells us where we are.

15 The discussions are interrelated though. And to  
16 kick it off, Supervisor Gioia wanted to say a few words.

17 BOARD MEMBER GIOIA: Yeah. I just had a -- I had  
18 a couple comments and a question.

19 On the -- in the section of the scoping plan that  
20 discusses local action, can I just understand how detailed  
21 you'll be. It seems to me, as someone in local  
22 government, that identifying a number of suites -- a suite  
23 of measures and how much GHG reductions in a range,  
24 knowing it depends on how you implement them, one can get.  
25 So I'd like to hear more how you're going to write that

1 section or develop that section. Because I think it's  
2 useful for folks in local government to see from ARB's  
3 standpoint the types of local measures that can be most  
4 effective.

5 So I'm encouraging more detail of that section.  
6 Maybe you're already planning that. So can you talk about  
7 that.

8 DEPUTY EXECUTIVE OFFICER KAPEROS: Supervisor  
9 Gioia, maybe I can take a first shot at answering your  
10 question.

11 In our conversations with local air districts and  
12 other local entities, one of the things they came back to  
13 us with as we were developing this draft of the scoping  
14 plan is just the point you were making, that they were  
15 looking for much more detail in terms of how they could  
16 move forward. And also one of the things we heard from  
17 them is a more quantitative, not necessarily a specific  
18 target, but a more quantitative measure that they could  
19 use in terms of their local climate planning.

20 And you heard staff and their presentation talk  
21 about the two metric ton target for 2050 as one mechanism  
22 for helping to guide local planning. We think that is a  
23 way to really drive some innovation at the local level in  
24 terms of how they can get those sort of reductions. We're  
25 hoping in -- we will be articulating in some of the -- in

1 the next draft of the scoping plan some of those ideas.

2           There was a document released by the  
3 administration at the end of October, the first part of  
4 November which has generated some spirited debate on both  
5 sides in terms of what is possible at the local level. It  
6 was called Vibrant Communities and Landscapes. And it  
7 ranged everywhere from tighter SB 375 targets to  
8 potentially pricing mechanisms, parking -- new parking  
9 strategies. Add on to that innovative ways to think of  
10 local mobility.

11           Professor Sperling isn't here. But yesterday --  
12 for the last two days he was hosting a conference on  
13 options for autonomous vehicles. And one of the things  
14 that was discussed there was how local agencies -- transit  
15 agencies can play in this sort of arena. And --

16           BOARD MEMBER GIOIA: No, I appreciate that.

17           So my recommendation would be, the more detail  
18 you can go into, the more helpful it is, not just for  
19 local air districts, but local government that's looking  
20 for guidance and doesn't have to then recreate the wheel  
21 to understand what type of GHG reduction it can achieve  
22 with certain types of strategies. Knowing that obviously  
23 it's a range and you have -- you know, you can't be  
24 specific.

25           So hopefully -- and we'll see that level of

1 detail when the first draft comes out later this month.  
2 And then maybe we can have further comments if we think it  
3 should be even more detailed. I just think there's no  
4 replacement in local government for seeing some really  
5 specific recommendations.

6           Second, in the economic analysis. I assume the  
7 economic analysis is not just the cost of implementing  
8 these measures but does factor in sort of the social cost  
9 of carbon. And we don't often quantify the cost of doing  
10 nothing. So we have out here, here's cost to implement  
11 these strategies. But those aren't costs on top of  
12 nothing. Those are costs on top of a cost of not doing  
13 anything. And that's a little obviously harder to  
14 quantify.

15           Tell us how you're going to try to address that.

16           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
17 SAHOTA: So AB 197 specifically asks for us to do that  
18 kind of analysis. It wasn't specific in the statute that  
19 we tie it to the U.S. EPA social cost of carbon values,  
20 because they've published those values for CO<sub>2</sub>. It tells  
21 us to consider the societal costs of greenhouse gas  
22 emissions. In the absence of anything specific -- for  
23 California at this time, we're going to be using the  
24 U.S. EPA values. So what we will do is estimate the range  
25 of emission reductions by measure. And then use the \$36,

1 which translates to about \$50 in 2020 and then a little  
2 bit higher in 2030, to estimate the costs of social --  
3 avoided social cost by taking action by reducing that much  
4 amount of emissions.

5           The danger is trying to use that as a test to  
6 whether or not you should move forward with any kind of  
7 mitigation. So we are writing in a caveat about the  
8 shortcomings of the U.S. EPA social cost of carbon because  
9 they have identified the things that that doesn't  
10 consider. And we're also trying to make sure that folks  
11 understand the difference between cost effectiveness of  
12 measures versus the social cost of taking action.

13           BOARD MEMBER GIOIA: Okay. And then my last  
14 point, could you tell us a little more about -- and of  
15 course we'll see it in detail -- about the refinery  
16 efficiency measure strategy.

17           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
18 SAHOTA: Yes. There will be additional detail in the  
19 discussion draft that we are going to be releasing at the  
20 end of this month just in time for the holidays. It is  
21 really based on an analysis --

22           BOARD MEMBER GIOIA: I know a number of folks who  
23 are probably going to read that section very closely.

24           (Laughter.)

25           CHAIR NICHOLS: I was thinking about it as a gift

1 item.

2 (Laughter.)

3 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

4 SAHOTA: We could have put it out before Thanksgiving.

5 BOARD MEMBER GIOIA: Great holiday reading.

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: Yes.

8 So what we did was we undertook an analysis  
9 inside ARB to look at what the potential reductions could  
10 be in the industrial sectors. We had efficiency data,  
11 production data, then emissions data from surveys that we  
12 did to set the benchmarks in the Cap-and-Trade Program.

13 So within the refinery sector we identified the most  
14 efficient refinery. We don't advertise what those values  
15 are and who that is because it's CBI for those entities.

16 BOARD MEMBER GIOIA: You all know who it is, but  
17 you're not going to tell us?

18 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

19 SAHOTA: I can tell you the number, but I can't tell you  
20 who.

21 BOARD MEMBER GIOIA: All right. Could you tell  
22 us what city it's located in?

23 (Laughter.)

24 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

25 SAHOTA: So what we did was we took the 2014 data, the



1 production data in 2014. We assumed that every refinery  
2 was as efficient as the most efficient refinery based on  
3 the data we had. And we calculated the difference in  
4 emissions in 2014.

5 BOARD MEMBER GIOIA: And this is a refinery  
6 based -- efficiency based on throughput?

7 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
8 SAHOTA: That's right.

9 BOARD MEMBER GIOIA: It's per unit.

10 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
11 SAHOTA: Per unit -- per unit production.

12 BOARD MEMBER GIOIA: And how do you factor that  
13 knowing that different refineries have -- you know, some  
14 of them more complex than others?

15 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
16 SAHOTA: So what we did was we estimated a range based on  
17 some uncertainties, looking at the range of efficiencies  
18 between the benchmark data that we had, because that tells  
19 you what the range is of potential efficiency across all  
20 the refineries in California.

21 And what we did was estimated that. We think we  
22 can get a 20 percent reduction, because most of that  
23 technology is in use and available and is deployed.

24 When we push it up to 30 percent, we're being a  
25 bit more aspirational there. But in that alternative that

1 has no cap and trade, we're being aspirational in a lot of  
2 the measures that we put there.

3 BOARD MEMBER GIOIA: So you're going to go in a  
4 more detailed in the discussion draft. We'll get to read  
5 it.

6 So is it 20 percent goal across all facilities,  
7 not by facility?

8 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
9 SAHOTA: That's right.

10 BOARD MEMBER GIOIA: Because some may be more  
11 efficient than others and have less room for implementing  
12 efficiency measures.

13 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF  
14 SAHOTA: That's correct. So it's not a facility-specific  
15 cap or a facility-specific number. It actually is across  
16 that sector.

17 BOARD MEMBER GIOIA: Great. Thank you.

18 CHAIR NICHOLS: I have a comment on your comment.  
19 I think I've said this before, but I want to say it again.

20 With respect to local government, and measures  
21 that can be implemented at the local level, I'm not  
22 convinced that we have mined all the good ideas that are  
23 out there for specific policies that we could be  
24 recommending. Even if these are things that we don't have  
25 a legal authority ourselves, or maybe even the State of

1 California doesn't have the legal authority at the moment  
2 to implement them. And maybe they require new funding or  
3 new sources of funding, et cetera.

4 But the fact is that this -- we know this is an  
5 area of opportunity. And so if there are references or  
6 experts that we should be talking to, I think this is an  
7 area where the Board could play a big role.

8 BOARD MEMBER GIOIA: I think local governments  
9 would be -- really be looking to ARB for some really good  
10 specific recommendations and quantification of -- or what  
11 the reductions would be.

12 BOARD MEMBER MITCHELL: Let me mention one thing  
13 in that regard. There are some programs out there now  
14 that are being discussed called Community Choice  
15 Aggregation. Marin County has implemented such a program.  
16 And that allows for local governments to opt in and obtain  
17 more renewable energy than might be available otherwise.  
18 So I just wanted to mention that as one choice.

19 But I think it's hard with local government.  
20 They're all very different and they all have different  
21 resources. But I think it would be good to have a menu of  
22 possibilities that might be included in our -- in --  
23 somewhere in our draft or in guidelines for local  
24 governments to look at.

25 Thank you.

1 CHAIR NICHOLS: Okay. I know we have Board  
2 members with challenging schedules today. But I still  
3 think we should hear from people if they have specific  
4 ideas.

5 Do we have -- Diane, would you like to speak  
6 next?

7 BOARD MEMBER TAKVORIAN: Thank you. Just a  
8 couple of questions. Thank you so much. A great report  
9 and very comprehensive.

10 I would agree on the local actions piece. I  
11 think that we have a Climate Action Plan at the port, at  
12 the city, and now at the County of San Diego that's coming  
13 that could very much benefit I think from involvement with  
14 CARB and vice versa. I think there's good ideas that can  
15 come from the local level, so I would agree with that.

16 I would like to get a response about the carbon  
17 tax option that was asked and the inclusion or exclusion  
18 of the cap, that question. So if we could get a response  
19 on that.

20 I'm also interested in the question in regards to  
21 the 375 targets and their inclusion. And I thought I saw  
22 some different opinions from staff going back and forth.  
23 So be great to hear where we are on that.

24 And then I'd like to know about whether the paper  
25 that will be coming out will include a response or some

1 kind of inclusion of the equity report on cap and trade.

2 And then lastly the status of the OEHHA study  
3 that's coming out on cap and trade.

4 So those are my questions.

5 Thank you.

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: So I can take a couple of these. And then I  
8 think some of these may be answered in the next  
9 presentation as well on adoptive management, such as the  
10 question about the equity report on cap and trade.

11 On the carbon tax and cap question that was  
12 posed, that we could try and do both, we are trying to  
13 understand how those would interact with each other. It's  
14 not clear at this time how they would.

15 The Cap-and-Trade Program is a carbon pricing  
16 mechanism. A carbon tax is the same, a carbon pricing  
17 mechanism. You're trying to get to a certain objective in  
18 2030. And what you're essentially doing is trying to  
19 price carbon twice. And we're trying to figure out can  
20 that option be structured in a way that you're not levying  
21 the same price on the same emission reductions that you're  
22 trying to achieve.

23 It's not clear how you would structure those two  
24 together right now.

25 We can go back and talk to the economic

1 reviewers. But they really are two very separate carbon  
2 pricing mechanisms that are meant to be used individually  
3 to get the same objective.

4           When you think about the carbon tax, you're going  
5 to be generating some revenues. When you think about the  
6 Cap-and-Trade Program, there's auction proceeds. There's  
7 increased emissions leakage potential because you're  
8 levying a -- almost the same price twice on the same  
9 facilities for carbon liabilities. And there would have  
10 to be some mechanism to almost return some of that value  
11 back. And those are the kinds of questions we're still  
12 trying to work through on how you would even structure  
13 something like that if you were to try and do it. It's  
14 never been done that we're aware of.

15           CHAIR NICHOLS: Okay. Yes, Ms. Mitchell.

16           BOARD MEMBER MITCHELL: I'll just mention a few  
17 things.

18           CHAIR NICHOLS: Oh, I'm sorry.

19           BOARD MEMBER MITCHELL: Oh, I'm sorry.

20           CHAIR NICHOLS: You weren't finished. Go ahead.  
21 Excuse me.

22           DEPUTY EXECUTIVE OFFICER KARPEROS: The 375  
23 question.

24           BOARD MEMBER TAKVORIAN: Yes.

25           DEPUTY EXECUTIVE OFFICER KARPEROS: So in the

1 mobile source strategy that was referenced early in the  
2 presentation that we're building the transportation and  
3 activity measures off of for the scoping plan, that  
4 included an estimate of about a 7 to 8 percent reduction  
5 of VMT from baseline in the 2030 time frame, paired up  
6 with the changes in fuel and vehicle technology in order  
7 to meet the 2030 target.

8           We've given that number to the MPOs as a starting  
9 place for their bottom-up analysis of what's possible for  
10 SB 375 targets. We expect to get the results of their  
11 analysis in the upcoming month, and then would -- in  
12 December, and we would be rolling those into the update of  
13 the targets that we'll be bringing to you first part of  
14 next year. And then as the timing works out, be able to  
15 work them into the scoping plan.

16           BOARD MEMBER TAKVORIAN: Thank you.

17           CHAIR NICHOLS: Okay. You had some additional  
18 comments?

19           BOARD MEMBER TAKVORIAN: No, that was it.

20           CHAIR NICHOLS: Okay.

21           BOARD MEMBER MITCHELL: Well, just a couple of  
22 comments. One is that the -- I think it's important the  
23 continuation of our existing programs, the low carbon fuel  
24 standard. I feel very strongly we should be continuing  
25 that. People have invested based upon that program and I

1 think we need to make sure that these programs continue  
2 including that one.

3           The other thing is, we have long pushed for a  
4 policy of getting the co-benefits of criteria pollutant  
5 reduction, and I think -- you know, I hope we continue  
6 with that.

7           I'm in support of your refinery efficiency  
8 measure. I think there's probably a number of refineries  
9 where we can get some substantial reductions from just  
10 efficiency in their existing operations.

11           And reductions in mobile sources of course  
12 continue to be very important.

13           Thank you.

14           CHAIR NICHOLS: I heard a number of comments that  
15 suggest that there's things that need to be better  
16 explained, better integrated, or possibly even organized  
17 somewhat differently when we come to the next draft of the  
18 scoping plan. And I'm not going to try to detail them all  
19 here. But I do think that the balance between mobile  
20 sources and stationary sources is an issue that's been  
21 raised in various places by different people. Clearly, we  
22 are going to need all of the efficiencies and all of the  
23 improvements from both. But both -- because of the way we  
24 regulate and the way we handle these issues, and the fact  
25 that you really can't trade mobility for production in



1 many instances, it's important that we think a little bit  
2 more about how we make sure that we're -- that we have a  
3 parallel emphasis on those things as well as in the  
4 natural resources versus technology areas.

5           We've made huge progress in terms of  
6 quantification in these areas in just the last few years,  
7 but there's still a lot more work that needs to be done.

8           And so those are just among the kinds of thoughts  
9 that I think I'll at least be wanting to explore with  
10 staff as to how we can do a better job of sort of  
11 articulating what the choices really are and organizing  
12 the choices, because this is a very complex system that  
13 we're now working with here.

14           But with that, I think that we'll wind up the  
15 discussion and that we should move onto the relate -- oh,  
16 sorry. One more.

17           BOARD MEMBER FLOREZ: No, I -- I just have a  
18 quick question.

19           CHAIR NICHOLS: Good.

20           BOARD MEMBER FLOREZ: On the models that we are  
21 putting forth in terms of the transportation side of it.  
22 I'm not sure how this fits in, so it's kind of an odd  
23 question.

24           So where does high-speed rail fit into this  
25 model? If indeed -- you know, you showed kind of some

1 scenarios, made some assumptions in terms of mobile  
2 sources. And I'm just wondering if President Trump pulls  
3 the plug, which it sounds like he probably will, on  
4 high-speed rail at the federal level for funding, what  
5 happens if that project doesn't come about?

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: So we talked about how we have the reference  
8 level, like if we took no further action would be around  
9 400 million metric tons. As part of that reference  
10 scenario, we have things like a 33 percent RPS, and we  
11 have the high-speed rail project as a base condition  
12 because we've already broken ground on it. Obviously if  
13 it doesn't --

14 BOARD MEMBER FLOREZ: Right. But is the base  
15 condition zero? Because even though we've broken ground,  
16 we've broken ground on Shafter to Oakland.

17 Okay. So there must --

18 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

19 SAHOTA: Well, in the early years it's zero.

20 BOARD MEMBER FLOREZ: Yeah.

21 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

22 SAHOTA: And then over time you expect to see some  
23 reductions because it does start to displace other modes  
24 of transportation and reduce fossil emissions.

25 BOARD MEMBER FLOREZ: How big of a part of that

1 is the data -- the model?

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: I'd have to go back and look, but I can follow up  
4 with you on that.

5 BOARD MEMBER FLOREZ: Yeah. Just wondering.

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: And if anything is taken out of the reference  
8 scenario or taken out of any of the measures, that  
9 obviously means those are emission reductions we have to  
10 try and gain somewhere else.

11 BOARD MEMBER FLOREZ: Exactly. And so given the  
12 conversation about how big of a project at least from a  
13 cap-and-trade perspective, how much money that takes, if  
14 you will, in some sense. You know, I'm kind of wondering  
15 if that project were not to go forward, you know, what  
16 does it -- one, what does it do to the model? Two, where  
17 do we find the other reductions? Three, what happens to  
18 the dollars that were, you know, in some sense generated  
19 from that and where do they go, you know? Do they go to  
20 other projects? Do they go to the EJ communities? Do  
21 they go to other reallocations? We've had some  
22 legislation passed in terms of percentages. What happens  
23 with those dollars?

24 So just maybe that little segment on that, given  
25 we still don't know ultimately what that decision will be.

1 But if we follow Mr. McCarthy and others in the Congress  
2 and given where they're at and this new president, I'm  
3 just wondering, you know, should we be prepared or at  
4 least have some sense of what that looks like?

5 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

6 SAHOTA: Sure. And just so that -- we're setting  
7 expectations. The numbers that we used for the expected  
8 reductions from high-speed rail came from a recent updated  
9 study that they did earlier this year. So we didn't  
10 recreate those reductions. We just incorporated them.  
11 But we can get all of that for you.

12 BOARD MEMBER FLOREZ: Yeah. No, I'm just asking,  
13 if it's zeroed out completely, what does that look like?  
14 What does the world look like, you know.

15 CHAIR NICHOLS: Okay. Thank you very much.

16 We move on to a related item, which is going to  
17 be the adaptive management discussion.

18 So move a few chairs here.

19 Okay. The next item is going to be an update, as  
20 I understand it, on the Adaptive Management Plan, which  
21 was a term that we I believe first used as we were  
22 crafting the original Cap-and-Trade regulation and the  
23 CEQA review that went with that. The program was designed  
24 to specifically track emissions and identify potential  
25 local air quality impacts from the Cap-and-Trade Program.

1 And a portion of the staff's presentation today is going  
2 to cover that specific item.

3           However, it seems like an opportunity also to  
4 raise a broader and perhaps more useful conversation about  
5 looking at air pollution more broadly in the context of  
6 the scoping plan and of cap and trade, looking at the  
7 progress California has made from local, State, and  
8 federal programs that are aimed at reducing criteria  
9 pollutants as well as toxics and greenhouse gases, and  
10 what else this Board could be doing to address all of  
11 these pollution types especially in environmental justice  
12 communities.

13           Simply put, air pollution impacts people's  
14 health, and we need to ensure that our programs are  
15 continuing to reduce those impacts in California, and to  
16 do it in a way that's as cost effective as possible, which  
17 means never or hardly ever only thinking about one  
18 pollutant at a time.

19           We put into place new measures and efforts to  
20 achieve further reductions, particularly for communities  
21 around ports and railyards and freight distribution  
22 facilities, and other disadvantaged communities.

23           Over the past year, the staff has worked closely  
24 with an expert stakeholder work group and continue to work  
25 air district staff to develop a comprehensive process to

1 review annual emissions from cap-and-trade covered  
2 facilities and to identify potential adverse impacts.  
3 After staff sets up the regulatory framework under which  
4 air pollution is controlled in California, staff will  
5 describe the adaptive management process for  
6 cap and trade, including the multi-step screenings and  
7 further analyses, and then provide some preliminary  
8 results of the screening and analysis that they've been  
9 doing.

10           So this then will lead to a broader look at air  
11 pollution control efforts, as I noted earlier. Staff will  
12 highlight the broader efforts looking beyond adaptive  
13 management, which will be begin a conversation hopefully  
14 that will allow us to look at our progress overall and to  
15 look at what tools we can use to further reduce community  
16 exposures overall.

17           So we're trying both to address the specific  
18 topic of the Adaptive Management Program; but recognizing  
19 that it was limited in its concept and implementation, to  
20 take a broader look at how we're integrating our various  
21 programs to deal with the three major types of air  
22 pollution - regional health-based pollutants for which we  
23 have standards; toxic air contaminants; and greenhouse  
24 gases.

25           So, Mr. Corey, would you please introduce this

1 item.

2 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.  
3 And as you mentioned, the Board approved an Adaptive  
4 Management Plan to monitor for potential localized air  
5 quality impacts from the implementation of Cap-and-Trade  
6 program. Board further directed staff to work with the  
7 air districts on the implementation of that plan.

8 But in staff's presentation as you noted, staff  
9 will first provide some important context for this effort,  
10 establishing the local, State, and federal framework for  
11 air pollution control in California. We'll then discuss  
12 the progress we've made at the regional local levels,  
13 which are noteworthy. But the message I want to convey is  
14 that we've heard loud and clear from our scoping plan  
15 development efforts and our extensive engagement with the  
16 EJ Advisor Committee and local community meetings that  
17 more needs to be done, to look beyond adaptive management,  
18 and implement measures to further reduce community  
19 exposures, especially for those communities around ports,  
20 railyards, freight distribution facilities, and other  
21 heavily impacted, disadvantaged communities. We'll tee up  
22 how we have a plan for achieving these further reductions  
23 and how adaptive management is one tool, among many, that  
24 are part of the needed broader effort to further reduce  
25 community exposures.

1           We'll then pivot to a specific discussion on  
2 adaptive management, the multi-step screening process and  
3 analytical framework we've developed with stakeholders,  
4 some preliminary results from the screening and analysis,  
5 the development of process we've worked through and then  
6 the next steps.

7           And finally, we'll close out the presentation by  
8 discussing plans for developing the broader levels of  
9 action beyond adaptive management that are needed to  
10 further reduce community exposures.

11           Now, with that, I'll ask Johnnie Raymond to give  
12 the staff presentation.

13           Johnnie.

14           (Thereupon an overhead presentation was  
15 Presented as follows.)

16           STAFF AIR POLLUTION SPECIALIST RAYMOND: Good  
17 afternoon, Chair Nichols and members of the board. Thank  
18 you for the opportunity to update you on our progress in  
19 further developing the Cap-and-Trade Adaptive Management  
20 Program.

21           As Mr. Corey indicated, we will discuss the  
22 adaptive management program within the broader context of  
23 our overall approach to clean air and how adaptive  
24 management is but one part of that broader effort to  
25 reduce community exposures.





1           This leads to a discussion of Adaptive Management  
2 Program itself, our current thinking on how to track and  
3 respond to any emission increases from cap-and-trade  
4 covered facilities, and a discussion of some preliminary  
5 results from our use of the Adaptive Management process  
6 developed to date.

7           I will then go over the public process for  
8 getting us to this point with Adaptive Management.

9           And finally, I will outline the next steps for both  
10 Adaptive Management and the broader effort to further  
11 reduce localized emissions and community exposures.

12                           --o0o--

13           STAFF AIR POLLUTION SPECIALIST RAYMOND: For  
14 decades, California has implemented a comprehensive set of  
15 air pollution control laws and emission reduction efforts.  
16 At the federal, State, and local level, air pollution  
17 control programs are designed to reduce emissions of  
18 smog-forming criteria pollutants, toxic air contaminants,  
19 and greenhouse gases throughout California, improving the  
20 health of all residents.

21           State and federal legislation in the 1950s, '60s,  
22 and '70s established the local air districts, ARB, the  
23 U.S. EPA. At that time, most of our collective focus was  
24 applied to reducing smog-forming or criteria emissions.  
25 In the '80s and '90s we began a parallel effort targeting

1 toxic air contaminants, including diesel exhaust  
2 particulate matter and air toxics. These efforts continue  
3 today. More recently global climate change has become a  
4 significant concern, and we have led the world in  
5 developing and implementing climate change strategies like  
6 cap-and-trade and low carbon fuel standard that are  
7 watched closely by numerous countries and other  
8 jurisdictions hoping to emulate our successes.

9 --o0o--

10 STAFF AIR POLLUTION SPECIALIST RAYMOND: The  
11 regulatory roles served by the local, State, and federal  
12 agencies in the previous slide are shown here. They are  
13 complementary and require substantial coordination between  
14 the agencies to ensure effective implementation.

15 At the federal level, the U.S. EPA sets:

16 National ambient air quality standards;

17 National emissions standards for cars, trucks,  
18 and equipment; and

19 National standards for hazardous air pollutants.

20 At the State level, ARB:

21 Sets motor vehicle, fuel and consumer product  
22 emission standards;

23 Develops and implements reduction measures  
24 targeting criteria pollutants, toxics, and greenhouse gas  
25 sources;

1 Provides primary oversight of the 35 local air  
2 districts; and

3 Monitors and reports air quality.

4 At the local level, air districts have authority  
5 to:

6 Develop, implement, and enforce stationary source  
7 rules;

8 Establish and implement a permit system governing  
9 the operation of these sources of air pollution; and

10 Monitor, collect, and report air quality data.

11 --o0o--

12 STAFF AIR POLLUTION SPECIALIST RAYMOND: Now that  
13 I've described the different roles of the air quality  
14 agencies, I will summarize how these jurisdictions apply  
15 their authorities to regulating smog-forming emissions,  
16 air toxics, and climate change pollutants.

17 The role of mobile sources is implementing at all  
18 three levels. Both ARB and U.S. EPA establish motor  
19 vehicle emission standards, while local air districts  
20 establish fleet rules and other in-use and operational  
21 controls. The mobile source control program is aimed at  
22 achieving regional criteria pollutant reductions that  
23 combat the formation of smog and make heavy-duty trucks  
24 cleaner by reducing diesel particulate matter.

25 Sources of air toxic contaminants are identified

1 at the State and federal level and are controlled through  
2 air toxic control measures at the State, local, and  
3 federal levels.

4 For climate pollutants, the State has primary  
5 authority under AB 32, SB 32, and other laws to regulate  
6 greenhouse gases and other climate forcing pollutants. We  
7 have implemented programs for motor vehicles, large  
8 stationary facilities, transportation fuels and other  
9 sources of climate forcing pollutants. ARB also has an  
10 important role in working with sister agencies to develop  
11 comprehensive plans targeting the reduction of climate and  
12 other pollutants through the Scoping Plan, Short-Lived  
13 Climate Pollutants Strategy, and other efforts.

14 For stationary facilities, local air districts  
15 and U.S. EPA have primary authority to directly control  
16 emissions through the air district and Title 5 permitting  
17 programs. These efforts focus on criteria and toxic  
18 pollutants. ARB has an oversight role for district  
19 permitting and implementation as well as the development  
20 of model rules as Suggested Control Measures and Best  
21 Available Retrofit Control technology determinations.

22 --o0o--

23 STAFF AIR POLLUTION SPECIALIST RAYMOND: The  
24 sustained multi-jurisdictional effort described previously  
25 has produced substantially positive results over several

1 decades. This and the following slide show long-term  
2 trends of air pollutant levels that affect California  
3 communities.

4 At the regional level, you can see from these  
5 graphs that the State has made remarkable progress in  
6 reducing regional pollutants - like oxides of nitrogen and  
7 benzene emissions - in areas such as South Coast Air  
8 Basin.

9 --o0o--

10 STAFF AIR POLLUTION SPECIALIST RAYMOND:

11 Similarly at the local level, we've also made steady  
12 long-term progress driving down emissions of pollutants  
13 such as diesel particulate matter and PM<sub>2.5</sub> that are  
14 impacting local communities.

15 These graphs demonstrate that ambient  
16 concentration of these pollutants have decreased at a  
17 significantly faster rate in environmental justice  
18 communities as compared to non-EJ communities.

19 However, these graphs also show that, despite our  
20 progress, there is still a gap that exists between  
21 measured concentrations in EJ communities as compared to  
22 non-EJ communities.

23 Although the gap has been closing, it is still  
24 there. We've made progress but more needs to be done. We  
25 view closing this gap permanently as a high priority

1 across all our programs. Moreover, I'd like to underscore  
2 that additional emission reductions are needed to protect  
3 California's most vulnerable communities, such as those  
4 near railyards and distribution centers.

5 --o0o--

6 STAFF AIR POLLUTION SPECIALIST RAYMOND: It is  
7 clear that more needs to be done to further drive down  
8 emissions both regionally and for local environmental  
9 justice communities. That message has been informed and  
10 reinforced by a number of sources, including:

11 Our extensive engagement with the Environmental  
12 Justice Advisory Committee at numerous local community  
13 meetings we have participated in throughout the State;

14 The various community visits and tours many ARB  
15 staff from different programs have attended;

16 Recent findings that shed light on evaluated  
17 exposures in these communities, such as chromium levels in  
18 some communities in the South Coast; and

19 Studies focused on community exposures and  
20 benefits, such as studies conducted by OEHHA coming up in  
21 December, the Luskin Center study on climate program  
22 benefits, and the Cushing study that was discussed at the  
23 September hearing.

24 --o0o--

25 STAFF AIR POLLUTION SPECIALIST RAYMOND: Over the

1 next several slides we will look beyond Adaptive  
2 Management to the broader effort that is needed to reduce  
3 regional emissions and localized community exposure to air  
4 pollution.

5 --o0o--

6 STAFF AIR POLLUTION SPECIALIST RAYMOND: As I  
7 mentioned, Adaptive management is a focused program  
8 designed to detect and address unlikely but potential  
9 localized air quality impacts caused by cap and trade. It  
10 is but one part of a broader effort needed to reduce  
11 regional emissions and localized community air pollution.

12 That broader effort beyond Adaptive Management  
13 will focus on cutting current emission levels further,  
14 address mobile and industrial sources, and employ  
15 multi-agency coordination.

16 Ultimately, it is our top priority to take  
17 actions within our authority - and work with the local and  
18 federal jurisdictions to implement measures within their  
19 respective authorities - to reduce regional emissions and  
20 community exposure to air pollution.

21 --o0o--

22 STAFF AIR POLLUTION SPECIALIST RAYMOND: The  
23 broader, multi-jurisdictional effort will need to employ a  
24 multi-pronged approach to address regional emissions and  
25 community exposures. These efforts will be guided by a





1 further;

2           Implementing our own Sustainable Freight and  
3 Mobile Source Strategies;

4           Continuing the toxics review process to reflect  
5 the recent risk methodology updates by OEHHA;

6           Continuing the implementation and enforcement of  
7 our diesel reduction measures; and

8           Improving our emissions inventory and making  
9 related information more accessible to the public.

10                           --o0o--

11           STAFF AIR POLLUTION SPECIALIST RAYMOND: The  
12 needed actions also call for us to assess our climate  
13 strategies for potential enhancements that can yield  
14 co-benefits and prioritize measures that result in direct  
15 reductions as provided under AB 197.

16           Moreover, better data informs better actions, so  
17 it is imperative that we continue to collaborate with  
18 researchers on assessments of community impacts, research  
19 to fill gaps, and development of appropriate responses.

20           As you can see, our plan is to use all of the tools in  
21 our toolbox to develop new ones as appropriate. To this  
22 end, we expect to present to the Board in 2017 more  
23 details on our broader actions needed to further reduce  
24 regional and community air pollution.

25                           --o0o--

1           STAFF AIR POLLUTION SPECIALIST RAYMOND: Now that  
2 I've described the broader context of California's  
3 emissions control landscape, now I will switch to a  
4 discussion of the Adaptive Management program itself and  
5 some preliminary results in our application of the process  
6 developed to date.

7                                 --o0o--

8           STAFF AIR POLLUTION SPECIALIST RAYMOND: In the  
9 next several slides, I'll define Adaptive Management and  
10 its objectives, and present key questions governing the  
11 design of Adaptive Management.

12           When the Cap-and-Trade regulation was first  
13 considered by the Board in 2011, the Board concluded that  
14 cap and trade is unlikely to contribute to increased  
15 localized emission impacts.

16           However, to address some comments and concerns  
17 raised, the Board approved the Adaptive Management Plan to  
18 closely track the effects of the Cap-and-Trade Program on  
19 localized air quality.

20           Adaptive Management provides a focused public  
21 process and tool to track emissions from cap-and-trade  
22 covered facility. The program also provides a transparent  
23 and public process for vetting recommended actions to  
24 address and avoid emission increases from cap-and-trade  
25 covered facilities.

1           The proposed process and emissions visualization  
2 tool also allows anyone to follow and replicate staff's  
3 analysis. And we will present a short video demonstrating  
4 this tool later in this presentation.

5                               --o0o--

6           STAFF AIR POLLUTION SPECIALIST RAYMOND: Here we  
7 will show the key questions governing our application of  
8 the Adaptive Management Program.

9           Here, have we observed an increase in criteria  
10 pollutant emissions from cap-and-trade covered facilities  
11 and disadvantaged communities? This question identifies  
12 one primary purpose of Adaptive Management, which is to  
13 monitor for emission increases from cap-and-trade covered  
14 facilities in disadvantaged communities.

15           Does the observed emission increase warrant a  
16 deeper investigation? Here we identify whether the  
17 increase is real, and, if so, warrants intensive deeper  
18 analysis of the cause. An example of this is where an air  
19 district has changed accounting methodologies that might  
20 indicate a potential increase in emissions from the  
21 previous year but may not be an actual emissions increase.  
22 Only a deeper investigation will shed light on this type  
23 of scenario. This question also involves prioritizing the  
24 deeper analysis for those communities with the largest  
25 observed increases.

1           Is the increase caused by cap and trade? This  
2 question is probably the most challenging question to  
3 answer since increases in emissions can be caused by a  
4 number of factors, which can include but not limited to  
5 the implementation of cap and trade, and those causal  
6 factors can often operate simultaneously and in  
7 confounding ways that make it difficult to tease out a  
8 primary cause or causes.

9           Finally, what are the potential responses?  
10 Emission increases from cap-and-trade covered facilities  
11 need to be addressed irrespective of whether the increased  
12 is caused by or attributed to cap and trade. The  
13 potential response to an emissions increase can be  
14 informed by the answer to the attribution question. If  
15 the increase can be attributed to cap and trade, then a  
16 further evaluation of a program design and implementation  
17 is designed to determine how best to address the increase.

18           But the inquiry doesn't end if we cannot show an  
19 increase was caused by cap and trade. Ultimately  
20 substantial emission increases need to be understood and  
21 addressed. And that leads us to the broader,  
22 multi-pronged effort to reduce regional and community air  
23 pollution that I discussed earlier.

24                           --o0o--

25           STAFF AIR POLLUTION SPECIALIST RAYMOND: In

1 developing the Adaptive Management Program, we've broken  
2 it down to four key steps. In the next couple slides I'll  
3 go over the first step: Annual monitoring for criteria  
4 pollutant emissions using ARB emissions visualization  
5 tool.

6 --o0o--

7 STAFF AIR POLLUTION SPECIALIST RAYMOND: To  
8 monitor annual changes in emissions we will use a new  
9 version of the Emissions Visualization and Mapping Tool.  
10 An older version of this mapping tool is already available  
11 to the public.

12 In a previous hearing, we demonstrated this  
13 mapping tool in an earlier update on Adaptive Management.  
14 But that version of the tool contains only greenhouse gas  
15 data. For today's update, we will be demonstrating a new  
16 version being developed by our staff from our Air Quality  
17 Planning and Science Division.

18 Currently, the three tool displays by location  
19 greenhouse gas emissions data reported directly to ARB by  
20 over 500 entities as required by the Mandatory Reporting  
21 Regulation. The general reporting threshold for  
22 facilities is 10,000 metric tons of greenhouse gas  
23 emissions per year. These data are validated by  
24 third-party verifiers and reviewed by ARB staff.

25 We will add criteria pollutants later this year.

1 When completed, this will allow staff and the public to  
2 identify emission increases from cap-and-trade covered  
3 facilities at disadvantaged communities in a number of  
4 different ways. Under AB 197, we will plan on adding air  
5 toxics data to this tool before 2018.

6 We will now pivot briefly to show you a short  
7 video demonstrating our progress in updating the tool. We  
8 are currently working with the air districts to  
9 ground-truth the emissions data, and we anticipate that an  
10 updated version of this tool will be released to the  
11 public by the end of this year.

12 (Thereupon a video was played as follows:)

13 THE NARRATOR: ARB is in the process of updating  
14 its Interactive Facility Emissions Visualization and  
15 Mapping Tool originally released in 2012. This web-based  
16 tool displays the locations of mandatory recording  
17 facilities in California and their greenhouse gas  
18 emissions. After the update the tool will be able to  
19 display criteria emissions for these facilities.

20 Let's start by reviewing the tool's user  
21 interface and features. The user interface consists of  
22 three panels: A control panel, a display panel, and a  
23 facility list panel.

24 The control panel allows users to search  
25 facilities by name, geographic region, primary sector, or

1 whether a facility participates in the Cap-and-Trade  
2 Program. It also lets users select the pollutants and the  
3 years for which data can be displayed.

4 The display panel shows the locations of  
5 mandatory reporting facilities on a map, and users are  
6 able to pan and zoom the map. Facilities are color coded  
7 based on their primary sector.

8 The right-side bar displays a list of facilities  
9 along with their emissions. This list and the map respond  
10 to the filter selected in the left-side menu.

11 Note that one new feature added to the tool is  
12 that it now displays cap-and-trade covered emissions.

13 Now, let's take a look at new information the  
14 tool will provide. Using the tool search feature, we'll  
15 look for XYZ Company. Notice the facility bouncing on the  
16 map.

17 Let's zoom in, which can be done using the zoom  
18 and pan controls or the mouse wheel. Notice the 5 tabs in  
19 the pop-up window when we click on the facility. As  
20 before, the first half shows information about the  
21 facility. The "emissions" tab shows greenhouse gas and  
22 criteria pollutant emissions reported in 2014 for this  
23 facility.

24 The "GHG trend" tab shows a trend of a facility's  
25 greenhouse gas emissions over time, along with a table of



1 the emissions reported for each year.

2 Similarly, the "criteria trend" tab shows the  
3 trend and emissions table for criteria pollutants.

4 And lastly, the "compare'" tab allows users to  
5 plot greenhouse gas and criteria pollutant trends on the  
6 same chart.

7 Now, let's reset the map to revisit a very useful  
8 feature of the tool. The "shape" options in the tool  
9 allow users to select several facilities at once, using a  
10 circle, a rectangle, or a polygon. Let's demonstrate.

11 Using the circle tool, we'll draw a perimeter  
12 around a number of facilities. When we click on the  
13 shaded area, the tool displays information about the size  
14 of the area and the number of facilities in it, a list of  
15 facilities, the total aggregated emissions, and the GHG  
16 and criteria pollutant trends.

17 This concludes our demonstration.

18 CHAIR NICHOLS: Okay.

19 (Laughter.)

20 CHAIR NICHOLS: It's cute. I hope it's going to  
21 be useful. It looks like it's going to be useful. I  
22 really like the 3-panels idea. I don't know who all  
23 you've tested it on or how many ten-year olds versus, you  
24 know, slightly older folks.

25 (Laughter.)

1           CHAIR NICHOLS: But definitely seems like it has  
2 the potential to be useful. So glad to know you're doing  
3 this.

4           I'm really most excited about the potential for  
5 allowing -- enabling people to go facility by facility and  
6 to get a bigger -- a more comprehensive picture of what we  
7 know. And I do think it exposes also then some of the  
8 questions about timeliness of data and then the formats of  
9 data and all of that. So I know not everybody thinks  
10 emissions inventories are as exciting as I do, but I think  
11 this is actually a pretty powerful item.

12           BOARD MEMBER BALMES: Well, it will be more  
13 powerful when toxics are added in 2017.

14           CHAIR NICHOLS: Yes, exactly, because that's  
15 really I think where most of the community interest is.

16           Okay. Thank you.

17           INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA:

18           Chair Nichols, I apologize. That was the end of  
19 the video, but we still have a few more --

20           CHAIR NICHOLS: Oh, I know you have more  
21 presentation. I was just commenting on the tool, that's  
22 all. Giving a little review, you know --

23           (Laughter.)

24           CHAIR NICHOLS: -- a little feedback.

25           Okay. Go ahead.

1           STAFF AIR POLLUTION SPECIALIST RAYMOND: So I  
2 will continue.

3                               --o0o--

4           STAFF AIR POLLUTION SPECIALIST RAYMOND: The next  
5 two parts in our current thinking for the Adaptive  
6 Management process consist of a number of analytical  
7 steps:

8           First, we would screen emissions data to identify  
9 emission increases from cap-and-trade covered facilities  
10 in disadvantaged communities. Specifically, we're looking  
11 for increases in aggregated levels of volatile organic  
12 compounds, oxides of nitrogen, and fine particulate  
13 matter.

14           Next, we would prioritize for deeper analyses  
15 those disadvantaged communities showing the largest  
16 observed increases, then conducting the deeper analysis  
17 for the remaining disadvantaged communities showing any  
18 observed increases in criteria emissions.

19           We would then analyze individual facility  
20 emissions in the disadvantaged communities with observed  
21 increases to determine whether those increases are real;  
22 and, if so, what factors are causing the increases? The  
23 intensive investigation into the validity of the observed  
24 increase and their cause will require close collaboration  
25 with the local air districts.

1                   --o0o--

2                   STAFF AIR POLLUTION SPECIALIST RAYMOND: As noted  
3 on the previous slide, the two analytical parts of the  
4 Adaptive Management process involve a number of steps  
5 which we elaborate future on this slide.

6                   To identify disadvantaged communities for  
7 analysis, we first determine which disadvantaged  
8 communities are co-located with at least one cap-and-trade  
9 covered facility. So far we have identified 80  
10 communities with at least one such covered facility.  
11 Those 80 communities are co-located with approximately 100  
12 cap-and-trade covered facilities.

13                  We then use the mapping tool to create a study  
14 area with a 2.5 mile radius from the center point of those  
15 communities. As you'll recall from the September hearing,  
16 a 2.5 mile radius has been used by researchers in defining  
17 a study area in research involving environmental justice.

18                  We will then use the mapping tool to aggregate  
19 criteria emissions from all cap-and-trade covered  
20 facilities within a study area. Those study areas  
21 indicating an observed emissions increase in any of the  
22 criteria pollutants will be identified for a deeper  
23 analysis, with those study areas showing the largest  
24 increases prioritized for the initial deeper analysis.

25                  As I noted in the previous slide, we will work

1 closely with the local air districts in both the  
2 analytical and attributional phases to determine whether  
3 an observed increase is real and what is causing the  
4 increase.

5           It's important to notice that careful  
6 interpretation of the analytical results is needed so that  
7 the recommended actions can be effective in addressing an  
8 actual emissions increase.

9   --o0o--

10           STAFF AIR POLLUTION SPECIALIST RAYMOND: In the  
11 next several slides we are presenting preliminary results  
12 from our analysis using the Adaptive Management process I  
13 just described. For this initial stage we started with  
14 many of the communities we visited as part of the local  
15 community meetings hosted by the Environmental Justice  
16 Advisory Committee this year.

17           The first preliminary analysis in today's  
18 presentation is for the Southern California community of  
19 Wilmington. There are ten cap-and-trade covered  
20 facilities within 2.5 mile radius of Wilmington's center.

21           As you can see from the graph, criteria pollutant  
22 emissions from these facilities are generally at or below  
23 their pre-recession levels.

24   --00o--

25           STAFF AIR POLLUTION SPECIALIST RAYMOND: This

1 slide shows a similar analysis conducted for Oakland in  
2 the East Bay Area. There is one cap-and-trade covered  
3 facility within the 2.5 mile radius of Oakland. And VOCs,  
4 NO<sub>x</sub> and PM<sub>2.5</sub> appear to have increased in recent years.

5 We are working with the Bay Area Air Quality  
6 Management District to investigate whether these observed  
7 increases are real; and, if so, what are the underlying  
8 causes.

9 --o0o--

10 STAFF AIR POLLUTION SPECIALIST RAYMOND: Here we  
11 list the preliminary screening results for ten communities  
12 we reviewed. Six out of ten initial study area show  
13 emission decreases or no change in criteria pollutant  
14 emissions. This includes the communities of Wilmington,  
15 Barrio Logan, Brawley, San Bernardino, Bakersfield and  
16 South Sacramento.

17 Four out of initial ten study areas indicate  
18 potential emission increases, which we are currently  
19 investigating with the local air districts. This includes  
20 the communities of Richmond, Oakland, downtown L.A. and  
21 Fresno.

22 It is important to acknowledge the significant  
23 progress each of the air districts covering these  
24 communities - the Bay Area, South Coast, and San Joaquin  
25 Valley air districts - have made in reducing overall air

1 pollution over the years. As I noted earlier, we will  
2 work with the air districts to validate whether these are  
3 real emission increases; and, if so, identify appropriate  
4 targeted actions to reduce emissions in these communities.

5 --o0o--

6 STAFF AIR POLLUTION SPECIALIST RAYMOND: In the  
7 process of analyzing observed emission increases in the  
8 study areas noted previously, we've encountered a number  
9 of challenges in determining whether an observed increase  
10 is real and what are the underlying causes of the  
11 increase.

12 Observed emission changes can be attributed to a  
13 wide variety of factors, and multiple causal factors quite  
14 often can occur simultaneously. Examples of this include  
15 differences in emission estimation methodologies over  
16 time, misreported data, and historical data that have not  
17 been updated using current methodologies. Of course these  
18 factors may not explain an observed increase entirely, so  
19 an intensive investigation is often required to obtain  
20 further insight.

21 As I noted previously, we've identified  
22 approximately 80 EJ communities with at least one  
23 cap-and-trade covered facility. We plan to continue our  
24 evaluation of the initial set of ten communities, along  
25 with the rest of the estimate 80 disadvantaged

1 communities, and include the results of our analysis in  
2 the draft Adaptive Management Report released in spring  
3 2017.

4 --o0o--

5 STAFF AIR POLLUTION SPECIALIST RAYMOND: In the  
6 next two slides I will discuss the public process for the  
7 Adaptive Management Program.

8 --o0o--

9 STAFF AIR POLLUTION SPECIALIST RAYMOND: As shown  
10 on this slide, the fourth step of the process includes  
11 releasing results for public review and comment,  
12 developing recommendations, and providing updates to the  
13 Board and CAPCOA.

14 --o0o--

15 STAFF AIR POLLUTION SPECIALIST RAYMOND: This  
16 slide lists our collaborations with CAPCOA in 2015, and  
17 that we held a series of regional public workshops and  
18 updated the Board on the proposed process last November.

19 This year we continue to work with our local air  
20 district partners. We also formed an informal work group  
21 to further refine the process, obtain independent  
22 perspectives on how to determine when emission changes  
23 warrant further investigation and how to identify  
24 potential adverse impacts from cap-and-trade covered  
25 facilities.



1           Staff held six work group meetings from January  
2 through August of this year. The work group consisted of  
3 representatives from the Environmental Justice Advisory  
4 Committee, academia, public health, the air districts, and  
5 industry. We greatly appreciate the input and  
6 contributions we received from the air districts, the work  
7 group, and the Environmental Justice Advisory Committee on  
8 the Adaptive Management Process.

9                               --o0o--

10           STAFF AIR POLLUTION SPECIALIST RAYMOND: Moving  
11 forward. We plan to release an updated mapping tool with  
12 criteria pollutant emissions in December.

13           We're also targeting Spring 2017 for the release  
14 of our draft Adaptive Management Report. We plan to hold  
15 public meetings to discuss the draft report before and  
16 after its release.

17           Following that public process, we plan to come  
18 back with a proposed Adaptive Management Report for the  
19 Board's consideration in Summer 2017.

20           And to bring it back to our earlier discussion on  
21 the broader effort beyond Adaptive Management, we plan to  
22 come back to the Board in Summer 2017 with more details on  
23 further actions needed to reduce community exposures.

24           Thank you. This concludes my presentation. I'd  
25 be happy to take any questions.

1 CHAIR NICHOLS: Okay. Questions or comments  
2 before we hear from the public.

3 We have a list. We have 12 people. I think we  
4 should probably stick to our two-minute suggestion here.

5 So we'll start this time with Tiffany Roberts.  
6 Made it to the top of the list, beating out Shelly  
7 Sullivan.

8 MS. ROBERTS: Thank you, Madam Chair and members  
9 of the Board. Tiffany Roberts from Western States  
10 Petroleum Association.

11 We want to start off by thanking staff for  
12 working on this very difficult task that they've been  
13 assigned. So it has been a good I think working  
14 relationship and we just want to say thank you for that.

15 We do believe that the Adaptive Management  
16 process or any successor process should start with a  
17 rational, logical screening process to identify  
18 cap-and-trade facilities and/or sectors where increases in  
19 greenhouse gas emissions have actually occurred. This  
20 screening process should be followed by increasingly  
21 focused reviews to attempt to determine the extent to  
22 which those emission increases may have resulted from the  
23 Cap-and-Trade Program.

24 While we understand the desire for transparency  
25 in presenting air emission information to communities, we

1 believe that a website that shows only participants in the  
2 Cap-and-Trade Program will convey potentially misleading  
3 information. This is true for a number of reasons.

4           First, large emitters of greenhouse gas emissions  
5 such as those sources included in the Cap-and-Trade  
6 Program are not the same as large emitters of PM  
7 emissions. A mapping program that only shows emissions  
8 from cap-and-trade facilities will omit important  
9 information about large sources of PM emissions in those  
10 communities.

11           As an example, industrial sources emit only 12  
12 percent of direct PM<sub>10</sub> emissions in the Bay Area. Of that  
13 12 percent, sources are -- sources that are in the  
14 Cap-and-Trade Program represent only a small fraction. A  
15 map that only shows the emissions from facilities in the  
16 Cap-and-Trade Program would omit over 90 percent of the  
17 emissions that contribute to ambient PM concentrations,  
18 and thus doesn't give the context necessary to understand  
19 or evaluate the issue.

20           So to conclude, we look forward to continuing to  
21 work with staff to make sure that there is a statistically  
22 sound way of evaluating and presenting information.

23           Thank you.

24           CHAIR NICHOLS: Thank you.

25           Shelly Sullivan.

1 MS. SULLIVAN: Shelly Sullivan with the Climate  
2 Change Policy Coalition. And I'm just going to be really  
3 brief here.

4 The intent of the Adaptive Management Process was  
5 to measure the effect of the Cap-and-Trade Program and GHG  
6 emissions in regions throughout California. And so we  
7 just really want to caution the staff and the Board that  
8 the process now seems to be going into a different  
9 direction and that the Adaptive Management Process must  
10 now refocus its original intent.

11 Adding other types of pollutants before  
12 understanding if GHG emissions are going up dilutes ARB's  
13 ability to determine if Cap-and-Trade Program is having  
14 negative effects or impacts. And so we just kind of  
15 wanted to reiterate that point.

16 And I also just wanted to ask. I know that staff  
17 has worked with CAPCOA and their subgroup and also gave  
18 the Environmental Justice Advisory Committee a briefing on  
19 it. Going forward, was there going to be an opportunity  
20 for actual informal or formal public comment periods as  
21 well? Because I don't think that that's happened. Or if  
22 it has, I missed that. So I apologize.

23 So thank you.

24 CHAIR NICHOLS: I see a head nodding here. But  
25 maybe staff would like to specifically respond.

1 INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA:

2 Yeah, Floyd Vergara. Definitely, as Mr. Raymond  
3 mentioned, there is a public process vetting and  
4 ground-truthing of the draft report that we'll be putting  
5 out. So we definitely have public meetings and workshops  
6 planned.

7 MS. SULLIVAN: Thank you.

8 BOARD MEMBER GIOIA: I wanted to make sure I  
9 heard your concern.

10 Is your concern that we shouldn't be looking at  
11 whether other pollutants have gone up or down?

12 MS. SULLIVAN: My concern is is that we're  
13 getting far afield of looking specifically at greenhouse  
14 gas emissions.

15 BOARD MEMBER GIOIA: How is that far afield?

16 MS. SULLIVAN: Well, the Adaptive Management  
17 Process was initially for greenhouse gas, looking at --

18 BOARD MEMBER GIOIA: But it was to determine if  
19 there were other impacts that were not beneficial, and  
20 that would mean criteria pollutants and toxics. But  
21 that's not -- those are the health issues. I represent  
22 Richmond. I sort of understand that the concern of  
23 communities that drove this was will the Cap-and-Trade  
24 Program affect other pollutants like criteria and toxics.  
25 So I'm not sure I understand why that's not relevant.

1 MS. SULLIVAN: I'm not saying it's not relevant.  
2 I just think that we really need to focus on what the  
3 greenhouse gas emission impacts are having on those  
4 communities as well.

5 BOARD MEMBER GIOIA: But that's a global issue.  
6 But the issue is what has impacts on that community as you  
7 state. That's toxics or criteria?

8 MS. SULLIVAN: It's criteria pollutants.

9 BOARD MEMBER GIOIA: Okay. All right.

10 BOARD MEMBER BALMES: As someone who I think  
11 really pushed us to move in this direction, the original  
12 intent of -- it was called an audit initially. And we now  
13 have a sexier name, adaptive management.

14 (Laughter.)

15 BOARD MEMBER BALMES: But it was specifically to  
16 address the health impacts of co-pollutants in addition to  
17 greenhouse gas emissions.

18 BOARD MEMBER GIOIA: Exactly.

19 BOARD MEMBER BALMES: That was the original  
20 intent. It was --

21 BOARD MEMBER GIOIA: Exactly.

22 BOARD MEMBER BALMES: It was part of cap and  
23 trade, but it was to look at the co-pollutants.

24 CHAIR NICHOLS: Yeah, it was done to comply with  
25 CEQA specifically. That was the intent anyway.

1 BOARD MEMBER BALMES: Well, I think actually that  
2 may have been the legal intent. But, you know, my  
3 intent --

4 (Laughter.)

5 BOARD MEMBER BALMES: -- and the community's  
6 intent that were pushing me to do something was public  
7 health.

8 CHAIR NICHOLS: Yeah, that is true. That was the  
9 concern. I agree with you.

10 (Laughter.)

11 CHAIR NICHOLS: Spoken like a lawyer. All right.  
12 Sorry. I confess. It's true. Okay.

13 (Laughter.)

14 CHAIR NICHOLS: All right. Let's continue then.  
15 Thank you.

16 CAPCOA EXECUTIVE DIRECTOR ABBS: Good afternoon,  
17 Chair Nichols and members of the Board. My name's Alan  
18 Abbs. I'm with the California Air Pollution Control  
19 Officers Association representing the 35 local air  
20 districts.

21 As Johnnie said - and he gave an excellent  
22 presentation, by the way - the districts have been  
23 participating in this work group for over a year now.  
24 We've had a pretty diverse set of air districts  
25 represented, all the way up from far Northern California

1 down to the traditional large urban air districts. And so  
2 we had good representation and a lot of thought was put  
3 into this process.

4           And I think if you were really listening to his  
5 presentation, what you probably realized is that this was  
6 a lot harder in the end than we thought it was going to be  
7 when we first started it.

8           We have climate change pollutants, we have  
9 regional pollutants that are really of interest to the air  
10 districts, and then we also have the toxic air  
11 contaminants. They're all measured slightly differently.  
12 They get different weights based for health purposes on  
13 how we deal with them, and trying to incorporate -- they  
14 come from different databases. The data's collected  
15 differently. And so trying to merge all of that into one  
16 program where a person can click a button and see how  
17 things are changing over four or five years and then make  
18 a determination of about what to do, it really gets to be  
19 complicated. And I think staff has done a great job so  
20 far in trying to work through the issues and get to an  
21 ultimate resolution.

22           So we're in support of the process so far. And I  
23 think, as you also heard mentioned, air toxics are going  
24 to be a big deal in future versions of this program  
25 because -- the reason toxics are going to be so different



1 is we -- one pound of a certain toxic is different from  
2 one pound of another. Where they're exhausted matters.  
3 The weather patterns matter. And so how to represent that  
4 in the Adaptive Management Program is going to be  
5 particularly challenging if we want the public to really  
6 understand what's happening at some of these facilities.

7 And then to take it a step further, going into AB  
8 197 process, makes it even more challenging.

9 So we're here to help and we look forward to it.

10 Thank you.

11 CHAIR NICHOLS: Well, thank your. Your  
12 involvement in this is critical because they're -- you're  
13 the additional repository of a lot of the data that we're  
14 trying to get here. So thank you.

15 MR. BENGTSSON: Good afternoon, chair Nichols,  
16 Board members. Nathan Bengtsson with PG&E.

17 Just here to say that PG&E strongly supports a  
18 process that prevents unexpected, unintended, and  
19 inappropriate consequences in terms of localized air  
20 impacts from cap-and-trade. Obviously air quality and  
21 impacts from climate change are both very important, as  
22 we've heard many times today, and both have outside  
23 impacts on disadvantaged communities, and so it's  
24 important we're thinking about both of them.

25 With that in mind, you know, to be an effective

1 exercise of public trust, the AMP or its successor process  
2 must be rooted in good data, and it must be transparent.  
3 And I think staff did a good job of recognizing that in  
4 what they've just presented to you all here.

5 I think the other thing that is really important  
6 to focus on - I think Shelly was getting at this - is that  
7 the purpose of this process is to identify localized air  
8 impacts that are a result of the Cap-and-Trade Program.  
9 And that causal link there is really, really important.  
10 Because as staff also did a good job of saying, there are  
11 lots of reasons for changes to localized air impacts, from  
12 wild fire to changes in economic -- changes in economic,  
13 you know -- economic uptick.

14 And so what we want you to -- this process is  
15 designed so that we don't rob Peter to pay Paul in terms  
16 of GHG reductions at the expense of public health. But we  
17 also don't want to go the opposite direction by doing an  
18 analysis that is confused and, you know, eventually  
19 mitigating our ability to limit GHGs because we're not --  
20 you know, we aren't careful enough about what the  
21 localized air impact causes are.

22 And so I just want to flag that, that we're  
23 really careful about that. And one way to do that might  
24 be to, you know, sort of put the increases in GHGs as the  
25 trigger for further AMP sort of digging in, instead of

1 starting with the increases in PM and toxics. Those are  
2 the things that actually should be measured. And when  
3 they're examined, there are other means for ARB to deal  
4 with them. But specifically with regard to GHGs and  
5 cap and trade, AMP's focused on results they're from.

6 Thank you.

7 CHAIR NICHOLS: Okay. Thank you.

8 MR. LARREA: John Larrea with the California  
9 League of Food Processors. Wow. I remember when this was  
10 first brought up and it was just a simple little program  
11 to determine whether or not cap and trade would have any  
12 effects. And now it seems to be expanding into something  
13 that I -- frankly I probably should have paid more  
14 attention to.

15 One of the things that kind of caught me was  
16 that, you know, there are informal work groups going on,  
17 there's developments associated with this. It's expanding  
18 well beyond what it was originally intended to be.

19 Has any thought been given to a public process?  
20 I would have loved to have seen some notification or  
21 knowing that I could attend some of these meetings to  
22 listen to it, because some of us do enjoy watching the  
23 sausage being made before it's actually placed out there  
24 in the public.

25 You know, many of our facilities as far as food

1 processor is concerned would be very interested in what's  
2 being developed within this working group and along with  
3 adaptive management as well.

4           You know, I'm not going to criticize or anything  
5 because I just don't know enough right now. But I take to  
6 heart what the PG&E representative just said. I thought  
7 that made a heck of a lot of sense. And I'd like to see  
8 more -- maybe something posted. Let us know what's  
9 happening, the timelines associated with this. And so  
10 that if we do choose to be there, I can bring experts as  
11 well too, you know, and help maybe the process along, you  
12 know, and give data that you could use to develop more of  
13 this, you know, if it's going to be that helpful.

14           So, please, just look to the public process, you  
15 know. Some of us really do want to participate in this.

16           Thank you.

17           CHAIR NICHOLS: I think this is the start of  
18 that. So thank you. Glad you're willing to participate.

19           MR. BARRETT: Hi. Good afternoon. I'm Will  
20 Barrett with the American Lung Association. And we did  
21 participate in the work group that the staff ran over the  
22 last year. We also participated in the public process and  
23 the workshops that went on earlier this year and late last  
24 year, and have appreciated working with staff on this  
25 important program.

1           Today the Lung Association, Physicians for Social  
2 Responsibility in Los Angeles, the Coalition for Clean  
3 Air, and Mari Rose Taruc from -- Co-chair of the EJ  
4 Advisory Committee submitted a letter to you today  
5 basically to outline our support for the process, and  
6 basically to show that we think that this is a responsive  
7 program and it's a part of the overall -- as the  
8 presentation laid out, the overall need to protect local  
9 communities from industrial pollutants. These are our  
10 major concerns. And we appreciate the effort within that  
11 context.

12           We feel that the approach laid out by staff to  
13 review the criteria air pollutants and, coming soon, the  
14 toxics data is really the only appropriate starting point  
15 to identify any potential impacts of the Cap-and-Trade  
16 Program. We know throughout the discussion that's not an  
17 expected outcome. But we do appreciate the -- the  
18 possibility to look for early warning signals.

19           We also appreciate the focus of starting these  
20 reviews within -- at facilities within disadvantaged  
21 communities. I think that's an important starting point  
22 rather than -- you know, it's a hard thing to kind of  
23 wrestle all the facilities. But starting in the most --  
24 the disadvantaged communities makes a lot of sense.

25           We do suggest that the process can also look

1 beyond increases to other unexpected changes in emissions.  
2 For example, why an emission -- or a facility might be  
3 flat-lining on emissions rather than reducing emissions.  
4 Or why slow reductions are seen in an EJ area than outside  
5 of the EJ area.

6           Clearly the focus should be on the major  
7 increases given what the resources staff has. But we  
8 think there's a lot of opportunity to expand the  
9 evaluation.

10           We'd like to just say also that we support the  
11 inclusion of the path we're dealing with,  
12 non-cap-and-trade-related increases that show up. We know  
13 that the staff can direct those to the appropriate  
14 resolution even if they're outside the Cap-and-Trade  
15 Program.

16           CHAIR NICHOLS: You're time's up.

17           MR. BARRETT: And I'll just close by saying thank  
18 you for all the effort and the work that's gone into it.  
19 It was a difficult process and we appreciated being part  
20 of it. So thank you all.

21           CHAIR NICHOLS: Okay. Is Brent Newell still with  
22 us?

23           No.

24           Okay. Rachel O'Brien.

25           MS. O'BRIEN: Good afternoon, Madam Chair and

1 members of the Board. Rachel O'Brien with the  
2 Agricultural Council of California. I wanted to note for  
3 those who might not be familiar that cooperatives and  
4 farmer-owned businesses can exceed the 25,000 metric tons  
5 of CO<sub>2</sub> emission threshold when cooking, cleaning, or  
6 processing food which requires them to participate in the  
7 Cap-and-Trade Program.

8           Ag Council has been engaging in the public  
9 process and in the Adaptive Management work group. That  
10 work group has met about six times -- I think it's six  
11 times this year. Unfortunately we weren't able to do a  
12 seventh before the Board meeting today. But hopefully  
13 that process continues. I wanted to thank staff for their  
14 efforts and including me in that process.

15           You might have heard from some -- or maybe  
16 started to glean from some folks that this is the first  
17 time that the public and other capped entities have been  
18 provided an update on adaptive management and been given a  
19 chance to provide. So, like you said, this is still the  
20 start of this process. But for some folks it's the first  
21 time kind of seeing the new developments.

22           I wanted to note that Ag Council agrees with the  
23 need to reduce community exposure of air pollution. We  
24 think that the best way to do -- to address emissions of  
25 criteria and toxic pollutants are through the best

1 available control technologies, the toxic rules, the  
2 criteria pollutant programs, and at the local levels. I  
3 bring that up, because to date in the scoping plan  
4 process, under one of the policy scenarios, under  
5 cap and trade and considering AB 197, there was a note  
6 that says that a decrease allocation -- there would be an  
7 decrease in an allocation if a covered facility reports an  
8 increase in on-site criteria and toxic emissions. I have  
9 concerns which I'll lay out next about that. But there  
10 are -- like has been said, there are many reasons -- God,  
11 that went by fast.

12 CHAIR NICHOLS: Sorry. Just finish the thought,  
13 if you would, about what you want to say here.

14 MS. O'BRIEN: One of the things that happens in  
15 the agricultural arena is that there are different weather  
16 patterns, there are different regions that food is  
17 produced in, there's different technologies, there's an  
18 array of factors that contribute to air toxics and  
19 criteria pollutants. And I think those need to be  
20 carefully analyzed, and I look forward to continuing to do  
21 that with you.

22 CHAIR NICHOLS: Thank you. I mean, basically  
23 what you're saying with respect to agriculture is true to  
24 some degree with everybody. Nobody is agreeing at the  
25 moment at least that the indicator of being in the



1 Cap-and-Trade Program in and of itself is a reason why  
2 emissions increased, right? I mean, there are people  
3 who've alleged that, and that is a potential conclusion  
4 that one could come to. But what we're trying right now  
5 to do is to tease out what the reasons are, what the  
6 factors are.

7 MS. O'BRIEN: Absolutely.

8 CHAIR NICHOLS: And then to make sure that we've  
9 got appropriate policies in place. The people who think  
10 that cap and trade causes this kind of thing are not going  
11 to be persuaded so far based on anything that they've  
12 seen. The people who think that cap and trade is, you  
13 know, completely different and separate are probably also  
14 not going to persuade much of anybody else, because the  
15 cap-and-trade policy is layered on to a lot of other  
16 things that are already going on.

17 So this is not an easy thing to figure out. And  
18 I don't think we're suggesting that we have a magic answer  
19 at this point either. But we ought to use the data that  
20 we have in a better way to try to explain, if we can, and  
21 do what our job is, which is to protect communities  
22 against increases in exposures. And I think that's  
23 really -- that is what the bottom line for us has to be in  
24 terms of following our own statutes.

25 So I appreciate that there's fear and concern out

1 there about being identified or targeted or, you know,  
2 forced to go through some new regulatory regime. And I  
3 could understand why people are concerned. But I think AB  
4 197 requires us to do this; and I think logically, in any  
5 event, we should be doing it.

6 So I hope you'll stay with the process.

7 MS. O'BRIEN: I just wanted to return, that I  
8 didn't mean to interpret that the data shouldn't be used.  
9 I don't think you were addressing my comments that I  
10 specifically made.

11 But okay. Thank you.

12 CHAIR NICHOLS: Thank you.

13 No, you didn't say that. I just used your  
14 comments as a springboard.

15 MS. WHITTICK: Good afternoon. I'm Janet  
16 Whittick and I'm here on behalf of CCEEB, the California  
17 council. And this is actually a really hard position for  
18 me to be in today, because I need to express CCEEB's real  
19 concern with the process that's happened up to date.

20 You know, we represent many of those in the  
21 Cap-and-Trade Program. But our members are still only a  
22 small portion of all the capped entities affected by  
23 cap and trade. And I have to say most have had no  
24 opportunity to input into this process.

25 Even Bill Quinn, who was one of the working group

1 members, one of only three industry members. We've been  
2 following this process throughout the last year. And I  
3 have to tell you, I have never seen the steps outlined  
4 today by staff, I've never seen the preliminary analysis.  
5 All of this is new and very surprising, because it's not  
6 what we've been working on over the last year. And that's  
7 been pretty disappointing for me today.

8           And we tried to have other technical experts  
9 brought into the process, and that was denied.

10           So there's no information on the website, and  
11 none of the working documents that we've been seeing have  
12 been ever posted. And again that's very disappointing.

13           Now, we agree that adaptive management can and should  
14 provide a safety check on cap and trade. And we believe  
15 that it should be based on valid and accurate data.  
16 However, the process keeps shifting and it's been very  
17 hard for us to follow.

18           You know, the purpose of cap and trade is to  
19 reduce greenhouse gas emissions. We think that should be  
20 front and center in adaptive management. I mean, I think  
21 the preliminary analysis that you saw today, it misses  
22 that step of causal analysis. And I think it -- it also  
23 misses the real legitimate reasons why emissions at  
24 facilities change over time. And I would say it's highly  
25 unlikely that those increases were due to cap and trade.

1           Because I have such limited time, I have to  
2 ask -- also ask, that facilities need an opportunity -- an  
3 iterative step in the process so that they can be working  
4 with staff to verify and provide data that's going to go  
5 into this analysis.

6           Thank you.

7           CHAIR NICHOLS: Thank you.

8           MR. MAGAVERN: Bill Magavern with the Coalition  
9 for Clean Air.

10           I want to start by agreeing with Supervisor Gioia  
11 and Dr. Balmes, because during the development of the  
12 initial cap-and-trade rule, I actually testified about a  
13 concern that we could possibly get hot spots because of  
14 emissions trading. So this is exactly the inquiry that we  
15 need to have. And we've been hearing today and for years  
16 from people who want to compartmentalize. "You regulate  
17 greenhouse gases, you regulate local air pollution. Why  
18 are you mixing the two?"

19           And I actually want to applaud this Board and the  
20 staff because, particularly in recent years, you have been  
21 more integrating your two great missions. And let's face  
22 it, the sources of the emissions are almost all the same.  
23 And as the Chair just pointed out, now AB 197 actually  
24 tells you that you need to look at local air pollution and  
25 its interactions with the climate program.

1           My biggest concern about this proposal is the one  
2 that was articulated by Will Barrett, is that your inquiry  
3 is limited to the facilities where the emissions have gone  
4 up. Now, we've got a declining cap. Emissions should be  
5 going down. But if emissions are staying flat or even in  
6 some cases where they're going down, that doesn't mean we  
7 shouldn't be looking into it. Because you still could  
8 have a situation where a big emitter is purchasing  
9 offsets, purchasing allowances, and because of that, is  
10 not cleaning up as much as it would without that, and  
11 therefore that community may not be getting the full  
12 benefits that other communities are getting. And we're  
13 talking about places where the status quo is not  
14 acceptable because the air is not healthy in those areas.

15           So just to say, "emissions didn't go up, that's  
16 fine, we'll check that off the list," that's not  
17 sufficient.

18           I think this process is improving as it evolves  
19 and grows, but I think we need to add that element.

20           Thanks.

21           CHAIR NICHOLS: Thank you.

22           BOARD MEMBER BALMES: Madam Chair?

23           CHAIR NICHOLS: Yes.

24           BOARD MEMBER BALMES: May I just make one  
25 comment?

1 CHAIR NICHOLS: Yes, please.

2 BOARD MEMBER BALMES: In my recollection of the  
3 ancient history of this, initially we didn't have any  
4 longitudinal data. The original audit idea was for high  
5 GHG emitters to evaluate, do an audit about what other  
6 pollutants -- what co-pollutants were being emitted. So  
7 it wasn't confined to -- at least in my memory the  
8 original intent was not confined to facilities where  
9 greenhouse gas emissions had gone up but where they were  
10 high. And that's a difference that I think is important.

11 CHAIR NICHOLS: Mr. Sweeney.

12 MR. SWEENEY: Yes. First and foremost, I am also  
13 speaking on behalf of the BAPAC, the Black American  
14 Political Association of California, the Sacramento  
15 chapter. And we are more than pleased that you are  
16 tackling these pertinent issues and their harms as they  
17 impact our various communities.

18 And our key point is not to come here and bash  
19 what you're doing, but to support and affirm what you're  
20 doing.

21 But we are also seeing that there is a pronounced  
22 need for outreach -- further outreach. And we think that  
23 here in Sacramento that should include both the local and  
24 State chapter of the NAACP, it should include the black  
25 chamber of commerce, and it should include some more

1 diverse voices as you put your reports together.

2           It is in fact true that the pollutants are --  
3 actually they're pandemic. And so you're -- the fact that  
4 you are measuring them is important, because we all are  
5 breathing this same air.

6           But given the paucity of time here, I would only  
7 like to say keep up the good work, but that your outreach  
8 needs to be more extensive. And we'd like to thank you  
9 all for the fine job that you are doing, Ms. Nichols and  
10 the balance of the Board, Brother John Gioia and your  
11 staff.

12           Thank you so much.

13           CHAIR NICHOLS: Thank you for coming and for your  
14 suggestions. And I hope we can follow up on them. Thank  
15 you.

16           MR. SWEENEY: Thank you.

17           BOARD MEMBER GIOIA: Good to see you in  
18 Sacramento, James. Miss you in the East Bay.

19           CHAIR NICHOLS: Okay. Ms. Vanderwarker.

20           MS. VANDERWARKER: Hi.

21           CHAIR NICHOLS: Hi.

22           MS. VANDERWARKER: Hi again. Amy Vanderwarker,  
23 California Environmental Justice Alliance.

24           Thank you all so much for this, you know,  
25 in-depth study on environmental justice issue. It's one

1 of the things we've been calling for a long time, so I  
2 really appreciate the hard work on it.

3           Also want to echo the sentiment from Supervisor  
4 Gioia and Dr. Balmes, that -- from the environmental  
5 justice perspective, looking at this public health impact  
6 and really looking at the integration of greenhouse gases  
7 and criteria and toxic air pollutants is critical. So  
8 that's all extremely important and much appreciated. And  
9 it is the reality that place does matter, and to have the  
10 best climate policy in the country and in the world, you  
11 know, we will be addressing criteria and toxic air  
12 pollutants as well as greenhouse gas emissions.

13           I also agree with previous comments that we  
14 should be looking at all capped entities in this program.  
15 And I have to say this is where information on allowance  
16 and trading data is actually critical. I know that's been  
17 an issue to actually continue to get that data. That was  
18 an issue at the Manuel Pastor study that was released.  
19 And whether that's folded into this process or elsewhere,  
20 some kind of analysis, that really is critical information  
21 to understanding what's happening with emissions on a  
22 local level and in specific communities. So that data  
23 needs to be included in the picture.

24           Finally, the other thing I just have a question  
25 on is, is how does this relate to the scoping plan



1 process? You know, really appreciate that there air You  
2 know, I really appreciate that the Air Resources Board is  
3 really diving in deep on the issues in environmental  
4 justice communities, collaborating with Manuel Pastor  
5 with -- through the OEHHA process. I know you all are  
6 working with OEHHA on that. And then through this  
7 process. And it just seems like these are the studies and  
8 this is the information we need before we can make any  
9 other final determinations on the scoping plan and what to  
10 do to 2030.

11 So this is critical information and I think it's  
12 really important to the scoping plan process. And I'm not  
13 quite understanding how the timelines all match up.

14 So thank you.

15 CHAIR NICHOLS: Thank you.

16 I think that will conclude this portion of our  
17 program for today.

18 But we've learned a lot and hopefully managed to  
19 get some of the information out as well, which needed to  
20 happen.

21 I'm sorry if there were folks who were shocked at  
22 what they saw. But it sounds like at least we've begun  
23 the process of getting that dialogue that needs to happen.

24 So comments from Board members?

25 BOARD MEMBER GIOIA: Just a question and then a

1 comment.

2           So just to be clear. The preliminary findings  
3 that you showed from the screening of -- criteria  
4 emissions, the results of your final evaluation will be  
5 out - I want to make sure I really understand this - this  
6 summer?

7           So the conclusions one way or another will be  
8 clear when?

9           INDUSTRIAL STRATEGIES DIVISION CHIEF VERGARA:

10          Yes, Supervisor Gioia. Floyd Vergara.

11          So to elaborate on what I said earlier, we do  
12 have plans to implement a public vetting process that will  
13 include workshops to discuss both the methodology that you  
14 saw today, and also the preliminary analyses not just of  
15 the ten local communities that we talked about earlier,  
16 but also all 80 of the environmental justice communities  
17 for which there has been a cap-and-trade covered facility  
18 that's co-located.

19          So all of that will be discussed in that public  
20 process. There will be public meetings and workshops.  
21 And the draft report encompassing all of those results  
22 will be -- we're targeting spring of next year. And then  
23 continue the public process, get more input on that, with  
24 a target of Summer 2017 to take it to the Board for your  
25 consideration.

1           BOARD MEMBER GIOIA: Right. And let me just say,  
2 I understand that there are some who are concerned that as  
3 data comes out people will draw certain conclusions. And  
4 it's the responsibility of this agency to really look into  
5 the data that's out and understand if there's a  
6 relationship or not, whether Cap-and-Trade Program is  
7 having impacts that are unintended, that are negative.  
8 All I can say -- and I forgot whose quote this is --  
9 democracy is messy. This is a public, transparent  
10 process. No one -- pub -- we don't want to be accused of  
11 hiding data while it's being evaluated and while things  
12 are being looked at.

13           I think the agencies also made a disclosure that  
14 here's some preliminary information, we're trying to  
15 understand it fully, it's data and it reflects certain  
16 things. And we understand everything that a public agency  
17 does can be interpreted in so many different ways.

18           We haven't reached a final conclusion. But it's  
19 important to be up front with the public. Otherwise -- I  
20 mean, it's not like sitting in the back room and cooking  
21 up the stew and then, you know, not knowing what's in it.  
22 So I think the process as we go forward will reveal, you  
23 know, more and will have a final conclusion.

24           CHAIR NICHOLS: Okay. Great. Good statement.  
25 Thank you.

1 Yes. Ms. -- anybody else?

2 Yes.

3 You weren't waving your hand.

4 So, you know, I am suffering from envy for the  
5 San Joaquin Valley District for having a nice display  
6 board where when Board members want to speak, they flip a  
7 switch on their microphone and it lights up so the poor  
8 Chair can look at that and see who wants to speak, and it  
9 puts them in order --

10 BOARD MEMBER GIOIA: Maybe we need one here.

11 CHAIR NICHOLS: I feel that -- if anybody out  
12 there is listening, like the building management or  
13 whoever runs the sound system in this place -- what this  
14 Board needs for Christmas is --

15 (Laughter.)

16 CHAIR NICHOLS: -- or Hanukkah or whatever other  
17 holidays we might be celebrating this winter, it is a  
18 system that would allow us to see who wants to speak and  
19 make sure they get recognized.

20 I think, Dr. Balmes, you had your hand up first,  
21 but you agreed to cede your time to -- and Ms. Takvorian  
22 has agreed to have you go first.

23 Okay. Let's here from Dr. Balmes.

24 BOARD MEMBER BALMES: All right. Well, I was  
25 going to give the historical perspective.

1           So I've heard several people say what we need to  
2 do is make sure that the Cap-and-Trade Program isn't  
3 causing more health problems by emissions of criteria or  
4 toxic pollutants. And of courses we don't want that to  
5 happen. But still, going back historically, my intent in  
6 terms of advocating for this type of process was to try to  
7 obtain co-benefits from our Cap-and-Trade Program that was  
8 going to reduce greenhouse gas emissions. That was my  
9 intent all along.

10           I also didn't want to see disadvantaged  
11 communities have further exposures from trading of  
12 emissions. But I don't see what's wrong with trying to  
13 get co-benefits. We're charged with controlling air  
14 quality and we're charged with mitigating climate change.  
15 Why can't we do both together? I think that's actually  
16 what we've been trying to do for the past few years, and  
17 I've really been proud of the way the Board has integrated  
18 these efforts.

19           So I don't see anything wrong with mixing these  
20 two. I think it's what we should be doing.

21           So that was sort of my historical comment.

22           CHAIR NICHOLS: You're allowed to walk and chew  
23 gum at the same time.

24           BOARD MEMBER BALMES: And I really want to thank  
25 staff. It's been long in coming. And, you know, I have

1 complained in past meetings about what we're doing about  
2 the audit and now adaptive management, but to see it come  
3 to some fruition -- I know we have more to do. And we  
4 need to bring in everybody into the process, you know.  
5 It's not fair for people to be blindsided. Though I think  
6 actually there has been a -- there has been some attempt  
7 to engage the public, but we can do more.

8           But I think it's really great that we've come  
9 this far. And, you know, I really like that the staff  
10 presentation put it in the context of -- you know, we  
11 really need to do adaptive management across the board,  
12 not just with cap and trade. And I thought you did a nice  
13 job of doing that.

14           And this Board member, who is supposed to be  
15 concerned with public health - that's my statutory role -  
16 then to do that properly we need data about what's being  
17 emitted. And we're getting some data about potential hot  
18 spots of exposure through the Cap-and-Trade Program. And  
19 I again would like to see it expanded to other sources of  
20 emissions. And some of the regulated community's comments  
21 were, "Well, don't just look at us. There are other  
22 sources." And I agree. So I would love to see that those  
23 radii for the various cities include other sources of  
24 criteria pollutants, toxic pollutants, so we can be  
25 adaptively managing those emissions.

1 CHAIR NICHOLS: Thank you.

2 Ms. Takvorian.

3 BOARD MEMBER TAKVORIAN: Thank you. I knew that  
4 would be extremely helpful if you went first.

5 So I guess yes, yes, and yes, I would really  
6 appreciate -- I was confused because I thought that the  
7 intention was that we would combine these sources of  
8 pollution and different types of pollutants. So I'm glad  
9 to have that confirmed in terms of the intention of the  
10 program. So I appreciate the historical perspective, Dr.  
11 Balmes and Mr. Gioia.

12 I am disturbed a little bit because I see that --  
13 I think there's a flashback here for me, going back  
14 decades for when we had our first, frankly, battles about  
15 community right to know. The community has a right to  
16 have this information. And this is the right agency to  
17 provide it. And I have complete confidence that this  
18 agency will provide the information in the most credible  
19 way possible in a highly technical and respectful way.

20 So I -- I guess I thought we were done with that,  
21 that we were done hiding the data. You know, wrong again.  
22 Not the first time and the last couple weeks. But I  
23 really think this is critical. Communities have the right  
24 to have this information. And from that, they have the  
25 right to demand action. And so that's the other piece of

1 this.

2           And I appreciate staff's hard work on this, and I  
3 appreciate the opening to the fact that data isn't there  
4 just for data's sake. The point is to create healthy  
5 communities. And we're pointing at some of the most  
6 unhealthy communities, and we already know that. We have  
7 multiple sources of information that tell us that these  
8 communities are not healthy, that people are sick, they're  
9 dying. And our responsibility in this agency is to try to  
10 fix that, and I think this is another way that we can  
11 start to get at that solution.

12           So I think I agree with the WSPA representative -  
13 not sure - but that these maps shouldn't just show the  
14 cap-and-trade facilities; and with Dr. Balmes also. I  
15 think they should be more robust. They should be  
16 comprehensive. We should look at it all. And we should  
17 look at what more comprehensive solutions are.

18           I am hoping that CARB can take a leadership role  
19 with how data is collected and represented, because I  
20 think that it's inconsistent in the air districts, you  
21 know. I just think it's not. We haven't done this  
22 before. So I think with 197 plus the Adaptive Management  
23 Plan, that we have this opportunity now to make it  
24 consistent across the board.

25           And I also have a hope that we can really point



1 to what the solutions are for communities. And I think  
2 that the Scoping Plan is a part of that. And, again, I  
3 think this is a critical piece that can go into the  
4 Scoping Plan. So I too want to see how we're going to  
5 integrate that, because the timing seems a little  
6 challenging.

7 Thank you.

8 CHAIR NICHOLS: How much -- I'm not sure.

9 Question is the next item. We're moving --

10 BOARD MEMBER GIOIA: What's our time estimate?

11 Just trying to get a time estimate for --

12 EXECUTIVE OFFICER COREY: Presentation's about 20  
13 minutes. And I think we have about 10-15 people that will  
14 sign up to testify.

15 Tracy.

16 BOARD CLERK HARLAN: We have 18.

17 BOARD MEMBER GIOIA: Okay. Thanks.

18 CHAIR NICHOLS: Thanks.

19 Additional comments on this one? If not, we can  
20 switch to the next.

21 All right.

22 Five minutes.

23 (Off record: 4:31 p.m.)

24 (Thereupon a recess was taken.)

25 (On record: 4:36 p.m.)

1           CHAIR NICHOLS: The last item on today's agenda  
2 is the Annual Update for the Cap-and-Trade Program for  
3 Greenhouse Gases.

4           The Board first considered the Cap-and-Trade  
5 Regulation in 2010. Some of us still remember that. The  
6 Cap-and-Trade Regulation has been in operation since 2013  
7 and is one of the measures designed to achieve the 2020  
8 emissions reductions target and put us on the path for  
9 further reductions to 2030 and beyond. It is ensuring  
10 that we will achieve those targets.

11           As mentioned earlier, recent modeling shows we  
12 are going to be well under our 2020 target due to the  
13 current suite of climate policies.

14           The Cap-and-Trade Program is just one of a mix of  
15 measures that are designed to help the State achieve its  
16 climate goals. It works in concert with other climate and  
17 air quality programs, as we've just been discussing, all  
18 of which support near-term and long-term air quality and  
19 climate goals.

20           The program has established an important  
21 mechanism for reducing greenhouse gas emissions that can  
22 continue past 2020 to meet our newly established emissions  
23 targets, and it can do it in a way that complies with AB  
24 32 and AB 197.

25           Comments received on the 2030 target scoping plan

1 and current open rulemaking will help inform any post-2020  
2 Cap-and-Trade Program.

3           The Cap-and-Trade Program is one of the programs  
4 that has generated collaborative discussions and  
5 partnerships with other jurisdictions around the world.  
6 California's leadership on climate change is widely  
7 recognized and some of our partners are seeking to emulate  
8 our program. For instance, both China and Mexico have  
9 participated in numerous discussions and visits to  
10 understand how our program works as they each pursue their  
11 own cap-and-trade pilot programs, which will be different,  
12 but which will be related and will build on what they  
13 learned here.

14           Mexico has asked California specifically to be an  
15 observer to their emerging pilot emissions trading  
16 program, a role that we are honored to play.

17           Because the Cap-and-Trade Program is a key  
18 element of our strategy to meet our overall emissions  
19 reduction goals, the Board initially asked for annual  
20 updates to track its performance and to stay informed  
21 about recent developments. And I know there are various  
22 specific changes that are under consideration, as there  
23 probably will be always as long as the program is in  
24 existence.

25           So without further adieu, I will ask Mr. Corey to

1 introduce this item.

2 EXECUTIVE OFFICER COREY: Yes, thanks, Chair.  
3 And I'm going to go right to Alex Yiu to give the staff  
4 presentation.

5 CHAIR NICHOLS: Okay. Good.

6 AIR POLLUTION SPECIALIST YIU: All right. Thank  
7 you, Mr. Corey.

8 (Thereupon an overhead presentation was  
9 Presented as follows.)

10 AIR POLLUTION SPECIALIST YIU: Good afternoon,  
11 Chair Nichols and members of the Board.

12 --o0o--

13 AIR POLLUTION SPECIALIST YIU: Here's an overview  
14 of today's presentation. I'll first provide information  
15 on the background and goals of the California's  
16 Cap-and-Trade Program. Then I'll review the reporting and  
17 verification program.

18 Next I'll go over recent major milestones and  
19 general statistics of the program, including the most  
20 recent compliance event.

21 I'll also provide information on the compliance  
22 offsets program and an update on linking California's  
23 Cap-and-Trade Program with other jurisdictions.

24 I will close by discussing staff's proposal for  
25 the scope and schedule for 2016 amendments to the

1 regulation and the next steps for the program.

2 --o0o--

3 AIR POLLUTION SPECIALIST YIU: Given how late it  
4 is in the day and how familiar you all most likely are  
5 with the program, I'm going to skip through some of the  
6 background.

7 The Cap-and-Trade Program is one of a suite of  
8 measures to reduce greenhouse gas emissions, referred to  
9 as GHGs, and meet the goals set by AB 32. The cap limits  
10 total annual GHG emissions from all regulated sources, and  
11 this cap declines each year to reduce emissions.

12 The program is designed to provide flexibility so  
13 that the lowest cost reductions in the economy can be  
14 targeted. It does not mandate any reductions by specific  
15 facilities. It provides a guarantee that we'll meet our  
16 statewide reduction goals.

17 The program also supports information  
18 transparency, and a large amount of information on the  
19 program is publicly available on the main Cap-and-Trade  
20 Program website.

21 --o0o--

22 AIR POLLUTION SPECIALIST YIU: The main goal of  
23 the program is to reduce greenhouse gas emissions. This  
24 is accomplished by putting a price on GHG emissions to  
25 incentivize change. This price signal spurs innovations



1 reported in 2016, roughly 800 reports were submitted to  
2 ARB. Of these, 516 required verification and all of them  
3 met the verification deadlines. Only one adverse  
4 verification statement was issued. ARB publicly posted  
5 the 2015 emissions data on November 4th, 2016.

6           Regarding enforcement, staff works proactively  
7 with stakeholders to prevent nonconformance with the  
8 regulation, and formal enforcement is consistent and  
9 effective.

10                           --o0o--

11           AIR POLLUTION SPECIALIST YIU: The Cap-and-Trade  
12 Regulation took effect January 1st, 2012, and covers  
13 approximately 85 percent of statewide GHG emissions.  
14 Entities that are covered must acquire and surrender  
15 allowances and a limited number of offsets to match their  
16 GHG emissions for each compliance period, and they must  
17 also comply with all recordkeeping, market rules,  
18 verification, and other requirements in the regulation.  
19 As will be shown later in this presentation, the program  
20 is working and entities are complying with its  
21 requirements. Our comprehensive, well-designed program  
22 requirements were developed through a multi-year  
23 stakeholder process, and often feature in discussions with  
24 other jurisdictions seeking to reduce GHG emissions.

25                           --o0o--

1 AIR POLLUTION SPECIALIST YIU: Compliance  
2 instruments were surrendered for 99.8 percent of emissions  
3 covered by the program in the first compliance period.

4 Emissions associated with transportation fuels and  
5 natural gas supplied to residential and commercial outlets  
6 became covered by the program in January 2015. The first  
7 compliance event of the second compliance period, covering  
8 30 percent of covered emissions from the 2015 calendar  
9 year, was November 1st, 2016, and 100 percent of covered  
10 entities met their surrender obligation.

11 --o0o--

12 AIR POLLUTION SPECIALIST YIU: There are  
13 approximately 325 businesses that are covered by the  
14 program. These businesses account for 85 percent of  
15 statewide emissions. In addition, there are about 275  
16 voluntary entities in the program. These include brokers,  
17 traders, and offset project developers.

18 There are currently about 855 million compliance  
19 instruments held in private accounts, and the August  
20 auction settlement price was \$12.73 per allowance. The  
21 approximate market value of compliance instruments in  
22 circulation is \$10.9 billion.

23 --o0o--

24 AIR POLLUTION SPECIALIST YIU: The second  
25 compliance period covers the 2015, 2016, and 2017 data



1 years. Total covered emissions for 2015, reported in  
2 2016, were about 340 million metric tons. As mentioned  
3 previously, for the annual compliance event, covered  
4 entities are required to surrender compliance instruments  
5 equaling 30 percent of their covered emissions.  
6 Compliance instruments were surrendered for 100 percent of  
7 the annual surrender obligation amount. As we have done  
8 at the end of each year of the program, staff will publish  
9 a table showing individual entity obligations, their  
10 compliance status, and the number of compliance  
11 instruments surrendered, including, where applicable,  
12 details on the number of offsets utilized by each covered  
13 entity and by offset project.

14 For the annual surrender of 2015 emissions,  
15 entities met their obligations using 92.1 percent  
16 allowances and 7.9 percent offsets.

17 Since the beginning of the program, the market  
18 has functioned smoothly, and covered entities have  
19 successfully met their compliance obligations. The  
20 program is operating as intended and is viable for the  
21 future, and staff has received feedback from covered  
22 entities that their long-term financial planning includes  
23 consideration of the cost of GHG emissions.

24 --o0o--

25 AIR POLLUTION SPECIALIST YIU: This figure shows

1 the difference between the covered and capped GHG  
2 emissions during the first three years of the program.  
3 You can see in each year that the covered emissions are  
4 less than the annual caps, which are indicated with the  
5 red circles. In addition to the avoided GHG emissions  
6 under the cap, the program has also resulted in 50 million  
7 metric tons of reductions outside the cap through the  
8 offset program.

9           The program is designed to address periods of low  
10 demand for allowances by withholding previously unsold  
11 auction allowances from future auctions until their have  
12 been two subsequent auctions where all allowances  
13 available for sale have sold above the floor price.

14                           --o0o--

15           AIR POLLUTION SPECIALIST YIU: I'll briefly now  
16 discuss the offsets program within the Cap-and-Trade  
17 Program. Offset credits are tradable compliance  
18 instruments that represent verified GHG emission  
19 reductions or removal enhancements made in sectors and  
20 sources not covered by the Cap-and-Trade Program.  
21 Entities may use ARB offset credits to fulfill up to 8  
22 percent of their compliance obligation.

23           Reductions from offsets must meet AB 32 criteria  
24 of being real, permanent, quantifiable, verifiable,  
25 enforceable, and additional.

1                   --o0o--

2                   AIR POLLUTION SPECIALIST YIU: The early action  
3 program ended on August 31st, 2016, and staff was able to  
4 process the backlog of early action projects before the  
5 deadline. 130 compliance projects and 117 early action  
6 projects have received the ARB offset credits, and over 50  
7 million offsets have been issued to date. 71 offset  
8 project verifiers are accredited by ARB.

9                   The cap for the second compliance period is  
10 approximately 1.2 billion metrics tons, which will equate  
11 to roughly 99 million metric tons of offset credits to  
12 meet the 8 percent threshold. Currently there are over  
13 22.6 million offsets available in circulation.

14                   --o0o--

15                   AIR POLLUTION SPECIALIST YIU: California's  
16 program linked with Quebec beginning January 2014.  
17 California and Quebec have held nine joint auctions to  
18 date. In the first compliance period, the 55 reporting  
19 facilities in Quebec achieved 100 percent compliance and a  
20 positive indication of strong commitment to the program by  
21 both the regulatory teams and covered entities there.

22                   Earlier this year, Ontario adopted and began to  
23 implement a Cap-and-Trade Program with a launch in 2017.  
24 Ontario is proposing to link their program with California  
25 and Quebec, and there is ongoing collaboration on

1 reporting, market rules, offset requirements, and other  
2 areas to support potential linkage. This includes ARB  
3 staff's current rulemaking to include linkage with  
4 Ontario's program by January 1st, 2018. Governor's  
5 linkage findings will be required before a final Board  
6 vote.

7 --o0o--

8 AIR POLLUTION SPECIALIST YIU: Staff has also  
9 heard concerns regarding the timing of the Cap-and-Trade  
10 amendments relative to the 2030 Target Scoping Plan  
11 Update. Specifically there have been some questions  
12 raised as to the necessity of moving forward with the open  
13 rulemaking to amend the Cap-and-Trade Program before the  
14 scoping plan update process is completed. As you heard  
15 during the Scoping Plan discussion earlier today, and as  
16 staff described in the September 2016 Board hearing and in  
17 the rulemaking documentation for the amendment process,  
18 moving forward with the proposed amendments is necessary  
19 for several important reasons.

20 First, the amendments affect both the third  
21 compliance period and the post-2020 periods. These  
22 amendments include post-2020 caps and post-2020 allowance  
23 allocation, which provides certainty for businesses for  
24 financial planning purposes for onsite investment in clean  
25 and efficient technology to achieve expected emissions

1 reductions toward the 2030 limit and beyond.

2           Second, the timing of the rulemaking process will  
3 ensure a smooth transition to the post-2020 program if  
4 that is the outcome approved in the Scoping Plan update.  
5 Waiting until after the Scoping Plan update process to  
6 start the Cap-and-Trade amendments, as some have  
7 suggested, would jeopardize the ability to sell 2021  
8 vintage allowances in 2018 as part of the future auction,  
9 and would jeopardize the ability of having those funds  
10 available in the Greenhouse Gas Reduction Fund. Moving  
11 forward now keeps our options open for the smooth  
12 transition to a post-2020 program.

13           Third, the timing of the amendments is necessary  
14 to enable linkage with Ontario, beginning in 2018.

15           Finally, California is proposing to use the  
16 Cap-and-Trade Program for compliance with U.S. EPA's Clean  
17 Power Plan, and this plan would require a post-2020  
18 program. Rather than starting the CPP process on  
19 federalizing other programs such as the renewable  
20 portfolio standard, using Cap-and-Trade will ensure  
21 compliance with CPP. It's also important to note that the  
22 federal default compliance program for CPP, for states who  
23 do not propose plans, will be a trading program.

24           For all of these reasons, continuing with the  
25 ongoing rulemaking process is necessary for ARB's

1 evaluation of our post-2020 suite of reduction measures.

2 --o0o--

3 AIR POLLUTION SPECIALIST YIU: Staff is proposing  
4 to amend the Cap-and-Trade Regulation, and recently  
5 presented their proposed amendments to the Board in  
6 September of this year. One main goal of this rulemaking  
7 is to continue the Cap-and-Trade Program beyond 2020. The  
8 last scoping plan update identified the Cap-and-Trade  
9 Program as an important program to ensure GHG emissions  
10 continue to decline in the State.

11 Another goal is to make the program more  
12 efficient where possible. Staff has implemented the  
13 program for several years and has identified opportunities  
14 to make the process even more efficient. This will be  
15 done by streamlining regulation requirements, streamlining  
16 implementation, and removing requirements where possible.

17 We also want the program to be based on the  
18 latest data and information, including recent leakage  
19 studies, global warming potentials, and experiences from  
20 other emissions trading programs. And we must do this  
21 while maintaining the environmental integrity of the  
22 program as well as the integrity of the carbon market.

23 --o0o--

24 AIR POLLUTION SPECIALIST YIU: Some proposed  
25 amendments for the Cap-and-Trade Regulation would take

1 effect for the third compliance period, which will be the  
2 years 2018 through 2020. These amendments would  
3 streamline the offsets program, auctions, and the  
4 management of information; would update industrial  
5 allocation benchmarks, product definitions, and assistance  
6 factors to reflect changed and new sectors, as well as to  
7 correct a limited number of inaccurate benchmarks; and  
8 would clarify rules on the use of allocated allowance  
9 value for electrical distribution utilities and natural  
10 gas suppliers.

11 Program linkage with Ontario is another area that  
12 is to be addressed by proposed amendments for the third  
13 compliance period. Staff is not proposing to incorporate  
14 international sector-based offset credits into the program  
15 at this time, but intends to propose this incorporation as  
16 part of a future rulemaking.

17 --o0o--

18 AIR POLLUTION SPECIALIST YIU: Some amendments  
19 will affect the program after the third compliance period,  
20 beginning in the year 2021. Areas for change include the  
21 continuation of the program after 2020, including the  
22 post-2020 caps on emissions and discussions about which  
23 sectors will be included in the cap. Other changes will  
24 consider revised or additional provision for cost  
25 containment and market oversight, the program's role for

1 compliance with the U.S. EPA Clean Power Plan, allowance  
2 allocation, and continuation of our linkage with Quebec  
3 and potentially Ontario.

4 --o0o--

5 AIR POLLUTION SPECIALIST YIU: Staff has heard  
6 stakeholder and Board concerns from the first Board  
7 hearing and has taken steps to address these concerns.  
8 There has been an extensive public process in developing  
9 the proposed amendments. Workshops held throughout 2016  
10 addressing such areas as allocation, cap setting,  
11 emissions leakage, and cost-containment measures have  
12 given stakeholders ample opportunity to engage with staff.  
13 An additional workshop has been held since the September  
14 Board hearing addressing issues such as environmental  
15 justice, Assembly Bill 197, market data transparency,  
16 compliance obligations, and post-2020 allowance  
17 allocation. In advance of the workshop, staff released  
18 details including proposed post-2020 industrial assistance  
19 factors on their proposal for post-2020 allocation that  
20 will inform future 15-day changes.

21 AB 197 prioritizes measures in the scoping plan  
22 that result in direct reductions while considering the  
23 social cost of carbon and following the AB 32 requirements  
24 such as cost effectiveness and minimizing leakage. AB 197  
25 does not prohibit a Cap-and-Trade Program. Staff is



1 evaluating which program features could be refined to  
2 support greater emissions reductions at covered entities  
3 while coordinating with our linked partners and evaluating  
4 the impact on compliance cost.

5           Staff will continue to hold workshops and meet  
6 with stakeholders to provide plentiful opportunities for  
7 stakeholders to provide their input on the process and the  
8 substance of the proposals.

9                           --o0o--

10           AIR POLLUTION SPECIALIST YIU: Looking to the  
11 future, staff will continue to implement the program and  
12 continue coordination among the amendment process, the  
13 development of the 2030 Target Scoping Plan Update, and  
14 the development of the plan for compliance with the  
15 federal Clean Power Plan.

16           Staff is proposing at least two 15-day regulatory  
17 packages to allow additional public comments on the  
18 proposed amendments prior to returning to the Board in  
19 Spring 2017 for final approval. This approval would occur  
20 after the Board votes on the 2030 Target Scoping Plan  
21 Update.

22           If the Board approves the amendment package,  
23 staff will submit the final Regulation language and Final  
24 Statement of Reasons to the Office of Administrative Law  
25 by Summer 2017. This schedule would allow for the newly

1 adopted regulation to be in effect in October 2017, prior  
2 to the start of the third compliance period, with a  
3 linkage with Ontario's program by January 1st, 2018.

4 --o0o--

5 AIR POLLUTION SPECIALIST YIU: This concludes  
6 staff's update on the Cap-and-Trade Program, and we're  
7 happy to answer any questions that you may have at this  
8 time.

9 CHAIR NICHOLS: We have a group of people who've  
10 asked to speak, many of whom have been here with us all  
11 day and have been speaking on other items. But if you are  
12 not, if you have been new for this one, I think we should  
13 try to hear from them. But I'm really hoping that they  
14 will be very brief, because again this is not a formal  
15 hearing and it's a part of a work in progress. I think  
16 there was a lot of interesting information that was  
17 presented in that report, which I hope people will go back  
18 and look at, frankly, because it is a good summary of  
19 what's been happening to date as well as the planned  
20 timelines for the process.

21 But nevertheless I think it's important that we  
22 do hear from those who've been waiting. So let's just get  
23 started.

24 We are likely to lose at least one Board member  
25 by 5:30. But those of us who are still here will be

1 listening too.

2 Yes.

3 MS. SULLIVAN: Good afternoon, Chair Nichols.

4 CHAIR NICHOLS: Well, maybe three. I don't know.

5 How many people are leaving at 5:30?

6 5:25, 5:30. Okay.

7 So there you are. I may be hear listening.

8 (Laughter.)

9 MS. SULLIVAN: Not really anything new. CCPC  
10 supports as well the Cap-and-Trade Program as an effective  
11 regulatory tool in our toolbox for climate change  
12 policies.

13 We still would like to point out we have some  
14 concerns regarding energy intensive trade-exposed  
15 businesses, and we urge staff to continue working with the  
16 researchers and industry to kind of take a further look at  
17 those studies and see if there needs to be any corrective  
18 action taken with them.

19 We continue to believe that offsets are an  
20 integral part of -- a component to a well-designed  
21 Cap-and-Trade Program, and expansion of the offset program  
22 will further help our program and capture additional  
23 cost-containment measures in emission reduction benefits.

24 That's it. Thank you, if there aren't any  
25 questions.

1           Okay. Thank you.

2           MS. ROBERTS: I'm going to try to be just as fast  
3 as Shelly was. Tiffany Roberts from Western States  
4 Petroleum Association.

5           I want to touch on three different topics -  
6 offsets, the APCR, and then allowance allocation.

7           For offsets, I think it's going to be difficult  
8 for ARB to reduce the current 8 percent offset limit  
9 without undermining the program cost containment. And so  
10 we would recommend that ARB accelerate adoption of the  
11 sector-based offsets and couple this proposal with an  
12 expansion of the current use limit from 8 percent to 16  
13 percent in the post-2020 time frame.

14           On the APCR, we believe that ARB should quantify  
15 the potential impact of its current APCR proposals and the  
16 concept of retiring unsold pre-2021 APCR allowances on  
17 market liquidity and program costs.

18           And then we're extremely concerned with ARB's  
19 approach on allowance allocation, which contains -- what  
20 we see is some technical flaws from a data perspective.  
21 We do think that there's limitations to some of the  
22 research. The leakage risk studies conducted by UC  
23 Berkeley as well as RFF contain data irregularities and  
24 methodological uncertainties acknowledged by the study's  
25 authors. They shouldn't be included or be considered as a

1 basis for ARB's post-2020 allocation proposal.

2           And then, lastly, ARB proposed assistance factor  
3 adjustments for refining. And that's at odds with readily  
4 available data specifically from the Energy Information  
5 Administration. So we would recommend that you look to  
6 the EIA for that data.

7           Thank you.

8           CHAIR NICHOLS: Thank you.

9           MR. KRAUSSE: Madam Chair, I'm going to go before  
10 other reps just so that I can emphasize the positive.

11           PG&E, as we said earlier, strongly supports the  
12 Cap-and-Trade Program. We do this because of its  
13 guaranties of reductions. You mentioned this earlier,  
14 that program guaranties reductions.

15           But the certainty in terms of counting and  
16 capturing emissions is better than any other regulatory  
17 purchase we can think of. It provides the opportunity for  
18 linkage to other jurisdictions, and that's something we  
19 think is very important especially as we lead the way; and  
20 that it provides sources of revenue for disadvantaged  
21 communities that deliver major economic, environmental,  
22 and public health benefits, as well as in the public  
23 sector and elsewhere.

24           It's remarkable for what it doesn't do. It does  
25 not enrich companies through allocation. Rather it keeps

1 those companies from -- those at-risk employers in  
2 California instead of moving letting leakage happen just  
3 over the borders.

4           It does not happen overnight. And any program  
5 that did, I would suggest, would do exactly that, lose  
6 jobs and have some of that activity move over the borders.

7           And it does not cause toxic and particulate  
8 emissions. Obviously anybody in under the program also  
9 has to comply with their local air district permits.

10           And so, for all those reasons, we support the  
11 program. And a couple of my colleagues have some specific  
12 items they want to address.

13           We did not mean to multiply our speaking time.

14           Thank you very much.

15           CHAIR NICHOLS: Thank you.

16           MS. ALI: Hello. Fariya Ali with PG&E.

17           I just wanted to emphasize that PG&E continues to  
18 view cap and trade as a critical tool. And with this in  
19 mind, I just ask that you consider how best to fine-tune  
20 the tool of cap and trade for post-2020.

21           ARB's current proposal for a post-2020 program  
22 includes an increase in the cap decline and an increase in  
23 the rate of consignment at the same time, which creates an  
24 abrupt price signal for natural gas customers without  
25 providing time to adjust. And PG&E, like other gas

1 providers, believes that the opportunities for reducing  
2 energy usage are more limited for gas customers and that  
3 these consumers and business are generally less sensitive  
4 to changes in gas prices. This means that while costs may  
5 increase, they will not drive commensurate reductions in  
6 use.

7 PG&E is working with staff to consider which  
8 levers are most appropriate to support carbon reduction  
9 while maintaining affordable customer rates. And I just  
10 want to thank staff for their ongoing discussions with us  
11 to achieve our common goals, and to let the Board know  
12 that this is a key topic for us as we move forward.

13 Thank you.

14 CHAIR NICHOLS: Thank you.

15 MR. BENGTSSON: Thank you very much. And  
16 apologies for coming out a little strong. Trying to keep  
17 it to a total of 3 minutes.

18 Just one of -- we talked earlier about, you know,  
19 Scoping Plan and if cap and trade should play a role.  
20 Obviously we believe it does.

21 Let's focus on the how here for a minute for a  
22 post-2020 Cap-and-Trade Program. One thing to bring to  
23 your attention, allowance allocation for EDUs, just a  
24 reminder, all of the allowance allocation value that comes  
25 to EDUs is passed through to our customers 100 percent.

1 It's just that in the current staff proposal there's both  
2 an allowance cliff from 2020 to 2021 and there's also a  
3 very steep rate of decline in the amount of allowances  
4 that are allocated to EDUs.

5 And we think that there's a way to do this that  
6 still gets us to our 2030 target without -- with a much  
7 smoother path down, and that we can hopefully avoid, you  
8 know, price spikes and provide the adequate protection to  
9 our customers that is the stated purpose of EDU  
10 allocation.

11 So we're working with staff on this. It's going  
12 pretty well. I just want to raise it to your attention  
13 because it is really important.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 I suspect there will be people with better ideas  
17 up to the last second on this.

18 Mr. Carmichael.

19 MR. CARMICHAEL: I know it says Tim Tutt, But I  
20 don't see him in the room. So I'm just --

21 CHAIR NICHOLS: I don't either. I know Tim Tutt  
22 and you're no Tim Tutt.

23 (Laughter.)

24 MR. CARMICHAEL: Let me just say the world needs  
25 more Tims.



1 (Laughter.)

2 MR. CARMICHAEL: Tim Carmichael on behalf of San  
3 Diego Gas & Electric and SoCal Gas. I -- to keep it  
4 brief, I incorporate my comments earlier this afternoon  
5 during the Scoping Plan update, on the Cap-and-Trade  
6 Program by reference.

7 In sum, we're supportive of the Cap-and-Trade  
8 Program. We're a well-designed market-based program.  
9 We're supportive of cost containment measures. We're  
10 actively engaging Rajinder Sahota and her team on a couple  
11 of key issues - allowances, consignments, et cetera. And  
12 we look forward to continuing those constructive  
13 discussions.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 MR. LARREA: John Larrea with the California  
17 League of Food Processors. And here's where I tell you  
18 why we have a qualified support for the cap and trade  
19 going into post-2020.

20 You know, with the release of the assistance  
21 factors proposals, we were really disappointed in the fact  
22 that we didn't see any kind of peer review of these two  
23 studies, despite the fact that a lot of industry suggested  
24 that that should be the case.

25 The other one was that we were surprised that the

1 food processing study out of Cal Poly was not used at all  
2 in determining these assistance factors. And that study  
3 was comprised of actual facility-level data as well as  
4 market data. We've asked for an explanation of that from  
5 staff, and they've agreed to give it to us. But we were  
6 really surprised about that.

7           And to understand, we're going on a program that  
8 goes from a hundred percent allowances, a hundred percent  
9 allowances, 75 percent allowances in the third compliance  
10 period, down to 23 percent for some of our facilities.  
11 And dairy facilities are looking at 5 percent in an  
12 assistance factor.

13           And we are located in the highest disadvantaged  
14 community areas as well.

15           So those are really going to figure in in terms  
16 of how they're going to impact the economics down in that  
17 area. We would suggest another study before we move  
18 forward with these assistance factors in that method.

19           Finally, we were looking at -- slide 17 suggested  
20 there's going to be number of changes to the regulator --  
21 to the regulation associated with the third compliance  
22 period. The food processing study indicated that we  
23 should have been designated a high leakage risk back in  
24 2012. We're hoping that we're going to see a 15-day  
25 change rule or something along those lines that will meet

1 what the conclusions of that study was and give us the  
2 hundred percent allowances in the third compliance period.

3 Frankly, there aren't that -- very many  
4 allowances. We're only less than one half of one percent  
5 of the total emissions associated with it. But it is  
6 expensive for us, you know, given the size of the  
7 facilities and the number of allowances we have to  
8 purchase.

9 So thank you.

10 CHAIR NICHOLS: Okay. Amy?

11 She's passing. Okay.

12 That leaves Evan Vessels.

13 There you go.

14 MR. EVAN VESSELS: Thank you. And greetings, ARB  
15 Board members and staff. My name's Evan Vessels, and I'm  
16 with Vessels Coal Gas. We're an environmental remediation  
17 company and an offset producer.

18 There's been a lot of talk about the role the  
19 offsets should play in a cap-and-trade system. But it  
20 seems to me like there's a lot of confusion about what the  
21 function of offsets are and how that function is achieved.

22 Now, an offset to me represents one ton CO<sub>2</sub>  
23 equivalent of GHGs captured and destroyed that would not  
24 have been captured or destroyed had the offset protocol  
25 not existed.

1           Now, offsets are sort of a market mechanism.  
2 They allow the Cap-and-Trade Program to reduce our impact  
3 on climate change in two ways really at the same time.  
4 And this increases the greenhouse gas reductions even  
5 further than the declining cap demands.

6           Now, this is done by giving emitters the option  
7 to reduce the cost of complying with the following cap and  
8 buying offsets instead of allowances, which are more  
9 expensive.

10           However, the cap still falls and the mandatory  
11 emission reductions are still achieved.

12           But if an offset is purchased instead of an  
13 allowance, then an additional ton CO<sub>2</sub> equivalent is  
14 achieved and further emission reductions are gained from  
15 that.

16           The following cap forces improvements on energy  
17 efficiency, technology, and infrastructure maintenance to  
18 achieve reductions. And it forces measurement and record  
19 keeping to ensure that emissions are in fact being  
20 reduced.

21           However, climate change is not coming. It is  
22 well underway. And slowing it by merely reducing our  
23 present and future emissions footprint is not really going  
24 to get us to where we want to be.

25           Now, assuming that our goal is to return to a

1 natural pattern of climate change, we must be proactive in  
2 undoing some of the damage already done.

3 Thank you.

4 CHAIR NICHOLS: We have your letter also. Thank  
5 you.

6 Thank you.

7 Okay. Ms. Costantino.

8 MR. COSTANTINO: Hello. Good -- almost evening.

9 Thanks for letting me speak today on behalf of  
10 the Southern California Public Power authority.

11 And first of all, SCPPA supports cap and trade  
12 and its continuation.

13 Secondly, before when I talked about Scoping Plan  
14 and it's the big policy discussion, this is just the  
15 opposite. This is in the weeds. This is many, many  
16 meetings that I looked at -- when I heard the small  
17 off-road vehicle guys talk about ten meetings over a year,  
18 I kind of laughed because I've probably been in ten  
19 meetings in the last three weeks. And so there's just a  
20 lot going on. And I don't have to list them, but last --  
21 distribution, EIM, transition, cap decline. You name it.  
22 There's a lot of things that we're talking about. And  
23 when the 15-day package comes about sometime this year, I  
24 think we talked about it last time, that more than 15 days  
25 would be given because there's so much going on. And

1 especially with an association like SCPA where there's  
2 many members, and then when they go back to their members,  
3 there's individuals who study one side of the market or  
4 the other side. And two weeks is just not enough time to  
5 wrap our brains around everything that's going to be in  
6 this. There's at least 36 pieces of placeholder language  
7 from the 45-day package.

8 So I just want to make sure that we're committed  
9 to the discussion we had last time that more than 15 days  
10 would be given because there's just a lot going on.

11 So with that, thank you very much.

12 MS. BERLIN: Hi again. Susie Berlin for NCPA and  
13 M.S.R. Public Power Agency. And we just want to reiterate  
14 again our support for the Cap-and-Trade Program. It's a  
15 continuation of the program that's very important. But  
16 there's also -- needs to be recognition that it's  
17 continuation of the program with an aggressive new cap  
18 that changes the dynamics a bit. And part of that change  
19 dynamic is increased compliance costs.

20 And with the other programs that -- the electric  
21 distribution utilities are also called upon to effect GHG  
22 emissions, the allocation of allowances to mitigate  
23 compliance costs for all of the GHG mitigation becomes  
24 extremely important. And we've been working with staff  
25 and we appreciate their time, but I also reiterate a point

1 that Mr. Costantino just made, that it is important when  
2 we do receive the 15-day language, when we do finally have  
3 actual proposed changes in front of us, that we have  
4 sufficient time to fully assess them; not just on  
5 allowance allocation, but to see how those impacts also  
6 spread through to EIM and just overall programmatic  
7 changes.

8 So, again, very much support the continuation of  
9 that Cap-and-Trade Program. I think that's going down the  
10 right the path. And look forward to continuing to work on  
11 the nuances that are very, very, very important to us.

12 Thank you.

13 CHAIR NICHOLS: Okay.

14 MR. TOM VESSELS: Well, thank you. I'm Tom  
15 Vessels, Vessels Coal Gas. Thank you, Madam Chair and  
16 Board and staff, for letting me speak to you today.

17 California needs support of other states to -- if  
18 they're going to be successful in slowing global warming.  
19 Because of the carbon offset program that you have with  
20 mine methane capture, you allowed us to do a project in  
21 Colorado. And without your Cap-and-Trade Program, we  
22 would not have been able to capture about 2 billion cubic  
23 feet of methane as of the end of October this month -- I  
24 mean this year. That has the same effect of reducing  
25 carbon dioxide emissions by over 3 million tons. If you

1 put that in perspective, that's the equivalent of taking  
2 over 600,000 passenger vehicles off the road for a year.  
3 Or it's the same as cutting back 3 million megawatt-hours  
4 of electricity generation from coal. It's equivalent to  
5 leaving 3 million acres of forest in the ground, and  
6 planting 7 and a half million trees and letting them grow  
7 for ten years.

8           The project is a small -- or large pilot project,  
9 but it's had a significant effect. The project currently  
10 is capturing over 2,000 tons of CO<sub>2</sub> equivalent per day.  
11 We were working on developing three more projects that  
12 will if implemented reduce another 2700 tons per day of  
13 carbon dioxide.

14           Our project has been visited by federal, state,  
15 local politicians and official, including both senators  
16 from Colorado. Without this cap-and-trade system having  
17 provided the financing of this project, those people would  
18 not have shown up. They would not know about the  
19 methane -- they would not be as aware of methane's frost  
20 is a greenhouse gas. They wouldn't know about your  
21 cap and trade or would only be vaguely aware of it.

22           Thank you very much.

23           CHAIR NICHOLS: Thank you.

24           Mr. Weiner.

25           MR. WEINER: Thank you, Madam Chair, and members



1 of the Board. Peter Weiner here representing Crockett  
2 Cogeneration.

3           Crockett Cogeneration is located in Contra Costa  
4 County - Mr. Gioia knows it, I believe - and provides the  
5 electricity and steam for C&H Sugar, which is the only  
6 cane sugar - and it is cane sugar - refiner west of the  
7 Mississippi.

8           If it were in the system it would be clearly an  
9 energy-intensive trade-exposed entity. But it is not in  
10 the system because it produces almost no emissions. All  
11 of its electricity and steam come from Crocker Cogen.

12           In 2014, the Board gave assistance to legacy  
13 contract holders, which -- and I was honored to  
14 participate in that. And there was only one legacy  
15 contract left that has not been provided for, and that's  
16 Crockett Cogen. Because for legacy contracts without an  
17 industrial counterparty, you limit it to the end of the  
18 second compliance period. Crockett Cogen is the only  
19 legacy contract that goes beyond that. It goes to 2026.  
20 And we believe that it's equitably in the same position as  
21 those with an industrial counterparty for whom you  
22 provided assistance through the life of the contract.

23           Crockett Cogen is very small. It's got about two  
24 people other than the people actually work there. And  
25 they did not submit comments in time - and I was not

1 involved - for the September 19th hearing.

2           So I've been advised by staff and counsel that  
3 the best thing we can do is to ask you to reopen -- in the  
4 next 15-day comment period to open this issue - I've  
5 provided written materials to all of you - to address this  
6 issue. We're asking for your consideration during that  
7 15-day comment period, obviously not a decision, so that  
8 we can present this in the form it should be presented.

9           CHAIR NICHOLS: So just a question for our team.  
10 This is not specifically covered by today's proceeding;  
11 it's an information for us, which is --

12           CHIEF COUNSEL PETER: That's correct, it is.  
13 It's not an APA-noticed hearing. What I believe  
14 Mr. Weiner's asking for is the Board to give direction to  
15 staff to consider if it's possible to raise it into  
16 15-day -- next 15-day notice period.

17           There is a question if the initial notice covers  
18 this. And this was brought to our attention today, so we  
19 haven't evaluated that. There's always a possibility of  
20 doing a narrow bullet regulation on the topic. But we  
21 could look at all the options. And the question is is the  
22 Board asking -- what's the Board's pleasure?

23           CHAIR NICHOLS: If there's no objection, I think  
24 we should do that.

25           Okay. So directed.

1 MR. WEINER: Thank you so much.

2 CHAIR NICHOLS: Okay. Thank you.

3 Okay. Is Mr. Sweeney still with us?

4 No.

5 Okay. Mikhael Skvarla.

6 MR. SKVARLA: Mikhael Skvarla here on behalf of  
7 the California Council for Environmental Economic Balance.

8 We support the California cap and trade and  
9 support continuing post-2020. Obviously we have some  
10 technical concerns with, you know, the rapid loss of  
11 allowances and some other provisions that were provided in  
12 our rather extensive comments. We also provide some  
13 suggestions on things we'd like to see. Hope everyone  
14 gets a chance to read that.

15 I didn't want to bring attention to -- previously  
16 during the scoping plan comments, Mr. Krausse commented  
17 about a quote from Assemblymember Garcia on the AB 197  
18 stuff. Left out the last sentence of the quote, which was  
19 a response to CCEEB and IEP based on our testimony in  
20 Assembly Natural Resources Committee and our concerns of  
21 how AB 197 might impact the California cap and trade.

22 And the last sentence of that quote is: "So I  
23 want to just state that the intention is by no means to  
24 tamper with the Cap-and-Trade Program."

25 That is in reference to him providing certainty

1 that not only the Assembly leadership, the Senate  
2 leadership, and the Governor support the Cap-and-Trade  
3 Program. But it was his intent at least in that stated  
4 testimony on one of the last nights before the end of  
5 session to not tamper with the California Cap-and-Trade  
6 Program.

7 Thank you.

8 CHAIR NICHOLS: Okay. Thank you.

9 I read the language and read it the same way.

10 Mr. Magnani.

11 MR. MAGNANI: Madam Chair and members, thank you  
12 very much for the opportunity. Bruce Magnani speaking on  
13 behalf of Gerdau Steel. Gerdau Steel recycles scrap steel  
14 in Rancho Cucamonga, California, making steel bar and  
15 seismic steel bar, which is critical for California  
16 infrastructure. Gerdau is regulated under AB 32 and is  
17 correctly categorized as an EITE and highly subject to  
18 leakage concerns.

19 We do have concerns with the proposed assistance  
20 factors based on the new leakage studies, for a lot of  
21 reasons. And aside from those concerns -- and we are  
22 supportive of the Cap-and-Trade Program. Leakage is  
23 happening now in our particular industry. Two-thirds of  
24 California's demand is already supplied by out-of-state or  
25 international steel suppliers. So even without changes to

1 the assistance factors, we're already subject to leakage.

2           Moving forward, Gerdau under the current program  
3 is making a decision right now to invest over \$20 million  
4 into an enhanced filtration -- air filtration system,  
5 which would make the plant the cleanest steel recycling  
6 plant in all of North America.

7           So I think the point I'm trying to make is, if we  
8 can keep the Cap-and-Trade Program as similar as it is  
9 today, where that decision is being made you get those  
10 co-benefits, Gerdau's really a poster child for what  
11 you're looking for as the board in trying to get the  
12 co-benefits as well as get your greenhouse gas emission  
13 reductions.

14           So, you know, Gerdau employs over a thousand  
15 employees with good union jobs in the exact communities  
16 we're trying to protect. And we would like your  
17 consideration moving forward, continuing our engagement  
18 with staff on our concerns about how they apply those  
19 leakage studies. We think they can be applied  
20 appropriately, but not lowering the assistance factors the  
21 way that they've been suggested in the public documents  
22 that were just released.

23           So thank you very much.

24           CHAIR NICHOLS: Okay. I understand the point.

25           It's now the end of our group of witnesses.

1           Do we have any comments or responses from the  
2 staff at this point about what you're going to do next?

3           Yes, Ms. Sahota.

4           INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

5 SAHOTA: I have a few comments.

6           On process. I heard that there are some concerns  
7 about the 15-day process, which is a misnomer because it  
8 really is -- it takes us about a month and a half, two  
9 months to actually get the proposals together, and then  
10 put it out in 15 days of comment and review by the  
11 stakeholders.

12           What we did was we had the public workshop on  
13 October 21 and put out the draft changes that we would put  
14 in a formal 15-day package. But we did it in an informal  
15 way so that folks could not only engage at the workshop  
16 with us directly, but it wouldn't be tied to that two-week  
17 limited 15-day process.

18           We are still taking feedback on that because  
19 there's no timeline on informal comments and what staff  
20 proposed on October 21. Once we get that feedback, we  
21 will continue to revise a 15-day package and put it out.

22           So it's not like it's a black box and then for 15  
23 days you get to see what the staff has put together and  
24 then we close the curtains again and do something else.  
25 We're trying to make it this prolonged process of

1 discussion and dialogue with public workshops along the  
2 way.

3           There's concerns about the assistance factor. We  
4 are committed to working through each of those.

5 Stakeholders have been responsive in providing us detailed  
6 information about their facilities and their sectors to  
7 help us revise those. And so we are continuing to work  
8 through that with each of the facilities and sectors that  
9 are having concerns about the numbers that were put out in  
10 the 45-day process for the regulation.

11           And then we heard comments about the  
12 Cap-and-Trade Program and concerns about the costs of the  
13 Cap-and-Trade Program and design features that should be  
14 addressed to minimize costs to the entities. I think this  
15 goes back to the Scoping Plan discussion this morning, in  
16 that any path we choose is going to have some cost in how  
17 we get the deep reductions to hit the 2030 target.

18           I think it would be unrealistic to believe that  
19 there would be no costs associated with any of the paths  
20 that we choose here. Of course we want to minimize that  
21 and balance the environmental benefits versus the cost  
22 effectiveness and the avoided costs for social harm. But  
23 I just want to be clear that we can't have a program at  
24 this point with the reductions that we need that will  
25 probably be a zero cost for implementation.

1           CHAIR NICHOLS: I don't think that's one of the  
2 requirements anyhow. So understood that we're trying to  
3 do something that is -- where cost effectiveness is one of  
4 the criteria that we use for judging measures. And also  
5 that there are -- that's one of the reasons for doing an  
6 even more comprehensive job of evaluating the ancillary  
7 benefits of programs is to have a better way to judge the  
8 costs and costs fairly.

9           Okay. Any other questions or comments?

10          None.

11          Yes? No.

12          Finally.

13          BOARD MEMBER ROBERTS: I just want to refresh --  
14 I can't remember a time when we have spent all day on  
15 multiple items that all seem like one item.

16          (Laughter.)

17          BOARD MEMBER ROBERTS: Okay. I mean the witness  
18 lists are almost all interchangeable.

19          (Laughter.)

20          BOARD MEMBER ROBERTS: But if we would have been  
21 efficient, we could have scheduled something called  
22 Cap-and-Trade related.

23          CHAIR NICHOLS: All Cap-and-Trade items, and put  
24 them all together in one item.

25          BOARD MEMBER ROBERTS: And have everybody testify



1 once and be done.

2 But at this late hour, I don't want to get into  
3 that.

4 CHAIR NICHOLS: It's a perfectly valid comment.  
5 And I thought about it myself. I will yield to anybody  
6 else who wants to raise it. But I think there are  
7 separate products here that sort of needed their own  
8 separate airing as opposed to just hearing kind of generic  
9 thoughts that people have about cap and trade.

10 But I wish there were a better way that we could  
11 target this in the future to be more efficient with our  
12 time. So I, however, feel that it's -- you know, we could  
13 hear more really from some of these people, and it  
14 would -- that -- it may be another issue here is dividing  
15 their comments up into little chunks. May not be the best  
16 way to hear from all of these stakeholders, and maybe it  
17 would have been better to involve something a little more  
18 like -- more workshop-like, I suppose.

19 But it's a good comment and we should think about  
20 how to do better next time.

21 However, this is it for today.

22 (Laughter.)

23 CHAIR NICHOLS: So we will stand adjourned.  
24 There's no requests for general public comments.

25 So thank you all for being with us.

Happy Thanksgiving.  
(Thereupon the Air Resources Board  
adjourned at 5:27 p.m.)

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## C E R T I F I C A T E O F R E P O R T E R

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 5th day of November, 2016.



JAMES F. PETERS, CSR  
Certified Shorthand Reporter  
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