

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

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

THURSDAY, NOVEMBER 15, 2018
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JAMES F. PETERS, CSR
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A P P E A R A N C E S

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Assembly Member Eduardo Garcia
Supervisor John Gioia
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Mrs. Barbara Riordan
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Professor Dan Sperling
Ms. Diane Takvorian

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Ms. Edie Chang, Deputy Executive Officer
Mr. Steve Cliff, Deputy Executive Officer
Mr. Kurt Karperos, Deputy Executive Officer
Ms. Ellen Peter, Chief Counsel
Ms. Emily Wimberger, Chief Economist
Ms. Veronica Eady, Assistant Executive Officer
Ms. La Ronda Bowen, Ombudsman

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

STAFF:

Mr. Pipin Brehler, Senior Attorney, Legal Office

Mr. Dominic Bulone, Legislative Analyst, Office of
Legislative Affairs, Chair's Office (CO)

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Development Section, Industrial Strategies Division (ISD)

Mr. Ben Carrier, Attorney, Legal Office

Mr. Mike Carter, Assistant Division Chief, Mobile Sources
Control Division (MSCD)

Ms. Catherine Dunwoody, Division Chief, Monitoring and Lab
Division (MLD)

Mr. Richard Enion, Senior Attorney, Legal Office

Ms. Dorothy Fibiger, Air Resources Engineer, Testing and
Certification Section, MLD

Ms. Annette Hebert, Division Chief, Emissions Compliance,
Automotive Regulations and Science Division (ECARS)

Mr. Paul Henderick, Air Resources Engineer, Diesel
On-Board Diagnostic Section, ECARS

Mr. Jack Kitowski, Division Chief, MSCD

Mr. Aaron Livingston, Assistant Chief Counsel, Legal
Office

Mr. Mike McCarthy, Chief Technology Officer, ECARS

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

Ms. Leela Rao, Manager, On-Board Diagnostics Program
Development Section, ECARS

Mr. Randy Reck, Attorney, Legal Office

Mr. Mike Regenfuss, Branch Chief, On-Board Diagnostics
Branch, ECARS

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

STAFF:

Mr. Bill Robertson, Vehicle Program Specialist, MSCD

Ms. Rajinder Sahota, Assistant Division Chief, ISD

Mr. Abajh Singh, Air Pollution Specialist, Emissions and Data Quality Assurance Section, ISD

Mr. Mark Sippola, Manager, Program Development Section, ISD

Ms. Linda Smith, Branch Chief, Health and Exposure Assessment, Research Division (RD)

Mr. Floyd Vergara, Division Chief, ISD

Ms. Sydney Vergis, Interim Legislative Director, Office of Legal Affairs, CO

Mr. Jason Wong, Staff Air Pollution Specialist, Gasoline On-Board Diagnostics Section, ECARS

Ms. Zoe Zhang, Staff Air Pollution Specialist, Indoor Exposure Assessment Section, RD

ALSO PRESENT:

Mr. Kevin Abernathy, Dairy Cares & Milk Producers Council

Mr. Lovester Adams, Baptist Ministers Convention

Mr. Pete Aguyo, Nisei Farmers League

Ms. Fariya Ali, Pacific Gas and Electric

Mr. Nathan Alonzo, Fresno Chamber

Ms. Christina Beckstead, Madera County Farm Bureau

Ms. Jamie Banks, Quiet Communities

Ms. Susie Berlin, Northern California Power Agency, Golden State Power Cooperative, MSR Public Power

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

ALSO PRESENT:

Mr. Brian Biering, Bloom Energy

Mr. Bruce Blodgett, San Joaquin Farm Bureau

Ms. Kate Blumberg, International Council on Clean
Transportation

Mr. Cody Boyles, Nisei Farmers League

Mr. Tony Braun, California Municipal Utilities Association

Mr. Tony Brunello, California Forest Carbon Coalition

Mr. Oliver Buie, Holman United Methodist

Ms. Julia Bussey, Chevron Corporation

Mr. Tim Carmichael, Sempra Energy

Mr. Ron Chavez, The Two Hundred, California Community
Builders

Dr. Steven Colome, City of Ojai

Mr. John Costantino, Verified Emission Reductions
Association

Mr. Danny Cullenward, Near Zero

Ms. Tanya DeRivi, Southern California Public Power
Authority

Ms. Michelle Embury, E2(Environmental Engineers)

Ms. Carolyn Fowler, Democratic Party Women's Caucus

Mr. Juan Garcia, PG Cuttings

Ms. Kathryn Garcia, Sierra Club California

Mr. Roger T. Gault, EMA

Mr. Michael Geller, MECA

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

ALSO PRESENT:

Ms. Maria Guriato, Latino Seaside Merchants Association

Mr. Ryan Hallenberg, Valley Industry and Commerce Association

Mr. Ronald Keith Hayes, Baptist Ministers Convention

Mr. Scott Henderson, Covanta

Mr. Matt Henigan, Deputy Secretary, California Government Operations

Mr. James Jones, Missionary Baptist Convention

Mr. Johnny Johnston, City of Ojai

Mr. Greg Knott, Outdoor Power Equipment Institute

Mr. Mark Krausse, Pacific Gas and Electric

Mr. Ted Kujawski, Stihl

Mr. John Larrea, California Food Producers

Mr. Prentiss Lewiss, Greater Starlight MBC

Mr. Timothy Litton, Northern California Carpenters Regional Council

Mr. Victor Lopez, Central Valley Latino Mayors & Elected Officials Coalition

Mr. Bill Magavern, Coalition for Clean Air

Mr. Bruce Magnani, Coalition for Sustainable Cement Manufacturing and the Environment

Mr. Jed Mandel, CMA Truck and Engine Manufacturers

Mr. Simon Martin, Procter and Gamble

Mr. Luke Massman-Johnson, American Green Zone Alliance

Mr. Thomas Maulhardt, Campbell's

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

ALSO PRESENT:

Mr. Brian McDonald, Marathon Petroleum Company

Ms. Patty Modellmog, Ceres, BICEP Network

Mr. Jonathan Mosely, National Action Network

Mr. Jacob Moss, South Coast Air Quality Management District

Ms. Maddie Munson, Agricultural Energy Consumers Association

Ms. Andrea Navarrete, Latin Business Association

Mr. Jarron Nichols, Baptist Ministers Convention

Ms. Naomi Padron, California Manufacturers and Technology Association

Mr. Daniel Parra, Central Valley Latino Mayors & Elected Officials Coalition

Mr. Arjun Patney, American Carbon Registry

Mr. Luis Portillo, Inland Empire Economic Partnership

Mr. Mark Riechers, Microvast

Ms. Tiffany Roberts, Western States Petroleum Association

Mr. Roy Rodriguez, Central Valley Latino Mayors & Elected Officials Coalition

Ms. Katelyn Roedner Sutter, Environmental Defense Fund

Mr. Michael Saragosa, City of Placerville

Ms. Robin Shropshire, Panoche Energy Center

Mr. Will Scott, African American Farmers Association

Mr. David Siao, Roseville Electric

Ms. Leah Silverthorn, CalChamber

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

ALSO PRESENT:

Mr. Michael Skvarla, California Council for Environmental and Economic Balance

Mr. Steven Smith, Phillips 66

Ms. Anna Solorio, CHOC Housing

Ms. Tricia Stever Blattler, Tulare Farm Bureau

Ms. Shelly Sullivan, Climate Change Policy Coalition

Mr. Patrick Swarthout, Greater Coachella Valley Chamber

Ms. Diana Tang, City of Long Beach

Ms. Melissa Travgh, Central Valley Business Federation

Mr. Dennis Tristao, J.G. Boswell Company

Mr. Tom Tuchman, Usal Redwood Company

Mr. Tim Tutt, Sacramento Municipal Utility District

Mr. Cedric Twight, Sierra Pacific Industries

Ms. Emily Warms, New Forests

Mr. Erick Watkins, Pacific Coast Producers

Mr. Peter Weiner, Crockett Cogeneration, LP

Mr. Dave Weiskopf, NextGen

Mr. Roger Williams, Bluesource

Ms. Raemeisha Williams, National Action Network

Ms. Vivian Williams, National Action Network

Mr. Jack Wilson, Baptist Ministers Convention

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

2 CHAIR NICHOLS: Hello. The mic is on. The red
3 light is on.

4 (Laughter.)

5 CHAIR NICHOLS: That tells you that it's on.
6 Great. Welcome everybody to the November 15th 2018 public
7 meeting of the California Air Resources Board. The
8 meeting will come to order. And we will begin with the
9 Pledge of Allegiance to the flag.

10 Please rise.

11 (Thereupon the Pledge of Allegiance was
12 recited in unison.)

13 CHAIR NICHOLS: And the Clerk will please call
14 the roll.

15 BOARD CLERK DAVIS: Dr. Balmes?

16 BOARD MEMBER BALMES: Here.

17 BOARD CLERK DAVIS: Mr. De La Torre?
18 Mr. Eisenhut?

19 BOARD MEMBER EISENHUT: Here.

20 BOARD CLERK DAVIS: Senator Florez?
21 Assembly Member Garcia?
22 Supervisor Gioia?

23 BOARD MEMBER GIOIA: Here.

24 BOARD CLERK DAVIS: Senator Lara?
25 Ms. Mitchell?

1 BOARD MEMBER MITCHELL: Here.

2 BOARD CLERK DAVIS: Ms. -- Mrs. Riordan?

3 BOARD MEMBER RIORDAN: Here.

4 BOARD CLERK DAVIS: Supervisor Roberts?

5 Supervisor Serna?

6 BOARD MEMBER SERNA: Here.

7 BOARD CLERK DAVIS: Dr. Sherriffs?

8 Professor Sperling?

9 BOARD MEMBER SPERLING: Here.

10 BOARD CLERK DAVIS: Ms. Takvorian?

11 BOARD MEMBER TAKVORIAN: Here.

12 BOARD CLERK DAVIS: Vice Chair Berg?

13 VICE CHAIR BERG: Here.

14 BOARD CLERK DAVIS: Chair Nichols?

15 CHAIR NICHOLS: Here.

16 BOARD CLERK DAVIS: Madam Chair, we have a
17 quorum.

18 CHAIR NICHOLS: Thank you.

19 I'm going to make the sort of routine
20 announcements, and then I'm going to have a word to say
21 before we get started. We always have to point out to
22 people that there are emergency exits at the rear of the
23 room. And in the event of a fire alarm, which sounds
24 ironic but it's real, we are required to evacuate this
25 room immediately and go down the stairs, and out of the

1 building until we hear an all-clear signal and then come
2 back to the hearing room and resume the hearing.

3 Anyone who wishes to testify on any item on
4 today's agenda should fill out a request to speak card
5 which is available in the lobby outside the room. We
6 appreciate it if you would turn it in before the item
7 begins, if at all possible.

8 Also, we will be imposing a three minute time
9 limit on speakers, unless for some reason the testimony is
10 repetitive and long, and we end up deciding we need to
11 shorten it. But normally we give three minutes for each
12 speaker. We read everything that is submitted to us as
13 well.

14 I also want to point out that we have
15 interpretation services available this morning in Spanish
16 for Item number 18-9-9, the Proposed Amendments to the
17 Regulation for the Mandatory Reporting of Greenhouse Gas
18 Emissions and for 18-9-10, Proposed Amendments to the
19 California Cap-and-Trade Greenhouse Gas Emissions and
20 Market-Based Compliance Mechanism Regulation. These two
21 are going together.

22 Headsets are available outside the hearing room
23 at the attendant sign-up table, and can be picked up at
24 any time. And I will now pause for the translator to say
25 this in Spanish.

1 (Thereupon the interpreter translated
2 in Spanish.)

3 CHAIR NICHOLS: Gracias. Thank you.

4 All right. Before we take up our regular agenda,
5 I want to say a few words about the fires that are burning
6 now in this state. The loss of life is shocking to all of
7 us. And while we need to worry about the smoke and the
8 air here today, we also need to keep in mind the people
9 who have lost their lives in the Camp Fire and in the
10 Southern California fires as well.

11 Sadly, it now seems that the abnormal has become
12 the normal, as we see the compounding impacts of climate
13 change. The loss of life and property is unprecedented.
14 The Camp Fire is the deadliest in our state's history, and
15 we don't know the full extent of the damage yet. And the
16 fires aren't out.

17 I have been talking with staff for the last few
18 days. But this morning, we got together just briefly, and
19 I wanted to make sure that I would give you an update on
20 what CARB is doing at this moment. This week and last,
21 we've deployed nine supplemental particulate matter
22 monitors to communities that are impacted directly by
23 wildfire smoke in both Northern and Southern California.

24 Over the last week, we've seen that the lower
25 Sacramento Valley and the adjacent foothills have been

1 experiencing extended periods of very unhealthy to
2 hazardous air quality. This is beyond anything that we
3 think of as normal. And many Northern California
4 communities as far away as the Bay Area have experienced
5 extended periods of unhealthy air due to smoke impacts
6 from the Camp Fire.

7 Unfortunately, we don't anticipate much relief
8 from this air quality problem until possibly Thanksgiving
9 at the earliest. For us, including myself, who are
10 farther away, the safest thing we can do is to stay
11 indoors. We're fortunate that our headquarters building
12 has a sophisticated ventilation system, the building that
13 we're in right now. And the building engineering staff
14 have closed down the dampers that draw in outdoor air to
15 the maximum extent possible. The filters in the HVAC
16 system are very efficient MERV 13 filters that are able to
17 capture a good deal of the smoke particles. But as you
18 can tell, there still is a smell of smoke in the air, and
19 you can tell that there's smoke around.

20 The stairwells draw air more directly from the
21 outside. So our advice to people in the building is not
22 to linger in the stairwells or near the doors in the
23 lobby. You can get coffee and eat lunch downstairs on our
24 lunch breaks rather than going outside the building. And
25 again, the major advice is to stay indoors as much as

1 possible.

2 Finally, in addition to the outdoor monitoring
3 support that we are providing, CARB technical staff and
4 our executive team have been tracking the indoor air
5 quality here in our building. And we are also looking at
6 what we can be doing to clarify and extend on the advice
7 that we are often asked for. Our own Board Member
8 physician John Balmes has been interviewed, I think he
9 said, 11 times in the last couple of days, primarily by
10 people wanting to know how bad is it, what should I do?

11 And we are going to be taking advantage of his
12 presence here today to give some more generic clarifying
13 advice about the meaning of these various AQI levels, and
14 what we mean when we say bad for sensitive people. Of
15 course, it's been bad for sensitive people -- way beyond
16 bad for sensitive people for many days now. But what is
17 the best advice that we can give people who are worried or
18 experiencing symptoms? But again, unfortunately, staying
19 right where we are today is probably the safest thing we
20 could be doing.

21 And if anybody wants to add anything, any Board
22 members?

23 Yes, Mr. Serna, please. This is your territory
24 here.

25 BOARD MEMBER SERNA: It is. Thank you, Chair

1 Nichols for mentioning all that you just did about this
2 incredibly unfortunate circumstance we find ourselves in.

3 I just wanted to add to that, the public can
4 visit CARB's webpage. The first thing you'll see is a
5 link to current AQI conditions, as well as forecast AQI
6 conditions. So please do use that, and let others know
7 about that particular resource, so that you can make an
8 informed decision about whether or not to expose yourself
9 outside -- to the air quality outside or to remain
10 indoors, or whether or not to take other precautions to
11 guard against the health risks associated with the smoke
12 and the fires.

13 CHAIR NICHOLS: Thank you.

14 Dr. Balmes.

15 BOARD MEMBER BALMES: Thank you, Chair Nichols.
16 Just to give the basics here, in terms of the health
17 effects of this wildland fire smoke. It's the fine
18 particulate, the PM2.5, that's the major health risk. The
19 smell is not from the particles themselves, but from the
20 offgassing of semi-volatile materials from the particles.

21 When it's in the red zone in terms of the AQI,
22 greater than 151. That's unhealthy for everyone, not just
23 sensitive subgroups. So that means that nobody should be
24 exercising outdoors, especially strenuous exercise. This
25 is interesting for farm workers and construction workers,

1 whose livelihood depends on this. But because when you're
2 exercising you increase ventilation, it increases the
3 effective dose, and you -- if you're exercising
4 strenuously, then you're doing it through your mouth and
5 you bypass the filtering mechanism of the nose. So that's
6 why people -- what -- that's why we recommend N95 masks.

7 N95 masks only are properly fit for adults. So
8 I'm always asked about children, whether they should be
9 wearing N95s. They don't properly fit kids and kids
10 don't usually like to wear them. I mean, adults don't
11 like to wear them, but they do provide some protection
12 even if they don't fit properly, even if they don't --
13 even me with a beard, an N95 would give me some protection
14 just not 95 percent.

15 And, you know, being indoors in a building that
16 is well filtered like this one is sort of the best way to
17 deal with it. Unfortunately, a lot of homes and buildings
18 aren't that well ventilated. I've been freezing in the --
19 my house in the Berkeley Hills, because my wife has asthma
20 that is definitely exacerbated by these kinds of
21 conditions. And so she -- and our heating system brings
22 in outdoor air, so I sympathize with others in this
23 regard.

24 But the last thing I want to say is I have been
25 interviewed multiple times over the last few days by

1 media. And they always want to know about the health
2 effects of this. And I always try to bring the
3 conversation back to the climate change issue, and the
4 need to do a better job with forest maintenance.

5 I mean, there's a legacy of fire suppression in
6 our country where fires were always put out quickly, so
7 that our western forests that really need to have fire
8 periodically, small lightning fires. The Native Americans
9 knew this. Now, we have all this fuel that's built up,
10 and that leads to catastrophic fires like we're
11 unfortunately having repeatedly in California.

12 Communities at the Wildland-Urban Interface need
13 to be better protected. And they need -- the way they
14 fight wildland fires is to create a buffer between the
15 fire and where it hasn't burned. They dig a buffer. And
16 so we need to have that around our at-risk communities.
17 And we need to have early warning systems. There are
18 cameras, sensors that can be around these communities.

19 I mean, basically, we have to move from the
20 beauty of living in the woods to maybe we should have a
21 buffer between the woods and where we live. And I mention
22 this because it's an emergency. This is the new normal,
23 and we need to be doing a better job at being ready for
24 wildland fires -- catastrophic wildland fires and try to
25 prevent them.

1 CHAIR NICHOLS: Thank you, John. The topic of
2 the impact of our forest and other natural and working
3 lands and the relationship with greenhouse gases is on our
4 agenda in a different way later, a couple of different
5 ways. And so this is a topic that we're going to be
6 dealing with increasingly as time goes on.

7 I think I will now get us back on to our regular
8 track then. Oh, I'm sorry. Excuse me, I didn't see you
9 come in.

10 BOARD MEMBER FLOREZ: No problem.

11 CHAIR NICHOLS: Good morning.

12 BOARD MEMBER FLOREZ: No problem. Just a -- just
13 a quick comment. I would like to say in taking all the
14 comments into account, I got out of the car in order to
15 come to the meeting, and I felt like I was in Bakersfield.
16 And I shouldn't be able to feel that way.

17 But I would like to say ag burns are still part
18 and parcel of our society today. Today is very much like
19 any given day in the Delano or Arvin, or McFarand, or in
20 some of the lower parts of the valley. And I do want to
21 emphasize that we still need to turn the corner on
22 prescribed ag burns for this winter, particularly in the
23 Central Valley.

24 And I think although it's very tough to
25 breathe -- and in some sense for any of you who haven't

1 been to that part of the area during those cold months,
2 you know, this is very much part and parcel of everyday
3 life.

4 So, you know, I really appreciate the path we've
5 been taking with staff. I think we have a good path
6 forward. But I also would like to say as the air does
7 clear, at some point in time, and the fires subside, which
8 they will, this will continue to be an everyday part of a
9 good majority of people in California doing exactly what
10 we're doing here today.

11 So, you know, continue down the path, and I
12 appreciate staff's help. And hopefully, we can have these
13 kind of -- a better environment moving forward.

14 CHAIR NICHOLS: Thank you.

15 Okay. We'll start with the consent item, which
16 is the Ozone Attainment Plan for Western Nevada County.

17 Did we receive any comments on this one?

18 BOARD CLERK DAVIS: (Shakes head.)

19 CHAIR NICHOLS: No reason to do anything other
20 than approve it then, I believe. So the record is closed
21 at this point. And do any Board members want to comment
22 on this one?

23 If not, could I have a resolution and a second?

24 VICE CHAIR BERG: Madam Chair, I'll move 18-9-1.

25 BOARD MEMBER SERNA: Second.

1 CHAIR NICHOLS: Thank you. Moved, seconded.

2 All in favor, please say aye?

3 (Unanimous aye vote.)

4 CHAIR NICHOLS: Any opposed?

5 Any abstentions?

6 Okay. Great.

7 Now, we'll move on to an informational item on
8 the Mobile Source Program, which is titled A Vision for
9 Minimizing Real-World Emissions.

10 As California continues to push vehicle emissions
11 closer and closer towards zero to meet our air quality
12 needs, it's critical that the expected emissions
13 reductions from our programs are actually occurring as
14 cars are being driven in the real world. Today's
15 informational item will discuss how California's existing
16 mobile source programs address the real-world emissions
17 problem, and provide an update on staff's efforts to
18 better ensure that future changes to the programs better
19 reflect how mobile sources are being used.

20 Mr. Corey, would you please introduce this item?

21 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

22 As vehicles standards push towards zero, we need
23 to ensure that vehicles are designed, built, and
24 maintained not just to start out clean, but to stay as
25 clean as possible throughout their life regardless of how

1 they're being used in the real world.

2 Vehicles are becoming increasingly complex and
3 more capable, which create new opportunities to ensure
4 emission control systems are operating at maximum levels
5 of efficiency in the broadest spectrum of conditions.

6 Staff is working to identify where California's
7 comprehensive suite of programs to regulate car and truck
8 emissions can be improved to more accurately reflect
9 real-world driving conditions. These efforts will help
10 ensure that we maximize emission reductions from
11 California's vehicle fleet, not just in test cells, but in
12 use where the rubber meets the road.

13 I'll now ask Mike McCarthy of the ECARS Division
14 and Bill Robertson of the Mobile Source Control Division
15 to begin the staff presentation.

16 Mike and Bill.

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

19 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: Thank
20 you, Mr. Corey. Good morning, Chair Nichols and members
21 of the Board. Today, myself and Bill Robertson, one of
22 our heavy-duty experts from the Mobile Source Control
23 Division will provide a short overview of how we are
24 planning to evolve our mobile source control programs to
25 better ensure our current and future actions result in

1 minimizing real-world emissions from on-road cars and
2 trucks.

3 --000--

4 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: As you
5 all know, CARB has its root in the regulation of emissions
6 from mobile sources and recently celebrated our 50-year
7 anniversary. From equipping cars with prototype emission
8 controls to supporting academic research on how drivers
9 react to alternative fuel vehicles, CARB has relied on
10 strong technical foundations to adopt technology-forcing
11 standards for cars and trucks.

12 Along the way, we've learned a lot about the
13 different emission sources in California. On the left,
14 the chart shows the contributions from different sectors
15 to NOx emissions in the South Coast Basin, while the chart
16 on the right shows the contributions to the state's
17 greenhouse gas emissions.

18 Even with a long history of mobile source
19 controls, mobile sources continue to be a dominant source
20 of emissions in California. For NOx, mobile sources make
21 up approximately 80 percent of all emissions, while in
22 greenhouse gas emissions, mobile sources are directly
23 responsible for more than one-third of the emissions. And
24 if you include the emissions associated with the
25 production of fuels used in mobile sources, nearly 50

1 percent of all GHG emissions are mobile related.

2 --o0o--

3 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: Our
4 current programs have achieved significant reductions.
5 The left shows how NOx emissions continue to come down,
6 largely due to reductions from mobile sources leading to
7 fewer days that exceed ozone ambient air quality
8 standards.

9 On the right, while we have a much shorter
10 history in greenhouse gas regulations, we have already
11 dropped below 1990 levels four years earlier than our 2020
12 mandate, despite continued growth in vehicle miles
13 traveled, or VMT, by an ever increasing number of people
14 in the state and number of cars and trucks on the road.

15 --o0o--

16 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: It has
17 taken a massive effort with lots of hard-fought battles
18 along the way to achieve these reductions. And there are
19 many individual elements that form the comprehensive set
20 of requirements that we have today that touch nearly all
21 aspects of a vehicle's life.

22 These elements include a rigorous certification
23 review before vehicles are even built, scrutinizing
24 aspects of the design and control strategies among other
25 things.

1 Early in the vehicle's life, we have many
2 programs ranging from manufacturer self-testing, to CARB
3 testing, and other data reporting to verify vehicles are
4 performing as expected.

5 These and other programs continue as vehicles
6 reach the middle of their life, and even late in the
7 vehicle's life where aspects like SmogCheck and programs
8 to incentivize or require fleet turnover play a larger
9 role.

10 And other CARB actions are always being carried
11 out to characterize emissions and vehicle activity to
12 enhance or develop subsequent requirements.

13 --000--

14 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: Despite
15 our concerted efforts to date, we still need to do more.
16 In both the South Coast Basin and the San Joaquin Valley,
17 ozone ambient air quality standards continue to be
18 exceeded, necessitating further reductions in NOx, the
19 primary ozone precursor.

20 While our currently adopted programs will lead to
21 further reductions from today's levels, substantially more
22 reductions will be needed to reach the levels necessary to
23 meet the 2023 and 2031 targets, not mention the even more
24 stringent 70 parts per billion ozone standard that only
25 recently received U.S. EPA's court ordered attainment

1 designations for future implementation. For the San
2 Joaquin area, NOx is also an important contributor to
3 nonattainment for particulate matter or PM.

4 For greenhouse gas emissions, much deeper
5 reductions are still needed to reach the 40 percent and 80
6 percent reduction targets by 2030 and 2050 respectively.
7 And, of course, Governor Brown recently issued an
8 Executive Order further targeting carbon neutrality by
9 2045.

10 Given the contributions from cars and trucks,
11 mobile source reductions will be key to our success.

12 --000--

13 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: Not
14 only do we need to do more to reach statewide targets, but
15 also because particular vulnerabilities in our
16 disadvantaged and low income communities to mobile
17 sources.

18 The legislature has directed CARB to consider the
19 effects of its programs at an increasingly granular
20 community level. As shown on the map by the shaded areas,
21 environmental justice communities are not a rarity and
22 contain a considerable amount of California's population.

23 The significant impact -- emission impacts of
24 mobile sources often directly overlay with these
25 communities, for example, in their association with ozone,

1 diesel particulate matter, and air toxics levels along
2 highway corridors and other goods movement activity.

3 While mobile source emissions, in general, are a
4 control target, the urgency of decreasing them is
5 especially important for the populations least able to
6 avoid them.

7 --000--

8 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: Plain
9 and simple, we need to do better. We need to be more
10 efficient in how we assure broad emissions control on the
11 road. Our focus needs to expand from further improvement
12 in areas of good control to also include addressing areas
13 that have not been as well controlled.

14 As noted before, California's mobile source
15 emissions decline has been hard won by the determined and
16 combined efforts of iterations of regulation and
17 innovative industry responses. However, CARB testing also
18 shows that the expected reductions have not always been
19 fully realized in the real world where the cars and trucks
20 are actually used.

21 As an example, some systems have weak designs or
22 frail control systems that degrade prematurely. This
23 chart shows results of CARB on-road testing of recent
24 model year heavy-duty trucks using portable emission
25 measurement systems, where emissions from many engines

1 were found to be much higher than the expected levels.
2 This type of testing has already led to a recall by
3 Cummins to fix approximately 500,000 engines.

4 Secondly, some systems have not been calibrated
5 and designed for optimal emissions control across all
6 situations. This chart shows passenger car emissions from
7 the initial start-up of the engine after the vehicle has
8 been parked for varying amounts of time.

9 The tail-ends at the beginning and ends of the
10 curves - the two areas that happen to be well covered by
11 our current requirements - show actual emissions to be
12 near expected levels. However, recent testing found the
13 strategies used effectively to control start emissions
14 were not being utilized at intermediate points, causing
15 NOx emissions to be up to two and a half times higher than
16 expected.

17 Of course, certain parties have engaged in
18 outright illegal behavior to actively circumvent our
19 requirements to the detriment of air quality and thereby
20 the public health of our citizens.

21 --000--

22 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: So
23 how do we do more?

24 You may recall from our Mobile Source Strategy,
25 and the SIP planning efforts, that transitioning the fleet

1 to more electrification is the only viable path we see to
2 meet both our ambient air quality and greenhouse gas
3 targets.

4 On the left, an example for the light-duty sector
5 is shown where the fleet is largely transformed to
6 zero-emission vehicle technologies by 2050. The right
7 side shows potential scenarios for the heavy trucks that
8 relies largely on transitioning to even cleaner engines in
9 the future.

10 Of note in both cases, however, is that a
11 substantial portion of both fleets would still utilize
12 combustion engines. For the light-duty fleet, this
13 scenario results in approximately 60 percent of the 2050
14 fleet having combustion engines, while approximately 90
15 percent of the heaviest trucks would still be utilizing
16 engines, including a large population of emission level --
17 current emission level trucks for at least two more
18 decades.

19 Given the long-term role of engines, we need to
20 continue to dedicate resources to make sure these cars and
21 trucks perform as expected. To achieve our targets, the
22 future combustion engine vehicles need to start out even
23 cleaner, they need to stay clean even longer, and for any
24 vehicle that doesn't, we need to find it and get it fixed
25 even faster.

--000--

ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: And how can we do a better job of ensuring we fully get the expected and needed emission reductions?

By increasing our focus on real-world emission performance.

First, by broadening coverage of our requirements, we can target optimal emission control under all operation and usage. Our current programs have achieved substantial reductions under conditions that are representative of a lot of real-world operation. But to get even further reductions, we need to make sure we cover virtually all operating conditions.

Secondly, we need to increase transparency on car and truck emission performance, so we have a more efficient way to quickly identify higher than expected emission levels. One way to do this would be to move closer to monitoring actual on-road emission performance of all vehicles.

Put together, we believe these two principles will yield increased robustness of real-world emission performance to better ensure the needed reductions are occurring and to maximize the benefits for public health.

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ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY:

1 Concrete actions that apply the principles of
2 broader coverage and increased transparency will occur in
3 parallel on multiple times scales. Early actions and
4 ongoing periodic reviews have already been used to refocus
5 priorities within existing programs.

6 Intermediate timeline activities involve
7 critically evaluating our existing standards and in-use
8 programs against newer approaches and emerging technical
9 feasibility with this mindset towards increasing the
10 robustness of real-world performance.

11 Looking out further are the long-term potential
12 benefits of weaving various kinds of fleet data into
13 CARB's processes to achieve durable emission reductions
14 across all conditions of how cars and trucks are actually
15 used.

16 --o0o--

17 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: As some
18 examples for actions already taken in the direction of
19 broadening coverage, staff have already refocused efforts
20 within certification reviews with an eye towards making
21 sure control strategies work optimally under as broad of
22 conditions as possible.

23 Board members may recall that you've also already
24 taken actions to strengthen the warranty provisions for
25 heavy-duty engines, ensuring emission components are

1 designed to last longer. And we have increased testing of
2 new and pre-production vehicles to specifically look for
3 inappropriate behavior when operated on road.

4 To the goal of increasing transparency, we have
5 already increased on-road testing efforts of in-use trucks
6 to find noncompliant engines or otherwise unexpected
7 behavior. And the Board has previously adopted provisions
8 for light-duty vehicles to store data on their CO₂
9 emission performance, which will provide a comprehensive
10 look into the on-road performance of the newest
11 technologies.

12 Lastly, we have already been expanding the use of
13 alternate methods for measuring emissions from a larger
14 portion of the fleet to increase awareness of how the
15 fleet is actually performing.

16 --o0o--

17 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: Next
18 up, the Board will see a number of items brought before
19 them primarily over the next two years.

20 For light-duty vehicles, the two most significant
21 items are scheduled for 2020, and include a proposed set
22 of criteria pollutant, greenhouse gas, and zero-emission
23 vehicle requirements for a second generation of our
24 Advanced Clean Cars program, and an update to the on-board
25 diagnostic requirements.

1 For heavy-duty, staff have prioritizes the items
2 based on the severity of emissions issues, the
3 technological readiness of solutions, and the time scales
4 of other related efforts. This has led to early
5 individual actions already taken, for example the more
6 than tripling of the 100,000 mile emission warranty for
7 the heaviest trucks, and the tightening of outdated
8 opacity limits to match the current diesel particulate
9 filter-equipped fleet.

10 CARB is also distributing about \$1 billion of
11 clean transportation funding annually to assist the
12 transition to clean, sustainable transportation.

13 Later today, the Board will hear proposed updates
14 to the heavy-duty onboard diagnostics program that
15 includes elements to improve transparency of actual
16 heavy-duty engine emission performance. While early next
17 year, the Board will hear proposed certification
18 procedures for zero-emission powertrains to support the
19 introduction of heavy-duty ZEVs

20 The same priority assessment process also
21 resulted in the bundling of actions into the heavy-duty
22 omnibus rulemaking scheduled for late 2019 to
23 simultaneously consider several changes that will both
24 broaden coverage and increase transparency of emission
25 performance.

1 The concerted actions of California and a variety
2 of stakeholders including industry, NGOs, and other
3 jurisdictions has resulted in EPA's announcement just this
4 Tuesday that they, too, will begin work towards a
5 low-emission heavy-duty standard for release in 2020.

6 These regulatory development efforts for new
7 vehicle and engine standards are also happening against a
8 backdrop of fleet turnover efforts through incentives,
9 production mandates, and fleet rules. The heavy-duty
10 fleet rules have already resulted in DPF installation for
11 the heaviest trucks and will see complete fleet turnover
12 to 2010 standard NOx and PM controls by 2023.

13 --000--

14 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: But
15 continued progress requires more than just a change in
16 regulations. Continuous investment in skilled engineers,
17 chemists, and technicians while providing them the tools
18 and facilities to perform their jobs is the bedrock of how
19 CARB does business.

20 Through generous support from the Governor,
21 Legislature, and a coalition of other supportive
22 stakeholders, CARB is in the midst of redefining our
23 ability to carry out our mobile source programs via the
24 design, construction, and outfitting of the new Southern
25 California Headquarters Laboratory.

1 The facility currently under construction
2 consolidates our staff into a unified collaborative
3 workspace surrounded by the laboratory resources retooling
4 CARB's ability to measure and understand engine and
5 vehicle emissions for the next 50 years.

6 In recognition of rapidly evolving engine and
7 vehicle technology, transportation systems level
8 interactions, and shifting vehicle usage patterns, the new
9 laboratory is taking a decidedly real-world in-use focus.
10 This includes significant on-road testing support
11 facilities for PEMS and OBD field testing, increasing
12 heavy-duty capabilities commensurate with the sector's
13 impact, and better replicating field conditions in the
14 laboratories with all-wheel drive compatible test
15 equipment, and environmental chambers.

16 --o0o--

17 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON:

18 Another step that we are taking is called the
19 REAL concept for Real Emissions Assessment Logging. In
20 the simplest form, it requires the vehicles themselves to
21 store aggregated data in the on-board computer about its
22 emissions performance.

23 To be clear, this data would not store any
24 information about where a vehicle is being operated or how
25 fast it is being driven. Instead, this common sense

1 logging of available data would store a limited set of
2 aggregated data about average emission levels to provide a
3 readily available data set for assessing vehicle
4 performance.

5 In the next item today, you will hear from the
6 OBD team about how the first steps of this concept are
7 being proposed for implementation using the existing
8 sensor and data structure currently on today's heavy-duty
9 vehicles to better understand both NOx and CO2
10 performance.

11 This concept will provide comprehensive and
12 efficient feedback to enable faster identification of
13 design and manufacturing defects, and other areas of
14 operation with higher than expected emission levels that
15 warrant further investigation.

16 Staff also foresee a future where continued
17 improvement of the sensors not only provides accurate
18 inventory data, but could also become the basis for
19 standards directly linked to real-world emissions
20 accountability.

21 --000--

22 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON:

23 CARB's vision for controlling mobile source
24 emissions in the long term will involve introduction of
25 inherently clean technologies paired with focused efforts

1 on the remaining internal combustion engines. The focused
2 engine efforts will be guided by information aggregated in
3 increasingly efficient ways, such as the REAL concept, and
4 used to broaden coverage to ensure optimal emission
5 control under virtually all conditions.

6 Along the way, CARB will continue developing its
7 initiatives to understand and inform systems-level changes
8 to the transportation network brought about by sharing
9 connectivity, automation, and electrification that are
10 reshaping the role of cars and trucks in society.

11 Ultimately, while we often lead with the
12 light-duty sector, we will need to focus on transferring
13 technology to other mobile source sectors. For example,
14 expansion of the zero-emissions technology currently
15 diversifying across the light-duty fleet will need similar
16 continued encouragement in the heavy-duty on-road sector,
17 then into the even more diverse off-road sectors.

18 Later today, you will hear an item about the
19 impacts of small off-road engines, and the potential for
20 transforming the lawn care industry with zero-emissions
21 equipment.

22 CARB is funding further technology transfer
23 demonstrations in various goods movement and cargo
24 handling equipment projects from yard trucks and heavy
25 forklifts to shipping container top handlers and drayage

1 trucks. More work remains to be done to realize the
2 emissions reduction potential in the construction and
3 agricultural off-road sectors.

4 This is an exciting and dynamic period for mobile
5 source emissions and their control. We're seeing rapid
6 development of new internal combustion engine technologies
7 in parallel with zero emission alternatives and
8 combinations thereof. The technology now exists to
9 efficiently increase transparency of real-world emission
10 performance. And CARB is taking action to utilize such
11 data to redefine what emission compliance means.

12 --000--

13 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: Thank
14 you for your time, and we welcome any comments or
15 questions from the Board.

16 CHAIR NICHOLS: Okay. Thank you for that
17 presentation. It is a high level overview obviously of a
18 situation which involves multiple pieces and actions that
19 are either underway or soon to be underway. I thought it
20 was a good idea for the Board to get that larger sense of
21 where this is all headed, because we will get pushback on
22 various pieces of it, especially from regulated industry,
23 who usually have an argument that you really should be
24 doing something else about the problem. Not that it's not
25 a problem, but you should be focusing somewhere else at

1 any given time. And I think this shows that we really
2 have a very comprehensive approach to dealing with this
3 complicated problem.

4 I am glad you mentioned the potential and PRM
5 that's coming at the federal level, because we did get
6 good news this week that the administration that we hardly
7 ever have anything nice to say about --

8 (Laughter.)

9 CHAIR NICHOLS: -- in Washington actually appears
10 to have made a decision to move ahead on something. And
11 we are already a part of the discussions at the technical
12 level. And obviously, we will be very closely involved in
13 pushing hard to make sure that whatever they come up with
14 is good, as good as it can be, as it should be at the
15 national level, but that doesn't, in any way, take off the
16 pressure to deal with all of these vehicles that we have
17 on the road now that are just not meeting expectations
18 when it comes to what they're -- what they are actually
19 emitting.

20 So this is a chance if any of the Board members
21 have any questions or comments. Dr. Sperling, you might
22 want to say a word about this topic perhaps?

23 (Laughter.)

24 CHAIR NICHOLS: I can tell you were thinking of
25 it.

1 (Laughter.)

2 BOARD MEMBER SPERLING: Well, sticking at the
3 high level --

4 (Laughter.)

5 BOARD MEMBER SPERLING: -- it really -- I mean,
6 it's extraordinary how much progress we've made. And then
7 yet I look at this graph about how much emissions are
8 still coming from light-duty vehicle -- not from -- I mean
9 - excuse me - from all mobile sources. And it's kind of
10 stunning how much emissions there -- I mean, I give these
11 lectures in class, you know, we've got 98, 99 percent
12 reduction in emissions from new vehicles. And, you know,
13 as this points out, that's great progress, but the in-use
14 emissions, especially heavy-duty, is so problematic.

15 And then I look at this other category of other
16 mobile sources, and I guess I hadn't fully appreciated
17 what a big chunk that is, and it's, of course, much less
18 controlled.

19 So it's a very impressive story. And it's
20 exciting. And I know there's some new ideas here about
21 how to move forward. And so, you know, one can only say,
22 you know, congratulations to all of us, but yet, a long
23 ways still to go. And it does highlight again the
24 electrification -- you know, strategy, how important that
25 is. And it's been encouraging to see on a heavy-duty, as

1 Chair Nichols said in a speech last night, you know,
2 it's -- a few years ago, we wouldn't have even conceived
3 of use -- of electrification of trucks. And now, it's
4 considered a very real, plausible, and even feasible
5 option.

6 So lots to do, but, you know, won't be easy. So
7 thank you, staff, for great work, and good luck for all of
8 us going forward.

9 (Laughter.)

10 CHAIR NICHOLS: Yeah. I just want to add one
11 other thought to make this even -- and even bigger and
12 more complicated issue. I know that staff in various
13 places is also looking at the future of goods movement in
14 California, and changes that we think we see on the
15 horizon to the way people get things, to put it as broadly
16 as possible, you know, not only ordering, and the
17 delivery, and the kind of things that people are buying,
18 and all of the changes that that could imply for the way
19 cities are operated, and the way roads are operated, and
20 I -- I would like to at least keep that in parallel, and
21 in communication with this other effort as well. We,
22 obviously, are the experts without a doubt on the
23 technology side of the vehicles, and of the fuels, but
24 that third leg of the stool, as we always call it, needs
25 to be kept in focus as well.

1 I know that at the senior level our staff is well
2 aware of this issue. But I just want to remind everybody
3 that that needs to be kept there too.

4 BOARD MEMBER SPERLING: And I can't help but
5 recall back in the seventies there was this comic strip
6 Pogo, and it -- the title was a book and the story was we
7 have seen the enemy and it is us.

8 (Laughter.)

9 BOARD MEMBER SPERLING: Because with freight,
10 just what Chair Nichols was saying, we are the problem.
11 We're the ones that want those two-hour deliveries. And
12 that's what's creating havoc with the freight system, and
13 resulting in big increases in truck VMT and all of those
14 warehouses.

15 So I'm not sure what the solution is to that one,
16 but -- but that is -- I mean, it highlights again we need
17 to pay attention. Now that we're in the business of
18 climate change, we need to approach this in a much broader
19 way than we have in the past.

20 CHAIR NICHOLS: Yeah. Okay. Thank you all for
21 an excellent presentation.

22 Sorry. Excuse me. Go ahead. I think I -- our
23 system of lights may not be working as it should.

24 BOARD MEMBER TAKVORIAN: Can I speak?

25 CHAIR NICHOLS: Okay.

1 BOARD MEMBER TAKVORIAN: Thank you. No, that
2 doesn't work yet.

3 CHAIR NICHOLS: Anyway, wave your hand and speak
4 up.

5 BOARD MEMBER TAKVORIAN: I will.

6 (Laughter.)

7 BOARD MEMBER TAKVORIAN: I'll just yell at you.
8 Sorry.

9 Thank you for raising the larger issue of goods
10 movement and consumption, because I think this report is
11 really important, and I appreciate that we're moving
12 forward in this way. I heard a quote from Alicia Garza,
13 who's the founder of Black Lives Matter the other day at a
14 conference. And she said something that I think we could
15 all keep in mind, which is we should have everything we
16 need, but not everything we want. So I think that could
17 be a good watch-word for all of us on the consumption
18 side.

19 I also have to point out that I think that this
20 also points to VMT matters. And as we are looking at how
21 the MPOs are hitting their targets, or not hitting those
22 targets, we have to look at the fact that electric
23 vehicles and -- and -- car chair -- car share is not going
24 to be the answer. That this report really points to the
25 fact that we need to reduce the use of vehicles overall,

1 and that we have these other programs so that this is a --
2 this is a great set of programs that can go together with
3 this being a critical piece of it. But I'm hoping that we
4 can always remember that as well, and focus on that.

5 So thanks.

6 CHAIR NICHOLS: Thank you.

7 Anybody else?

8 Yes, Ms. Mitchell.

9 BOARD MEMBER MITCHELL: I'm looking at the chart
10 that we have on slide two, and Dr. Sperling's comment
11 about other mobile sources being 30 percent. But out of
12 those, some of them we may not have control over, like
13 locomotives are difficult, and things under federal
14 control. Can you give me kind of a breakdown of what's in
15 that sector, the ones we don't have control over?

16 ECARS CHIEF TECHNOLOGY OFFICER MCCARTHY: No,
17 you're correct, there's plains, trains, those kind of
18 things in there. And many of those we have much less
19 direct control over. So to get the types of reductions we
20 need, especially from those sectors, is going to be heavy
21 reliance on our federal partners.

22 And, you know, when we do our planning, we
23 realize we're probably not going to get equivalent
24 reductions in that sector, because they're not going to be
25 willing to push as hard as we are. So that is part of our

1 planning process, and it does make it more difficult when
2 there is a piece of the pie that we can't quite control.

3 BOARD MEMBER MITCHELL: So it may be important to
4 do some --

5 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: We
6 have --

7 BOARD MEMBER MITCHELL: -- negotiating that is
8 behind the scenes, you know, with -- maybe not with the
9 federal government, but with ships that are coming into
10 port.

11 (Laughter.)

12 MSCD VEHICLE PROGRAM SPECIALIST ROBERTSON: You
13 know, we are active in, you know, trying to make sure that
14 people are aware of the technologies that are available.
15 We're trying to make sure that we have incentives in place
16 to deploy them as rapidly as possible in California, even
17 if they're not required from the federal level.

18 And we've had a lot of success on both voluntary
19 improvements, and -- as well as the -- seeing these
20 technologies roll-out through an incentive-based
21 mechanism.

22 BOARD MEMBER MITCHELL: Great. Thank you for
23 your work on that.

24 CHAIR NICHOLS: Okay. I think we should move on
25 to the next item then and look forward to hearing more in

1 the months ahead.

2 The next item on our agenda is Proposed Revisions
3 to the On-Board Diagnostic System Requirements, Including
4 the Introduction of Real Emissions Assessment Logging for
5 Heavy-Duty Engines, Passenger Cars, Light-Duty Trucks, and
6 Medium-Duty Vehicles and Engines.

7 Under the progressively cleaner Low-Emission
8 Vehicle I, II, and III programs, otherwise known as LEV I,
9 II, and III, California's light- and medium-duty vehicles
10 are required to meet very stringent emissions standards.
11 The emission standards for heavy-duty engines have also
12 become significantly more stringent. Our OBD program is
13 important, because it is one way of ensuring that the
14 vehicles and engines meet those standards in-use and
15 remain clean for their entire life.

16 When emissions problems are detected, drivers are
17 alerted by a warning light and repair technicians can
18 quickly access diagnostic information to identify the
19 nature of the problem, verify that the problem has been
20 correctly fixed -- and verify that the problem has been
21 fixed. The Board regularly receives updates on the
22 progress of these OBD regulations, including the one that
23 we will hear today.

24 So with that, Mr. Corey, would you introduce
25 this?

1 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

2 And as directed by the Board, staff has been
3 evaluating manufacturers' progress in designing and
4 implementing heavy-duty OBD systems. Since the heavy-duty
5 OBD regulation was last amended with significant revisions
6 in 2012, staff has identified several changes that need to
7 be made to improve the effectiveness of the regulation.
8 The modifications include changes related to the
9 monitoring requirements for gasoline and diesel vehicles,
10 and changes related to additional data information from
11 the vehicles.

12 And specifically, as we just heard in the prior
13 presentation to the Board, staff will be proposing the
14 introduction of Real Emission Assessment Logging, or REAL,
15 for NOx and greenhouse gas emissions tracking.

16 Additionally, the heavy-duty OBD enforcement
17 provisions would also be updated concurrently with some of
18 the revisions being proposed today.

19 With that, I'll ask Paul Henderick to begin the
20 staff presentation.

21 Paul.

22 (Thereupon an overhead presentation was
23 presented as follows.)

24 AIR RESOURCES ENGINEER HENDERICK: Thank you, Mr.
25 Corey. Good morning, Chair Nichols and members of the

1 Board. Today, I will present a proposal to amend CARB's
2 on-board diagnostic regulations, which includes the
3 introduction of a program called Real Emissions Assessment
4 Logging, or REAL.

5 --o0o--

6 AIR RESOURCES ENGINEER HENDERICK: I will start
7 with the context and background of our proposal followed
8 by an overview of the proposed amendments. Then I will
9 talk about the costs and benefits of the proposal, and
10 briefly discuss the remaining concerns voiced by industry.
11 Lastly, I will present the staff recommendation.

12 --o0o--

13 AIR RESOURCES ENGINEER HENDERICK: Looking at the
14 big picture, as laid out in the previous item, CARB staff
15 will be bringing a number of different heavy-duty measures
16 to the Board over the next year and a half. These diverse
17 measures include adoption of new lower emission standards,
18 changes to the in-use compliance program, and programs to
19 incentivize the adoption of zero-emission vehicles.

20 --o0o--

21 AIR RESOURCES ENGINEER HENDERICK: One element of
22 the big picture, durable and working emissions controls,
23 is intended to ensure that clean technologies actually
24 achieve emission reductions in the real world. It
25 includes the items shown here.

1 The fleet smoke inspection rules and step one of
2 the heavy-duty warranty item were adopted by the Board
3 earlier this year. We are here today with the heavy-duty
4 OBD proposal and the introduction of REAL.

5 Coming later in 2019 and 2020 are the second
6 stage of the heavy-duty warranty rules, as well as a
7 proposal to introduce a heavy-duty inspection and
8 maintenance program, which is similar to the light-duty
9 Smog Check Program.

10 --000--

11 AIR RESOURCES ENGINEER HENDERICK: So why are we
12 here today?

13 OBD is very clearly a technology forcing
14 regulation. Staff closely monitors developments in
15 technologies and manufacturers' progress towards meeting
16 the requirements, and reports back to the Board
17 periodically if any changes are warranted. Our last
18 comprehensive update to the heavy-duty OBD regulations was
19 in 2012, so we are due for another update.

20 Our proposal addresses a set of diverse issues.
21 First, it takes big steps towards addressing industry
22 concerns over the cost and difficulty of testing in-use
23 engines.

24 Second, it addresses areas of the regulation that
25 needs to be clarified.

1 Third, it addresses issues that were discovered
2 by CARB staff during the certification process, and the
3 testing of in-use vehicles. Last, as discussed in the
4 previous presentation, our proposal addresses the need to
5 begin advancing the mobile source program in a new
6 direction.

7 --o0o--

8 AIR RESOURCES ENGINEER HENDERICK: So let's take
9 a step back briefly and cover just what OBD is. First
10 off, OBD was established by CARB for light- and
11 medium-duty vehicles starting in 1994. And the
12 implementation of heavy-duty OBD started in 2010. OBD
13 itself is a system in the engine's on-board computer that
14 monitors the performance of emission-related components
15 and identifies malfunctions.

16 When the OBD system detects a problem with one of
17 these components, it notifies the vehicle owner by
18 illuminating a check engine light on the dashboard that we
19 refer to as the malfunction indicator light, or MIL.
20 Anyone with a standard scan tool can get specific
21 information about the malfunction by connecting the tool
22 to the vehicle. CARB regulations require the OBD system
23 to continue to perform all of these functions for the
24 entire life of the vehicle.

25 OBD plays a key supporting role in both

1 light-duty inspection and maintenance programs, and the
2 identification of repairs that are covered by warranty.
3 At the public hearing in June of this year, the Board
4 extended the explicit linkage of OBD to the emissions
5 warranty for heavy-duty vehicle, and intends to
6 incorporate OBD as part of a future heavy-duty inspection
7 and maintenance program.

8 --o0o--

9 AIR RESOURCES ENGINEER HENDERICK: I'll now shift
10 gears and cover the amendments to the OBD regulations that
11 we are proposing today. At a high level, the proposed
12 changes fit into four categories: changes to the
13 monitoring requirements, the testing requirements, the
14 data that the engine's computer is required to report, and
15 the compliance and enforcement provisions.

16 I will first discuss the proposed amendments to
17 the monitoring requirements.

18 --o0o--

19 AIR RESOURCES ENGINEER HENDERICK: So what
20 exactly does an OBD monitor do? An OBD monitor makes sure
21 that an emissions-related component is working properly
22 while the vehicle is being used in the real world. It
23 consists of signals that enter the on-board computer,
24 which are then evaluated against specific malfunction
25 criteria under specific conditions.

1 Because of the need to detect and repair
2 malfunctions as soon as possible, staff is proposing to
3 require that monitors look for malfunctions more
4 frequently. For most monitors, this means running on at
5 least three out of every ten trips that a truck is driven.

6 Staff is also proposing amendments that would
7 improve the monitoring of the hoses that carry gases from
8 the engine's crankcase.

9 In addition to these amendments, which increase
10 the stringency of the regulation, staff is also proposing
11 to relax a few requirements to address manufacturers'
12 concerns about the feasibility of certain monitors.

13 --o0o--

14 AIR RESOURCES ENGINEER HENDERICK: Next, I will
15 discuss the proposed amendments which relate to OBD system
16 testing requirements.

17 --o0o--

18 AIR RESOURCES ENGINEER HENDERICK: Before
19 receiving OBD certification, manufacturers are required to
20 conduct OBD demonstration testing in which they test all
21 the major monitors on an engine, which has been aged to
22 full useful life.

23 After being certified, manufacturers must then
24 test production vehicles to make sure that finished
25 commercial products, and not just lab engines, meet OBD

1 requirements. Several of staff's proposed changes apply
2 to OBD demonstration testing.

3 These include enhancements to the engine aging
4 procedure that will make the test engine better represent
5 the performance and behavior of a full useful life engine.
6 Staff is also proposing that the manufacturer collect and
7 report additional data during this demonstration testing
8 to get a better understanding of how monitors and the
9 engine behave in the test cell environment. Having such
10 data would serve as a valuable point of reference for
11 analyzing real world test data gathered from in-use
12 compliance programs.

13 Lastly, staff is proposing changes that apply to
14 production vehicle testing that occurs after
15 certification, including testing a few major monitors on
16 the road to ensure that they work properly when the trucks
17 are put into commercial service.

18 --o0o--

19 AIR RESOURCES ENGINEER HENDERICK: Ensuring good
20 performance in the real world is a major theme for us, and
21 it is at the heart of the proposed changes to the data
22 requirements, which I will now discuss.

23 --o0o--

24 AIR RESOURCES ENGINEER HENDERICK: The proposed
25 changes to the data requirements of the regulation are

1 tied to the introduction of a new CARB initiative called
2 Real Emissions Assessment Logging, or REAL.

3 REAL is motivated by nothing other than a
4 fundamental goal of CARB, which is to control real-world
5 emissions and not just test cell emissions. In-use data
6 suggests that with diesels in particular, we are falling
7 short of our expectations when we set emission standards.

8 Two very different examples have been revealed in
9 the past few years. First, as we all know, several model
10 years of Volkswagen diesel cars were not performing in-use
11 consistent with how they were certified in the laboratory.

12 Second, staff discovered that 2010 through 2015
13 model year Cummins engines had an in-use durability issue
14 associated with the SCR catalyst. These issues highlight
15 the need to monitor actual real-world emission performance
16 and to identify problems sooner than we are doing today.

17 We could conduct more of the usual in-use test
18 programs, but they are slow, expensive, and yield small
19 sample sizes. A more powerful alternative would be for
20 each truck to use the sensors it already has to estimate
21 and track its own emissions. Hence, the concept of REAL
22 was born. If such a tool were applied to every new truck,
23 we would have access to far greater amounts of data on the
24 real-world emissions of these vehicles.

25 Therefore, as part of the introduction of REAL,

1 staff is proposing that heavy-duty engines track and
2 report data characterizing their own NOx and GHG emissions
3 in the real world. Details of this proposal will be
4 discussed in the following slides.

5 --o0o--

6 AIR RESOURCES ENGINEER HENDERICK: Let's first
7 discuss the NOx data tracking proposal. The idea is to
8 use existing technology and hardware, like the NOx sensors
9 already on trucks, to estimate and track NOx emissions in
10 the real world. These data could be used as a quick
11 screening tool for flagging potential high emitters in the
12 field.

13 The data could also be used to improve our
14 emissions inventory and serve as a new tool in the
15 evolution of future regulations.

16 The proposal would require NOx data tracking on
17 new medium-duty and heavy-duty diesel engines. Engines
18 would be required to log both NOx emissions and engine
19 activity data, while being driven in-use.

20 Recent and lifetime data would need to be stored
21 separately. Because the data would be stored in aggregate
22 without any location information, it could not be used to
23 identify the movement or driving behavior of a vehicle
24 operator.

25 --o0o--

1 AIR RESOURCES ENGINEER HENDERICK: CARB staff is
2 currently working with industry to develop standard
3 specifications for these data, which will be contained in
4 future versions of SAE J1979 and J1939 standards.

5 Implementation of these standards is
6 straightforward and relies on existing technology on the
7 engines. In discussions with industry, however, staff
8 learned that current engine control modules might have
9 insufficient space to store all of the proposed tracking
10 parameters. Staff, therefore, recognizes that lead time
11 is required for manufacturers to update their control
12 modules prior to implementation of this proposal.

13 --000--

14 AIR RESOURCES ENGINEER HENDERICK: Next, I will
15 discuss the greenhouse gas data tracking concept. Similar
16 to the NOx tracking proposal, GHG tracking would rely on
17 technology and hardware that is already on the engine to
18 estimate and track CO2 emissions.

19 The GHG related data that CARB would gain access
20 to, as a result of this proposal, is critical for
21 determining the actual benefits of new technologies used
22 for compliance with the Phase 2 GHG rule, and provide
23 valuable data for future rule development.

24 This proposal does not add any GHG OBD
25 malfunction criteria at this point, so GHG-specific

1 parameters will not be used to illuminate the MIL.

2 Staff's proposal would apply to all new
3 heavy-duty on-road engines. Similar to the 2015 OBD II
4 update for light- and medium-duty vehicles, this proposal
5 would require the logging of both GHG technology activity
6 and CO2 emission data as trucks operate in the real world.

7 --o0o--

8 AIR RESOURCES ENGINEER HENDERICK: Next, I will
9 discuss the proposed amendments to compliance and
10 enforcement requirements.

11 --o0o--

12 AIR RESOURCES ENGINEER HENDERICK: First up are
13 the proposed changes to the deficiency provisions.
14 Sometimes manufacturers put in a good faith effort to
15 comply with the OBD regulation, but for various reasons
16 can fall short.

17 In such cases, the OBD regulations allow
18 manufacturers to certify their OBD systems with
19 deficiencies. Fines are applied to these deficiencies to
20 prevent misuse of the provisions and to ensure equity
21 among manufacturers.

22 However, CARB staff learned that some
23 manufacturers have been using deficiencies as a product
24 planning tool instead of investing the engineering
25 resources needed to produce a compliant product. There is

1 also concern that some manufacturers may be using
2 deficiencies to reduce in-use liability and self-testing
3 burdens. To deter this behavior, staff is proposing to
4 increase the deficiency fines.

5 As can be seen from the table, no fines were
6 applied between 2010 and 2012, which were the first years
7 of heavy-duty OBD. Starting in 2013, fines of \$50 were
8 applied to deficiencies of emission threshold and major
9 monitors, while all other deficiencies had fines of \$25
10 each, with the total fine cap being \$500 per engine.

11 Since heavy-duty engine production volumes tend
12 to be small, the fines that manufacturers must pay for
13 noncompliant OBD systems ended up being too low to deter
14 noncompliance.

15 Therefore, staff is proposing that starting with
16 the 2021 model year, deficiency fines for emission
17 threshold monitors would range from is \$100 to \$450,
18 depending on how much emissions exceed the required
19 detection thresholds. Other major monitors would have
20 deficiency fines of \$100 each, and all remaining
21 deficiencies would have fines of \$50 each. The total fine
22 cap per engine would increase from \$750 in 2021 up to
23 \$1,500 for 2023 and later model year engines.

24 --000--

25 AIR RESOURCES ENGINEER HENDERICK: The next

1 proposed changes I will discuss are in response to
2 manufacturers' concerns about the workload and costs
3 associated with manufacturer self-testing requirements.

4 Due to manufacturers' difficulty in finding
5 engines that meet the selection criteria in the
6 regulation, staff is proposing amendments that would
7 broaden some of the criteria, and make it easier to find
8 engines to test. These include things like expanding the
9 required mileage on the vehicle, and having some
10 flexibility on the power rating of the engine.

11 Additionally, staff is proposing to reduce the
12 testing burden by cutting the number of monitors that need
13 to be tested in half from about 30 monitors down to 15
14 monitors. This change would save manufacturers a large
15 amount of time and money.

16 The last point on this slide relates to
17 investigations. Staff is proposing an amendment to make
18 it clear that CARB staff can require manufacturers to
19 provide full details on engine and after-treatment
20 controls, including hardware and software to assist staff
21 during in-depth investigations of OBD systems.

22 --o0o--

23 AIR RESOURCES ENGINEER HENDERICK: I will now
24 move on to the costs of the proposal. Staff's proposed
25 changes are expected to result in an incremental cost to

1 the consumer of about \$43 per engine. This cost estimate
2 is based on published reports related data, and input from
3 manufacturers, suppliers, and testing labs.

4 As mentioned in the previous slides, deficiencies
5 and increased manufacturer self-testing due to
6 noncompliance would result in additional costs for
7 manufacturers. More details on these costs will be
8 discussed later in the presentation.

9 --000--

10 AIR RESOURCES ENGINEER HENDERICK: I would now
11 like to talk about the benefits of the heavy-duty OBD
12 program. OBD is a powerful on all on-road heavy-duty
13 vehicles. It ensures that the benefits of the emission
14 standards program are achieved in-us throughout the entire
15 life of the vehicle.

16 OBD is used as a basis for warranty claims,
17 facilitates effective repairs by identifying the
18 malfunction component, and motivates industry to increase
19 the durability of these components. OBD will also likely
20 be the foundation for a future heavy-duty I&M program
21 similar to how OBD is used today in California's
22 light-duty Smog Check Program. Once the Real Emissions
23 Assessment Logging element is added to the picture, it
24 will further ensure that these benefits are realized and
25 maintained.

1 Today's proposal does not generate new emissions
2 benefits in the traditional sense, but instead serves to
3 ensure that the benefits associated with the original
4 regulation are preserved.

5 Looking at the cumulative heavy-duty OBD program
6 costs versus the original emission benefit estimates
7 yields an overall cost effectiveness of \$28 per pound of
8 PM and \$0.20 per pound of NOx. These numbers compare
9 favorably to other recently approved on-road heavy-duty
10 rulemakings.

11 The Smoke Inspection Program, for example,
12 calculated a PM cost effectiveness of \$93 per pound. The
13 Heavy-Duty Warranty Program had a PM cost effectiveness of
14 between \$18 and \$49 per pound, and a NOx cost
15 effectiveness of \$3 to \$8 per pound.

16 --o0o--

17 AIR RESOURCES ENGINEER HENDERICK: Over the
18 course of multiple meetings with industry, manufacturers
19 have expressed concerns with our original proposal,
20 primarily on the timing of the introduction of the REAL
21 Program, and the overall cost of the OBD program. They
22 believe that the implementation of REAL should be delayed
23 because it is better suited to start with engines that
24 will meet CARB's future low NOx proposal.

25 Staff disagrees with this, because we consider

1 REAL to be a necessary tool for both current and future
2 standards. Engines built before the new emission
3 standards are effective will be on the road for many
4 years, so it is important that REAL data are tracked on
5 these engines to ensure they are running clean in-use.

6 As I described earlier, there are some very
7 significant diesel emission issues that CARB staff has
8 found in the field, and we can't afford delays in fixing
9 these types of problems when they arise. Using today's
10 hardware and technology, we can implement REAL to help us
11 quickly find emission problems in the near term. Doing so
12 will also lay the foundation for the evolution of REAL on
13 engines that meet the lower emission standards of the
14 future.

15 The second key concern voiced by manufacturers is
16 the -- is that the overall cost of the OBD Program is too
17 high. While staff acknowledges that the cost of the
18 program is indeed high, we consider it necessary to ensure
19 that California gets high quality OBD systems that are
20 effective in keeping heavy-duty engines clean in-use, and
21 able to properly support I&M and warranty programs.

22 Of course, the cost of the OBD Program increases
23 significantly for non-compliant systems. But these costs
24 are avoidable by designing compliant systems.

25 --000--

1 AIR RESOURCES ENGINEER HENDERICK: To help
2 understand the overall costs of the OBD Program, staff did
3 cost analyses each time the program was updated. The
4 first row of this table shows the incremental cost to the
5 consumer for each program update. The current proposal
6 has an estimated incremental cost of \$42 per engine. When
7 this cost is added to the other incremental costs and
8 adjusted for inflation, the total incremental cost comes
9 to \$242 per engine.

10 The second row of the table shows the incremental
11 cost to consumers when scaled up to the production volume
12 of the average manufacturer. If all costs are passed on
13 to consumers, the total cost for an average OEM's
14 production volume is projected to be \$14.3 million per
15 year in 2018 dollars. Scaled to the annual production
16 volume of the entire heavy-duty engine industry, the total
17 incremental cost to consumers is estimated to be \$121
18 million.

19 While these costs are significant, staff believes
20 that the benefits from the heavy-duty OBD Program are well
21 worth the costs. And as discussed previously, the costs
22 are comparable to those of other adopted measures. It
23 should be pointed out that these costs assume full
24 compliance with the regulation.

25 On the following slide, I will give examples of

1 what the costs of noncompliance can look like.

2 --000--

3 AIR RESOURCES ENGINEER HENDERICK: This slide
4 illustrates that noncompliance can be very expensive under
5 the proposed fine structure. It uses actual data from two
6 engines made by different manufacturers, OEM A and OEM B.
7 The first row is the total incremental cost for the OEM to
8 comply with the proposed amendments. Since these OEMs
9 have similar annual sales numbers in California and offer
10 the same number of engine families, they have the same \$32
11 incremental cost per engine. The second row shows the
12 costs of noncompliance for the two -- for the two OEMs.

13 OEM A has no emissions threshold deficiencies,
14 but does have nine other deficiencies giving a total cost
15 of \$450 per engine. In contrast, OEM B has five emissions
16 threshold deficiencies and 13 other deficiencies for a
17 total deficiency cost of \$1,575, but our proposal caps
18 this at \$1,500.

19 The last row sums up all of the costs to the OEM.
20 Because OEM A has fewer noncompliance issues, it's cost
21 per engine sold is more than \$1,000 less than the cost to
22 OEM B. This demonstrates that doing the work up front to
23 have compliant systems can have a substantial -- can save
24 a substantial amount of money in the long run.

25 --000--

1 AIR RESOURCES ENGINEER HENDERICK: I will now
2 discuss the changes that staff would like to make to the
3 proposal based on an evaluation of comments from industry.

4 The first change is to delay the effective date
5 of the amendments to the 2024 model year. This delay does
6 not include the REAL proposal, manufacturer self-testing
7 relaxations, and other increased flexibilities.

8 The second change is to provide manufacturers
9 with two compliance options for introducing REAL. Option
10 1 is a reduction in the number of REAL parameters in the
11 22 -- 2022 and 2023 model careers. Specifically, staff is
12 proposing that only lifetime data, and not the recent
13 history data be stored in the on-board computer during
14 these introductory years.

15 Option 2 provides manufacturers with two years of
16 reduced OBD demonstration testing in exchange for full
17 implementation of REAL in 2022.

18 Staff's third proposed change is to delay
19 implementation of the increased deficiency fines to the
20 2024 model year, so that manufacturers have more time to
21 come into full compliance before facing the higher fines.
22 Staff is also proposing to slightly reduce the total fine
23 cap from \$1,500 down to \$1,250 per engine.

24 --000--

25 AIR RESOURCES ENGINEER HENDERICK: In addition to

1 the proposed 15-day changes, staff is committing to come
2 back to the Board in 2021 with a technical review of the
3 heavy-duty OBD Program in light of the other on-highway
4 program developments that are projected to take place
5 between now and 2020. At that time, staff is also
6 committing to conduct an economic analysis of the ongoing
7 costs and benefits of the OBD Program.

8 --o0o--

9 AIR RESOURCES ENGINEER HENDERICK: In concluding
10 this presentation, staff recommends that the Board adopt
11 the proposed amendments with 15 day changes. The 15-day
12 changes will include clarifications and updates to
13 references that are incorporated in the regulations, as
14 well as amendments stemming from ongoing discussions with
15 industry, as I mentioned earlier.

16 Staff also recommends that the Board approve the
17 written response to the environmental comments that we
18 received. This concludes the staff presentation, and I
19 thank you for your attention.

20 CHAIR NICHOLS: Thank you. Just to be clear
21 then, if the Board acts as the staff is requesting, and
22 the 15-day changes go forward, and you don't receive any
23 information that causes you to make substantial changes,
24 the Executive Officer would go ahead and adopt without
25 bringing it back to the Board, is that correct?

1 EXECUTIVE OFFICER COREY: That's correct.

2 CHAIR NICHOLS: Okay. I just -- I think that's a
3 fine process given the very highly technical nature of
4 this. I just want to make sure that we and everybody else
5 understands that we're not following the process of going
6 through dual hearings on this same set of rules. I think
7 that -- I think that makes sense.

8 Okay. We have four witness who have signed up.
9 So lets go ahead and hear from them first beginning with
10 Mr. Jed Mandel, the CMA Truck and Manufacturers
11 organization.

12 Good morning.

13 MR. MANDEL: Good morning, Chair Nichols. I'm
14 jed -- it would be nice if the microphone were on.

15 CHAIR NICHOLS: I have this problem too.

16 MR. MANDEL: Technology challenged.

17 I am technology challenged.

18 (Laughter.)

19 CHAIR NICHOLS: How about those engines?

20 (Laughter.)

21 MR. MANDEL: The engines are great.

22 (Laughter.)

23 MR. MANDEL: I'm president of the Truck and
24 Engine Manufacturer's Association. I just want to take
25 one moment to express my industry's sympathy and concern

1 for the tragic fires that have happened in California. It
2 is really a tragedy, the human life and obviously the
3 environmental damage.

4 EMA and its members recognize that areas in
5 California are in ozone non-attainment, and that
6 additional NOx reductions are, in fact, needed. We are
7 committed to pursuing both additional NOx reductions from
8 heavy-duty on-highway vehicles, and overall improvements
9 in the regulatory program, both in California, and
10 nationwide. Advancements in emission sensors, real-time
11 data processing, and telematic capabilities, and potential
12 geofencing strategies afford an opportunity to reimagine
13 the regulatory paradigm to ensure improved emission
14 compliance, and additional real-world NOx reductions.

15 We envision next tier emission control
16 regulations that move from a prescriptive based approach
17 to a robust and comprehensive performance based approach.
18 But it will take time and effort to fully develop and
19 implement that type of paradigm shift. And we need to do
20 so on a nationwide basis, not only because trucks operate
21 in interstate commerce, but also because 60 percent of the
22 state's commercial vehicle VMT comes from out-of-state
23 trucks.

24 And, of course, I'd be remiss if I didn't note at
25 this point the announcement that EPA just made of their

1 commitment to do national program that we have been
2 advocating for more than two years. So a little bit man
3 bites dog that this industry has actually asked EPA to
4 regulate us further.

5 The complexity and expense of the proposed
6 heavy-duty OBD amendments -- amendment measures will
7 consume a significant percentage of manufacturer's
8 engineering resources and expertise that otherwise could
9 be directed toward developing and optimizing a new
10 performance-based paradigm.

11 Further, as noticed by your staff, the overall
12 cost of OBD program are extraordinarily expensive. And as
13 we note, the newest OBD requirements add yet additional
14 costs and provide no meaningful emissions benefits. For
15 all of the above reasons we've been working with your
16 staff the last few days to find a way to move forward to
17 achieving what I think is our mutual goal, the development
18 of a new paradigm-shifting performance-based compliance
19 program providing real-world NOx reductions.

20 To help accommodate that goal, the staff is
21 proposing to defer a bulk of the recommendations to a
22 later time frame. I'm not going to summarize what they
23 are. They were on the last slide. We think that proposal
24 is a creative and workable solution to addressing the very
25 significant concerns we have raised. It both avoids the

1 need for unnecessary acrimony and gives us time to work on
2 the future program. We urge the Board to accept the
3 staff's revised proposal, which we strongly support. I'm
4 happy to answer any questions.

5 CHAIR NICHOLS: Thank you very much.

6 We'll keep you here in case we need some
7 questions answered.

8 Thank you.

9 MR. MANDEL: Thank you very much.

10 CHAIR NICHOLS: Kate Blumberg.

11 Good morning.

12 MS. BLUMBERG: Good morning. Thank you, Chairman
13 Nichols and the Board for having us. I'm sure it comes as
14 no surprise to the Board that the International Council on
15 Clean Transportation supports greater availability and
16 transparency of real-world emissions performance from
17 heavy-duty trucks.

18 We submitted comments in support of Real
19 Emissions Assessment Logging, and also want to support
20 CARB's OBD proposal in general. It's been an integral
21 part of California and nationwide efforts to reduce
22 vehicle emissions, and it's really been the model for
23 heavy-duty OBD programs worldwide.

24 Indeed, we expect China and Europe to look to
25 this proposal and that it will impact Euro 7 proposals, as

1 well as China's remote OBD and Europe's real world fuel
2 consumption programs.

3 OBD has really proven itself in the light-duty
4 arena by increasing durability and effectiveness of
5 emission controls, warranty and smog check programs. It
6 detects malfunctions, and assists in diagnosis. And it's
7 a critical part of emission controls operations.

8 As sensor technology has improved and reduced in
9 cost, we strongly support taking advantage of these
10 systems to provide better data transparency and increased
11 effectiveness of heavy-duty in-use monitoring program in
12 California and at the national level.

13 Unfortunately, the data currently available from
14 real-world emission testing for heavy-duty diesels in the
15 U.S. shows that NOx emissions are consistently above
16 certification levels for a large number of vehicles under
17 driving conditions under urban and suburban driving, an
18 area where Europe is actually doing better and this is the
19 reason we need this information.

20 This proposal will add transparency, and make
21 available key parameters that would help in understanding
22 and solving these high emissions. And PEMS testing is
23 very expensive. While these sensors are already on the
24 vehicles, it's mostly just about storing and making the
25 data available.

1 There is also a lack of publicly available
2 real-world fuel consumption data for heavy-duties --
3 heavy-duty vehicles, even though EPA and CARB both have
4 greenhouse gas inefficiency standards. Having access to
5 that real-world fuel consumption data will help track the
6 effectiveness of these programs and identify areas of
7 improvement helping researchers, governments, even
8 industry and consumers.

9 We really support implementing the REAL Program
10 and the proposed OBD amendments as soon as possible. We
11 appreciate that OBD can be a demanding program to
12 implement, especially for manufacturers, but we really see
13 that the great benefits are worth the efforts.

14 Thank you so much.

15 CHAIR NICHOLS: Thank you for your help in all of
16 this.

17 Michael Geller and then Bill Magavern.

18 MR. GELLER: Good morning, Chair Nichols and
19 members of the Board. My name is Michael Geller. I'm the
20 Deputy Director for the Manufacturers of Emission Controls
21 Association. MECA represents manufacturers of
22 technologies that reduce both criteria and greenhouse
23 gases from all mobile sources, including the sensors used
24 in OBD systems on both light- and heavy-duty vehicles.

25 These sensors may be used for the measurements of

1 PM and NOx levels in the exhaust to basically facilitate
2 closed-loop control of the combustion process and also
3 monitoring catalyst and filter elements.

4 MECA supports ARB's proposed introduction of Real
5 Assessment -- Emissions Assessment Logging, or REAL, to
6 characterize real-world NOx and CO2 performance. Because
7 the collection and storage of real-world NOx and CO2 data
8 on board vehicles is a new requirement, MECA does support
9 ARB's proposed 15-day changes to provide some flexibility
10 for REAL to be phased in.

11 This phased in approach has been successful for
12 other mobile source regulations and allows industries,
13 consumers, as well as the regulatory bodies some ability
14 to learn from experience early on from technology early
15 adopters.

16 Most current vehicles are already equipped with
17 sensors that measure NOx and fuel use. The addition of a
18 requirement that these data be stored, along with other
19 currently measured parameters, results in a cost effective
20 method to collect and report in-use operational data. And
21 that can enable quicker inspection, and maintenance, and
22 repair.

23 In addition, as REAL is implemented and ARB staff
24 gain experience with the data, there may be an opportunity
25 to reduce further -- future certification and compliance

1 burden.

2 MECA encourages ARB to continue to explore the
3 potential concepts for future I&M programs that are
4 comprehensive and could use some of this enhanced REAL
5 data. MECA supports the use of OBD and potentially
6 telematics when they become available to screen vehicles
7 for these purposes.

8 A future heavy-duty I&M program may utilize OBD
9 system data, including some REAL data, and some of the
10 malfunction code information to basically analyze vehicle
11 operation and diagnose current and potential issues.

12 For light-duty vehicles, MECA anticipates that
13 the use of onboard CO2 data could be used to help verify
14 off-cycle emission credits, technology credits. After
15 assigning conditional preapproved credit, there could be a
16 way to basically determine if a technology, after it's
17 introduced to market by an OEM how the CO2 data could be
18 used to demonstrate real-world off-cycle credit values.
19 And that's based on using an average over the REAL fleet
20 of hundreds or thousands of vehicles.

21 In conclusion, MECA does support ARB staff's
22 efforts to improve OBD regulatory requirements, including
23 future addition of a framework to enable continuous
24 monitoring on board vehicles. Our industry continues to
25 respond to the need for on-board diagnostics that can

1 facilitate inspection and maintenance, as well as
2 continuous monitoring by innovating and commercializing
3 the technologies that will happen our customers meet OBD
4 requirements.

5 Now, we're committed to continuing to work with
6 you on this, as well as the Heavy-duty low NOx program
7 that we are -- Rasto was at -- Rasto Brezny was at in
8 Washington D.C. earlier this week, which is why I'm here
9 before you today.

10 So thank you very much.

11 CHAIR NICHOLS: Thank you.

12 Good morning.

13 MR. MAGAVERN: Good morning. Bill Magavern with
14 the Coalition for Clean Air in support of the proposal
15 that is before you. Looking at the big picture, we
16 strongly endorse the dual directions that this agency has
17 been taking for several years now, and that staff outlines
18 in the previous item, first, to push for inherently
19 cleaner engine technologies for new vehicles; and second,
20 for those vehicles that are already in use to try to make
21 sure that we're getting the emission reductions that are
22 promised and projected when those engines are certified.

23 This particular proposal that you have this
24 morning we think has several benefits, more frequent and
25 comprehensive monitoring, making the certification more

1 representative of real-world aging, and improvements in
2 verification.

3 The Real Emissions Assessment Logging, or REAL --
4 and I would note that between FARMER and REAL, your staff
5 are really upping their game when it comes to acronyms.

6 (Laughter.)

7 MR. MAGAVERN: -- also the higher fines are
8 necessary to deter noncompliance. So we urge you to
9 approve this proposal without delay. And looking ahead,
10 staff have teed up some future actions. And I wanted to
11 particularly call attention to two that we look forward to
12 working on. One is the low NOx standard for new trucks.
13 And then for existing heavy-duty vehicles, it's essential
14 that we get into place a comprehensive inspection and
15 maintenance program.

16 I think that most Californians would be shocked
17 to find out that while their cars need to go through a
18 smog check process, the diesel big rigs that they see on
19 the roads are not subject to such a comprehensive
20 inspection and maintenance system.

21 So we need to get that into place soon, and we
22 look forward to working with you and the industry on both
23 of those.

24 Thank you.

25 CHAIR NICHOLS: Thank you.

1 I'll join in your commendation on the acronyms.
2 And I want to raise you on this, because I think that we
3 need to implement a program, which does an automatic
4 search of all text for the words "real world" and
5 eliminates most of them --

6 (Laughter.)

7 CHAIR NICHOLS: -- because what unreal-world are
8 we living in?

9 (Laughter.)

10 CHAIR NICHOLS: Maybe it is unreal. But we seem
11 to have suddenly discovered that there's a difference
12 between what happens in the lab and what happens in the
13 quote "real world". So I feel like maybe once per report
14 would be enough, and then we could just kind of -- think
15 of the paper we would save, the trees, the -- anyway.

16 (Laughter.)

17 CHAIR NICHOLS: Other than that, I have no other
18 comments to make on the presentation. I think it was
19 fine. And I'm going to close the record unless the staff
20 has any additional points they need to make.

21 Yes, Mr. Eisenhut.

22 BOARD MEMBER EISENHUT: There we go. If this is
23 a worthy proposal, and I believe it is, my question of
24 staff for longer term than this proposal is why on-road
25 only? Why not include off-road?

1 We have, as industry and state, a significant
2 investment in off-road vehicles. And we have made that
3 investment based on the capacity, rather than the
4 delivered reductions. And I get very much that off-road
5 vehicles or off-road equipment has a different use
6 pattern, a different maintenance pattern, and doesn't
7 cross state lines.

8 But if this technology is available for feedback
9 on on-road vehicles, I would request, at least for future
10 conversations, a report on why not -- why we wouldn't
11 include off-road vehicles.

12 ECARS DIVISION CHIEF HEBERT: Okay. Just to
13 address your comments. What tends to happen is new
14 technology rollouts like this will usually start in the
15 light-duty categories and then expand to heavy-duty, like
16 OBD has. It's gone from light-duty to heavy-duty. The
17 On-Board Diagnostic Program, for instance, does not exist
18 on off road yet. And therefore, it wouldn't have the
19 basis in off-road to take advantage of the sensor
20 technology that we're talking about that's used for
21 on-board diagnostics to transpose to REAL.

22 However, as we all pointed out, the other
23 category's area, it is something that we will be looking
24 closely at if we need to bring something like OBD or REAL
25 to the off-road arena as well. We might, you know, be

1 able to leap frog straight to REAL, depending on how this
2 REAL Program matures. But it does need to mature a little
3 bit in the on-road category first.

4 And in case, you're not aware, starting in 2019,
5 light-duty vehicles will already have a version of REAL
6 for greenhouse gas emissions on the new vehicles starting
7 in 2019. So that was the initial implementation of REAL
8 that was adopted a few years ago.

9 BOARD MEMBER EISENHUT: Thank you.

10 CHAIR NICHOLS: Any other questions or comments
11 from the Board members?

12 Yes, Dr. Sperling.

13 BOARD MEMBER SPERLING: I do want to comment how
14 impressed I am with this whole strategy. I mean, this is
15 -- I don't if everyone appreciates it, but this really is
16 highly innovative, even revolutionary, this path that the
17 staff and the industry has started on. You know, we're
18 talking about -- you know, the -- Mr. Mandel had a quote,
19 and I think I'd like to read it again that he said the
20 advancements in sensors and other capabilities, and with
21 geofencing strategies afford an opportunity to reimagine
22 the regulatory paradigm to assure improved in-use
23 compliance and real-world NOx emissions. He did say that.

24 (Laughter.)

25 BOARD MEMBER SPERLING: This is really important,

1 because, you know, as regulators, there's a temptation to
2 just keep adopting ever more prescriptive requirements.
3 And I think what the staff is doing here working with
4 industry is starting to think about how do we do it in a
5 more effective way. And I think that is the path we're on
6 here. And, you know, I want to commend the staff and the
7 industry for embarking on this. And it's going to be --
8 you know, it's not clear exactly how it's going to play
9 out, but the in-state vision here, at least that Mr.
10 Mandel laid out and in my discussions with the staff,
11 there's agreement that eventually we're ending up with
12 more of a telematics-based system where the responsibility
13 is put on the industry to -- where they've been -- they
14 collect the emissions and they keep track of it and report
15 back for in-use on whether they're in compliance.

16 An given what we've seen how in-use emissions are
17 so high, we've got to do better somehow. And so it seems
18 like it makes a lot of sense the REAL Program is a step in
19 that direction. But I'm particularly excited about it,
20 because when you move towards that telematics-based
21 approach, it opens up the possibility for two big changes
22 that we've always wanted to do and never been able to do.

23 And that is, one, we can really focus on really
24 high-polluted -- you know, high-exposure, high-polluted
25 areas, EJ communities, because now we can do essentially

1 reverse defeat devices in which the emissions are even
2 lower in those areas. And I know there's a lot of debate
3 about exactly how to do that, and how easy it is and what
4 those trade-offs will be, but it creates that potential,
5 which does not exist now.

6 And the other thing it does is it creates the
7 potential eventually for us to understand what the real
8 emissions are and be able to adopt - okay, I'm going to
9 use the P word here - pricing strategies for emissions,
10 which is really if it can be done is highly effective.

11 Now, CARB -- I should probably highlight, CARB
12 would not be the one doing the pricing part of it. But
13 that is the path the state is on with -- and probably, you
14 know, much of the world, towards moving away from a
15 gasoline tax and keeping track of actual CO -- in this
16 case CO2 and fuel consumption, real world. So -- and then
17 being able to eventually tax it.

18 So this creates the potential to do that as well.
19 So this is potentially really a radical -- even a radical
20 change in how we do it, and creating the conditions for
21 really creating a far more sustainable transportation
22 systems, and using other mechanisms to accomplish that.

23 So I just want to add my very enthusiastic
24 support for the direction we're going in here.

25 CHAIR NICHOLS: Thank you. I'm going to take

1 that as a motion.

2 (Laughter.)

3 BOARD MEMBER SPERLING: You got it.

4 CHAIR NICHOLS: To be followed by a second.

5 BOARD MEMBER RIORDAN: And I'll second it, Madam
6 Chair. I'll second that.

7 CHAIR NICHOLS: All right. I don't -- I think
8 it's clear what we're doing here. There will be a 15-day
9 period, and then the staff will move forward unless they
10 feel there's something fundamental that needs to be
11 changed.

12 So we have a motion and a second.

13 All in favor, please say aye?

14 (Unanimous aye vote.)

15 CHAIR NICHOLS: Opposed?

16 Any opposition?

17 Very good. Thank you and congratulations. This
18 is a very good move.

19 We are next moving to two items that are going to
20 heard together regarding cap and trade. And I'm going to
21 suggest that we take a very brief, really brief like five
22 minutes break, so people can stretch and get ready, and
23 we'll start the next item at exactly 10 of 11:00.

24 (Off record: 10:44 a.m.)

25 (Thereupon a recess was taken.)

1 (On record: 10:50 a.m.)

2 CHAIR NICHOLS: All right. A deal is a deal.

3 We will get back to work here. Before we begin,
4 I should have said something at the start of the break
5 but -- I have the mic on.

6 Hello?

7 Can you turn it up? Okay. Thank you.

8 At the next break, or if you happen to have an
9 opportunity to get up and move around during the course of
10 the day, I want to call everybody's attention to a
11 showcase that's going on in the lobby and outside showing
12 the products of a number of manufacturers of electric lawn
13 and garden equipment. This is going to be part of the
14 discussion later this afternoon when we hear an update on
15 progress with these small off-road engines. But we've got
16 some actual products here, and we'd like people to take a
17 look at them. There's also some larger equipment down in
18 the courtyard that you can go by and ooh and aah over,
19 think about what you might be wanting for Christmas.

20 Anyway, so that is the display. It's called the
21 Zero-Emission Equipment Showcase.

22 Okay. So the next staff presentation today
23 combines two items, Proposed Amendments to the
24 Cap-and-Trade Regulation and Proposed Amendments to the
25 Regulation for Mandatory Reporting of Greenhouse Gas

1 Emissions, which, of course, is fundamental to our whole
2 program for addressing the issue of global warming.

3 The Cap-and-Trade Program is a key part of a
4 comprehensive set of programs outlined in the Climate
5 Change Scoping Plan to help California reach our 2020 and
6 2030 targets. The program is an economy-wide measure that
7 places a price on emissions and thereby incentivizes
8 actions that lead to emissions reductions.

9 The Board first considered the Cap-and-Trade
10 Regulation in 2010. Since then, the regulation has been
11 updated several times as we move forward with
12 implementation and identify issues. And Board direction
13 has also moved this forward.

14 Today's amendments are proposed in response to
15 legislation that was authored by our fellow Board Member
16 Honorable Assembly Member Eduardo Garcia - and I am very
17 pleased to recognize him as well as Senator Lara, who is
18 taking a well-deserved rest after his statewide election
19 campaign - to recognize the strong support that we have
20 had for AB 398, which was passed by a two-thirds vote of
21 the legislature last summer. We now enjoy a strong legal
22 basis for the program.

23 While implementing this program, staff has
24 continued to meet with stakeholders on a regular basis to
25 ensure efficient implementation while sharing lessons

1 learned with other jurisdictions and demonstrating that
2 economic growth and climate action are not only not
3 mutually exclusive but actually mutually supportive.

4 Supporting the Cap-and-Trade Program and our GHG
5 emissions inventory and several other programs is the
6 mandatory reporting of greenhouse gases, which covers the
7 State's largest emitters. Verified emissions data is
8 fundamental to any kind of an effective regulation. And
9 that is what our programs are based on.

10 So, Mr. Corey, if you would like to go ahead and
11 introduce the report.

12 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

13 So staff is proposing that the Board consider
14 amendments to the Cap-and-Trade Regulation and the
15 regulation for the mandatory reporting of greenhouse
16 gases -- greenhouse gas emissions. With the adoption of
17 the 2017 Scoping Plan update last December and the signing
18 AB 398, as you noted, staff is proposing amendments to the
19 Cap-and-Trade Regulation to conform to legislative
20 direction in AB 398 as well as Board direction.

21 Timely adoption of these amendments will ensure
22 businesses have the regulatory certainty to plan for the
23 transition to the next decade when the rate of reductions
24 needed to achieve the 2030 target doubles.

25 Staff is engaged in a robust public process in

1 the development of these amendments that includes four
2 publicly noticed workshops and meetings with stakeholders
3 to discuss specific topics related to the proposed
4 cap-and-trade amendments.

5 These forums provided the opportunities for
6 stakeholders and staff to discuss initial regulatory
7 concepts and potential alternatives. And the proposed
8 amendments incorporate many aspects of these discussions.

9 Key elements of the modifications bolster cost
10 containment, support an increase in cost benefits -- or
11 rather co-benefits from offsets in the state, ensure
12 continued efforts to minimize leakage, and ensure
13 accounting of emissions associated with imported
14 electricity and associated compliance obligations.

15 Also, in response to recent action by the
16 Government of Ontario to revoke its Cap-and-Trade Program
17 as of July of this year. The proposed amendments also
18 propose to de-link from Ontario's program.

19 I'll now ask Carey Bylin of the Industrial
20 Strategies Division to begin the staff presentation.

21 Carey.

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

24 AIR POLLUTION SPECIALIST BYLIN: Thank you, Mr.
25 Corey, and good morning.

1 Today, I'll start with the Cap-and-Trade
2 Regulation providing background, context, and an overview
3 of amendments and analyses. I will then present proposed
4 changes to the mandatory GHG reporting regulation to
5 support changes to the Cap-and-Trade Program. I will
6 close with a discussion of next steps.

7 --oOo--

8 AIR POLLUTION SPECIALIST BYLIN: Our climate
9 targets are guided by a few key statutes and executive
10 orders. In 2006, AB 32 set our initial goal for 2020
11 statewide GHG emissions to return to 1990 levels. In
12 2016, SB 32 established a target that calls for a 40
13 percent reduction in GHGs below 1990 levels by 2030.

14 Last December, we adopted the 2017 Scoping Plan
15 update which lays out the strategy - a suite of
16 complementary measures that will help us achieve the 2030
17 reductions, and that includes the Cap-and-Trade Program.

18 Governor Schwarzenegger's Executive Order set a
19 goal of an 80 percent reduction below 1990 levels by 2050.
20 Likewise, Governor Brown's most recent Executive Order
21 calling for carbon neutrality by 2045, and the most recent
22 IPCC report require us to find ways to drive emissions
23 reductions sooner while balancing any remaining emissions
24 against sequestration.

25 --oOo--

1 AIR POLLUTION SPECIALIST BYLIN: From the
2 beginning and per AB 32, the Cap-and-Trade Program is
3 designed to, "Achieve the maximum technologically feasible
4 and cost-effective GHG emissions reductions". It sets
5 declining annual emissions caps and creates a mechanism to
6 drive a steadily increasing carbon price to motivate the
7 lowest cost reductions in the near term, and create a
8 long-term price signal to encourage investments in low
9 emitting and energy efficient technologies.

10 As mentioned, the program is a key part of the
11 overall strategy to achieve the State's GHG reduction
12 targets and the 2017 Scoping Plan Update found that a
13 suite of policies that includes a Cap-and-Trade Program is
14 the most cost-effective path to achieve the 2030 target,
15 four times less costly than the alternative approaches
16 that were evaluated.

17 The program is intended to work in conjunction
18 with other established measures. The program covers about
19 80 percent of the State's emissions. And AB 398
20 designates the Cap-and-Trade Regulation as the rule for
21 petroleum refineries and oil and gas production facilities
22 to achieve their GHG reductions.

23 To date, quarterly auctions have generated over
24 \$8 billion for California climate investments, which is
25 reinvested in California to reduce GHG emissions,

1 strengthen the economy, and improve public health and the
2 environment, particularly in disadvantaged communities.

3 For projects implemented to date, 51 percent of
4 the investments benefit disadvantaged communities, and 31
5 percent are located within disadvantaged communities.

6 --o0o--

7 AIR POLLUTION SPECIALIST BYLIN: The next slide
8 gives a sense of the role of the Cap-and-Trade Program in
9 achieving our 2030 target. The policy itself must deliver
10 significant reductions to ensure we achieve the target.
11 Also, the program is beyond just charging a cost per ton
12 of carbon emissions. It must send the right price signals
13 for companies to take actions today in how they develop
14 and use energy, or plan for higher compliance costs if
15 they delay those actions.

16 --o0o--

17 AIR POLLUTION SPECIALIST BYLIN: Prior to
18 starting the formal rulemaking process for these
19 amendments, staff conducted an informal public process,
20 and held four workshops from October 2017 to June 2018.
21 In conjunction with these workshops, CARB released
22 discussion drafts of possible changes to regulatory
23 language, technical discussion documents, and a summary of
24 stakeholder comments received.

25 This process enabled staff to share preliminary

1 ideas with stakeholders and solicit constructive specific
2 feedback on our proposals to inform our formal rulemaking
3 package, which we released September 4th.

4 Staff is proposing to release one 15-day
5 proposal, which I will discuss later. Following a second
6 and final Board hearing, we plan for both regulations to
7 take effect April 1st of 2019.

8 --o0o--

9 AIR POLLUTION SPECIALIST BYLIN: This rulemaking
10 package is primarily in response to AB 398 and Board
11 Resolution 17-21, which the Board adopted in July of last
12 year. To accommodate AB 398, the proposed amendments at a
13 price ceiling and two allowance price containment reserve
14 tiers, reduce offset usage limits post-2020, implement
15 direct environmental benefits in the state's -- in the
16 State provision for offsets, and set post-2020 industry
17 assistance factors for allowance allocation.

18 Staff also evaluated whether post-2020 caps
19 should be adjusted to account for currently unused
20 allowances as directed by AB 398.

21 Board Resolution 17-21 directs staff to take
22 specific action on post-2020 cap adjustment factors for
23 certain sectors and assistance factors for the third
24 compliance period.

25 Staff is also proposing amendments to respond to

1 changes to Ontario's Cap-and-Trade Program and to clarify
2 and streamline program participation and implementation.

3 I will discuss several of these items in detail
4 in the following slides.

5 --o0o--

6 AIR POLLUTION SPECIALIST BYLIN: As mentioned on
7 the previous slide, in response to AB 398, staff evaluated
8 the concerns related to overallocation and the post-2020
9 caps. Staff analyzed this issue, presented initial
10 thinking at two public workshops, and released supporting
11 material that documents a comprehensive assessment of
12 post-2020 caps using public data and the most recent
13 scoping plan modeling forecasts.

14 Staff also looked at and took into account
15 several third-party analyses of this issue. To focus our
16 review, staff prepared appendix D of the regulatory
17 package by assessing five key questions to inform decision
18 making on this topic.

19 Question one, does the design of the
20 Cap-and-Trade Program support a steadily increasing carbon
21 price signal to prompt the needed actions to reduce GHG
22 emissions?

23 Yes. Historical data demonstrates the carbon
24 price has steadily increased over time. Our steadily
25 increasing floor price reinforces this outcome.

1 Question two, are the pre- and post-2020 caps set
2 appropriately, given the Cap-and-Trade Program's role in
3 achieving the statewide GHG reduction targets when taking
4 into account complementary policies?

5 Yes. We consider the potential unused allowances
6 from before 2021 -- excuse me. When we consider the
7 potential unused allowances from before 2021 in
8 conjunction with the post-2020 caps, we found the amount
9 of allowances are lower than the projected emissions.

10 --o0o--

11 AIR POLLUTION SPECIALIST BYLIN: Question 3, does
12 California need to make adjustments to its Cap-and-Trade
13 Program to address potential overallocation similar to
14 actions taken in the European Union Emissions Trading
15 System and the Regional Greenhouse Gas Initiative?

16 No, we do not need to make similar adjustments.
17 The reference programs had to correct for low allowance
18 prices that the program administrators believed were too
19 low to send a sufficient carbon price signal.

20 In contrast, data shows the allowance price in
21 the California program has steadily increased over time
22 and we are reducing our statewide emissions
23 year-over-year.

24 Question four, is there any evidence that future
25 allowance prices would not continue to steadily increase

1 to prompt the needed actions to reduce GHG emissions?

2 No, our staff and third-party analyses do not
3 indicate allowance prices would collapse or stagnate.
4 Instead, many of the third-party analyses show that the
5 prices would increase close to the floor price for the
6 next several years, and then start to lift above the
7 floor.

8 Question five, what would happen if caps from
9 2021 through 2030 were reduced in response to concerns
10 about unused allowances from 2013 through 2020.

11 Reduced caps would increase allowance prices
12 today and in the future. In summary, staff expects the
13 program with its current features, including the current
14 allowance budgets and steadily increasing carbon price
15 signal, will result in actions to reduce GHG emissions to
16 help achieve the 2030 target.

17 As a result of this analysis, staff is not
18 recommending any revisions in this rulemaking package that
19 would alter allowance budgets or banking rules.

20 --o0o--

21 AIR POLLUTION SPECIALIST BYLIN: We now turn to
22 the details of our proposed amendments starting with new
23 cost-containment features. This figure will show
24 projected allowance prices through 2030 in 2018 dollars.
25 We start with the auction reserve price commonly known as

1 the auction floor price, which escalates over time.

2 It is shown in the dark line extending from 2018
3 to 2030. Next, are the current three tiers that make up
4 the allowance price containment reserve from 2018 to 2020.

5 In the current regulation, the post-2020 reserve
6 is changed to a single tier. That is shown in the dotted
7 line from 2021 to 2030, and I will refer to that as the
8 current regulation. AB 39 directed CARB to make specific
9 revisions to the current regulation.

10 Next, we will show the new post-2020 reserve as
11 proposed in the amendments. Reserve tier 1, reserve tier
12 2, and the price ceiling. The price ceiling, as mandated
13 by AB 398, provides a limit on allowance prices. Staff
14 does not consider the price ceiling a goal, but rather a
15 release valve for unlikely price levels.

16 In building the new reserve tiers and price
17 ceiling, we sought to enhance cost containment of the
18 program relative to the current regulation. As you can
19 see in 2021, the proposed price ceiling and new reserve
20 tiers are lower relative to the current regulation. The
21 new reserve tiers would remain below the current
22 regulation price through the 2020s.

23 The price ceiling would be below the current
24 regulation price through 2026 and increases slightly above
25 the current regulation value from 2027 through 2030. To

1 ensure there is no divergence between the floor and the
2 new reserve tiers and price ceiling, all three escalate at
3 five percent plus inflation, similar to the floor price.

4 Relative to the current regulation, the proposed
5 reserve allowances initiate price containment at lower
6 values and are spread over a wider range of prices. This
7 results in stronger dampening of potential allowance price
8 increases and provides additional time for covered
9 entities to reassess and implement newly cost effective
10 GHG reductions.

11 In the very unlikely event that allowance prices
12 or costs of emission reductions under the program are much
13 higher than anticipated, price ceiling allowances and
14 additional reductions are guaranteed to be available at a
15 known price.

16 --o0o--

17 AIR POLLUTION SPECIALIST BYLIN: It is also worth
18 noting that in bolstering the cost containment features of
19 the program, the proposed amendments provide access to
20 more allowances at lower prices in the period 2021 to
21 2030. I'll illustrate this with an example using the year
22 2021.

23 Under the current regulation on the left, in 2021
24 the projected single reserve tier price would be about
25 \$75, and no price-containing reserve allowances would be

1 available at lower prices.

2 The total number of allowances projected to be in
3 the single tier reserve in 2021 is 213.2 million. Under
4 the proposed amendments on the right, more allowances are
5 available at lower prices beginning in 2021. We propose
6 to meet -- to make 66.8 million tier one allowances
7 available at the \$39, 89.5 million tier 2 allowances would
8 be available at about \$50, and 79.6 million price ceiling
9 allowances would be available at about \$61.

10 In addition, if price ceiling allowances are
11 exhausted, the proposal includes the sale of price ceiling
12 units. And proceeds from the sale of price ceiling units
13 would fund ton-for-ton GHG reductions outside the program
14 pursuant to AB 398.

15 The total amount of allowances in the new
16 post-2020 reserve tiers and price ceiling is estimated to
17 be 235.9 million, which includes the 120 million
18 allowances carried over from the existing reserve.

19 --000--

20 AIR POLLUTION SPECIALIST BYLIN: AB 398 specifies
21 criteria that CARB must consider in setting the price
22 ceiling, and staff sought to balance these elements while
23 developing this proposal. In looking at these legislative
24 criteria, it is helpful to look at the program through a
25 come comprehensive lens as the cost containment features

1 all work together.

2 So in assessing the price ceiling, we wanted to
3 understand and acknowledge how other design features in
4 the program also interact with and respond to the criteria
5 in AB 398.

6 The first criterion is the need to avoid adverse
7 impacts on resident households, businesses, and the
8 state's economy. This outcome continues to be a critical
9 design objective for the Cap-and-Trade Program. In
10 2017 -- the 2017 Scoping Plan Update found that a suite of
11 policies that included a Cap-and-Trade Program is the
12 least costly path to achieve the 2030 target by a factor
13 of four compared to alternatives, with the lowest
14 estimated impact to the economy, jobs, and households.

15 AB 398 requires that CARB consider the full
16 social cost associated with emitting a metric ton of GHGs.
17 In evaluating the level at which to set the price ceiling,
18 staff looked extensively at sources that estimate social
19 cost of carbon, in particular the 2017 Scoping Plan
20 Update, and the comprehensive efforts of the Interagency
21 Working Group on the Social Cost of GHGs, or IWG --
22 convened in 2009 by the Council of Economic Advisors and
23 the Office of Management and Budget.

24 Staff's proposed 2021 price ceiling of \$61 in
25 real 2018 dollars captures the social cost of carbon as

1 established by the IWG and the Scoping Plan.

2 It is important to note that the social cost of
3 carbon research acknowledges that value is likely
4 underestimated, and work continues to refine estimates to
5 reflect full social costs, which are estimated to be
6 higher.

7 The cost per metric ton of GHG emissions
8 reductions to achieve the statewide emissions target is
9 another AB 398 required factor, and the proposed price
10 ceiling level includes consideration of the costs of
11 existing and known technologies to reduce emissions.

12 AB 398 also requires consideration of the 2020
13 tier prices of the allowance price containment reserve and
14 the auction reserve price. The proposed amendments
15 maintain continuity with the program's current
16 cost-containment design features. The proposed price
17 ceiling retains the five percent annual escalation of the
18 current 2013 through 2020 reserve, and the auction reserve
19 price.

20 And it roughly maintains the cost range that
21 would have been provided by the current regulation only to
22 slightly exceed the current regulation beginning in 2027.

23 This price range between the floor and ceiling
24 allows for price discovery across a consistent range for
25 all periods of the program, while ensuring the lowest cost

1 reductions are targeted first.

2 Reserving this price range also provides
3 sufficient space for the two new post-2020 reserve tiers
4 to operate at a meaningful fixed distance between the two
5 points. And finally, staff considered the potential for
6 environmental and economic leakage. Minimizing leakage
7 continues to be a critical design objective for the
8 Cap-and-Trade Program. Coupled with the increase in
9 assistance factors for allocation to 100 percent, the
10 program is the most cost-effective option from the 2017
11 Scoping Plan and the best option to minimize leakage of
12 emissions, jobs, and economic activity.

13 In short, staff had to consider and balance
14 across these criteria and ensure the program continues to
15 play a meaningful role to incentivize actions and
16 technology to reduce emissions and transform how we
17 develop and use energy.

18 --000--

19 AIR POLLUTION SPECIALIST BYLIN: Staff proposes
20 amendments to comply with AB 398 direction to reduce the
21 offset usage limit. The quantitative offset usage limit
22 in the current ram is eight percent. Under this proposal,
23 calendar year emissions for 2021 to 2025 will have an
24 offset credit usage limit of four percent.

25 And calendar year emissions for 2026 to 2030 will

1 have an offset usage limit of six percent. Per AB 398,
2 for compliance, no more than one half of an entity's
3 quantitative offset usage limit may be sourced from
4 projects that do not provide direct environmental benefits
5 in the state or DEBS.

6 The legislative definition of DEBS is, "The
7 reduction or avoidance of emissions of any air pollutant
8 in the State, or reduction or avoidance of any pollutant
9 that could have adverse impacts on waters of the state".

10 CARB proposes to use the legislative definition
11 to assess if offset projects provide DEBS.

12 --000--

13 AIR POLLUTION SPECIALIST BYLIN: In terms of
14 implementing the DEBS requirement, staff is proposing a
15 performance standard for projects located in state or
16 sourced with gases from in-state. This approach is
17 consistent with the approach to implement additionality
18 for offset projects. The criteria are established by
19 project type. And if projects conform to all protocol
20 requirements, they are determined to meet all offset
21 related criteria.

22 The staff report details how projects undertaken
23 within the state meet the DEBS criteria. Staff proposes a
24 case-by-case review for projects located out-of-state or
25 sourced with gases from out-of-state. These project

1 developers will need to demonstrate how the project meets
2 the DEBS requirements, and CARB staff will review the
3 submitted information and make a determination for each
4 offset project.

5 --o0o--

6 AIR POLLUTION SPECIALIST BYLIN: With respect to
7 linkage with Ontario, on June 15, the Government of
8 Ontario issued a press release indicating that Ontario
9 would repeal its Cap-and-Trade Program. In response,
10 California and Quebec immediately took steps to protect
11 the environmental stringency of the linked market and
12 suspended transfers of compliance instruments between
13 Ontario entities and California or Quebec entities.

14 On July 3rd, the Ontario Government published a
15 regulation revoking Ontario's Cap-and-Trade Regulation and
16 prohibiting Ontario's cap-and-trade participants from
17 purchasing, selling, trading or otherwise dealing with
18 allowances and offset credits.

19 Based on these actions, staff proposes amendments
20 to de-link with Ontario's program.

21 The proposed amendments clarify how the Executive
22 Officer may exercise existing authority to protect the
23 environmental stringency of the California program,
24 ensuring that a careful approach is followed during what
25 is expected to be very limited circumstances in which the

1 Executive Officer would need to take specified actions.

2 The experience with Ontario did provide important
3 lessons. In particular, it highlighted the resiliency of
4 the design of our Cap-and-Trade Program.

5 --o0o--

6 AIR POLLUTION SPECIALIST BYLIN: I want to next
7 discuss allocation. Calculation methodologies for
8 allowance allocation contain four elements: fuel or
9 product data, an assistance factor reflecting leakage
10 risk, benchmarks, and a cap adjustment factor.

11 Industry assistance factors in the current
12 regulation scale free allowance allocation with the level
13 of leakage risk for each industrial sector. The proposed
14 amendments follow AB 398 direction to set assistance
15 factors at 100 percent for the post-2020 period,
16 increasing protection against leakage.

17 Board Resolution 17-21 directed staff to evaluate
18 setting assistance factors in the third compliance period
19 if 2018 to 2020, at 100 percent as well. The current
20 regulations 2018 to 2020 assistance factors are 100
21 percent for high leakage risk sectors, 75 percent for
22 medium, and 50 percent for low.

23 With the AB 398 post-2020 revision, the
24 assistance factors for the years leading up to and
25 following the third compliance period are 100 percent for

1 all leakage risk categories. The graph depicts estimated
2 compliance costs for low- and medium-risk sectors assuming
3 2018 to 2020 assistance factors in the current regulation,
4 shown as light blue bars, and assuming 100 percent
5 assistance factors for the same period shown in the dark
6 blue bars.

7 As shown, maintaining current assistance factors
8 results in a spike in compliance costs under the current
9 regulation, and modifying the 2018 to 2020 assistance
10 factors to 100 percent results in a smoother cost
11 trajectory. Staff notes that smoothing this -- the
12 transition into the post-2020 program is critical as the
13 rate of reductions needed is doubled relative to today.

14 In addition to the revisions to assistance
15 factors, the proposed amendments extend the alternative,
16 more slowly declining, cap adjustment factor for certain
17 sectors through 2030.

18 --000--

19 AIR POLLUTION SPECIALIST BYLIN: These proposed
20 amendments are expected to both increase and decrease
21 compliance costs and, in turn, costs to consumers.

22 Increased compliance costs will result from the
23 reduction in the offset usage limits, and the new criteria
24 that limits the use of offsets that do not meet the
25 definition of direct environmental benefits in the state.

1 There are also several elements of the proposal
2 that decrease compliance costs, including the two new
3 reserve tiers, which make available an additional 156
4 million allowances at prices below the current regulation,
5 a price ceiling that balances across AB 398 criteria,
6 continued use of limited banking to allow for hedging, no
7 removal of unused allowances or reductions to the
8 post-2020 caps, and increasing assistance factors to 100
9 percent from 2018 through 2030.

10 --000--

11 AIR POLLUTION SPECIALIST BYLIN: Staff also
12 proposes amendments to clarify, enhance, and streamline
13 the permissible uses of allowances value allocated to
14 electrical distribution utilities, or EDUs, and natural
15 gas suppliers.

16 The State allocates allowances to these entities
17 for the purpose of benefiting their ratepayers consistent
18 with the goals of AB 32. The proposed amendments continue
19 to allow a range of uses of allocated allowance proceeds,
20 including renewable energy, energy efficiency and fuel
21 switching, and other GHG-reducing activities.

22 Both EDUs and natural gas suppliers can continue
23 to use allowance value for non-volumetric return of
24 proceeds to ratepayers. The proposed amendments clarify
25 particular activities that are not allowed, including

1 compliance activities, lobbying, and benefiting employers
2 or shareholders.

3 --000--

4 AIR POLLUTION SPECIALIST BYLIN: This slide shows
5 other proposed revisions. For the compliance offset
6 program, the proposed amendments revise and clarify
7 provisions related to successor liability; use of
8 alternative methods to obtain measurement and monitoring
9 data; and regulatory compliance and invalidation.

10 The proposed amendments also revise certain
11 allowance allocation provisions to ensure appropriate
12 levels of allocation for transition assistance, such as
13 for waste to energy and leakage prevention, including for
14 newly covered sectors.

15 Provisions related to the Energy Imbalance Market
16 are also being revised. This change will be covered in
17 more detail during the discussion of the mandatory
18 reporting regulation changes. To improve program
19 administration, the amendments clarify and update
20 registration and auction requirements, process, and
21 procedures.

22 Staff proposes to extend the application deadline
23 for the limited exemption for emissions from the
24 production of qualified thermal output, known as the "but
25 for" CHP exemption -- from 2014 to 2020 to provide an

1 additional application opportunity for entities that
2 potentially qualify for this exemption.

3 These and other revisions clarify and streamline
4 the program and enhance CARB's ability to implement and
5 oversee the regulation.

6 --o0o--

7 AIR POLLUTION SPECIALIST BYLIN: Staff modeled
8 the macroeconomic impacts of the proposed amendments
9 relative to the current regulation listed as the reference
10 scenario on this slide. As modeled, the proposed
11 amendments are anticipated to have a negligible impact on
12 the economy, employment, and personal income through 2030,
13 even in the unlikely event that allowance prices reach the
14 price ceiling.

15 --o0o--

16 AIR POLLUTION SPECIALIST BYLIN: Staff completed
17 a draft Environmental Analysis, or EA, for the proposed
18 cap-and-trade amendments. The draft EA was released for a
19 45-day comment period on September 7th. The public
20 comment period closed on October 22nd, and staff will be
21 preparing written responses to all of the draft EA
22 comments received.

23 Staff will present the final EA and written
24 response to comments on the draft EA to the Board at the
25 second Board hearing.

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AIR POLLUTION SPECIALIST BYLIN: Now, I will turn to the proposed amendments to the mandatory reporting regulation or MRR. Annually over 800 entities report data under MRR. And the data collected supports multiple climate change programs at CARB, including the Cap-and-Trade Program and the statewide GHG inventory.

Staff is proposing targeted updates that clarify and streamline reporting requirements and implementation, based on experience with the program and stakeholder input, to ensure that report data are accurate, complete, and fully support CARB's climate programs.

The proposal includes minor dairy product data clarifications to align with current industry practices and updates to source-testing requirements for nitric acid producer not covered in the Cap-and-Trade Program.

The proposed changes clarify the cessation requirements for reporting and verification of certain entities, and support the alignment of CARB's GHG accounting and CAISO's Energy Imbalance Market.

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AIR POLLUTION SPECIALIST BYLIN: Under AB 32, CARB must account for GHG emissions from electricity that is generated in-state or imported to California to serve California load. The current design of the Energy

1 Imbalance Market, or EIM, does not account for all GHG
2 emission from imported electricity under EIM, and results
3 in emissions leakage.

4 In 2017, the Board approved a temporary solution
5 for the MRR and Cap-and-Trade Programs to account for this
6 emissions leakage. Under the current regulations, CARB
7 calculates the annual EIM outstanding emissions and
8 retires an equivalent number of unsold allowances from the
9 state's pool of allowances to account for compliance
10 obligation associated with the emissions leakage.

11 In early 2018, CAISO released a proposal that
12 would limit the amount of electricity deemed to support
13 EIM imports. While staff supports CAISO's updated
14 proposal, because it will reduce the amount of emissions
15 leakage in the system, it would not address all of the EIM
16 GHG accounting concerns.

17 --o0o--

18 AIR POLLUTION SPECIALIST BYLIN: Staff is now
19 proposing to implement an approach to replace the current
20 regulatory solution and require entities in the
21 electricity sector, purchasing from the EIM market, to be
22 responsible for EIM emissions leakage. In the 45-day
23 package, staff proposed to place a reporting and
24 compliance obligation on entities importing in the EIM
25 that would have resulted in bringing new entities into the

1 MRR and Cap-and-Trade Programs.

2 Since the release of the 45-day package, staff
3 has been working with CAISO and stakeholders to refine the
4 approach in a 15-day proposal. The 15-day proposal would
5 include provisions to retire allowances that would
6 otherwise go to the electricity sector to account for the
7 emissions leakage, and narrows the scope of the entities
8 to those already participating in the MRR and
9 Cap-and-Trade Programs.

10 Staff's proposal only addresses EIM transactions
11 and not the day-ahead market or regionalization.

12 --000--

13 AIR POLLUTION SPECIALIST BYLIN: Staff will be
14 proposing limited updates to be included in a 15-day
15 package. In addition to the mentioned revisions to the
16 EIM proposal, possible revisions include slightly revising
17 and clarifying provisions for use of allowance value,
18 updating the leakage risk classification for new sectors
19 eligible for allowance allocation, and revising regulatory
20 conformance and invalidation provisions fro U.S. Forest
21 offset projects. Staff may also make a clarification
22 related to offsets to address concerns of ambiguity.

23 --000--

24 AIR POLLUTION SPECIALIST BYLIN: In terms of next
25 steps, as mentioned, we are planning to release a 15-day

1 package for both regulations in late November, and we will
2 continue to engage with stakeholders.

3 We will have our second Board hearing in December
4 or January, and if adopted, the regulations are expected
5 to be in effect April 1st of 2019.

6 --000--

7 AIR POLLUTION SPECIALIST BYLIN: Before I end the
8 presentation, I want to flag a few items that staff is
9 proposing to address in a subsequent rulemaking. These
10 include adjusting the allocation to the utilities in
11 response to. SB 100, which increases the renewables
12 portfolio standard to 60 percent in 2030 from the existing
13 50 percent.

14 We will work with industrial stakeholders to
15 allocate additional allowances to address an embedded
16 energy carbon price that is not already accounted for.

17 We want to recognize the role of fuel cells in
18 addressing air quality concerns under specific conditions,
19 and we will evaluate the need for, and propose as
20 appropriate, updates to the compliance offset protocols.

21 These and any other amendments would be subject
22 to our usual public process before coming back to the
23 Board.

24 --000--

25 AIR POLLUTION SPECIALIST BYLIN: That ends my

1 presentation, and we can take your questions.

2 Thank you

3 CHAIR NICHOLS: Thank you. We also have about 65
4 witnesses who have signed up to testify on this item. But
5 I can see, and I'm aware from various of the media, social
6 media, other inputs, that their comments are going to be
7 largely clustered around a couple of different items.

8 So I want to make some comments first and then
9 I'm also going to talk about the schedule of the rest of
10 this. My comments are as follows:

11 I think you should put up on the screen again one
12 or maybe two slides. I'm not sure that you can do both of
13 them. The slide that shows the expected price of
14 allowances out to 2030, and the slide that -- that showed
15 the social cost of carbon, or the cost -- I'm not quite
16 sure. I want to focus on a couple of points.

17 So, first of all, this regulation that we are
18 dealing with, the Cap-and-Trade Regulation that is, is
19 designed not to be a revenue raiser for the State of
20 California, and not to have prices go very high. It was
21 never intended to be the principal tool for achieving our
22 carbon reduction goals. It was always intended mostly as
23 an insurance policy, but frankly also to demonstrate that
24 it would be possible for the State of California with the
25 size and diversity of its economy, and our concern about

1 climate change to actually design and implement a
2 successful Cap-and-Trade Program, meaning a program that
3 would achieve the reductions that it was called for in a
4 manner that was not overly expensive, and did not drive
5 businesses out of the state of California, or make the
6 price of goods too high for Californians to afford,
7 including the price of energy, whether electricity or
8 driving.

9 And in addition to that, that it would not be a
10 subject of scandal, or market manipulation, which at the
11 time we first started this was a very big concern in the
12 aftermath of the 2008 melt down of the economy.

13 And I think, as we demonstrated, and when we went
14 through the process of getting the two-thirds vote to
15 re-authorize this program from the legislature. Thank you
16 very much, Mr. Garcia. Welcome. Glad to see you here.
17 That those issues were aired in extensively. And I feel
18 that we had a good conversation and we dealt with a lot of
19 the -- a lot of the concerns at that time about prices of
20 allowances, whether they were too high or too low. And I
21 think we probably had more people who thought they were
22 too low, than thought that they were too high at that
23 point.

24 So it's a little bit ironic, I guess, that we're
25 here now dealing with the concerns about the ceiling

1 price, and what -- how to -- how to deal with the
2 potential threat that the prices could go too high.

3 But that's the nature of this program, that as it
4 goes along concerns get raised, and people find things
5 that they're going to worry about. And not to say that
6 those aren't legitimate, but just that we have to
7 recognize that people will continue to examine this. And
8 potentially think about whether they would like to, you
9 know, redo the whole program in shall way make a different
10 than it is today.

11 But the one thing that this die is pretty clear
12 is that as we were directed to look at the social cost of
13 carbon, in our assessment of the price, this social cost
14 of carbon that we were using was too low. There's no --
15 really no argument about that. And so when we look at the
16 predicted prices, I have to ask to start with the question
17 of whether you really think that it make sense to keep
18 going as we are out to 2030, given what we think is going
19 to be emerging from the studies that are underway now
20 about what the -- what it truly takes to address the
21 problem, and about what the impact is of the increasing
22 amount of carbon.

23 And I can look at any one of several people to
24 answer that question, including our economist, but I'll --
25 I'll start with Ms. Sahota who's the person in charge of

1 the actual running of this program.

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: So good morning. And I think this tees up the
4 question about how we've traditionally done regulations at
5 ARB, and the new construct in AB 197 to consider the
6 social cost of carbon, because it was really AB 197 that
7 first identified in statute that we need to look at the
8 social cost of carbon, and we did that in the Scoping
9 Plan.

10 So how we've traditionally done regulations is
11 look at cost effectiveness. And so in AB 32, it says to
12 design a program that is cost effective. And that's also
13 called for in AB 398, and in AB 977.

14 And when we think about cost effectiveness, it's
15 defined in AB 32 as the cost to reduce a ton of emissions.
16 And so that construct is really how we've traditionally
17 approached all of the regulations at ARB when we think
18 about cost effectiveness is what is the cost for every
19 unit of reduction in any of the programs? And that's how
20 we started with the Cap-and-Trade Program.

21 The social cost of carbon is really valuing the
22 economics of avoided damages. So if you don't emit one
23 ton into the atmosphere, how much economic value is saved
24 to everyone by not having that emission. So it actually
25 speaks to a very different concept than cost

1 effectiveness. There is work that is underway to look at
2 the social cost of carbon because we identified in the
3 2017 Scoping Plan that the social cost of carbon values we
4 used, which were the Obama administration values, much
5 higher than what's in the current administration's guide
6 book.

7 Those captured what could be monetized and
8 modeled when those values were developed over a decade of
9 work. And since that time, probably within in the last
10 two or three years, we've seen emerging research and
11 science that says if you even updated one part of the
12 social cost of carbon, just the agricultural part of that
13 entire equation, you would see a value that's probably
14 double digits -- or triple digits, not double digits.
15 It's about \$50. It would probably be over \$100.

16 So as we're thinking about the Cap-and-Trade
17 Program, what we're really trying to do is get people to
18 reduce emissions. And as we're thinking about reducing
19 emissions, we fall back into the cost effectiveness of the
20 program. So the allowance price, it needs to motivate
21 somebody to reduce emissions.

22 If we were to put the price at the social cost of
23 carbon, what we're essentially saying is it's not the
24 price to reduce emissions, it's the cost of you emitting
25 an additional ton into the atmosphere. And so it's a very

1 different construct in that sense.

2 Like I said, there is additional work going on.
3 And actually the Independent Emissions Market Advisory
4 Committee made one of the recommendations, which was
5 continue to look at the social cost of carbon, and add in
6 values, such as secondary impacts, like asthma. When you
7 have increased temperatures, what does that mean for local
8 air quality, smog formation? What does that mean for
9 missed days of work, miss days of school, et cetera.
10 Those are not included.

11 Emily can probably speak more to the ongoing
12 science, and the efforts that came out of the Governor's
13 Climate Action Summit, but the values of the social cost a
14 carbon are expected to be much higher than even what we
15 used in the scoping plan.

16 CHAIR NICHOLS: Um-hmm. Thank you for that. I
17 think it is sort of useful just to keep in mind as part of
18 the backdrop of what it is that we're doing here, not that
19 these amendments directly address that topic.

20 Before we go on and take comments from the
21 public, I think we should just talk about schedule. With
22 65 people at three minutes per, we have to think about
23 both the cost of time --

24 (Laughter.)

25 CHAIR NICHOLS: -- as people move back and forth,

1 and making sure that we keep on time, and also about
2 breaks. So I'm going to make a couple of suggestions.
3 First of all, with respect to the people in the audience,
4 the list is up there. And you know -- you'll see where
5 you are on the list. We would really appreciate it if a
6 couple of moves ahead of your own testimony, when you're
7 at a person who's like two or three ahead of you, if you
8 could move down to the front and either stand behind one
9 of the microphones, or take a seat in the front row.
10 We've kept the seats empty there so you'd be ready, and we
11 can actually save some significant time, if you add up all
12 those moments when people are walking up to the
13 microphone. It really does make a difference.

14 As far as the brunch -- lunch break is concerned,
15 sorry -- lunch break, I don't think we should take one. I
16 think we should have Board members get up when they need
17 to and go grab a bite in the back. We can hear you in the
18 back room. So we won't all leave at once. Hopefully,
19 people can stagger it.

20 And you, in turn, who are here to speak can see
21 when you've got a little bit of a break, and if you could
22 just go grab something downstairs in the cafeteria, or if
23 you are the sort of person who actually doesn't eat lunch,
24 then you don't have to worry about this. But anyway, I
25 there's a way that everybody can be accommodated without

1 us having to take an actual 45-minute break, which then
2 turns into an hour and so forth.

3 So if that's okay with everybody -- I don't see
4 anybody objecting. Let's just -- let's just get started
5 beginning with Diana Tang. Our prize winning number one.

6 (Laughter.)

7 CHAIR NICHOLS: Congratulations. The City of
8 Long Beach

9 Good morning.

10 MR. TANG: Good morning, Chair and members of the
11 California Air Resources Board. Again, my name is Diana
12 Tang. And I manage government affairs for the City of
13 Long Beach.

14 I am here before you today to speak in support of
15 the Cap-and-Trade Program overall. Long Beach has been
16 supportive of this program since AB 32 was introduced back
17 in 2006.

18 I'm also in support of the waste-to-energy
19 facility, which would be negatively affected by staff's
20 proposed changes to the cap-and-trade compliance
21 mechanisms before you today.

22 The city has a long history of supporting the
23 Cap-and-Trade Program, as I had mentioned. And I'd also
24 like to share a little bit about why we also choose to use
25 waste to energy.

1 So back in 1988, our community decided that waste
2 to energy is a cleaner and more sustainable way to manage
3 municipal solid waste as compared to landfills. Those are
4 the two options that we had back then, and they remain the
5 two options that we have today for municipal solid waste.

6 We are proud we take 100 percent of our
7 non-recyclable trash to -- collected curbside to this
8 facility, which has had a significantly smaller footprint
9 than even the smallest landfill. The facility also
10 reduces waste volume by over 90 percent while also
11 supporting metals recycling and narcotics disposal for
12 state, federal, and local law enforcement agencies across
13 Central and Southern California.

14 We are proud that over the years the city and our
15 private operator have taken the initiative to proactively
16 improve the facility's emissions technologies by
17 installing a carbon injection system, and ammonia
18 injection system, and we continue to use the best
19 available technologies and practices available.

20 These improvements have allowed us to ensure
21 emissions from the facility consistently fall well below
22 the -- our air permit requirements, and in most cases by
23 80 to 90 percent. We are proud that we chose to locate
24 this facility in the Port of Long Beach near many other
25 industrial uses and away from homes. To summarize, our

1 community values waste to energy.

2 In an effort to buy time for city staff to
3 identify an economically viable option for keeping the
4 facility, our city council just two months ago voted
5 unanimously to allocate 8.7 million to -- in local
6 resources to support facility equipment maintenance and
7 allow for opportunities to process higher value waste. We
8 are also pleased our contracted operator is putting an
9 additional five million towards these improvements. As
10 mentioned, city staff are currently trying to identify an
11 economically viable path forward for the facility.

12 From a facility management perspective, we are at
13 a cross road. Our power purchase agreement, which we have
14 relied on to support many of the facility's expenses,
15 expires at the end of the year, while the bonds we issued
16 to pay for the facility while also be diffused at the end
17 of the year.

18 But with that said, the facility does need
19 additional maintenance to ensure that we can continue
20 operating well below air permits as we intend to, but for
21 which significant resources will be needed beyond what was
22 already approved two months ago for long-term
23 improvements.

24 So the question is, is there a way we can make
25 meaningful improvements to the facility to keep it

1 operational long term? If not, then that means that
2 California's seventh largest city will go back to
3 landfilling just like every other city in California has
4 been doing with their waste.

5 And so with that, we're asking simply for parity
6 for waste to energy in landfills.

7 Thank you.

8 MR. LARREA: Good morning. John Larrea with the
9 California League of Food Producers.

10 I'm stepping in front of one of our members who
11 is Erick Watkins with the Pacific Coast Producers. They
12 asked me to come up and speak first on behalf of the
13 League, and then -- and I'd ask them to come in, in case
14 the Board wanted to hear from some of our actual members
15 on the impacts of the new regulation. So I think I'll let
16 them decide whether or not they want to speak to this too.

17 First of all, I'd just like to say, you know, we
18 appreciate the staff's effort in the development of this
19 package. And we are in general support of this package.
20 We see it as a good thing. It is -- we feel it's met the
21 requirements under 398 in order to focus on cost
22 containment, and we believe that it's leading in the right
23 direction.

24 That said, our main issue is the third compliance
25 period. This -- we are in the middle of this now.

1 Whereas 398 and all the issues associated with that are
2 post-2020, we are now feeling the effects of the third
3 compliance period as a medium leak -- leakage risk
4 industry. It is interfering with our ability to be able
5 to contract and to forecast going out. It creates
6 uncertainty going forward, so we are in full sort of the
7 Board's -- or the staff's position that we should level
8 out the third compliance period and provide for a smooth
9 transition going into 2020.

10 In terms of what we think is going to happen on
11 that is that if you do that, we think it will -- one, it
12 will immediately lessen the risk of leakage because that
13 is always a factor for us no matter what, because of the
14 other business factors that impact our ability to be able
15 to maintain our competitiveness. We also think it will
16 contribute to the overall stability of the program going
17 forward.

18 We need to have some sense that this is a stable
19 program, and 2020 is going to put a lot of burdens on us,
20 and it's going to be much difficult -- more difficult to
21 meet. And so we want to see, you know, that we're able to
22 prepare in this early issue.

23 Finally, it will eliminate, like I said, the
24 uncertainty associate with this and provide for more
25 forecasting.

1 So with that, I will -- if my members want to
2 speak, I'll let them, and answer any questions.

3 Thank you.

4 CHAIR NICHOLS:

5 MR. WATKINS: Good morning. I'm Erick Watkins
6 from Pacific Coast Producers. We're a locally grown
7 locally owned co-op here in Northern California. We have
8 facilities in Oroville, Woodland, and Lodi. We just
9 wanted to talk today, try not to be repetitious because
10 there are a lot of speakers today, is that we really would
11 like to focus on the third compliance period today, and
12 that that smooth transition is really a big deal for us.
13 We have a lot of other headwinds facing us right now,
14 including the steel tariff. And so your consideration
15 would be much appreciated and we fully support staff
16 comments today.

17 MR. TRISTAO: Good morning. Good morning,
18 Chairman Nichols and members of the Board. I'm Dennis
19 Tristao, and I represent the J.G. Boswell Company. We are
20 both a processor and farmer, and our processing is
21 involved around tomato paste. We've been involved with
22 the Cap-and-Trade Program since its inception, since the
23 adoption of AB 32 on through the climate change program of
24 the State. We've interacted with our Association and
25 we've interacted with many of the staff here over the

1 years.

2 I won't echo what John stated, other than we do
3 support John's comments. We all work together. There are
4 a few of us here, but there are many more behind us who
5 could not attend, and I wanted to make that point.

6 As a producer, I'm here to tell you that I'm in
7 the trenches, so to speak. I know how the calculations
8 work. I know the impact. I know the burdens. And for
9 the most part, I want to tell you that I do appreciate
10 staff's assistance all the way in the past few years in
11 addressing the cap-and-trade reporting and the program.

12 Specifically, I wanted to congratulate the staff
13 on the fact that on November 1st, you had 100 percent
14 compliance with the surrender, which is quite an
15 achievement.

16 As a regulated entity, I can tell you that
17 there's a great deal of anxiety until after that November
18 1st date passed, as you're watching it. But having -- you
19 know, we all have a sense of humor about it, so -- but I
20 am here before you because our main concern is with CP3,
21 the third compliance period. As our marketing team and
22 our company attempts to get a handle on the cost as we go
23 forward, this third compliance period is critical to us.
24 And it's for the transition in the post-2020.

25 We support the regulation being adopted here

1 today. We support that provision of 100 percent leakage
2 assistant. And we want to remind the Board that 100
3 percent leakage assistance is in no way an abrogation of
4 the responsibility that we have, or that the regulation
5 puts upon us for reductions.

6 You know, our goal is always to achieve our
7 better from our benchmark from the competitiveness aspect
8 of it. As we look at the benchmark, that's what we strive
9 to exceed, so that we can do better as we go forward.

10 And then from the cap adjustment factor, we
11 realize that there are adjustments being made and we
12 constantly have to improve our process. And to that end,
13 we support the incentive programs that the Air Resources
14 Board has been instrumental in putting forward with these
15 cap-and-trade funds, through the Energy Commission,
16 through agricultural assistance, through the California
17 Department of Food and Ag with the FARMER program, the
18 SWEEP program. These incentive programs we're very much
19 in favor of.

20 I'll conclude with that. We made the trip up
21 here, specifically because this means a lot to us. Thank
22 you.

23 MR. EMBURY: Chairwoman Nichols, members of the
24 Board, good morning. My name is Michelle Embury, and I'm
25 a part of California's Environmental Entrepreneurs team.

1 E2 is a national non-partisan group of American business
2 leaders and investors who advocate for smart policies that
3 are good for the economy and good for the environment.

4 Our members have founded -- or funded more than
5 2,500 companies, created more than 600,000 jobs, and
6 managed more than \$100 billion in private equity and
7 venture capital.

8 I am here on behalf of E2's 600 California
9 members to show business support for staff's proposed
10 amendments to California's Cap-and-Trade Program. Staff's
11 proposal would advance a program that ensures
12 environmental integrity and strong ambition while
13 providing important provisions to contain program costs.

14 E2 is a strong proponent of California's Climate
15 and Clean Energy Program. And last year, we advocated in
16 support of the AB 398, which extended California's
17 Cap-and-Trade Program beyond 2020. Our support for AB 398
18 was predicated on the Cap-and-Trade Program's strong track
19 record of success reducing emissions and advancing
20 California's clean energy economy. It is truly good for
21 the environment and the economy.

22 Since the program's implementation, \$2.2 billion
23 in cap-and-trade funds have been invested in nearly 30,000
24 projects across the state directly supporting almost
25 20,000 jobs. And 68 percent of these funds benefit

1 California's disadvantaged communities. In every corner
2 of the State, California's climate program and its bedrock
3 policy, Cap-and-Trade, is working. The State is exceeding
4 its greenhouse gas targets, program compliance is strong,
5 and the state's economy is booming.

6 Furthermore, cap and trade is the embodiment of
7 California's global climate leadership. And many states
8 across the country depend on that vision that California
9 sets. In fact, E2 is advocating for passage of a
10 cap-and-trade bill in Oregon, which is modeled off of
11 California's program.

12 The package proposed by staff will further the
13 Cap-and-Trade Program's success. The amendments provide
14 an appropriate balance of ambition and price containment,
15 and will ensure the program maintains the flexible
16 market-based approach, while safeguarding the market's
17 sacred role necessary to reduce emissions in step with our
18 2030 goals. Therefore, E2 requests the Board vote yes on
19 staff's proposal.

20 Thank you for your time.

21 MR. WEINER: I'm Peter Weiner from Paul Hastings
22 substituting for Anna Fero.

23 And Madam Chair, and members of the Board, today
24 I'm representing Crockett Cogeneration, LP, which operates
25 a steam facility that supplies steam to C&H sugar in

1 Crockett. Crockett Cogen has a legacy contract which has
2 required or needed transition assistance. We've worked
3 closely with staff and very much appreciate the allowances
4 the staff have provided for legacy contract generators
5 without industrial counterparties. We fully support the
6 draft amendments before you today, as well as supporting
7 AB 32 and the Cap-and-Trade program generally.

8 Thank you.

9 MR. HENDERSON: Hi, Madam Chair and members of
10 the Board. My name is Scott Henderson. I'm with Covanta.
11 We're a waste energy company that has two facilities in
12 California. We operate the facility for the City of Long
13 Beach in Long Beach, and then we own and operate a
14 facility in Stanislaus, where we process municipal solid
15 waste that would otherwise go to a landfill.

16 By doing that -- you know, these facilities were
17 build to take care of waste. And so we follow the waste
18 hierarchy, the reduce, reuse, recycle. So we max -- make
19 sure our communities are maximizing recycling efforts, and
20 then we take the stuff remaining from those into our
21 facilities. We combust it at a high temperature, clean
22 the air. Our emission profile is very low. And we've
23 shared a lot of that data with the -- with the Board.

24 We're concerned that the current regulation and
25 the current amendments do not treat the waste sector

1 evenly, and there's a significant, you know, non-parity
2 here. All we're asking for is to be treated the same as
3 landfills. Landfills were legislatively taken out of the
4 cap. We are in the cap. We're actually better from a
5 greenhouse gas perspective than landfills. So for every
6 ton of waste we process on a national average, we reduce
7 greenhouse gas emissions by about a ton. It's a little
8 smaller reduction in California, because of your low
9 carbon grid, which is terrific.

10 But both CalRecycle and CARB have both done
11 independent studies that have shown that waste energy is a
12 far better alternative than landfilling of this material.

13 So we are asking that the Board consider making
14 some additional changes to the amendments and bring parity
15 into the waste sector. I think we have been brought into
16 the electricity sector into the Cap-and-Trade Program.
17 And that's really not where we fit. We do not -- our
18 existence is not to create electricity. Our existence is
19 to get rid of waste, which is against the land -- you
20 know, kind of competing with landfills.

21 And so the energy that we generate about nine
22 times more power than a landfill gas project is a terrific
23 co-benefit, but not the primary function. And so we'd ask
24 that the -- you know, the Board consider this. The CARB
25 in their 2015 amend -- appendix C was -- basically spoke

1 to this exact question. So they were looking at
2 whether -- if you put waste energy in the cap and you left
3 landfills out of the cap what would happen, and I quote,
4 "This approach would likely result in more greenhouse gas
5 emissions, if it results in the increase MSW going to
6 landfills".

7 And so all we're doing -- all we're asking for is
8 to kind of follow the science here and to remain
9 consistent with what the findings of the staff has been.
10 So thank you.

11 MS. SULLIVAN: Good morning, Chair Nichols and
12 Board members. I'm Shelly Sullivan representing the
13 Climate Change Policy Coalition. And I'd like to thank
14 you and the staff to offer these comments today. We were
15 urge the Board to follow the staff recommendations for the
16 third compliance period assistance factors. We think that
17 that's really going to be a really cost effective and a
18 good program going forward.

19 But we do have concerns with other
20 recommendations, because they're not in compliance with
21 the directive of AB 398 with regard to cost containment
22 measures. These issues are critical to keeping costs low
23 for consumers and businesses. Specifically, we request
24 the Board to require additional information on the price
25 ceiling and the use of speed bumps. In order to ensure

1 our program is cost effective and a program that other
2 states and nations and -- would consider linking to, we
3 need a lower price ceiling and we need speed bumps to be
4 placed at the one-third and two-thirds distance between
5 the projected floor and the ceiling prices.

6 So we hope that you take these considerations and
7 suggestions, and -- as we move forward. And we look
8 forward to working with the Board and the staff in the
9 first year. Thank you.

10 MS. SILVERTHORN: Good morning, Chair Nichols and
11 Board. My name is Leah Silverthorn with the California
12 Chamber of Commerce representing our 14,000 member
13 company. CalChamber supports implementation of a robust
14 Cap-and-Trade Program as a cost effective means of
15 achieving California's ambitious climate change goals, and
16 we appreciate the hard work of the Board and staff in this
17 proposed regulation, which does provide long-term market
18 stability by keeping most of cap and trade's features in
19 tact.

20 AB 398 directs CARB to implement regulations to
21 extend the Cap-and-Trade Program using best available
22 science, and consider, among other factors, avoidance of
23 adverse impacts on California households, businesses, and
24 the economy, as well as the potential for economic and
25 environmental leakage outside of the state of California.

1 To that end, the proposed regulation does
2 incorporate a discussion of the social cost of carbon, but
3 does set the price ceiling of carbon's rating well above
4 that level, with no apparent scientific rationale.

5 CARB staff suggests that the best available
6 science regarding the social cost of carbon, here the
7 interagency working group, which was mentioned earlier, is
8 an Obama era report, is insufficient to account for the
9 social cost of carbon.

10 However, in reading the Statement of Reasons, it
11 does not appear to account for how a five percent
12 escalator is scientifically supported nor consistent with
13 the balancing of any of the statutory factors required by
14 AB 398. The proposal that sets the price ceiling at a
15 level far above the social cost of emitting carbon,
16 inconsistent with the best available science, and without
17 regard to adverse impacts on California residents and
18 businesses.

19 Failing to properly balance statutory factors in
20 setting the price ceiling and in evaluating the speed
21 bumps and third compliance period factors creates easy
22 fodder for environmental attorneys to challenge these
23 regulations as inconsistent with the legislative mandate.

24 It's important to remember that California makes
25 up a mere one percent of global GHG emissions. Where

1 California can make its -- most impact on global climate
2 change is by serving as a model for a robust cost
3 effective cap-and-trade system that encourages
4 participation by other jurisdictions.

5 This system requires buy-in from all parties, not
6 just government and environmental groups, but from the
7 businesses and industries that will support and implement
8 these regulations. Setting unreasonably high price
9 ceilings and speed bumps that cause spikes in pricing and
10 trading does not encourage participation by more moderate
11 states, many of which have recently rejected attempts at
12 major climate initiatives.

13 CalChamber is Afraid to step out on a limb and
14 support additional costs where there's an immediate need,
15 such as opposing the repeal of California's gas tax.
16 CalChamber supported 398, and the path to get it passed
17 was not an easy one. If it is difficult in California,
18 imagine how difficult it will be in more moderate states.

19 Here, the best available science must be
20 implemented, and the legislature's balancing factors must
21 be considered when finalizing the regulations. Imagine
22 the success we can have in California if we can tell other
23 states and nations that not only is our Cap-and-Trade
24 Program state of the art, but has buy-in from those it
25 regulates.

1 Appreciate your time. Thank you.

2 MS. PADRON: Good afternoon, Char and members.

3 My name is Naomi Padron with McHugh, Koepke and
4 Associates. And I'm here today on behalf of the
5 California Manufacturers and Technology Association.

6 I'd like to begin by saying that we support a
7 well-designed Cap-and-Trade Program. It's the most
8 cost-effective method for achieving emissions reductions
9 while also limiting the impact on California's economy.

10 That being said, we appreciate the opportunity to
11 comment on the proposed cap-and-trade regulation
12 amendments. Our comments today, as with those that we've
13 made in the past, center on cost containment and focus on
14 the continuation of industry assistance factors, a
15 reasonable price ceiling paired with appropriately placed
16 price containment points or speed bumps, and maintaining
17 available allowances in the market.

18 First, CMTA supports the proposed industry
19 assistance factor changes. And we would request that ARB
20 approve maintaining assistance factors at 100 percent for
21 all sectors during compliance period three, and post-2020
22 in order to protect against greater emission leakage
23 related to high compliance costs.

24 As it pertains to the price ceiling and speed
25 bump design, CMTA is concerned that the proposed

1 amendments fail to meet the legislative intent of AB 398.
2 To better address this, we would recommend that ARB
3 eliminate the five percent escalator on the price ceiling,
4 because it is unnecessary, and only serves to create the
5 opportunity for exceedingly high carbon prices. This
6 creates severe political instability and jeopardizes
7 potential linkage with other jurisdictions.

8 An appropriate course of action in this case
9 would be to continue the existing model by setting the
10 price ceiling at a flat rate above the floor price.
11 Further, we would suggest that the speed bumps be moved
12 from the proposed one-half and three-quarter levels down
13 to the one-third and two-third levels, in order to provide
14 an earlier signal and check on rapidly increasing prices.

15 Additionally, CMTA appreciates ARB's proposal on
16 unused allowances. And we would just note that keeping
17 these allowances in the market limits artificial price
18 spikes and supports compliance with carbon reduction
19 goals.

20 Lastly, CMTA supports the discussion of
21 additional industry assistance to protect against emission
22 leakage related to high-energy costs. This will help
23 protect cleaner, more efficient California manufacturers.

24 I thank you for your consideration of these
25 critical points. We look forward to working with you and

1 your staff, and would welcome further discussion on
2 these -- the issues raised.

3 Thank you.

4 MR. PATNEY: I'm over here.

5 Arjun Patney with the American Carbon Registry.
6 Chair Nichols, members of the Board, thank you for the
7 opportunity to speak today. I, ACR, would like to thank
8 CARB staff for drafting amendments to the cap-and-trade
9 regulation that are prudent and that that carefully hue to
10 the language of AB 398 with respect to offsets.

11 As of yesterday, the offsets program has achieved
12 over 140 million tons of emissions reductions from
13 uncapped sources, unregulated sources. Those reductions
14 deliver environmental and economic benefits to
15 Californians and our partners in Climate Action.

16 To the well-meaning stakeholders who advocate
17 against offsets, we must ask what they are advocating for.
18 They are effectively advocating climate strategy that will
19 unnecessarily burden California consumers and ratepayers,
20 ultimately risking public support.

21 I'd like to focus on the statutory provisions to
22 ensure offsets deliver Direct Environmental Benefits in
23 State, DEBS.

24 As the legislative record contains no indication
25 of the intent behind this requirement, staff have rightly

1 adhered closely to the statutory language. The language
2 allows for DEBS associated with quote, "Any air
3 pollutant", unquote. The language allows for DEBS
4 associated with quote, "Any pollutant that could have an
5 adverse impact on waters of the state", unquote.

6 No one in this room is going to dispute that
7 greenhouse gases are pollutants. Some, including members
8 of the IEMAC, have asserted that such phrases as, "any air
9 pollutant", should, in this case, be understood to exclude
10 greenhouse gases.

11 We would like to point out that even if
12 greenhouse gas reductions do enable DEBS, the DEBS
13 language is of significant consequence. The Legislature
14 has now required CARB to provide an assurance that offsets
15 deliver direct environmental benefits in state.

16 CARB's assurance has meaning. It is
17 understandable that the local benefits of offsets may have
18 been unclear to many people without CARB's evaluation. If
19 CARB, with its expertise finds, that more offsets benefit
20 Californians than we may have expected, that's an outcome
21 with which we should be pleased, not unsettled.

22 ACR supports regulatory amendments that continue
23 to allow a robust offsets program that contributes to
24 climate action and delivers local benefits as articulated
25 in AB 398.

1 Thank you very much.

2 MR. PORTILLO: Hello, Chairman Nichols and Board
3 members. My name is Luis Portillo. I'm with the Inland
4 Empire Economic Partnership, otherwise known as IEEP. I'm
5 here to urge you to reject the proposed price ceiling,
6 which is part of the Board's proposal today.

7 IEEP is concerned about the harm that our
8 communities could have if the cost of electricity, gas,
9 and diesel dramatically escalate. Simply put, we cannot
10 afford unending dramatic increases in fuel energy costs.
11 The Inland Empire covers more than 24,000 square miles.
12 And while our region is working harder to improve our
13 transit -- public -- our public transit system, you know,
14 driving to get to where you need to go still remains
15 reality.

16 You know, I drive 45 minutes to get to work every
17 day, and I'm one of the lucky ones frankly, because that
18 was considered a short drive. More and more people are
19 spending more time on the road, and the cost of fuel is
20 taking up a larger and larger share of their budgets.

21 By setting the price ceiling so high, we think
22 the Board is risking increasing that burden on drivers
23 that face every day in Southern California.

24 You know, IEEP supports efforts to reduce our
25 greenhouse gas emissions. And while we recognize there is

1 going to be increased costs associated with doing that, we
2 shouldn't seek to needlessly increase those costs, which
3 we is what we think the current proposal does by setting
4 such a high price ceiling. California -- you know, as was
5 mentioned earlier California is responsible for only one
6 percent of the world's greenhouse gas emissions. And
7 where our strength really lies in is being able to
8 demonstrate a program that shows, look, you don't have to
9 choose between the environment and a healthy economy. You
10 can have both.

11 We think that the carbon -- the Cap-and-Trade
12 Program isn't one of those programs that really is
13 designed to really showcase that, because we can show we
14 can achieve the successes and the greenhouse gas emission
15 reductions without setting those impacts so high.

16 We also urge you to keep in mind the costs that,
17 you know, consumers and businesses are already facing.
18 When it comes to transportation result of Senate Bill 1,
19 IEEP opposed the initiative that would have repealed it,
20 because we think sometimes it is important to invest in
21 that. And while we're willing to pay for our share to
22 improve our transportation system, to improve our
23 environment, we think that those same goals to reduce GHG
24 emissions can be done with minimizing the risk to
25 consumers by setting that cap lower.

1 So I would urge you to reconsider that, and
2 reject that part of the proposal.

3 Thank you.

4 MR. SIAO: Hello.

5 Okay. So may I start?

6 Okay.

7 So thank you. Good morning, and thank you, CARB
8 Board members, for your time today. My name is David
9 Siao, and I represent Roseville Electric.

10 And as noted on the Board, I also happen to be
11 Sino.

12 We're a locally-owned and operated mid-size
13 municipal utility just northwest of here. Roseville
14 Electric is proud to help advance the State's climate
15 goals while providing safe, reliable, and affordable
16 service.

17 So in my comments before you today, I would like
18 to first thank CARB staff. They have proposed amendments
19 clarifying how proceeds from GHG auctions may be used,
20 while preserving flexibility for local utilities, like
21 Roseville, to tailor programs to local needs.

22 So transparency and accountability are very
23 important, especially for public funds. So I wanted to
24 highlight for the Board today several of the many ways in
25 which Roseville Electric has been reducing GHG emissions

1 while benefiting its customers.

2 First, Roseville is using the funds to modernize
3 our grid with smart meters. This not only allows our
4 system to be more efficient, reducing cost, and GHG
5 emissions, but also allows us to provide faster and better
6 customer service. Smart grids are essential for more
7 advanced rates like time of use, and can also assist in
8 integrating renewables, demand response, and electric
9 vehicles.

10 Second, Roseville Electric is using GHG proceeds
11 to fund EV rebates. We cannot reach California's
12 ambitious climate goals without reducing emissions from
13 the transportation sector, and Roseville is doing its part
14 to accelerate the adoption of EVs.

15 Third, Roseville Electric is funding a low-income
16 refrigerator replacement program. This will allow us to
17 safely dispose of older refrigerators, which might be
18 leaking HFCs and CFCs, which are extremely potent GHGs,
19 and lowers the energy bills for customers who could not
20 otherwise afford to replace their refrigerators.

21 Finally, Roseville Electric is funding low-income
22 and multi-family housing retrofit programs. What these
23 programs do is, first of all, they ensure that all
24 customers can benefit from reducing emissions, not just
25 those who can afford electric vehicles and solar systems.

1 It also means that we're achieving the deeper
2 emissions, which will -- deeper emissions reductions,
3 which will be necessary to reach the State's goals.

4 So again, Roseville Electric appreciates the
5 continued flexibility and local control in how it can use
6 GHG auction proceeds. And we hope that CARB will continue
7 to support both, even for areas which cannot necessarily
8 be as easily quantified, such as education or potentially
9 wildfire reduction and prevention. Thank you.

10 MR. MAGNANI: Chair Nichols and Board, Bruce
11 Magnani here with the Coalition for Sustainable Cement
12 Manufacturing and the Environment.

13 As you know, the CSCME was formed shortly after
14 the passage of AB 32 had an executive level of the member
15 companies, specifically to work cooperatively with the
16 Board and staff for the implementation of AB 32, and now
17 continuing that work with SB 32.

18 We'd like to let the Board know that we support
19 the cap-and-trade amendments as presented by staff today,
20 and we believe it's consistent with AB 32, as it was
21 discussed and negotiated in the legislature.

22 CSCME believes it strikes a balance, and will
23 achieve the State's post-2020 greenhouse gas reduction
24 goal. We believe it will be done in a cost effective
25 manner, while minimizing emissions leakage, which we all

1 recognize any leakage would undermine the program, damage
2 the economy, and hurt employees.

3 CARB staff has repeatedly recognized the high
4 risk of leakage that our industry faces, year-in and
5 year-out. These amendments will minimize the risk of
6 leakage to our industry in the near term. As such, CSCME
7 encourages you to adopt these amendments as soon as
8 possible. That will give business certainty for us moving
9 forward.

10 Thank you so much.

11 MR. WILLIAMS: Hi. Chairman Nichols, members of
12 the Board, thank you for the opportunity to provide
13 comments. I'd also like to thank staff for preparing
14 amendments that were largely in support of.

15 My company, Bluesource, we've been involved in
16 developing projects for the program since its inception.
17 We've worked on 26 projects so far that have generated
18 around 10 million tons of climate benefit. We're really
19 proud of that. We've worked really hard, and we've been
20 able to hire folks in state. These are current and future
21 climate leaders, folks that are passionate on this issue.

22 And based on that, I want my -- my comments are
23 going to focus on largely the DEBS issue. And if we take
24 a step back for a second, it's been -- always been my
25 understanding that the program was designed, California's

1 program, to extend beyond California's borders in terms of
2 inspiring change, the concept of climate diplomacy.

3 And I think we need that more than ever. I mean,
4 you step outside this building and take a breath, and you
5 have a frightening reminder of the need for climate
6 diplomacy right now.

7 And so also the California program was based on
8 science based -- it's a science-based program. And within
9 that is the idea that a reduction that takes place
10 anywhere creates a benefit everywhere. I firmly believe
11 that. And for us, the view of a reduction in offset
12 utilization is not only going to increase cost to
13 ratepayers, but it's going to hamper the ability to
14 inspire others to follow and create these types of
15 projects.

16 In a way, I view the offset program as an
17 ambassador, in being able to work with public agencies,
18 private landowners, different folks across the U.S. to
19 inspire change.

20 With that in mind, a couple of specific ideas.
21 It would be our recommendation that the DEBS designation
22 would be granted for projects through 2020 to avoid
23 shifting goalposts for projects that are already underway,
24 and also that the process for review for DEBS designation
25 would take place pretty quickly. I think there's

1 currently a backlog of review right now for projects that
2 are in the queue. And we -- we're kind of fearful that
3 depending on how this goes, if there's a
4 project-by-project review on DEBS designation, that
5 backlog is going to increase even more.

6 And so I think there's an opportunity here for
7 transparency and replicability in decisions that are made
8 about application of this DEBS issue that I think will be
9 really important.

10 And my final comment is uncertainty around the
11 DEBS issue is not good for the program overall. It's
12 going to lead compliance entities to be uncertain with
13 what they have, and new projects will be on hold.

14 And so thank you very much for the opportunity to
15 provide comments.

16 MS. DeRIVI: Good morning to the CARB Board and
17 members of the Staff. I'm Tanya DeRivi with the Southern
18 California Public Power Authority. We're a joint powers
19 authority comprised of 11 municipal utilities as large as
20 Los Angeles and as small as low income and disadvantaged
21 communities in Banning and Colton, plus the Imperial
22 Irrigation District.

23 I wanted to first staff off by saying that we are
24 strongly supportive of the Cap-and-Trade Program and
25 appreciate legislative efforts to extend it through 2030.

1 Also, want to thank staff for helpful clarifying edits
2 that were reflected in the 45-day package, and had some
3 recommendations to further improve in the 15-day package.

4 For public power utilities, I wanted to focus our
5 testimony on improvements for the POU Use of Allowance
6 Values. This includes addressing some potential concerns
7 with the proposed quantification methodology that we fear
8 might be overly prescriptive and could preclude
9 investments in projects and programs that would reduce
10 emissions, thinking about transportation electrification
11 initiatives. That might not always be easily
12 quantifiable. As well as issues with vegetation
13 management, particularly given all the tragedies with
14 wildfires across the state right now. We don't want to
15 see barriers to investments by publicly-owned utilities in
16 those types of programs.

17 My other public power utility colleagues will
18 also be talking about our preference that CARB extend the
19 bridge solution for the CAISO Energy Imbalance Market for
20 an additional year to gather additional information about
21 it, before making changes on what is a very complicated
22 issue that we are dealing with now.

23 As far as the price ceiling goes, our number one
24 concern is ensuring that electricity prices remain
25 affordable, particularly for our low income and middle

1 income customers.

2 And we had one other recommendation to CARB
3 staff, to the extent that there may be programs and
4 projects that aren't explicitly outlined in the proposed
5 regulation that perhaps there be a formalized process for
6 utilities to come to the CARB Board to get a case-by-case
7 showing of yes or no on whether or not cap-and-trade
8 proceeds could be invested in those programs as a helpful
9 clarifying edit.

10 Thank you very much.

11 CHAIR NICHOLS: I need to ask you a question.
12 I'm sorry, I just didn't understand something that you
13 said. Your concerns about quantification of various
14 investments. What was the point or what do you want us to
15 do about that?

16 MS. DeRIVI: For the use of allowance values,
17 there is a provision about quantifying the emissions
18 reductions that would be associated with those
19 investments.

20 CHAIR NICHOLS: Um-hmm.

21 MS. DeRIVI: And our concern is that not all of
22 the programs and projects would be easily quantifiable.
23 So that was the concern that we'd outlined in our
24 comments.

25 CHAIR NICHOLS: I see. Thank you.

1 MR. COSTANTINO: Good morning, Board. Jon
2 Costantino on behalf of the Verified Emission Reductions
3 Association, a group of offset developers that came
4 together at the beginning of the AB 398 process to promote
5 and educate on the value of offsets.

6 And as part of that work, we worked with the
7 legislature, and they codified, for the first time, the
8 use of offsets. So now there's a statutory mandate to
9 have offsets in the program, which we think is great. We
10 think that maximizing the use of offsets, as presented in
11 the slide show today, helps with cost containment.

12 And offsets, just a reminder, are real,
13 quantifiable, enforceable, verifiable, and permanent
14 reductions outside of cap sectors. I think you're going
15 to hear from many folks today that are supportive of
16 offsets. We are supportive. We submitted comments about
17 DEBS. We're supportive of the statutory language being
18 used. We're supportive of some of the other technical
19 changes that are being made for materiality and regulatory
20 conformance.

21 And so the only comment we would -- we would
22 suggest is that, along with what Roger said earlier, was
23 that the sooner you can figure out what an out-of-state
24 DEBS is and go on a project-level, project-type basis,
25 rather than a case-by-case basis -- I mean, a protocol

1 basis, that would be helpful to allow folks to understand
2 what their investments mean, and how quickly they can
3 understand if you're an entity buying an offset, what
4 category it falls into, because there are certain market
5 requirements that are playing out as we speak.

6 So thank you very much.

7 MS. ALI: Good afternoon. Fariya Ali on behalf
8 of Pacific Gas and Electric. I'd like to thank staff for
9 all of their work on the amendments thus far. We think
10 that they are a good start, but there are still a few
11 areas where some additional work is needed.

12 On the price ceiling, we are concerned that
13 staff's escalation factor leads to a divergence between
14 the floor and the ceiling, which means less cost
15 protection in the later years of the program when it is
16 actually needed more.

17 To address this concern, PG&E supports using a
18 fixed adder on the floor to set the price ceiling, which
19 would lead to a constant distance between the floor and
20 the ceiling, which gives greater consistency and provides
21 better cost protection in the later years.

22 We'd also like to urge ARB to continue working
23 with the natural gas utilities on natural gas allowance
24 allocation, so that that allocation helps to foster the
25 decarbonization of the natural gas sector, rather than

1 hindering it in the future.

2 And we'd also like to urge staff to provide
3 equitable treatment of the types of projects that
4 utilities can spend their allowance revenue on. We
5 believe that renewable natural gas projects are also
6 renewable energy, just as renewable electricity projects
7 are and should be explicitly allowed.

8 On the overallocation, we agree with ARB staff
9 that the current cumulative caps constrain GHG emissions
10 through 2030, and support a steadily rising price signal.

11 Our 2018 market study with NERA is consistent
12 with this view. The study finds high allowance prices in
13 the late 2020s under ARB's existing program design. And
14 these high prices occur sooner if significant allowances
15 are removed from the market -- from the market.

16 We, therefore, support staff's current position,
17 and we look forward to working with staff on continuing to
18 improve these amendments to ensure a program that is both
19 effective and sustainable. And finally, on behalf of
20 PG&E, I would just like to say that our hearts are with
21 all of the communities that have been impacted by the
22 fires in California. And right now, our entire company is
23 focused on providing support to first responders and in
24 assisting those communities. Thank you very much for your
25 time.

1 MR. BRAUN: Good afternoon, Chair Nichols,
2 members of the Board. My name is Tony Braun on behalf of
3 the California Municipal Utilities Association. Thank you
4 for the opportunity to speak today.

5 My comments are limited to one issue, and that is
6 the issue of the outstanding emissions and allocating
7 those obligations as a consequence of the operation of the
8 Energy Imbalance Market.

9 Let me begin with by noting upfront that this is
10 an extremely difficult issue. It occurs at the confluence
11 of a complicated Cap-and-Trade Program, and perhaps even
12 more complicated wholesale market operation and design.

13 The market is not a closed system. Actions
14 happen outside the market that affect the market. Actions
15 happen outside California that affect California. We
16 can't control those. And it's even more difficult -- it's
17 very difficult to control them, and it's even difficult to
18 account for them and allocate obligations accordingly.

19 And so what we've done to date is to take the
20 allowances associated with these outstanding emissions and
21 retire them from the unsold pool of allowances. And that
22 seemed like a reasonable approach, given the complexity of
23 the issue of the lack of data and the clear right answer
24 going forward.

25 And we'd urge the Board to consider continuing

1 that so-called bridging solution for number of reasons.
2 One, we don't have any data on how this is going to work.
3 The ISO's new market methodology for accounting for these
4 outstanding emissions hasn't been put in place yet. And
5 we won't -- even though the proposed effective date is
6 April 1, we won't have a lot of data even by that metric.
7 And the market and the market scope continues to change.

8 There is no link to behavior. No EIM entity
9 within California that may see these costs is going to
10 change its behavior. And there's no link between their
11 behavior in real-time and the attribution of these costs.
12 So it fundamental -- violates some fundamental tenets
13 associated with just policy development.

14 EIM reduces carbon emissions. The ISO studies
15 have found that. And more work outside by some of the EIM
16 entities, show that the dispatch of their fleets,
17 including their coal fleets, have been modified. And that
18 work continues. And we should have an opportunity to
19 continue to understand that data and how EIM reduces
20 carbon emissions, and actually furthers the goals that the
21 State is trying to achieve.

22 And finally, there's an element of no good deed
23 goes unpunished here. California entities have been --
24 that are outside the ISO have been encouraged to
25 collaborate closely with the ISO. And to that end, the

1 Balancing Authority of Northern California and SMUD are
2 set to actually go live with EIM implementation in April
3 of next year.

4 If they had not taken that step, they wouldn't
5 see these costs. Under the proposal, they will see those
6 costs. So there seems to be a little bit of -- we could
7 do a little learning here. And so we would encourage the
8 Board to consider keeping the bridging solution moving
9 forward.

10 Thank you.

11 MR. WEISKOPF: Good morning. Thank you. David
12 Weiskopf for NextGen America. NextGen is broadly
13 supportive of the proposed regulation. We thank the Board
14 and staff for the extensive opportunities they've provided
15 for public participation, the thorough and transparent
16 processes that has informed this proposal.

17 While we think this proposal is generally
18 reflective of the legal requirements of AB 398 and
19 provides a balanced approach. We would like to point out
20 a few areas where we think amendments may be warranted.
21 We provide greater detail on these topics in our written
22 comments.

23 First, the price ceiling drops off significantly
24 from current trajectory of the single reserve tier in
25 2020. It doesn't catch up with that until 2027. And

1 while we see little risk of the price ceiling actually
2 being reached under current market rules, we are concerned
3 that this trajectory does exclude any possibility that
4 market prices ever actually match or really remotely
5 approach modern estimates of the social cost of carbon.

6 We ask that the price ceiling and potentially the
7 floor would be revised to better approximate the social
8 cost of carbon, while still remaining highly cost
9 effective compared to any additional direct regulations
10 that may be required if cap and trade does not produce the
11 level of reductions that are needed in order to comply
12 with SB 32.

13 Second, the proposed revision to the current
14 regulations to provide an additional subsidy of \$365
15 million primarily to oil refineries through the change of
16 the industrial assistance factors from current levels at
17 75 percent to 100 percent for the third compliance period.
18 It's not based really on any assessment of leakage risk.
19 There's virtually no risk of -- to -- of leakage from oil
20 refineries. And that change would come at the expense of
21 GGRF revenue that's badly needed to actually provide
22 emissions reductions and undermine the effectiveness of
23 the Cap-and-Trade Program to incentivize reductions at
24 those direct sources.

25 We ask that that proposal be rejected, and that

1 would be in greater conformity to AB 398, where the
2 legislature had the opportunity to consider this change
3 and rejected it, as well as AB 197, which directs the
4 Board to prioritize direct emission reductions at major
5 sources.

6 Finally, we do ask that the Board require staff
7 to take a close look and propose regulatory changes that
8 may be needed, if it turns out that either because of
9 oversupply or other elements of the market design, cap and
10 trade is not performing at the levels required of it and
11 envision in the scoping plan. So we think that that would
12 be a good -- a good proposal for subsequent regulation.

13 Thank you very much.

14 MR. McDONALD: Good afternoon, Chair Nichols,
15 members of the Board, and CARB staff. My name is Brian
16 McDonald. I represent Marathon Petroleum Company.
17 Marathon Petroleum Company is a refiner and marketer of
18 fuels -- of transportation fuels in the State of
19 California, therefore a regulated party within the
20 Cap-and-Trade Program.

21 Thank you for this time to make a few comments
22 about the proposed Cap-and-Trade Regulation.

23 Following the passage of AB 398, CARB is taking
24 on a big task to improve cost containment within the
25 Cap-and-Trade Regulation by establishing a price ceiling

1 and two intermediate price containment points or speed
2 bumps.

3 Additionally, CARB was tasked with evaluating
4 oversupply or checking on the numbers of allowances within
5 the program.

6 First, I wanted to request your consideration for
7 the comments submitted by WSPA on the proposed regulation
8 as we believe that they will enhance it. In reviewing the
9 proposed regulation, CARB staff has chosen the ceiling and
10 speed bumps to escalate at five percent, the same rate as
11 the floor. It is unclear why this was chosen, as it only
12 serves to increase the cost associated with the program.

13 Peeling back the layers of previous rulemaking
14 documents, the five percent escalator is based on the
15 federal cap-and-trade proposal by Waxman-Markey in 2009,
16 which intended to match a firm's alternate investment
17 options and encourage early reductions.

18 This reasoning has little to do with cost
19 containment.

20 For oversupply, it is encouraging to see CARB
21 staff not make any hasty decisions to withdraw allowances
22 from the budget, which will only serve to drive allowance
23 prices higher. We believe liquidity in the market is
24 important and provides time for firms to evaluate and
25 implement emission reduction projects in support of the

1 program's goals. Those that believe the program is
2 oversupplied must be under the incorrect opinion that a
3 large disproportionate fraction of the participants in the
4 program can bank allowances over multiple years to achieve
5 the results.

6 The ability for enough firms to accomplish this
7 is questionable, and assuming so will distort the actual
8 benefits of allowance banking and early reductions.

9 Thank for your time.

10 MR. MARTIN: Good afternoon Chair Nichols and
11 members of the Board. Thank you the opportunity to speak
12 before you today. My name is Simon Martin, and I'm the
13 Procter and Gamble Sacramento plant manager.

14 For more than 60 years our plant has been a proud
15 member of the Sacramento community, and where we make
16 natural-based ingredients for soaps and detergents such as
17 Tide laundry detergent.

18 I'm here today because we have concerns with the
19 proposed amendments to the cap-and-trade regulation. In
20 particular, section 95894(e), known as Legacy Contracts.
21 I believe that the proposed amendments to the legacy
22 contract language is counter to the ARB original intent of
23 the legacy contract provisions to provide transitional
24 allowances that encourages negotiating GHG costs into
25 revised contracts.

1 Section 95894(e) should be removed from the
2 rulemaking package, because it would not encourage
3 renegotiation. And we are concerned that these changes
4 may actually create a new barrier to renegotiating legacy
5 contracts.

6 Furthermore, the Board should consider whether
7 the legacy contract provisions are even necessary at this
8 point. Given the original intent of the legacy contract
9 provisions, all or most parties should have already
10 revised contracts by now to incorporate GHG costs, absent
11 unusual circumstances not contemplated when the legacy
12 contract provisions were first promulgated.

13 Give that some parties continue to seek legacy
14 contract relief, rather than renegotiate contracts, it's
15 like that the legacy contract provisions as written have
16 caused unintended outcomes, disincentivizing certain
17 parties from renegotiating.

18 To avoid this unintended cons -- circumstance, we
19 ask the Board to amend the legacy contract provisions to
20 require an applicant to make a demonstration of actual
21 cost exposure linked to legacy contract GHG emissions in
22 light of the free allowances provided to an applicant and
23 its direct corporate associates. Thank you for your time.

24 MR. BIERING: Good afternoon, Chair Nichols,
25 members of the board. My name is Brian Biering, and I'm

1 here on behalf of Bloom Energy.

2 I want to speak to an issue that was raised in
3 the staff proposal -- or the staff presentation related to
4 the treatment of fuel cells and the potential for a
5 follow-on rulemaking that we understand would be noticed
6 sometime in 2019 to more clearly address fuel cells, and
7 the environmental benefits that are provided by fuel
8 cells.

9 Fuel cells -- Bloom is a developer of fuel cell
10 systems. And what's important about these systems is they
11 not only provide reliable on-site sources of electricity,
12 but they don't emit any criteria pollutants by virtue of
13 not involving any combustion.

14 The -- in the longer term, Bloom is very focused
15 on developing fuel cells that can run on renewable natural
16 gas. And at the recent global climate action summit, we
17 worked with Bay Area Air Quality Management District to
18 provide a demonstration project of a cleaning module that
19 can be installed on a conventional Bloom energy server to
20 basically run it on renewable natural gas. And that's
21 part of the longer term vision that the company has,
22 consistent with the goals of SB 1383, and as well as AB
23 197, and AB 32, and SB 32.

24 What's happening right now in the program is that
25 there are some instances where fuel cell systems are

1 included under the Cap-and-Trade Program as a directly
2 regulated entity when fuel cells run on conventional
3 natural gas.

4 And the issue that that creates is that it poses
5 a choice for the customer to basically install the fuel
6 cell and become a regulated entity, and may basically
7 create a disincentive from reducing emissions on site, for
8 example, from diesel generators that may not be included
9 as part of the cap-and-trade threshold, or what may keep
10 them below the cap-and-trade threshold.

11 So what we're looking for is really a signal that
12 we'll provide a transition in the longer term to convert
13 conventional fuel cells to running on renewable natural
14 gas. And we look forward to working with the ARB staff
15 and thank them for their help in thinking through this
16 issue. Thank you.

17 MS. MUNSON: Good afternoon, Chairwoman and
18 members. My name is Maddie Munson, on behalf of the
19 Agricultural Energy Consumers Association. I will be
20 brief and just align our comments with our colleagues from
21 the food processing industry and our colleagues from the
22 dairy industry that will speak later. We are comfortable
23 with many of the cost-containment provisions in this
24 amendment, but we continue to be concerned with the cap
25 and the level and expense of that cap. And as our members

1 are vulnerable to leakage and out-of-state competition,
2 this is a very important issue for us.

3 Thank you.

4 MR. LITTON: Good afternoon, Chairperson and
5 Board. My name is Tim Litton. I am with the Northern
6 California Carpenters Regional Council. I'm here to
7 represent our nearly 40,000 members that are working in
8 the field.

9 We have a concern about today's proposal and the
10 effects that it's going to have on fuel prices, and energy
11 costs. Many of the people in my trade have a lengthy
12 commute to work. Although California is kind of in a
13 construction boom right now, many of those jobs are in
14 cities that our members can't afford to live in, so they
15 commute more than 100 miles a day just to get to work.

16 The working men in this -- men and women of this
17 state have already shouldered the higher -- highest energy
18 costs in the country and a housing market has priced them
19 out. We can't afford to take on a larger financial
20 burden.

21 If costs continues to rise, we'll have less money
22 in our pocket to spend on goods and services that support
23 our local economies and our families. We urge that you
24 take some cost containment into consideration on this, and
25 take a good hard look at what it's going to do to the

1 working people of California.

2 Thank you.

3 MR. CARMICHAEL: Good morning, members of the
4 Board. Tim Carmichael on behalf of Sempra Utilities,
5 SoCalGas, San Diego Gas and Electric. I'll note that
6 you've clustered two Tims together, but you should have
7 put Tim Tutt right behind us, because the world knows --
8 the Lord knows the world would be better off with a few
9 more Tims, rights?

10 (Laughter.)

11 MR. CARMICHAEL: So kidding aside, we are here in
12 general support of the proposal from staff, but we -- I
13 want to highlight and echo a couple of the comments that
14 my colleague, Fariya Ali, made earlier.

15 We submitted a letter along with other gas
16 utilities. And we appreciate the staff's work with our
17 sector on the question of natural gas allowance
18 allocations. And to date, we've had a conversation that
19 feels like it's gone on for a little bit more than a year
20 now. And we appreciate the time and effort from staff,
21 but we really want to continue that conversation. And we
22 would appreciate Board direction to the staff to continue
23 working with our sector to continue to address this issue.

24 You know, it's acknowledged in the initial
25 statement of reasons. It's an important issue, and it

1 recognizes that gas utilities are actively working to
2 get -- to decarbonize. We worked active -- this year
3 actively with Senator Hueso on Senate Bill 1440. We'd
4 hoped that would have resulted in a procurement
5 requirement. We ended up with direction to the PUC and
6 ARB to consider such a program, and we support that.

7 These efforts are absolutely consistent with your
8 Short-Lived Climate Pollutant Plan. We -- you know, we
9 see renewable natural gas, renewable hydrogen as
10 delivering on the -- that very important piece of
11 California's climate strategy.

12 I also want to mention that both PG&E and
13 SoCalGas received permission this year sell renewable --
14 procure and sell renewable gas at our utility-owned
15 stations. We are actively working on the dairy pilot
16 projects, which are progressing, and hopefully there will
17 be more -- excuse me -- more news on that very soon.

18 And then I wanted to touch on the other point,
19 the equitable treatment of allowance proceeds.

20 The electric utilities are appropriately being
21 allowed to use allowance proceeds to invest in
22 infrastructure improvements, whether it's renewable energy
23 or in support of zero-emission vehicles. We believe that
24 gas utilities should be given the same permissions.
25 Renewable gas is a renewable energy, and we would like to

1 do more with that. And allowing us to use our allowance
2 proceeds in that way, we think makes a lot of sense.

3 Similarly in support of near zero-emission
4 tech -- infrastructure in support of near zero-emission
5 vehicles and fleets. We think it makes sense to allow us
6 to use our allowance proceeds in that regard as well, and
7 we would like to continue that. We would like to make
8 that request to the Board and continue those conversations
9 with the staff.

10 Thank you very much for the time.

11 MR. CULLENWARD: Good afternoon, Chair Nichols
12 and members of the Board. My name is Danny Cullenward.
13 I'm the policy director with Near Zero, an environmental
14 nonprofit focused on climate policy solutions. And I'm a
15 member of the Independent Emissions Market Advisory
16 Committee. I'm not speaking on behalf the committee
17 today, but I wanted to share a couple of views related to
18 this important package.

19 I think the most important thing to say at the
20 start is our organization is -- Near Zero is fundamentally
21 agnostic as to how California achieves its climate policy
22 goals. We think there are strong reasons to consider
23 market-based policies like the Cap-and Trade Program,
24 which have many advantages in terms of controlling costs.

25 I want to start off first by thanking staff, who,

1 in their remarks today, mentioned this issue of DEBS in
2 the greenhouse gas accounting for offsets, and referred to
3 IEMAC report, which I think comprehensively analyzes
4 whether or not there are DEBS associated with greenhouse
5 gas reductions beyond the offset credits that offset
6 developers rightly receive for their projects. I think
7 it's very positive for staff to consider looking into
8 changing the ambiguity that's in the current rule. I want
9 to thank them for their engagement on that.

10 Despite that progress, I do want to raise some
11 serious concerns, which I know many of you have heard
12 before from me about the overallocation issue. And I want
13 to return to, Chair Nichols, your opening statement at the
14 beginning of this session about the scoping plan and the
15 role the Cap-and-Trade Program has consistently played in
16 the Board's efforts to control climate change.

17 The Board has always used this program to
18 quantitatively backstop as an insurance policy to pick up
19 the emission reductions we don't achieve through other
20 strategies.

21 And with respect, I have to say the quantitative
22 analysis supporting that notion in the current package is
23 factually incorrect. Appendix D's analysis of this issue
24 rests on a math error, plain and simple, and it does not
25 provide the quantity backstop that the program used to

1 play. Now, that is not to say that it won't produce
2 important emission reductions or contribute meaningfully
3 to the state's climate goals. But the role identified in
4 last year's scoping plan was for this program to continue
5 to rely as a backstop program that guarantees we hit our
6 target.

7 The proposed structure today increases the
8 ambition of the program relative to today, but it doesn't
9 rise to the level of ensuring we reach our goals. And so
10 I would suggest to you that if no adjustments are made to
11 oversupply, not even to monitor the issue, as I would hope
12 the Board would consider in the future, we're looking at a
13 situation where one of two possibilities is the most
14 likely outcome. Either we need to develop more
15 regulations to get on track for our 2030 goal, especially
16 addressing the tough sectors, or we risk not being on
17 track to get our goal.

18 Because again, the role identified for the
19 Cap-and-Trade Program in the scoping plan is almost half
20 of the reductions called for in 2030. And it is quite
21 clear that if emission reduction trends continue as they
22 have for the last couple of years, that we will have a
23 significant surplus of credits, likely several hundred
24 million, that enter the next phase of the period and make
25 it unlikely that the program will constrain emissions on a

1 quantity basis.

2 Now again, we respect that there are many reasons
3 to do tradeoffs between this policy and other approaches.
4 And my group doesn't see one particular approach or
5 another as necessarily superior. But the analytical
6 foundations of the policies portfolio need to make sense.
7 And with respect, they currently do not. So I want to
8 thank you for your time on that.

9 And one last -- Well, I won't say more. Thank
10 you very much for your time.

11 MS. MODELMOG: Chair Nichols and members of the
12 Board, I appreciate the opportunity to provide comments on
13 the proposed amendments to the California cap on GHG
14 emissions and market-based compliance mechanisms
15 regulation.

16 My name is Patty Moddelmog and I'm a senior
17 associate of Ceres's California program. Ceres is a
18 non-profit organization advocating for sustainability
19 leadership. We mobilize a network of 52 leading U.S.
20 companies representing over 587 billion in annual revenue
21 to advocate for the adoption of meaningful climate policy.

22 This group is called BICEP, Businesses for
23 Innovative Climate and Energy Policy, and includes many
24 California-based companies. I'm here to express our
25 support to amend the cap-and-trade regulation to make the

1 program consistent with AB 3398 requirements.

2 BICEP members recognize the economic
3 opportunities associated with tackling climate change and
4 the costs of inaction, and are committed to working with
5 policymakers to pass meaningful energy and climate
6 legislation and regulation that will help the nation
7 rapidly transition to a low carbon 21st century economy.

8 A strong Cap-and-Trade Program in conjunction
9 with California's other key climate programs, such as the
10 Low Carbon Fuel Standard, is critical to meeting state's
11 2030 GHG reduction goals.

12 California's Cap-and-Trade Program has a track
13 record of successful compliance and has proven an
14 excellent backstop for the state's GHG mitigation program,
15 ensuring California will meet its current climate goals.

16 The Cap-and-Trade Program and complementary air
17 quality measures are crucial to the state's powerful
18 toolbox to reduce emissions, maintain market certainty,
19 and increase economic vitality while ensuring all
20 Californians have access to clean and healthy air.

21 The proposed amendments provide a reasoned
22 approach to ensure consistency with AB 398. In
23 particular, the proposed price ceiling in combination of
24 cost containment measures strike a good balance to drive
25 emission reductions, while providing a safety valve, if

1 something unforeseen with the market occurs.

2 In summary, California's Cap-and-Trade Program is
3 working. The program has become an integral part of the
4 economy stirring innovation and building new industries.
5 Furthermore, California's demonstrated success in
6 addressing climate pollution in the world's 5th largest
7 economy is critical for inspiring similar action around
8 the globe.

9 We urge the Board to adopt the proposed
10 amendments to ensure the program continues to drive down
11 emissions in a cost effective manner.

12 Thank you for your consideration of my comments.

13 MR. TUTT: Good afternoon, Chair Nichols, members
14 of the Board. My name is Timothy Tutt, and I'm
15 representing the Sacramento Municipal Utility District
16 here today.

17 We support the Cap-and-Trade Program and believe
18 that your staff has worked very well with stakeholders to
19 implement and propose these amendments. There's a lot to
20 like in the 45-day language, but we look forward to
21 working to improve with the 15-day language and subsequent
22 implementation.

23 I'm going to just raise four or five points that
24 are in our written comments. And first, we support
25 flexibility in the PO use of allowance value. There's

1 been some changes to clarify that. We would like more.
2 We think that the allowance proceeds should be usable for
3 general education and outreach about climate change, and
4 energy renewables efficiency, et cetera, because we
5 believe it's very important to continue to keep public
6 support for the program through that kind of general
7 education.

8 We also believe that the allowance proceeds
9 should continue to be able to be used to procure
10 allowances for compliance with reasonable metrics about
11 using those allowances, similarly to the ones that were
12 already allocated.

13 And then we recommended a variety of additional
14 specific allowed uses in the regulations, such as efforts
15 to reduce GHG emissions from forest fires and programs to
16 foster low-GHG refrigerants.

17 We support the cost containment provisions with
18 some revisions. What we would like to see is something
19 very similar to that -- remember that flatter line on the
20 chart that you saw, a price ceiling that is at the price
21 floor plus \$60, and at price containment points that are
22 very simple, price ceiling plus \$20, and price ceiling
23 plus \$40. That spreads those price containment points
24 out.

25 We want to have two distinct price pauses as the

1 legislature intended at levels that allow cost-effective
2 market investments. We also support removing the barrier
3 of additional cost burden for electrification. This has
4 been a long-standing issue. You must -- you guys must
5 develop a plausible and feasible method to do this. And
6 it should be okay to use estimations like you do in the
7 LCFS program, like the projections that are used already
8 in the electricity system allocations, and are likely to
9 be used when your staff updates the allocations
10 potentially for the 60 percent RPS. That's going to be
11 based on projections. The ability to use projections for
12 electrification should be a part of that.

13 Finally, we support the staff position on
14 oversupply and banking, and urge you to support that
15 position. They thought through this well and decided to
16 maintain the provisions in the program that worked best.
17 Any changes for that are likely to reduce the program
18 effectiveness.

19 One last thing, staff mentioned proposal and
20 15-day language to remove the true-up of allowances --
21 legacy allowances based on the CPUC decision. We do
22 not -- we hope you do not adopt that change, because it's
23 important to SMUD.

24 Thank you.

25 MS. ROEDNER SUTTER: Good afternoon. I'm Katelyn

1 Roedner Sutter with Environmental Defense Fund. Thank you
2 for the opportunity to provide comments today, and for all
3 the time that staff has dedicated to putting this
4 regulatory package together.

5 While this set of proposed amendments is not
6 exactly what EDF had been recommending, we do recognize
7 that CARB is balancing multiple policy interests, so we
8 are generally supportive of these amendments.

9 There's a few issues I would like to touch on
10 though. First, we strongly encourage CARB to begin
11 working now to identify high integrity reductions to back
12 the price ceiling units. It's important that CARB consult
13 with the legislature to consider a rainy-day type fund to
14 start the pipeline of reductions well in advance of
15 potentially reaching the price ceiling.

16 To guarantee the continued integrity of the
17 Cap-and-Trade Program and maintain its position as a
18 global model for emission reductions, the best option
19 would be not to wait until there is revenue from the price
20 ceiling to begin purchasing reductions to fulfill that
21 ton-for-ton requirement.

22 Second, EDF maintains our position that a modest
23 cap adjustment post-2020 is important to increase
24 California's climate ambition. Specifically, the 52.4
25 million allowances that are currently slated to be split

1 between the two post-2020 price tiers should be removed
2 from the program entirely. These allowances are not
3 needed for cost containment, and we think it's an
4 important opportunity to increase ambition.

5 We recognize that CARB is trying to balance
6 stringency and cost containment, but this is a really
7 important step towards meeting our 2030 target to increase
8 ambition. So we would respectfully request that CARB give
9 this proposal further examination or explain why they do
10 not see this as an opportunity to increase ambition.

11 And then lastly, I want to address the concern
12 about the price ceiling. We've heard some pretty emphatic
13 views here today. And honestly, the reaction to this set
14 of proposed amendments by some segments of the regulated
15 community seems a little out of proportion with the actual
16 content of these amendments.

17 As I've illustrated in my previous points, if EDF
18 had had a free hand to develop these amendments, we would
19 have done some things differently too. We asked for
20 increased ambition post-2020. And we want to see a price
21 ceiling that's significantly higher than the previous
22 APCR, rather than below it until 2027.

23 But what's most important in these amendments is
24 that California is moving forward with a program that has
25 been successful. Our emissions are declining. Our

1 economy is thriving. And we believe that staff is well
2 within the scope of what the legislature asked for in AB
3 398.

4 So in addition to my recommendations I've made,
5 we would urge CARB, at the very minimum, to not give into
6 further alarmist pressure and reduce the price ceiling
7 anymore.

8 So thank you for your work on these amendments
9 and for your consideration of these suggestions.

10 Thank you.

11 CHAIR NICHOLS: Thank you.

12 MS. BERLIN: It's my note pad.

13 Good morning, Chair Nichols, members of the
14 board. Good afternoon. Excuse me. My name is Susie
15 Berlin, and I'm here representing today the Northern
16 California Power Agency, and MSR Public Power who are
17 joint powers agencies comprised of publicly-owned
18 utilities that range in size from the City of Santa Clara
19 to the City of Biggs, which isn't, and which includes
20 Roseville who you heard from earlier today.

21 Also here on behalf of the Golden State Power
22 Cooperative that represents the State's rural electric
23 cooperatives that serve their member customers in
24 primarily rural areas.

25 First of all, I would like to address the

1 provisions regarding the EDUs -- EDU use of allowance
2 value generally. I'm hopeful that the 15-day changes
3 staff had referenced earlier will include some of the
4 refinements addressed herein. Namely, while we support
5 staff's efforts to provide greater clarity on what
6 programs are allowed, we think that they should not be
7 viewed as constraining the flexibility of EDUs to design
8 and implement GHG emissions reductions programs and
9 measures that provide the optimal benefits to their
10 members and electricity ratepayers.

11 To do this, we recommend that the list of
12 programs included in the proposed amendments be
13 characterized as guidelines.

14 Next, avoided emissions are emissions reductions.
15 And the regulations should explicitly recognize programs
16 and projects that directly attribute to carbon avoidance
17 as permissible uses of allowance value. EDUs, and POUs,
18 and electric cooperatives in particular, are uniquely
19 situated to provide direct and impactful benefits to their
20 ratepayers that mitigate the risks of wildfires and avoid
21 increased statewide GHG emissions.

22 Targeted and individualized programs and measures
23 for utility infrastructure, resiliency, vegetation
24 management, and wildfire prevention could complement the
25 broader statewide efforts funded by GGRF.

1 The proposed amendments -- next issue is the
2 quantification of emissions reductions, namely the
3 proposed amendments appropriately call for estimates of
4 emissions reductions, but elsewhere require EDUs to
5 demonstrate reductions from the programs. This language
6 needs to be reconciled.

7 Related to this is the way in which program
8 emissions reductions are viewed. The total number of
9 emissions reductions should never be the sole measure of a
10 program's success. First of all, as Ms. DeRivi from SCPA
11 noted earlier, not all program's emissions reductions can
12 be readily quantified. And secondly, worthy programs that
13 provide fewer emissions than others may be providing those
14 emissions in disadvantaged, low income, or highly impacted
15 communities, which clearly meets the broader objectives of
16 AB 32 and AB 617.

17 Next, the regulation includes a category for
18 other GHG emissions reductions activities, which we
19 support, but caution against a too strict interpretation.
20 Addressing the specific requirements as guidelines rather
21 than program limitations, as I mentioned earlier, would
22 address this, but it is important that this section
23 clearly allow for the use of allowance value investments
24 in programs and projects that directly attribute to carbon
25 avoidance.

1 We also support the comments regarding
2 maintaining the EIM bridging solution and thank staff very
3 much for all of their efforts on this.

4 Thank you.

5 MR. ABERNATHY: Good afternoon, Chairwoman
6 Nichols, members of the Board and staff. My name is Kevin
7 Abernathy. I'm the general manager of Milk Producers
8 Council, and also the vice president of Dairy Cares.

9 So 398, our read on that directly -- or
10 specifically directed CARB to avoid adverse impacts on
11 residents, households, businesses, and the state's
12 economy. So anytime we look at something that potentially
13 has an impact of fluctuating things that can impact
14 pass-through costs down below, which we're certainly down
15 below in the dairy industry, we certainly want to pay
16 quite a bit of attention to that to make sure that we're
17 addressing all the potential impacts and crossing all the
18 t's and dotting all the i's.

19 As the Board considers the proposed regulation
20 amendments, it's critical to implement cost containment
21 mechanisms that will allow the California dairy industry.
22 And we are such a interwoven web between our producer
23 segment and our processor segment that we will maintain
24 viable, and not at a severe detriment cost disadvantage to
25 our competitors outside of California.

1 We believe the authors of 398, Assemblyman
2 Garcia, that 398 intended modest price ceilings and floors
3 for credits, sufficient allowance and allocations, and
4 industry assistance, which we are very appreciative of and
5 have a tremendous success story from the industry
6 standpoint through our hub-and-spoke models and so forth
7 that have went from power generation on form, and now
8 we're transitioning into renewable biogas that's going
9 into the transportation segment.

10 As mentioned in the staff report, in-state dairy
11 offset projects are an integral part and a tool in meeting
12 the carbon reduction, as far as the goals of cap and
13 trade, and also meeting the state's implementation of the
14 short-lived climate pollutant strategy. It's very
15 important that these off -- amendments reflect and
16 facilitate these types of offsets. It is absolutely
17 critical, as this industry does not have the ability to
18 pass on any pass-through costs given our federally now
19 mandated price setting.

20 And then also the CME that prices all of our milk
21 that's turned into the wonderful dairy products that we
22 all like and love to consume.

23 An interesting note, I would say that all
24 segments of California are bearing a burden. When we look
25 at national averages, we're between had 41 percent to 113

1 percent between residential and industrial cost, compared
2 to the nationwide average.

3 And I would say that, you know, California dairy
4 families in particular have been a great environmental
5 leader since stewards with the backing of this Board and
6 other regulatory boards throughout the State.

7 And we continue to find innovative ways to combat
8 climate change. And I would just preference with this,
9 we're doing it right. Let's not stop getting this thing
10 right.

11 Thank you.

12 CHAIR NICHOLS: Thank you. I'd like to comment
13 at this moment that we are up to 74 people who have signed
14 up to witness to speak. That may be more people than are
15 in the room actually. But in all seriousness, I want to
16 cutoff sign-ups in the next five minutes. We're not going
17 to prevent you from speaking. But if you think you might
18 be speaking and you haven't come and given your name,
19 please do so, because we really need to know that there's
20 a line here.

21 Okay. Thank you very much.

22 MS. FOWLER: May I?

23 Good afternoon, Madam Chair and members. My name
24 is Carolyn Fowler. I'm vice chair of the California
25 Democratic Party Women's Caucus. I'm also a senior

1 assembly member for the California Senior Legislature.

2 Our bodies have been watching this issue, and we
3 have supported AB 398 in total -- totality. However, our
4 concerns now are around containment.

5 One in five women, single and older, live below
6 the poverty level, while another 32 percent have incomes
7 higher. Yet, they are still unable to meet their basic
8 living expenses. And this is particularly true for older
9 women of color, black and Latino, and they're facing
10 currently economic insecurity.

11 They have the greatest risk of poverty with over
12 60 percent, as I said, being women of color. When adding
13 the number of older Californians at the sublevel poverty
14 rate, with the number of hidden poor, nearly 40 percent of
15 the Californians age 65 plus have a substandard income
16 level, and are on fixed income.

17 California's direct care workers predominantly
18 women again, including certified nurses, home health aids,
19 and personal care aids are responsible for 70 to 80
20 percent of the paid hands-on care for older adults, and
21 are among the lowest paid of all U.S. workers. And
22 approximately 45 percent of these workers are in
23 households earning below 200 percent of the federal
24 poverty level.

25 Now, this data is not hidden. You can check the

1 Commission on the Status of Women, Justice in Aging, the
2 Kaiser Foundation, California Commission on Aging. As a
3 contractor, I work with the SLATE-Z in Los Angeles, the
4 federal zone and -- in metro L.A. to create awareness just
5 for our students alone in understanding the discount
6 programs that are available to get to and from school.

7 However, understanding that, and recognizing
8 that, there are right in LAUSD 16,000 homeless students,
9 and 10,000 students that are foster care. So your current
10 proposed pricing plan would be detrimental to many of
11 these groups from employment and a residential
12 perspective.

13 I respectfully[SIC] ask the Board to reject the
14 proposed pricing level, and support the legislation's
15 request, which initially was in support of AB 398, but
16 watching the costs and the impact that it would have on
17 the residential and consumers, I should say, just as -- as
18 alone.

19 Additionally, we're trying to build a strong
20 middle class. And as I gave you these statistics, clearly
21 you can understand even \$0.10 more almost is going to be a
22 major impact and a deficit to them. So hopefully, Madam
23 Chair, I've identified some real-world concerns for you in
24 the community.

25 Thank you so much.

1 CHAIR NICHOLS: Thank you. You're allowed to use
2 the word "real world", if you were listening to me before.

3 MS. FOWLER: Oh, good.

4 (Laughter.)

5 CHAIR NICHOLS: It's okay for you. It's just us.

6 I want to express a little frustration. And it's
7 not with you. It's with the way this issue has been
8 presented. And I'm going to ask -- I am going to ask that
9 we put the chart back up that shows what we anticipate the
10 price is actually going to be, as opposed to this issue
11 about the ceiling on the price, because I think there -- I
12 don't know if there's confusion. But to me, this argument
13 about the price ceiling is a little bit, I won't say
14 irrelevant, but maybe it is a little bit irrelevant, in
15 the sense that we were required to put a price ceiling out
16 there, because there was a fear that there could be some
17 occasion in which there would be a runaway increase in the
18 price of allowances.

19 That is not the intent of the program, and it is
20 not what we actually believe is going to happen under the
21 program. That's the part that I'm finding frustrating.
22 And --

23 MS. FOWLER: I think it would be helpful, MadamC
24 Chair, then if maybe -- the reports that most people see
25 is that it could escalate as much as a dollar more or more

1 per gallon. And so --

2 CHAIR NICHOLS: I've seen that same data myself.

3 MS. FOWLER: Oh, okay.

4 CHAIR NICHOLS: And so will this --

5 MS. FOWLER: Is that not true?

6 CHAIR NICHOLS: Does this help maybe?

7 VICE CHAIR BERG: She asked if it wasn't true,
8 the dollar amount?

9 CHAIR NICHOLS: Yeah. No -- well, it's --

10 VICE CHAIR BERG: She just asked you.

11 CHAIR NICHOLS: I heard her, and I'm trying to
12 give an answer.

13 (Laughter.)

14 CHAIR NICHOLS: I think the -- I think the way to
15 answer the question is actually to refer to the chart.
16 And I'm going to ask Rajinder to do it.

17 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
18 SAHOTA: Thank you, Chair Nichols. And we do appreciate
19 the concerns about cost containment, because we do believe
20 AB 398 requires us to balance cost containment with the
21 needed reductions to achieve the targets. If you look on
22 that chart and you see the single line from 2018 to 2030,
23 that is the floor price. That's the minimum price at
24 which the State will sell allowances.

25 To date, we have been at the floor in the

1 program. And projections by market analysts and third
2 parties indicate we will be at that lower line through the
3 next decade -- into the next decade.

4 The number that you're quoting, the \$1.09 is
5 really predicated on a worst case scenario, which is that
6 top green line, which ends at about \$94 in 2030. So
7 what's happened here is the reality is prices are going to
8 be along that lower line. We've seen that historically.
9 We know the projections are there. And that's what we
10 expect to see. Even the secondary market is pricing
11 products at that lower line.

12 But folks who would like to see a further
13 diminished role for this program have taken it upon
14 themselves to look at the worst case scenario and project
15 that as the price of the program. And that is not the
16 expected price of the program.

17 CHAIR NICHOLS: So the \$1.09 is a 2030 --

18 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

19 SAHOTA: That's right. It's a 2030 --

20 CHAIR NICHOLS: -- number. In 2030, I hope to be
21 a live in 2030.

22 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

23 SAHOTA: -- worst case scenario.

24 (Laughter.)

25 CHAIR NICHOLS: No. No guarantees. But the

1 price of gasoline could be a \$1.09 more. But more
2 importantly, I think is the fact that that is the worst
3 case. So that's why I want -- I want to answer your
4 question honestly, because I can't guarantee you to this
5 day at this moment that it couldn't happen. But
6 everything that we know says it's not going to happen.

7 And if we saw ourselves getting close to that
8 level, we would be doing something about it. And we'd be
9 doing it sooner rather than later. We wouldn't be waiting
10 around until 2030. We'd be doing something in, you know
11 2020.

12 So I just feel like this is a -- maybe has been
13 an issue that has caught people's attention because they
14 took a number out of context somehow. And obviously, I
15 understand why they would be concerned. But I do want to
16 really thank you for coming and for being willing to stand
17 up there and engage with me on this issue, because I think
18 it's important that we try to get the word out as well, if
19 we can.

20 MS. FOWLER: Thank you.

21 CHAIR NICHOLS: Thank you.

22 BOARD MEMBER GIOIA: Can I make -- can I also
23 make comment?

24 CHAIR NICHOLS: Yes, sir.

25 BOARD MEMBER GIOIA: I appreciate that you

1 pointed that out, Chair Nichols, because, you know, that
2 you're identifying a worst case scenario. I do have to
3 observe I find it interesting that we are not seeing
4 public outrage or public comment on what, you know,
5 Severin Borenstein has identified in many -- many of his
6 writings about the mysterious increase of -- in terms of
7 the price of gasoline in California compared to other
8 states, this differential. And there's been an attempt by
9 the legislature to try to investigate this further, and
10 there's been some pushback by industry from doing that.

11 And so no one seems to complain about the need to
12 investigate this -- this differential in price of
13 gasoline. And, you know, we can have our staff comment
14 about it, or having experienced this that when a refinery
15 experiences an accident and closes down, or ramps down
16 temporarily, that the price of gas goes up substantially.

17 So these are two things that aren't speculative.
18 They're two things that have happened. And between both
19 of those, that's -- at various times, we've seen dramatic
20 increases of \$0.25 to \$0.50 a gallon from a combination of
21 both of those things happening at the same time.

22 So I just thought I'd make an observation about
23 that. And because I know, frankly, that a lot of this --
24 this effort about talking about a potential worst case
25 scenario has been sort of -- the information sort of

1 originates back with many in industry who are sort of
2 publishing reports on that.

3 CHAIR NICHOLS: All right. Back to the list
4 here.

5 We're up to number 34, which isn't even halfway
6 through the list of people who signed up. So we've got to
7 move along.

8 Marcus Gomez I believe is next?

9 MR. LOPEZ: Madam Chair, I'm going to acknowledge
10 my Senator, the Honorable Dean Florez. He's a brother.
11 He was my Senator for many, many years, and it's really an
12 honor to see him here today.

13 Madam Chair, I am the Mayor of the City of Orange
14 Cove, 34 years Mayor of the City of Orange Cove, and I'm
15 also Chairman of the Latino Elected Officials in the
16 Central Valley. We represent the lowest income people in
17 the State of California, farmworkers, but we're proud.
18 We're proud.

19 But we're here to make sure that we speak on
20 their behalf, that poverty, if -- extremely high in
21 Bakersfield to Fresno. We're highest in the State of
22 California, and we are disadvantaged communities, okay?
23 But we are hard workers, and our people work hard, and we
24 just want to be able to get a fair deal out of this.

25 We're concerned that any increase in -- for

1 example, some of the farm workers travel 60 miles, 70
2 miles to go work from Orange Cove to Mendota to go pick
3 melons, okay? That is outrageous and it's real costly,
4 when you're dealing with farm workers that are in poverty.
5 But you know what, they're proud farm workers, and they go
6 out and work every day when there is work. They work on a
7 seasonal basis, the lowest wages that you can ever
8 imagine. But you know what, we're still proud and we keep
9 working. We are the food basket of the world, and people
10 don't recognize that.

11 If you increase the food who's going to pay for
12 it? The people. The people will pay for it.

13 So this is why I'm here asking the Board to
14 please -- and I'm glad to hear the Chairman say that
15 there's misinformation. I'm glad to hear that. And I'm
16 hoping that it is -- that is the cause, because we are
17 concerned that the well-being of the citizens of our
18 community are really concerned. And we are concerned
19 that -- a lot of people don't know, but we're having to
20 pass taxes for law enforcement in the small rural cities,
21 because we're losing our police departments.

22 Poverty -- I know. I'm the chairman. There's a
23 lot of poverty in the cities in Fresno County. But you
24 know what, we still want protection, so we tax ourselves,
25 you know, for police protection.

1 So again, Madam Chairman, on behalf of the
2 citizens we serve, especially the farm workers and all of
3 our communities, we thank you. And God bless you. And I
4 hope that you consider my statement.

5 Thank you, ma'am.

6 MR. SWARTHOUT: Good afternoon. My name is
7 Patrick Swarthout with the Great Coachella Valley Chamber
8 of Commerce. I believe that was Victor Lopez. I'm not
9 sure what happened to Marcus Gomez.

10 But I just wanted to -- I wanted to -- I'm here
11 representing the greater Coachella Valley Chamber of
12 Commerce with its 13 -- with its over 1,300 members in the
13 Coachella Valley. And I do want to recognize our Assembly
14 Member Eduardo Garcia, and thank him for his leadership
15 representing the Coachella Valley here in Sacramento.
16 He's done an incredible job. And after the election, I
17 know he'll be there for at least another two years.
18 Hopefully, a lot longer than that.

19 Please consider our opposition for the proposed
20 price ceiling. Even though we realize that this is a
21 worst case scenario, we always know that in California,
22 worst case scenarios seem to happen more often than they
23 should. And so we -- we would take that as a part of the
24 Board's proposal today to oppose the ceiling.

25 Our business community in the Coachella Valley,

1 like other communities throughout Coachella -- throughout
2 California depend on affordable energy in order to sustain
3 jobs. As we all know, the cost of doing business in
4 California continues to escalate, which makes it harder
5 for our businesses to grow and pay good wages. It is
6 important to promote an environment that supports small
7 businesses owners and entrepreneurs instead of continuing
8 to burden them.

9 We already know that California consumers pay 49
10 percent more than the national average for their utility
11 bills. Our members cannot afford higher fuel and energy
12 costs. We feel the lawmakers' intention is that your
13 Board needs to avoid adverse impacts to our residents,
14 households, businesses, and not create excessive costs
15 that will hurt the state's economy.

16 I ask your Board respectfully to reject the
17 proposed high ceiling, which would result in devastating
18 effects on our small business community that rely on
19 economic activity.

20 Thank you.

21 MR. ALONZO: Good afternoon, Madam Vice Chair and
22 members. My name is Nathan Alonzo. I am the Vice
23 President of Government Affairs for the Fresno Chamber of
24 Commerce. Our organization was also in support of the
25 cap-and-trade extension.

1 I'm here this afternoon to speak in opposition
2 and of concern with the proposed price ceiling before you
3 for consideration here today. Our 1,200 members and the
4 77,000 jobs that they provide in California's Central
5 Valley represent a beautiful mosaic of mom-and-pop shops,
6 small family-owned businesses, immigrant-owned businesses,
7 and women-owned businesses. Over two-thirds of our
8 members have less than 10 employees with many of those
9 being people who have just started their business and are
10 grasping at the American dream.

11 I say all that to emphasize that the proposal
12 here today will make their dreams of growing their
13 business or surviving that much more unlikely.

14 In our home region, businesses owners pay more in
15 energy costs and in transportation costs than near any
16 other region in California. We have hotter and colder
17 weather. We drive longer distances for daily necessities.
18 And we drive more than anyone else.

19 Higher prices will devastate our business
20 community and our families. This possible increase in
21 fuel costs will force thousands of more families to make
22 the choice that too many already have to make between
23 fueling up to go to work or putting food in the fridge for
24 them and their kids.

25 This will force a business owner trying to make

1 payroll, while balancing rising costs in products question
2 whether or not it makes sense to go forward. We already
3 pay, as one of my colleagues said, 49 percent more in
4 utility costs than the national average. And because of
5 this, consumers are hurt all the way down the line.

6 Let's not make it harder for business to stay in
7 business. Let's not hurt employees and families. Let's
8 consider our friends and neighbors in California's Central
9 Valley who can't afford this.

10 I please ask that you reject this proposal and
11 take our statement into consideration.

12 MR. PARRA: Good afternoon, Madam Chair and
13 members. I, too, would like to acknowledge my former
14 senator, Mr. Dean Florez. My name is Daniel Parra, and
15 I'm a Council Member for the City of Fowler. Fowler is a
16 small city located in Fresno County with over -- with
17 6,000 residents. Over 60 percent are Latino. Our home is
18 just small families, small businesses, and agriculture. I
19 am here because the pricing proposal before you today will
20 hurt my community.

21 CARB's proposal is not what the legislature
22 envisioned when they came together from both sides of the
23 aisle to pass AB 398. The language in the bill directed
24 CARB to establish a ceiling on the price of allowances to
25 avoid adverse impacts on residents, households,

1 businesses, and the state's economy. This proposal will
2 definitely cause adverse impacts on my community.

3 Our residents cannot forward such an increase in
4 energy and fuel costs. I ask that you take our residents
5 into account when you cast your vote today and urge you to
6 follow the directive set forth by the legislature.

7 Thank you for your time and consideration.

8 MR. GURIATO: Good afternoon, Madam Chair and
9 members of the Board. My name is Maria Guriato. And I'm
10 a former City Council Member from the City of Salinas and
11 also Mayor Pro Tem.

12 I right now am representing the Latino Seaside
13 Merchants Association. I'm here today to voice our strong
14 opposition to the proposed price ceiling in CARB's
15 proposal. The Latino Seaside Merchants Association
16 represent Latino businesses in the tri-county area, San
17 Benito, Monterey, and Santa Cruz County.

18 Our business community depends on affordable
19 energy in order to sustain jobs that pay good wages, offer
20 products and services at reasonable prices, and promotes
21 an environment that supports small business owners and
22 their employees.

23 We are concerned about the harm to our members if
24 the cost of electricity, gas, and diesel dramatically
25 escalate. These excessive costs will hurt our suppliers

1 and consumers. With the increase of costs, our suppliers
2 will be forced to increase their costs, which in turn
3 affects the employees. Our businesses and consumers
4 cannot afford higher fuel and energy costs.

5 We have situations where we have -- as some of
6 the other groups have mentioned, we have our employees and
7 our businesses that are commuting. They're going three to
8 four hours to another location, and sometimes they're
9 piled up in a car or in a van, and they're -- you know,
10 they're basically pooling their resources to be able to
11 get to their jobs.

12 If you increase that more, and they haven't
13 received any type of wage increase, what happens is then
14 they really are impacted and it's a detriment to their
15 family.

16 Additionally, growing costs under this proposal
17 makes it more difficult for businesses to maintain good
18 wages for their employees. Unaffordable operational
19 expenses that can't be avoided will likely result in pay
20 raises -- pay raises getting deferred, new hires getting
21 put off, or even workers losing their jobs.

22 I ask the Board respectfully to reject the
23 proposed price ceiling, which would only make it harder
24 for these employers to sustain good-paying jobs and not
25 have our economy threatened.

1 I also ask that we consider what's happening
2 around us today. We are having a disastrous fire in
3 California in two locations. And all those vehicles that
4 are commuting, the fire trucks, the supplies, the
5 sheriffs, the paramedics and all that, they're making
6 round trips. They're going across. They're help --
7 they're coming in from other areas. You can only imagine
8 how much more the cost will be if they're -- the fuel
9 costs are increased.

10 I also want to ensure that you're aware that the
11 central coast at the seaside merchants -- Latino merchants
12 represent is predominantly the agriculture and hospitality
13 industry. And the agriculture out of the Salinas Valley,
14 which is known as the salad bowl of the world, is the
15 second largest in the United States. And they're
16 dependent on transportation, and they're dependent on the
17 fuel, and all their equipment and machinery.

18 And, you know, when you look at it, it's not just
19 the employee. It just keeps on going up till it gets to
20 the consumer. So again, I thank you very much for
21 listening to us, and I hope that you'll take this all into
22 deep consideration.

23 MS. WILLIAMS: Good afternoon, Chair and the
24 Board. My name is Vivian Williams, and I represent
25 National Action Network of Los Angeles. And I, too, am

1 concerned about the rise in the cost of gas and
2 electricity for my community in South Central Los Angeles
3 as we cannot afford the cost increase. And I ask the
4 Committee to be mindful and considerate of my neighbors,
5 as we would have to decide which bill to pay, gas or
6 electric, if you make the decision to increase the cost of
7 gas and electricity.

8 I ask the Board to be considerate as the working
9 class for we just can't afford it. I'm a part of that
10 group. If the cost jumps the way that we've been told,
11 just couldn't afford it. We have to pay for gas. That
12 price goes up. Electricity goes up. The cost to ride the
13 train goes up. Take the train and the bus in order to get
14 to work and then to get back home.

15 That's an increase, and we would like -- I would
16 like for you to be considerate of us the citizens.

17 Thank you.

18 VICE CHAIR BERG: So if I could -- if I could
19 just ask if you see your name coming up, the next two, if
20 you could make your way down, because we still have quite
21 a few people, and we want to make sure to hear from
22 everybody and not have to cut the time. Thank you.

23 MR. NICHOLS: Thank you. My name is Jarron
24 Nichols. I'm here on behalf the Ministers Convention and
25 the National Action Network and also the NAACP for

1 Compton. I came to speak on behalf of all Los Angelans.

2 I saw that my aunt Mary Nichols was on the Board,
3 so I had to definitely come and speak.

4 (Laughter.)

5 MR. NICHOLS: She said something today that I
6 wanted to speak on behalf of, the worst case scenario.
7 The worst case scenario. Someone who has never ran for
8 political office in the United States of America is
9 elected to the highest elected office in the United States
10 of America.

11 (Applause.)

12 MR. NICHOLS: Today, I believe a lot of people in
13 this room are protecting the worst case scenario. For us,
14 gas prices for middle class people, people of lower than
15 middle class, it affects us directly and indirectly,
16 whether we want to admit or we don't want to admit it. In
17 the famous words of Muhammad Ali, "Don't count the days.
18 Make the days count".

19 I would say today, for us, don't count the
20 dollars, but make our dollars count that we've already
21 spent. For us, in Los Angeles, I also work with the Black
22 Lives Matter. But today, for me, I would say our
23 communities matter, our gas prices matter, our economics
24 matter. And raising our gas prices would just gash us. I
25 would ask that this Board recycle the money that we

1 already have into the community programs that we have,
2 especially for Los Angeles, Compton, Inglewood, Long
3 Beach, anywhere inside the L.A. county area and the -- and
4 outside of there.

5 It affects our communities, our youth programs.
6 It affects everyone. I was speaking with a gentleman
7 today that we came down here with, and -- I just found
8 out. I didn't even know this. We don't even have -- at
9 some L.A. Unified School Districts, we don't even have a
10 nurse that comes to our schools every day. Some of them
11 have to wait to get sick basically. That's Basically what
12 you're saying. Like, you can't get sick on Monday.
13 You've got wait till Tuesday or Wednesday. That affects
14 us directly.

15 I would -- I would thank you guys for your time,
16 and I would just ask that the monies that we have that we
17 would allocate it directly to our communities and the
18 programs that we have for our youth today.

19 Thank you.

20 MR. BUIE: Good afternoon. I Reverend Oliver E.
21 Buie of Holman United Methodist Church from South Los
22 Angeles. And I'm here to stand and speak for the
23 community in which I represent, which is a brown
24 community, which is deeply injured whenever there's any
25 increase in any cost.

1 I'd like to take the time and thank you. And I
2 believe that Mrs. Nichols, the Chair, has represented the
3 truth that that was a worst case scenario. However, we
4 are deeply concerned that if there's any increase, because
5 it has a profound an impact on those within my community.

6 Also, many of the people in my community are
7 paying 50, 60 percent of their salaries just for housing.
8 So any increase anywhere will have a profound impact on
9 their lives or whether they eat, or even whether they have
10 a place to live if there is an increase.

11 So I want us to please look at the cost and
12 hopefully like -- like the gentleman before me had talked
13 about the worst case scenario, it can happen. So if it
14 does happen, I want us to be proactive -- the Board to be
15 proactive in putting in mechanisms in place to safeguard
16 the community and to safeguard the most vulnerable.

17 And I believe that each and every one of us are
18 aware that California leads the country in the poverty
19 rate, where there is one out five Californians living in
20 poverty. And so as we make considerations, I think that
21 we need to look at the people more than the corporations.

22 We know that the large corporations have had a
23 windfall due to the recent tax break. And so we need to
24 give some break to the people who actually make things
25 happen.

1 Also, CARB has acknowledged that the majority of
2 the stakeholders input has indicated the importance of a
3 reasonably low-price ceiling and appropriate placement of
4 speed bumps to put market safeguards in place.

5 Nonetheless, the agency has included in its SRIA
6 a lower range and upper range scenario of price ceiling
7 and speed bumps that are higher than a majority of the
8 stakeholders recommended. The stakeholders have spoken.
9 I plead -- I stand here asking that you would hear us.

10 Also, Supervisor Gioia, I want to thank you for
11 bringing up the point, because I have noticed that about
12 if there's just an interruption, oil prices or gas prices
13 go up 50 percent. I don't know what authority you have,
14 but I would encourage you to make sure you look into that.
15 And next time it happens, that something -- that there is
16 an investigation, because many people are hurting
17 unnecessarily. And I'd just like to take this time to
18 thank you for letting me make a comment and encourage you
19 to look out for the least of these.

20 MS. NAVARRETE: Hello.

21 VICE CHAIR BERG: Hi.

22 MS. NAVARRETE: I had in my notes that I was
23 going to say good morning, but now good afternoon.

24 (Laughter.)

25 MS. NAVARRETE: It is a great honor for me to be

1 here representing our admirable chairman of the board, Dr.
2 Ruben Guerra and the Latino Business Association.

3 The Latino Business Association is consistently
4 committed to better serve and rightfully represent Latino
5 businesses and its communities throughout the state of
6 California since 1976, and today is no exception.

7 As I was approached to speak on behalf of your --
8 of the Board, and understanding the -- how important it is
9 to your mission of being able to check -- or your mission
10 of making a difference and an impact in the environment,
11 there's -- there's very important issues that you guys
12 address.

13 And there -- it is very obvious, and I have no
14 doubt, that the California Air Resource Board has -- has
15 and will continue to create an impact. And, of course, we
16 are viewing -- or we see that there -- that you have the
17 bigger vision to help other generations and future
18 generations.

19 I personally admire this, due to the fact that I
20 have two girls. We understand more that we have to do
21 more to reduce exposure of pollutants and improve the
22 quality of life in California communities facing
23 environmental and economic change, because -- and due to
24 facing environmental economic -- the change through the
25 CARB -- through CARB. And it's very important for us to

1 truly understand the decisions that you guys make.

2 As -- but as we further analyzed this situation,
3 we have concluded that despite your higher purpose of
4 prioritizing environmental justice, using the amendment to
5 do so really is not the way to motivate. In fact, it's
6 the way to shun the possibilities of communities
7 positively viewing your higher objective, and engage, and
8 collaborate with CARB.

9 This is why we respectfully ask you to consider
10 our strong opposition to the proposed price ceiling this
11 Board is doing.

12 VICE CHAIR BERG: Thank you.

13 MR. ADAMS: Good afternoon to Madam Chair Nichols
14 in her absence and to the Board. It is stated up there
15 that my government name Lovester Adams. But I stand
16 before you not only as Lovester Adams, but I stand as a
17 member of the clergy. I stand here as Bishop Lovester
18 Adams today on behalf of my great church that the God has
19 allowed me to pastor in this particular season, in South
20 Central Los Angeles, as well as holding a position on the
21 patriarchal council of United Christian Communion, who
22 also entitles me the opportunity and affords me the
23 opportunity to make various decisions that could also
24 impact our surrounding communities at large.

25 As well as currently holding a position as the

1 recorded secretary for the Baptist Ministers Conference of
2 Los Angeles and vicinity, which holds over 300 various
3 pastors from around -- from the surrounding communities at
4 large.

5 We've heard a lot of talk today as it relates to
6 the CARB, and dealt with the worst case scenario. We've
7 heard that a lot today as it relates to the worst case
8 scenario. And if we get to the worst case scenario, are
9 we prepared for the worst case scenario to -- we have a
10 safety net and place to safeguard us.

11 I would like to say that the Board's proposal
12 that's going to take place could worsen -- could worse the
13 cost of all Californians, especially on the -- of the
14 seven million California families already struggling just
15 to get by on a day-to-day basis.

16 ZEV subsidies aren't going to communities of
17 color, minorities. They're areas with the highest
18 concentration of solar panels or wealthy suburban. Many
19 low income Californians can't afford to live near their
20 places of work simply because the cost of housing is
21 simply too high and we cannot afford it.

22 Increasing transportation costs will affect them
23 the most, simply because they can't afford to live near
24 their work place. In my community alone -- my community
25 alone that I see every day, there are people who are

1 simply struggling on a day-to-day basis. We're feeding.
2 We're housing. We're doing the best that we can. But if
3 things are constantly increased, it takes a great impact
4 and affect on the surrounding communities at large.

5 I would say to you today, and I urge you to take
6 steps that will contain costs and meet our environmental
7 goals, not simply to raise the price, because if we hit it
8 and the refinery said the pump is going to hit it, the
9 station owners are going to hit it, and we're going to hit
10 it, and we're going to feel it hard into our pockets.

11 Thank you for your time

12 VICE CHAIR BERG: Thank you.

13 MR. WILSON: Good afternoon, Chair and Board.
14 Thank you for this time to speak to you on the matter
15 which is at hand. Today, I'm here to represent the
16 Baptist Ministers Conference of Los Angeles under the
17 leadership of Dr. Lee Arthur Kessee, who serves as our
18 President. I, as well, serve as a Treasurer of that fine
19 Conference. And I normally would not get involved with
20 such issues of politics.

21 However, I also pastor a group of people who will
22 be well deeply affected if gas prices rises higher than
23 they already are. I've heard several times about worst
24 case scenario. As far as I'm concerned, we already are in
25 worst case scenarios.

1 I don't know if this is allowed, but the Bible
2 says when the galley are an authority, the people rejoice.
3 But when the wicked are in power, they groan.

4 And I want to just share that the church in which
5 I pastor, Solid Rock Mission Church in the City of
6 Compton, Compton is a very poverty type community. Things
7 are already bad in that community, really bad in that
8 community. Even on Wednesday nights, out of my own
9 pocket, I make sure the community -- streets surrounding
10 my community is fed, because things are that bad. That
11 diabolical around that city.

12 And I would just say please consider that these
13 gas prices, if they go up, everything goes up, crime goes
14 up, and everything else goes up.

15 Thank you so much for this time.

16 VICE CHAIR BERG: Thank you.

17 Good afternoon.

18 MR. LEWIS: Good afternoon. My name is Pastor
19 Prentiss Lewis, and I pastor in the City of Los Angeles, a
20 church called Greater Starlight Baptist Church. I stand
21 here representing that particular church, but also serve
22 with the Progressive Baptists State Convention, where I
23 once served as president. And now I am Quality of Life
24 Minister. What we seek to do is do what we can to
25 encourage a better quality of life in our community, and

1 surrounding community.

2 Let me just say quickly thank you, Chair and
3 thank you, Board for hearing us today. I think we're all
4 aware of the fact that we have to aggressively address the
5 climate change. And listen, I'm the one that realizes
6 that in order to do that, there are certain prices that we
7 must pay.

8 I want to also say that I commend you and your
9 work. But those costs ought not be paid
10 disproportionately by communities of color, and low-income
11 Californians who can't even afford some creature comforts.
12 The church where I minister I watch broken people. And
13 these people are broken, because sometimes they have to
14 choose between -- between a meal and a ride to work.

15 The reality is they don't work in the area that
16 they live. And because of that, they have to -- you know,
17 they have to travel that distance. And it has become so
18 bad in our community that they're losing their jobs. And
19 they're losing their jobs, because they can't get to work.

20 All I would encourage you to do is to recognize
21 that reality. And in recognizing that reality, act
22 appropriately. Even as you now, you know, decide on this
23 very issue.

24 So that's basically what I have to say. I think
25 continually of the people that I serve. And my greatest

1 desire is to see their quality of life better each day.
2 Thank you so much.

3 VICE CHAIR BERG: Thank you.

4 MR. MOSELY: Madam Chair and distinguished
5 members of this great body of leadership. Good afternoon.

6 We live in what is considered the Golden State.
7 However, I'm concerned about how golden it is as it
8 relates to is it because of the economic welfare and
9 policies or is it because of the golden cloud that hovers
10 over our communities, because of the increasing amount of
11 pollution. Pollution that greatly affects our
12 communities, disappropriated number of our youth,
13 asthmatic, can't breathe.

14 And is already stated, if a parent has to make a
15 choice, because there's not a nurse in a LAUSD school, you
16 have to ask the question, if the child gets sick on the
17 day that there's no nurse, that parent has to leave their
18 job that they're already struggling. Many parents are
19 working multiple jobs because of the downsizing of the
20 work days.

21 Some parents now multiple jobs because they've
22 been taken from a 40-hour week because employers don't
23 want to pay for health care. Some working 28 hours and
24 have to go back and do another job. They have to use
25 public transportation in order to get to work, go through

1 school.

2 I'm Part of the National Action Network Los
3 Angeles Chapter. And I sit and watch them walk to school
4 with their children, get on a bus to go to work, to leave
5 work early, to come back and get their child or their
6 children to take them home. Hopefully, there's something
7 to eat, because they've been enough hours they've
8 accumulated in order to feed them.

9 Murphy's law says whatever can go wrong will go
10 wrong. And I understand what was said and what was stated
11 as it relates to potential possibilities. But if it can
12 go wrong, it will go wrong.

13 And I'm thankful again for looking at what our
14 supervisor here said, whenever there's a problem in El
15 Segundo about the gas, refineries shutting down, it hits
16 us first. Our communities become a premier target for
17 price increase.

18 Everything is going up, and even though they're
19 moving toward \$15 an hour, that's really not a substantial
20 amount of money, if you're only working 20 hours a week.

21 Thank you so very much for this time.

22 VICE CHAIR BERG: Thank you.

23 MR. SARAGOSA: Good afternoon, Vice Chair Berg,
24 Board members. My name is Michael Saragosa. I'm a
25 Council Member in the City of Placerville. I ask you

1 today to consider rejecting the price ceiling that is
2 recommended in the staff proposal, and adopt the one that
3 is more in line with the bipartisan agreement in AB 398.

4 I know our residents, businesses, and our local
5 economy will feel the negative effects of increased energy
6 cost, whether it's directly to refuel energy purchases or
7 indirectly in the cost of goods and services.

8 Our local economy is driven a lot by tourism. I
9 know a lot of other cities around the state it's the same
10 way. Significant increase in the price of fuel will have
11 negative consequences on our local businesses and workers
12 who rely on a healthy tourism presence.

13 Unlike other cities in the State coastal areas,
14 our local economy is still recovering from the Great
15 Recession. We do not want to take a step backwards.

16 AB 398 represented a significant victor for the
17 environment and for all Californians and it received
18 bipartisan support, as it should have. The expectation
19 was that the regulatory process should avoid adverse
20 impacts. I believe this current price ceiling proposal
21 falls short of that expectation.

22 You know, I also get to work with communities of
23 color throughout the state. And I can tell you there's
24 not a lot of Teslas in Compton. In Orange Cove, there's
25 not a lot of plug-in stations to do that or solar panels

1 on roofs.

2 These proposals will have real-life consequences
3 for people of color, people in low-income communities. I
4 don't believe that it's alarmist for them to be here, and
5 to talk about those real-life consequences.

6 And so I ask you to consider adopt a price
7 ceiling that is in line with both the language and spirit
8 of AB 398.

9 Thank you.

10 VICE CHAIR BERG: Thank you.

11 MS. SOLORIO: Good afternoon. Anna Solorio,
12 Community Housing Opportunities Corporation. First of
13 all, thank you -- thank you, Board - and hi, Phil - for
14 the opportunity to speak today.

15 So we are a nonprofit. We've been around for
16 about 30 years. We own and manage affordable housing.
17 We're also developers. We also run a energy program and
18 we have been a recipient of LIWP funds. And we're able to
19 do some really major upgrades to homes in West Sacramento
20 and Pinole -- excuse me, Pittsburg, where we did -- using
21 cap-and-trade funds. So just want to shout-out for that
22 and acknowledge that. We were be able to put solar --
23 solar panels on homes. We were able to do major upgrades
24 to homes, that we couldn't normally do through our other
25 energy programs. So good on that. Really positive.

1 Totally support that.

2 So -- but I do need to acknowledge that we're
3 very -- because we track the housing industry, we're very
4 aware and sensitive about cost to housing. We are
5 still -- we are in a high housing crisis. There is a huge
6 lack of affordable housing rentals and ownership. So for
7 example in my county, Solano, even though CHOC has -- is
8 in around five or six different counties. But in Solano
9 specifically, you know, a large amount of money is coming
10 into that county, as well as the Bay Area, as well as the
11 State and through REITS to buy and purchase multi-family
12 complexes, to do minor upgrades, a lot of the time using
13 public purpose funds, and then doubling and tripling the
14 rents

15 So we continue to have a housing crisis and will
16 continue to do so, unless there's some dramatic -- beyond
17 your role, dramatic changes in policy. But just want to
18 point out your policy has a very detrimental effect on the
19 cost of housing.

20 I can go into more detail, but I'm not going to
21 use my last minute. Just to say, unfortunately, talks
22 have broken down between -- we belong the 200, between
23 your staff, that we were not able to come to a compromise
24 or reasonable accommodation. So we filed a lawsuit. And
25 because of discrimina -- we believe discriminatory

1 practices that these regulations have on low income,
2 especially peoples of color.

3 So I want to invite everyone who has not been
4 heard or doesn't believe they're going to be heard join us
5 in our lawsuit. This superior court just acknowledged
6 that our suit has merit and is advancing our suit through
7 the court system.

8 So we would love to work with you to come to a
9 reasonable accommodation. Again, if people here in the
10 room feel that we're not going to be heard, or this report
11 is not going to address some of our real-life concerns,
12 the court is an alternative.

13 So thank you for the opportunity to speak.

14 MR. HALLENBERG: Good afternoon, Board members.
15 My name is Ryan Hallenberg. And I'm had on behalf of the
16 Valley Industry and Commerce Association, which represents
17 over 400 businesses and non-profits in the San Fernando
18 Valley and greater Los Angeles area.

19 I am here to voice our strong opposition the
20 proposed price ceiling that is being considered by the
21 Board today. The legislature provided a clear outline for
22 what they wanted the Cap-and-Trade Program to be. At the
23 heart of the design, there are cost containment features,
24 such as a price ceiling that places a limit on the price
25 allowance -- of allowances, as well as two speed bumps

1 which triggered the sale of additional allowances in order
2 to reduce market volatility.

3 The proposed price ceiling misses that mark. The
4 legislature fully intended the price ceiling and speed
5 bumps to serve as safeguards that provide cost
6 containment. If these are set too high, these will be
7 ineffective in reducing market volatility. As a business
8 organization, we aren't opposed to cleaner air or a
9 healthier environment. However, we do become anxious when
10 policies are introduced that aim to improve air quality
11 but risk increasing the cost to do business here in
12 California.

13 California is already one of the most expensive
14 states to run a business. Business here pay more on their
15 utilities than the national average. And the gap between
16 California and the rest of the nation is only getting
17 worse.

18 Under this proposal, increased costs will make it
19 more difficult to do business in California. Rising
20 operational costs will likely result in delayed pay
21 raises, reduce hiring, and even people losing their jobs.

22 The new pricing structure needs to protect
23 consumers, businesses, and the economy against any adverse
24 impacts. I respectfully implore you to establish a lower
25 price ceiling. As currently configured, this ceiling will

1 only put our economy at unnecessary risk.

2 Thank you for your time.

3 MR. SCOTT: Okay. Good afternoon, Madam Chair,
4 in absence and to the Board. I'm Will Scott, Junior. I'm
5 a farmer. I'm also the current President of the
6 African-American Farmers of California.

7 But first, I would like to thank the Board for
8 the opportunity that you have provided for me, the
9 incentive programs you have as far as purchasing a tractor
10 incentive program. Without that program, I would not have
11 been able to purchase a new tractor.

12 And I would also like to have this opportunity
13 extended to the other small farmers -- continued to the
14 other small farmers. They need the opportunity also to
15 upgrade their tractors, so they can participate in this
16 clean air business.

17 I feel that if the cost to purchase credits sky
18 rockets, it will mean less credit to purchase and less
19 funding for farmers to upgrade their equipment. I don't
20 use pesticides on my crops, and I farm sustainable. When
21 I go to farmers market, I'll also teach them how to eat
22 the, you know, health food.

23 So that's one of the benefits of being a small
24 farmer. I -- also, I want a clean environment to live in,
25 not only into the underserved areas, but also throughout

1 the state.

2 What I'm asking you to please consider is the
3 consequences of setting the cost of carbon credits too
4 high on small farmers like myself who want to do the right
5 thing. But absent the investment of incentives to upgrade
6 equipment, many small farmers will be -- will have to shut
7 down, and they would have to sell their property to big ag
8 business.

9 And as you know, small farmers is an asset, not
10 only to this community, but also to this civilization. If
11 you look at the United States, the United States was
12 started by small farmers. You know, we -- they advance on
13 us. And I think that, you know, in order for us to get
14 young people into it, I think that avenue should still be
15 there. We should sustain it. Because when I ask the
16 Board too to think about the collateral damage that will
17 be done to the least of us, you know, if consideration
18 isn't sent forward.

19 That's probably all I have to do, but I thank the
20 Board for what you're doing. But I think that not only do
21 we have to breathe, but we have to eat in order to live in
22 this civilization. So I think you for this opportunity to
23 stand before you. I thank you for your time also. And I
24 ask you in advance to take some consideration about the
25 collateral damage that you may do to the least of us.

1 Thank you.

2 MR. CHAVEZ: Good afternoon, members of the Board
3 and staff. My name is Ron Chavez. And I am the Director
4 of Community Development for California Community
5 Builders. And I'm here comment on CARB's scoping plan.

6 Our focus is to close the ratio wealth gap
7 through homeownership. Following the Great Recession and
8 recent housing crisis, the racial wealth gap is at its
9 largest since the Great Depression.

10 Several years ago, we started The Two Hundred
11 Project. Our plan was to organize 100 community leaders
12 across the state with a series of mini-conferences aimed
13 at developing and understanding of the obstacles to
14 homeownership.

15 Today, The Two Hundred represents a coalition of
16 over 800 community leaders, which now includes YIMBYs,
17 millennials, and students. And our plan now is to
18 organize -- to include student -- senior citizens.

19 The Two Hundred Project is led by a leadership
20 council composed of esteemed community leaders that have a
21 long history of defending the civil rights of marginalized
22 communities.

23 Founding members were the Honorable Cruz Reynoso,
24 the first Latino State Supreme Court Justice; Joe Coto a
25 former State Assemblyman, and former Chair of the Latino

1 Caucus; John Gamboa who has been a champion of civil
2 rights for many years; and Herman Gallegos who was a
3 founding founder of the National Council of La Raza with
4 over 50 years of activism. The Council includes leaders
5 from throughout the State, and is commit -- who are
6 committed to social equity.

7 As you know, and have heard, The Two Hundred sued
8 CARB because we believe the scoping plan will
9 disproportionately negatively impact communities of color.
10 What you may not know is that The Two Hundred is deeply
11 concerned about the future. It is not naive about GHG and
12 the effect on global warming.

13 Like GHG scientists, The Two Hundred relies on
14 facts. California is now a majority minority State. And
15 the future economy will rely on people of color. They are
16 our seed corn. They will pay the taxes and fund
17 entitlements for retiring Baby Boomers. Latinos are the
18 majority of California's K through 12 students.
19 Ninety-five percent of California Latino youth under 18
20 are native born. Latino youth under 20 make up more than
21 half of the California's population under the age of 200.

22 The Two Hundred understands that public policy
23 cannot be made in a vacuum. Past public policies like
24 redlining denied people of color the opportunity to buy a
25 home and accumulate wealth. This is at the core of

1 today's racial wealth gap.

2 Between 1934 and 1962 the federal government
3 issued \$120 billion in FHA and VA loans, of which 98
4 percent went to white families, and only two percent went
5 to African-American and other minorities. This policy
6 created the largest middle class in the world, and a
7 legacy of wealth to pass on. It is also institutionalized
8 housing segregation ghettos, which results in negative
9 health outcomes, health levels of -- high levels of
10 stress, diabetes, high blood pressure and lower life
11 expectancies, inferior school systems, higher crime rates.

12 Home ownership is tried and true path to success
13 and well-being in society. Policies that increase the
14 cost of housing like net zero and prices that increase
15 commute costs --

16 VICE CHAIR BERG: Mr. Chavez, your time is up.
17 Could you just give us a summary sentence, please?

18 MR. CHAVEZ: Policies to reduce GHG must not --
19 must equitably spread the burden and not further penalize
20 those that have been historically marginalized.

21 Thank you.

22 VICE CHAIR BERG: Thank you.

23 MR. GARCIA: Good afternoon, Madam Chair and
24 Board members. My name is Juan Garcia and I'm the owner
25 of PG Cutting Services in Lake Elsinore. It's a concrete

1 cutting company and hard demolition.

2 I came here today to voice my opposition for the
3 proposed price ceiling that is part of the Board's
4 proposal. Let me clarify. I understand that there might
5 be been a little bit of misconception. I appreciate the
6 clarification, but I came all the way from Riverside
7 County, so I'm still going to speak.

8 We're a family-owned and -operated business that
9 works with concrete cutting and drilling projects that
10 range from small residential to large capital improvement
11 projects, such as LAX. We have 23 employees. As a small
12 business in Riverside County, we run a tight budget. I
13 need as much certainty as possible with outside costs,
14 including energy and fuel. Our energy costs are some of
15 the highest in the nation.

16 By increasing energy and fuel costs to
17 businesses, we will have to look for ways to pass out --
18 pass on added expenses, either by raising our prices or
19 reduce or workforce.

20 In 2008, I almost had to close the doors because
21 diesel was \$5.49 a gallon. I don't want to get anywhere
22 near that anymore.

23 We all want cleaner air, I agree. And I'm doing
24 my part, because ever since this started, I have had to
25 upgrade my equipment from tier 2 to tier 3, tier 3 flex to

1 now tier 4, and tier 4 final, et cetera.

2 I -- these machines now have to have more filters
3 and sensors to burn cleaner, and they're less reliable.
4 Even the manufacturers can't keep up with giving us what
5 we need. So now I have to have three machines instead of
6 two machines, so I can have backups. So we're already
7 being impacted. And we appreciate what the Board is doing
8 for a better environment, but I would say at whose
9 expense?

10 I respectfully ask for you to reevaluate your
11 proposal. We need a price ceiling that does not punish
12 California's small businesses and consumers. Thank you
13 for your consideration.

14 VICE CHAIR BERG: And thank you for coming, Mr.
15 Garcia.

16 MR. GARCIA: Thank you.

17 MS. BECKSTEAD: Good afternoon, Vice Chair --
18 Vice Chairwoman Berg, Board, and staff. Thank you for the
19 opportunity to provide comments. My name is Christina
20 Beckstead, and I am the Executive Director of the Madera
21 County Farm Bureau.

22 And I am here today not only on behalf of the
23 members in Madera County, but also on behalf of my
24 counterparts in Merced and Kings County.

25 I'd like to echo the remarks made earlier today

1 by our fellow industry partners and representatives and
2 those to come, but would like to emphasize the concern on
3 the price ceiling.

4 We are concerned that the Legislature's direction
5 is being ignored, and that the proposed program will
6 drastically increase the cost of consumer goods to
7 Californians. As presented, we believe that the proposed
8 price ceiling would fail entirely at its statutory purpose
9 of controlling costs that are placed on households,
10 businesses, and the overall economy.

11 Agriculture and its related industries, including
12 manufacturing and processing, employs tens of thousands of
13 Californians who depend on agriculture for their jobs and
14 wages, whether they work on the farm, in its supply chain,
15 or at the neighborhood grocer. Higher costs will force
16 many to make difficult decisions for their businesses and
17 employees, as they try to find ways to continue to push
18 forward to provide food not only to California, but to the
19 nation and the world.

20 Higher costs already affect our ability to
21 compete nationally, and directly impact hiring and wage
22 decisions made for employees. Higher energy costs that
23 will result from this price ceiling will only make this
24 problem worse.

25 Please keep in mind that these additional

1 operational expenses are all factored into the prices
2 everyone pays at the grocery stores, restaurants, and
3 anywhere else they buy California grown food. If you
4 increase one of these costs, you increase the price of
5 food.

6 If the Board decides on a path that does not
7 contain -- that does not contain costs, it would make it
8 more expensive to grow, ship, process, and store food
9 impacting millions with higher food prices. This would
10 especially hurt low income families for whom healthy
11 groceries are a major expense.

12 We believe that a balance that reduces greenhouse
13 gas emissions while containing costs is a way to protect
14 this industry and create more sustainable environment.
15 Our members are stewards of the land who do everything to
16 not only be efficient but sustainable.

17 We thank you -- we thank the staff for their time
18 and efforts.

19 Thank you.

20 MR. AGUYO: Good afternoon, Board members and
21 staff. My name is Peter Aguyo here on behalf of Nisei
22 Farmers League. Our President, Manuel Cunha, isn't able
23 to be here. He is currently at the San Joaquin Valley Air
24 Pollution Control District to support the PM2.5 plan.

25 Our organization, which represents over 400

1 farmers and packers, large and small, who employ thousands
2 of farm workers also supported AB 398 to improve the air
3 quality of the Central Valley. Our farmers received
4 incentive funding for cap and trade that allowed them to
5 remove old tractors and trucks, and replace them with
6 equipment that produce significantly less emissions.

7 However, we worry that if projections aren't
8 correct, and the amount reaches the price ceiling, it
9 would decrease the purchases of credit, which would reduce
10 the amount of incentive funding, and prevent farmers from
11 upgrading their equipment.

12 Our farms pay some of the highest utility rates
13 in the country. And when you factor in the cost of fuel,
14 many of our small forms will simply not be able to stay in
15 business. Besides the potential loss of jobs, farmer
16 workers travel longer distances un less fuel efficient
17 vehicles to work. Any increase in utilities or fuel is
18 less money for family expenses. Agricultural workers,
19 farmers, all suffer with increased energy costs.

20 On behalf of the Nisei Farmers League, we urge
21 this Board to adopt a price ceiling consistent with the
22 bipartisan agreement contained in AB 398. Thank you for
23 your time and consideration.

24 VICE CHAIR BERG: Thank you very much. So what
25 we're going to do is we're going to hear from Mr.

1 Rodriguez next, and then we're going to go ahead and take
2 a break for our court reporter, and we'll take a 15-minute
3 break, is that okay?

4 THE COURT REPORTER: (Nods head.)

5 VICE CHAIR BERG: And so thank you, Mr.
6 Rodriguez.

7 MR. RODRIGUEZ: Good afternoon, Madam Chair and
8 members of the Board. My name is Roy Rodriguez. I'm
9 Council Member in the City of Orange Cove. Our population
10 is 90 percent Latino and most work in agriculture or a
11 related field. I'm here today because the proposal before
12 you today will harm my community. Many Central Valley
13 communities have been left behind in the economic
14 recovery. Our residents and farmers still struggle with
15 the effects of the recession.

16 Our community wants better air quality, but we
17 want to make sure that the costs do not dramatically
18 increase and cost and even greater hardship on our
19 residents. I want to repeat that last statement, because
20 it's important.

21 Please do not pass a price ceiling that will
22 increase cost of credits to the point where no one can
23 afford to purchase them, therefore closing businesses,
24 increased job loss, and energy costs. This type of help
25 is not what my community needs or wants. Let's work

1 together to fix our air and environment, but in a way that
2 it doesn't hurt our community in the process.

3 Thank you very much.

4 VICE CHAIR BERG: Thank you, sir. So we're going
5 to take a break. And we're going to start back sharply at
6 2:20 -- 2:20.

7 Thank you.

8 (Off record: 2:04 p.m.)

9 (Thereupon a recess was taken.)

10 (On record: 2:19 p.m.)

11 VICE CHAIR BERG: Am I on now?

12 Okay. If we can have everybody take their seats.
13 And if we can go ahead and check to see where you are on
14 the speaker queue. And if Mr. Hayes can kick us off for
15 the last 20 people.

16 MR. HAYES: Madam Chair, distinguished members of
17 the Board, my name is Ron Hayes. I'm the senior pastor at
18 the Visions of Heaven Church, also Executive Director of
19 Visions Community Outreach. We're a nonprofit
20 organization, as well as a church in South Central Los
21 Angeles, and right near downtown. We're maybe 20 blocks
22 away from skid row.

23 The reason for mentioning that is that my job
24 today here is just to convey a feeling to you, to the
25 Board, to let you know the concerns. All the statistic,

1 all the data that is required, I'm sure the Board would --
2 can get all of that.

3 But I want you to just hear from the shepherd's
4 heart, or the heart of a faith leader how important it is
5 that our concerns be considered. We hope that you would
6 consider all that the inner-city, and the downtrodden, and
7 disenfranchised go through on a day-to-day basis.

8 It's important to us, as we lead this charge --
9 we're in the trenches, we're on the front lines, leading a
10 people that feels like they're disconnected,
11 disenfranchised. There's almost no hope. And we're there
12 on daily basis just leading that charge.

13 One of the programs -- one of the programs that
14 our organization provide is a food program. We have a
15 homeless shelter, but there is a food pantry that we have.
16 You should see the lines that come to our church, to our
17 local edifice, you know, just reaching out to get whatever
18 resources that they can get. It would touch your heart.
19 It would touch your heart.

20 As I said, we're just a few blocks away from, you
21 know, skid row downtown Los Angeles. You know, as a male
22 guy, you figure you have to put on your hard and your
23 boots and stuff to walk down there in that area. I do not
24 know if the Board could stand walking down in that
25 degraded area. It's rough. It's tough. It's people

1 living like you wouldn't believe. I'm sure you've seen
2 the picture. I know you have the data.

3 But, you know, I'm asking the Board at this
4 time -- I'm asking the Board at this time -- I'm
5 pleading -- I'm pleading our case. We're asking that the
6 Board would take into consideration all that it needs.
7 Every is an issue. The gas is an issue. The energy is an
8 issue. The housing is an issue. You know, the resources
9 that always, you know, seems like the good old boys get
10 the contracts that sort of thing. Would you consider us
11 in South Los Angeles, would you consider us the people
12 that are on skid row, would you consider the inner-city
13 kids that have the programs that we need. You know,
14 they're not in the suburban areas where, you know, they
15 seem to have these things that -- at their finger tips.

16 But we're finding -- I'm hoping that someone that
17 would stand with me that would champion for these people,
18 for these disenfranchised people that they will come and
19 help us. Please, help us at this time. We thank you for
20 your time.

21 VICE CHAIR BERG: So as our next speaker comes
22 down, again, if you could keep your eye on the list and
23 move down, so that when it's your turn you can pop up and
24 get on the mic. It really helps us out. We have another
25 19 speakers. It's going to be a little bit less than an

1 hour, and you could help us keep it to that time.

2 Deb.

3 MS. TRAVGH: I'm not Deb.

4 VICE CHAIR BERG: Oh. You came down. Thank you.

5 (Laughter.)

6 VICE CHAIR BERG: Melissa. Yeah, lease keep your
7 eye on the list.

8 MR. TRAVGH: Good afternoon. My name is Melissa
9 Travgh with BizFed Central Valley. BizFed includes 50
10 members up and down the valley. Those members
11 collectively represent 20,000 businesses that employ more
12 than 300,000 workers.

13 When the legislature extended cap and trade last
14 year, it specifically tasked the Air Resources Board with
15 making sure costs for carbon emission allowances would not
16 become so high it would hurt businesses and consumers. To
17 do -- to do that, ARB must set a ceiling price for the
18 carbon allowances.

19 However, the recommendation before your Board
20 sets the ceiling price so high, it will likely result in
21 skyrocketing costs for carbon allowances. When businesses
22 have to pay more, those costs are passed on to consumers,
23 and some businesses will be driven out of California.

24 Californians already pay an average \$0.85 more
25 per gallon of gas than residents of other states. The

1 legislature increased per gallon costs by another \$0.12
2 last year. And costs are expected to increase another
3 \$0.36 to \$0.44 per gallon beyond that under ARB's enhanced
4 Low Carbon Fuel Standard.

5 California's families simply cannot afford more
6 spikes. Overly high price ceilings would result in
7 exactly what the legislature wanted to avoid in passing AB
8 398. BizFed Central Valley is asking the Board to
9 reconsider the carbon allowance price ceiling at a more
10 realistic level.

11 Thank you.

12 MS. BLATTLER: Good afternoon. My name is Tricia
13 Stever Blattler. I'm the Executive Director for Tulare
14 County Farm Bureau.

15 The Farm Bureau in Tulare County, much like
16 Merced, Madera, and Kings counties, who had a
17 representative speaking earlier, represents a lot of
18 small- and medium-sized farmers and ranchers. And a lot
19 of those farms and ranches are price takers.

20 We're highly dependent on export markets for many
21 of our fresh grown products including locally in Tulare
22 County a lot of citrus and grapes.

23 We compete locally, nationally, and globally with
24 farms that are able to produce at much lower regulatory
25 costs than those of us based here in California.

1 And farms are especially vulnerable to rising
2 energy costs. The cost of doing business in California is
3 already alarmingly high. Our operational costs must also
4 be passed along the entire food chain that you represent
5 in the grocery store, the wholesaler, the supplier, and
6 the distributor.

7 In Tulare County, the agricultural industry
8 directly supports approximately 25 percent of our
9 employment base, second only to government employment. We
10 are directly impacted anytime prices rise for food, and
11 certainly impacting the jobs that are available in our
12 local economy.

13 Indirectly, our multiplier effect in our
14 community is additionally three more dollars for every
15 dollar produced within agriculture. And when drought and
16 water impacts are crippling our communities, it is
17 difficult to leverage all of those additional costs on the
18 backs of all of our other production inputs.

19 In addition to the cost that we see directly
20 involving shipping, transportation, supply chain
21 management, and many other costs, we also have a rather
22 disadvantaged population in many respects. About 25
23 percent of our county's population relies upon the food
24 link pantry system in Tulare County to supplement their
25 food insecurity issues.

1 We know that imposing this price ceiling may
2 largely impact and hurt some of our lowest income
3 families, and families directly employed in agricultural
4 positions.

5 We know that passing on more energy and fuel
6 costs disproportionately impacts those low-income
7 communities, particularly in farm communities like Tulare
8 County. Decisions that you will make will impact jobs
9 directly in agriculture and many outside indirect jobs,
10 and, in general, have a significant impact on families in
11 Tulare County and the central San Joaquin Valley.

12 For these reasons, I would ask you to
13 respectfully reconsider the price ceiling. We oppose the
14 current proposal and would ask that you seek to find a
15 more reasonable approach to this plan.

16 Thank you.

17 MR. JONES: Good evening to the distinguished
18 Board. I'm Reverend James R. Jones, Junior. I am the
19 Pastor of Greater Liberty Baptist Church, but the
20 President of Minister Alliance down in Southern
21 California -- Southern California.

22 I thank you all for this opportunity. I do have
23 the blessing and the burden of dealing with the least
24 fortunate in our communities. As one of my colleagues
25 just spoke, one of my programs is I do feed homeless, as

1 well as give them a shower. And to experience -- to come
2 out and actually experience the gratefulness that meal and
3 that shower. But some of those same folks even drive off,
4 drive off with -- they have to borrow gas money that I
5 tive out of my own -- out of my pocket.

6 When we do it to the least, I'm unapologetically
7 a Christian. The Bible tell me -- when we do it to Christ
8 say we're doing it unto him.

9 I -- as the Supervisor made a statement as far as
10 he don't see -- where he doesn't see the outrage or -- a
11 lot of times you don't see the outrage, because there's a
12 disconnect. Mainstream knows who don't get hurt, and
13 don't -- but I'm here to offer not as a way of -- I
14 believe in -- by omission of permission, that we all are
15 responsible for the conditions of our community.

16 So as a way of kind of bridging the gap, I offer
17 my services to any of you up here who want to connect
18 or -- I can get you -- you want to see outrage, I can get
19 you -- I can set up those town halls where you'll get that
20 outrage.

21 But at the end of the day, we need to work
22 together. And unlike the administration at the top now,
23 we want to be able to build bridges and not walls. God
24 bless you.

25 MS. WILLIAMS: My name is Rae Williams, and I'm

1 representing the National Action Network. Today, I want
2 to talk to you about not raising the electric/gas prices.

3 One of the reasons being is because the people
4 that move here are the same people that are leaving here,
5 and we can't even hold the people that are moving here due
6 to the increase in inflation.

7 So when we -- if you raise the gas prices, that's
8 going to make the economy in California less sustainable.
9 So we have to do what's good for the greater good of the
10 community.

11 Thank you.

12 MR. BLODGETT: Good afternoon. Bruce Blodgett
13 with the San Joaquin Farm Bureau. Members of the Board
14 and staff, thank you for this opportunity to provide a
15 little bit of input. I wanted to talk about -- a little
16 bit about agriculture briefly in our region. It's a \$2.5
17 billion industry in 2017 numbers. So that was what our
18 farm gate value was. That isn't the value of the produce
19 when it hits the grocery store. That's the farm gate
20 value.

21 And when you see an agricultural industry we're
22 dependent on so many things. We're depending on water.
23 We're depending on the land obviously. We're depending on
24 a whole host of other things, inputs, and obviously
25 energy. We're extremely dependent on energy and the cost

1 of energy, and how that impacts us. And that's already
2 been covered.

3 But I want to talk about a couple different
4 commodities. Our top four commodities are dairy, walnuts,
5 almonds and wine grapes in some order every year. They
6 kind of bounce back and forth depending on prices and
7 yields on that given year.

8 Let's talk about briefly about dairy. You've had
9 dairy interests speak already today. In the last 10 years
10 we've seen exactly one dairy expand in our county. One.
11 We've seen no new applications for no -- there's not been
12 one new application for a dairy. It requires a use permit
13 in our county. Not one new dairy has come to our county,
14 and only one is expanding. We need to talk about what's
15 going on in the industry, because I think it's getting
16 lost here.

17 The problem that we're seeing is that there's --
18 nobody is looking at the cumulative impacts. I'm in a
19 meeting this week in this room. Last week, I was across
20 the hall. I could be down in Fresno at another one at
21 this very moment. I mean, there's always another meeting,
22 and nobody is looking at the cumulative impacts to
23 agriculture of all of these regulations and costs.

24 And as you look at that, dairy is the first one I
25 wanted to mention. Asparagus. We were the number one

1 asparagus growing county in the State. At one point, we
2 had over 60,000 of asparagus. We have less than 1,000.
3 Cumulative impact of regulations like this are the cause
4 of that. Less than 1,000 acres. Our last big processor
5 just went out business. Has closed doors. We have some
6 small ones left, but it's very small at this point. That
7 was a significant industry for us and it's gone.

8 Old Vine Zinfandel. How many of you have seen
9 bottles of Old Vine Zinfandel from Lodi, or the foothills,
10 or whatever. These vines lasted more than 100 years, and
11 they continued to produce wonderful wines. And they're
12 now being pulled out.

13 It's kind of a ironic that they could make it
14 through prohibition, but they can't live in California's
15 regulatory climate anymore. Made it through prohibition,
16 but can't stand -- or can't make it through California.

17 Walnuts. One of the fastest growing commodities
18 in our county the last probably 10 years, in terms of
19 acreage. A lot of people pulling old vine and planting
20 walnuts and almonds, to be honest with you.

21 But you know where our newest processor is?
22 Sparks, Nevada. Cost of doing business in California. So
23 now our walnuts being processed, being taken, shipped, and
24 taken to Sparks where the rest of that economic activity
25 is taking place.

1 So we'd ask you to look at these things. You
2 know, I said our crop report wag 2.5 million[SIC]. It's
3 not going to be 2.5 million[SIC] in 2018. I can already
4 tell you that. The numbers -- farm prices are depressed
5 right now. The farm economy is depressed right now.
6 Rules like this certainly are not helping.

7 Thank you.

8 MR. TWIGHT: Good afternoon. My name is Cedric
9 Twight. I represent Sierra Pacific Industries. If you
10 don't know, Sierra Pacific Industries is a family-owned
11 vertically integrated timber products company that owns
12 approximately 1,645,000 acres in California. They operate
13 ten saw mills, five cogeneration plants and some other
14 manufacturing facilities. They support 3,450 high-paying
15 jobs.

16 Sierra Pacific is also a participant in the
17 compliance offset program as an offset project operator
18 for improved forest management projects. As a forest
19 offset project participant, we're encouraged and thankful
20 that ARB is looking and taking this opportunity to make
21 improvements in that forest offset program.

22 Sierra Pacific believes that the most beneficial
23 regulatory proposal that you'll be evaluating during this
24 process for the forest offset program comes from the
25 California Forest Carbon Coalition, and their proposals --

1 their regulatory proposal for environmental health and
2 safety regulation invalidations under 95973(b)(1) in
3 Appendix E.

4 Currently, the environmental health and safety
5 invalidation regulations imposes significant negative
6 economic penalties for any environmental health and safety
7 violation, regardless of whether or not it impacts the
8 environmental integrity of the project, or even if the
9 violation occurs on site.

10 So this creates a lot of negative economic
11 uncertainty relative to economic risk of making further
12 investments in the Forest Protocol Program.

13 The proposal by the California Forest Carbon
14 Coalition solves much of those issues. They -- in the
15 proposal, it ensures that all offset project operators
16 must comply with all environmental health and safety
17 regulations. It provides -- it incentivizes the
18 identification and cessation of offending activities, and
19 it provides a clear and equitable means of developing the
20 penalty for any environmental health and safety violation.

21 So in doing so, it removes that negative economic
22 risk and should greatly increase the participation for
23 further offset project investments.

24 So for those reasons, I'd hope that you'd support
25 those recommendations from the California Forest Carbon

1 Coalition for the environmental health and safety
2 invalidation regulation changes to 95973(b)(1) and
3 appendix E.

4 Thank you.

5 MS. WARMS: Hi. Good afternoon, ARB members and
6 staff. My name is Emily Warms, and I'm representing New
7 Forests. New Forests was an early investor in the
8 California carbon offset market, developing the first
9 project under the Compliance Forest Offset Protocol in
10 partnership Yurok Tribe in Northern California.

11 Today, we've enrolled over half a million forest
12 acres, providing over six and a half million tons of
13 greenhouse gas reductions, approximately half of which are
14 from projects located here in the state.

15 We'd like to express our strong support for the
16 Cap-and-Trade Program, and in particular for the offset
17 program, which is the most rigorous and robust offset
18 program in the world.

19 We appreciate your technical amendments on
20 materiality and regulate -- regulatory compliance, and
21 encourage you to continue improvements related to program
22 implementation, efficiency, and transparency. We work
23 with a range of landowners from Native American tribes to
24 private forestland owners. And we've seen first hand how
25 the offset program has provided a host of benefits, in

1 addition to greenhouse gas reductions, from forest health
2 improvements to economic opportunities in rural
3 communities.

4 So we want to thank you for your efforts on this
5 program and encourage you to further strengthen the
6 program going forward.

7 Thank you.

8 MR. BRUNELLO: You're almost through this item.
9 Tony Brunello representing the California Forest Carbon
10 Coalition. Heard most -- several of my members, and we'll
11 have one more coming up next. The Forrest Carbon
12 Coalition represents a majority of in-state forest carbon
13 offset developers. We hope that you will support the
14 Cap-and-Trade Program. Appreciate your help and look
15 forward to your vote on this item.

16 Thanks.

17 MR. TUCHMAN: Good afternoon. My name is Tom
18 Tuchman. Madam Chair, members of the Board, thank you for
19 your work on the new rule. I represent the Usal Redwood
20 Forest Company. It's a community forest based north of
21 Fort Bragg, California. It includes representatives of
22 the environmental community, business community, and local
23 public representatives.

24 Our participation in California's carbon program
25 was really the foundation for the acquisition of the

1 50,000-acre Usal Redwood Forest in 2007. And ten years
2 later, we've sequestered approximately five million
3 additional tons beyond the baseline calculations that we
4 undertook under the protocol.

5 And so we think it's a very important program,
6 and very important to both the economic and environmental
7 health of our region.

8 Three things to leave you with. One is forest
9 offsets and offsets generally lead to real additional
10 benefits, both for the environment and local communities.

11 The second thing is I want to thank you and your
12 staff for the good and hard work that you do. We know
13 it's a tough -- a tough job, and we really feel like we've
14 been treated fairly.

15 And the third, and you've heard from our
16 colleagues from the coalition, we hope you'll take a
17 serious look at our proposed suggestions on how to improve
18 the program and the offset project opportunities in a way
19 that we think both achieve the pub -- underlying public
20 benefit and make it usable for forest project operators.

21 Thanks.

22 MR. MAULHARDT: Good afternoon, Chair Nichols,
23 distinguished members of the Board, and Board staff. My
24 name is Thomas Maulhardt. I work for Campbell's Soup
25 Company at our tomato ingredient plants here in the

1 Central Valley.

2 California is a great place to grow tomatoes.
3 The combination of warm dry summers, fertile soil, and
4 available water make it one of only a few regions
5 worldwide where this is true. Add to that farm
6 transportation and processing infrastructure, plus the
7 knowledge base in our university seed companies and
8 technology industries, and you have the perfect mix.

9 Farmers that are able to grow a huge quantity of
10 tomatoes and pick them at the peak of ripeness and flavor.
11 Processors take this bounty and turn it into tomato paste,
12 diced tomatoes, and other products that allow so many
13 worldwide to enjoy salsa, spaghetti sauce, ketch-up, and
14 let's not forget tomato soup.

15 Processes in California have been working for
16 decades to improve and optimize their operations,
17 modifying processes, and modernizing equipment to maximize
18 efficiency. Tomato processors here are world class and
19 will continue to innovate into the future.

20 But the processes that evaporate water to create
21 tomato paste, along with the cooking and sterilization
22 require large quantities of heat provided by burning
23 natural gas to create steam.

24 These processes are time-tested, safe, and ensure
25 the can of tomato soup can be enjoyed and taste just as

1 good on a cold winter night as a warm summer evening. In
2 order to continue to supply products to all our customers,
3 it is vital that we keep prices under control. Things
4 like the rising cost raw materials for packaging,
5 transportation, and labor are challenges we constantly
6 work to overcome, so that these customers can continue to
7 enjoy a safe, nutritious, and affordable food. Our
8 industry is in the forefront of the effort to deliver
9 delicious meals from California's farm to forks around the
10 world.

11 The Cap-and-Trade Program puts the cost on
12 emissions to carbon to incentivize the technologies that
13 will lead to a low-carbon future, but that transition will
14 be difficult. Cities, states, and countries around the
15 world are watching to see if California efforts to reduce
16 GHGs can be achieved while still allowing our economy to
17 prosper, and our way of life to endure.

18 The stakes are incredibly high. And we must
19 succeed to serve as an example to those who would follow,
20 otherwise those efforts will be inn vain. California
21 cannot solve this problem alone.

22 Some transitions to a cleaner future will be made
23 more easily than others, and some sectors will be subject
24 to more pressures along the way from competitors and areas
25 that don't have the same commitment to GHG reduction. It

1 is critical that those managing the program recognize the
2 fact, and work to ensure the process is smooth and orderly
3 as possible. That is why we believe it is important to
4 extend the industry assistance levels for the third
5 compliance period.

6 That provides a buffer for our industry from
7 international competitive pressures, and some areas where
8 leakage could result in actually higher emissions.

9 The Governor and legislature have now begun to
10 implement programs with guidance and collaboration from
11 food processors and State agencies to provide the funding
12 to make our industry more efficient.

13 And we're looking forward to a cleaner energy
14 future.

15 Thank you.

16 MR. KRAUSSE: Good afternoon, Madam Chair, Board
17 Members. Mark Krausse on behalf of Pacific Gas and
18 Electric. I'm going to maybe separate from the subject a
19 little bit.

20 The topic you heard about this morning on what
21 was characterized as legacy generators. Our contract, we
22 have I believe one of the last two remaining contracts
23 that some believe are legacy generators. We do not
24 believe ours qualifies for that. Just wanted to let the
25 Board that we continue to negotiate. Met with our

1 counterparty yesterday and are willing to continue to
2 negotiate.

3 At the same time, what the gentleman from Procter
4 and Gamble said this morning I think really hit home for
5 me, which is the more the Board continues to give
6 assistance to counterparties, the less likely those
7 counterparties are to reach agreement.

8 We can't outbid you. Essentially, that's what it
9 comes down to.

10 Thank you.

11 MS. ROBERTS: Good afternoon, Chair and members
12 of the Board. My name is Tiffany Roberts and I represent
13 Western States Petroleum Association. Thank you for the
14 opportunity to speak today.

15 In my testimony, I'd like to highlight some
16 positive aspects of the draft package before you. And I'd
17 also like to highlight a couple of areas where additional
18 work needs to be done.

19 So first, the positives. ARB staff has done
20 really good work in analyzing the need to extend the
21 second compliance period industry assistance factor to the
22 third compliance period. Since 2005, CARBOB production
23 capacity has been added in Asia and East Africa,
24 increasingly demonstrating that California's refining
25 sector is trade exposed.

1 Extension of second compliance period industry
2 assistance factors can help mitigate some of that trade
3 exposure. We support CARB staff's proposal on this issue.

4 Next, CARB staff has correctly found that the
5 state's climate initiatives have collectively achieved
6 more emission reductions than forecasted. Rather than
7 focusing on the positive news that California is doing
8 better than expected in achieving its climate goals, a few
9 stakeholders have tried to make the case that because of
10 this overperformance, allowances should be removed from
11 the market.

12 This assertion is not well founded. The
13 suggested remedies would actually have the potential to
14 disrupt the stable market that CARB has worked diligently
15 to develop. Debates about oversupply inevitably involve
16 debates about allowance banking, since the perceived
17 concern about oversupply arises from a fear that
18 allowances banking allows entities to avoid -- avoid
19 reducing emissions. Allowance banking, however, promotes
20 early investment in emission abatement measures, and plays
21 an important cost containment role without compromising
22 environmental integrity. This is something to be
23 celebrated, not punished. As such, we support CARB
24 staff's proposal on this issue.

25 Now, I'd like to turn to an area where more work

1 is needed. Specifically, the pricing ceiling and speed
2 bump placement. AB 398 provided six criteria that should
3 be considered when developing the pricing ceiling and
4 speed bumps. They're all important.

5 WSPA believes that using the social cost of
6 carbon can be an important starting point, but that
7 ultimately consideration for linkage, leakage, and
8 household impacts should persuade the Board to set a lower
9 prices ceiling. We feel the current proposed price
10 ceiling and placement of speed bumps will not provide
11 adequate cost containment. And we believe more
12 consideration needs to be given to the potential impact
13 that high allowance prices can have on consumers and the
14 economy me.

15 Thank you.

16 MS. BUSSEY: Good afternoon, Chairman Nichols and
17 Honorable Board members. I'm Julia Bussey representing
18 Chevron Corporation.

19 First, I simply want to echo the comments by
20 several industry folks regarding the excellent work that's
21 been done on offsets on oversupply, and the third
22 compliance period. The package represents a lot of good
23 work and thought in those areas. We are concerned,
24 however, on a few key provisions.

25 The Board has the opportunity to structure a

1 program that is environmentally sound, and also least cost
2 to Californians and the companies operating here. AB 398
3 provides substantial authority to the Board to contain
4 costs. But setting cost-containment mechanisms so high
5 that they will not be triggered is the same as having no
6 cost containment at all.

7 Business faces a much steeper challenge between
8 2020 and 2030, a steeper cap, declining industry
9 assistance. We urge that you consider a lower price
10 ceiling and set the cost containment points at one-third
11 and two-thirds between the floor and ceiling.

12 The cost containment points are needed to reduce
13 volatility. AB 398 gives additional responsibility to an
14 economic Committee to study the market when the first
15 speed bump is triggered. The higher the first speed bump,
16 the less effective economic review will be.

17 California's desire to be a world leader is also
18 impacted. By adopting various high priced ceiling -- very
19 high ceiling prices, California signals to potential
20 partners that high prices are acceptable. Higher ceiling
21 prices also impact how industry invests in California.
22 Economic leakage leads to emissions leakage, which defeats
23 California's goals.

24 We wish that you would plan of the unexpected and
25 recognize that much better information will exist after

1 California has more years of a much steeper cap under its
2 built. Thank you very much.

3 MS. SHROPSHIRE: Good afternoon, Chair Nichols
4 and members of the Board. My name is Robin Shropshire.
5 And I'm here today representing Panoche Energy Center.

6 I plan to be brief today, but wanted to let you
7 know that Panoche agrees to continue to work with our
8 utility counterparty in good faith to try to find a
9 contract solution. One of the important goals of those
10 negotiations is to ensure a carbon price signal is
11 accurately reflected in the energy price.

12 Having said that, we're here to ask you for help.
13 Our simple request is that the 15-day package includes
14 transition assistance for the third compliance period.
15 Secondly, that historically it's been demonstrated to be
16 effective for Board members to participate in the
17 discussions between counterparties. We request that in
18 the continued negotiations that a Board member participate
19 to help move this forward.

20 Then last, if in the -- if in six months a
21 resolution hasn't occurred, that in the next rulemaking
22 relief is provided by taking allowances from our
23 counterparty to cover emissions. I know that both the
24 Board and staff are eager to get beyond this.

25 And I just want to thank you for your support.

1 That's all I have.

2 Thank you.

3 CHAIR NICHOLS: Thank you.

4 MR. SKVARLA: Good afternoon, Chair and members.

5 My name is Michael Skvarla. I'm with the Gualco
6 Group here on behalf of the California Council for
7 Environmental and Economic Balance.

8 I think we've heard a lot today about some of the
9 political concerns and some of the structural concerns of
10 this program moving forward. CCEEB, in general, supports
11 the structural changes that are being made to this program
12 as we -- as we proceed into the 2020 area -- or the
13 post-2020 program for SB 32 compliance.

14 We support the staff's recommendations and urge
15 the Board to adopt them in regards to the allocations to
16 the third compliance period and other things that will
17 keep this market kind of even and steady, which is really
18 the goal of markets and what business is looking for in
19 most regulations. We want to see that steady and even
20 consistent hand from the regulator to allow us to enter
21 into this market and make the investments that we need to
22 make between now and 2030 in order to achieve California's
23 goals.

24 That can't be done by disrupting a third
25 compliance period to achieve a three-year increase in

1 revenues, only to bring us back down in 2021. Those
2 disruptions are not necessarily built out of having this
3 even pace and good steadiness, as much as they are built
4 to kind of punish businesses that some folks don't see
5 acceptable in this state anymore, as they're trying to
6 make this investment.

7 And it sends the wrong signal as executives and
8 stakeholders and shareholders are making investment
9 decisions for the California companies.

10 And so to that end, we urge the Board to kind of
11 keep the steady pace, maintain the CP3 -- the third
12 compliance period industrial assistance factors as it
13 evens us down over into the next phase of the program, as
14 adopted by 398.

15 It's that even and steady transition that's
16 needed in order to ensure that the investment is made here
17 and not made elsewhere. Additionally, we'd like to
18 support banking, as this allows businesses to make those
19 early investments. It also allows them to kind of jump in
20 early, while they're doing the physical infrastructure
21 needs that they have to do at their facilities.

22 As you guys know, we have a lot of regulations
23 and laws that extend beyond this building in terms of
24 permitting. Those permitting things can't be made
25 overnight. You know, we know that for a large facility,

1 it can take sometimes seven years to get the permits. And
2 that -- we're going to see that in the later years of this
3 program, especially when the markets tighten up.

4 And then to that end, we do have the political
5 concern. And I think the biggest political concern that
6 you guys saw here is the price ceiling. We do have
7 concerns about cost. Wages haven't grown substantially in
8 California or the rest of the United States over the last
9 20 years. They're not keeping up with inflation.

10 And to that end, the public's ability to pay over
11 time is going to be tightened. We've seen how this fight
12 has ended up in other infrastructure fights. You know,
13 and those of you at the local level know that -- what it
14 takes to get those bonds passed.

15 We're continuing to place an additional burden on
16 the public to pay costs to fund the programs that we need.
17 And in doing so, we need to balance that. And so it is a
18 political decision for this Board to make, but we want to
19 make everyone aware that it has to be considered that this
20 is going to provide a burden.

21 And we have to be willing to accept that burden,
22 whether we hit that ceiling or not. It's the -- that's
23 the signal that's going to be sent.

24 So we urge the Board to move forward with this
25 process and adopt this rule.

1 Thank you.

2 MR. BOYLES: Good afternoon. My name is Cody
3 Boyles, and I represent the Agricultural Presidents
4 Council, of which Nisei Farmers League is a member. And
5 I'll be very brief.

6 We are opposed to the price ceiling for reasons
7 that have already been stated and articulated far better
8 than I ever can.

9 Thank you very much.

10 MR. SMITH: Good afternoon, Chairman Nichols and
11 members of the Board. My name is Steven Smith. I'm a
12 director of regulatory programs with Phillips 66. We
13 produce market gasoline, diesel, and jet fuel under the 76
14 Brand. By coincidence, I am number 76 speaker. I made
15 sure that happened.

16 (Laughter.)

17 MR. SMITH: But no, we market under the 76 brand
18 here in the west coast states.

19 So I just want to reiterate we really appreciate
20 staff's great work in taking the many goals in AB 398 and
21 rolling them into regulation. We supported many of
22 staff's recommendations in our written comments.

23 So I'll be really brief and limit my comments to
24 today's favorite topic of cost containment. I do think
25 there was really good discussion amongst the Board earlier

1 today on the difference between the actual allowance
2 market price and the price ceiling. I think that was good
3 that that got out and was discussed briefly.

4 And towards that point, we do agree with staff's
5 conclusions that prices may stay below the ceiling closer
6 to the floor for the near term and into the start of the
7 next decade. So I thought that was a good discussion
8 point.

9 However, we do believe via our own modeling and
10 via some external modeling, assessment of other models, we
11 do think that there is at least a probability that prices
12 in the next decade could go up to the floor -- up to the
13 ceiling. We think there's a -- there's a probability
14 there -- a statistical probability.

15 So -- so our ask is simple. I'll just conclude.
16 Our ask is simple and it's consistent with, I think, what
17 you heard from WSPA earlier. Please keep the door open as
18 we go forward on price ceiling. I think that it is
19 important to the state's economy. Consider I think
20 perhaps bifurcating that issue. Often separate and future
21 rulemaking could be helpful. And even more specifically,
22 please look at the five percent escalator on the price
23 ceiling. When you tack on five percent escalation, plus
24 what could be two and a half percent inflation, you get
25 seven and a half percent escalation. Prices really would

1 move up quickly. So please look at that specifically.

2 With that, I'll conclude. Thank you for your
3 time.

4 CHAIR NICHOLS: Okay. Where is Nico van Aelstyn?
5 Is he not here apparently.

6 We have the written testimony. Okay.

7 Well, okay, we can accept that into our record.

8 All right. Well, I don't think so.

9 Okay. Mr. van Aelstyn has left us with his
10 written testimony, but apparently isn't here to speak in
11 person, so we will accept the written testimony, of course
12 and close the record at this point, and move to
13 discussion.

14 I would like to ask -- give the staff the
15 opportunity at least -- it's been a long day and a lot of
16 things said. Although, you can probably concentrate them
17 into a few major points. But if there are things that you
18 feel the need to respond to at this point that you feel --
19 where you feel the testimony or the record may not be
20 clear, we would certainly invite you to do that at this
21 time.

22 Rajinder.

23 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

24 SAHOTA: Sure. I have about six issues that I think came
25 up across more than one commenter.

1 CHAIR NICHOLS: Okay.

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: Those include waste to energy, legacy contracts,
4 the price ceiling, oversupply and the third compliance
5 period.

6 CHAIR NICHOLS: Um-hmm.

7 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

8 SAHOTA: I think there were some other comments related to
9 the use of allowance value. And we think that the 15-day
10 package the staff is working on will address most of those
11 concerns and comments. And we have been working closely
12 you the utilities on that.

13 CHAIR NICHOLS: Okay.

14 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

15 SAHOTA: I would be happy to take questions or comments
16 from the Board members unless it's been identified or if
17 I've missed anything. If you identify that for us, I can
18 add that to the list.

19 CHAIR NICHOLS: I think it would be good if you
20 just go through it, if you wouldn't -- unless you want --
21 don't want to hear the reactions. Sorry, I just thought
22 we would give her an opportunity to quickly address those
23 major points, and then we can go on. Okay.

24 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

25 SAHOTA: Okay. So I'm going to take the price ceiling

1 first, because that one has come up quite a bit.

2 CHAIR NICHOLS: Um-hmm.

3 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

4 SAHOTA: And I know that's an understatement.

5 First of all, some of the issue that were raised
6 by the commenters are real issues, the housing issues, the
7 affordability, all of those are real issues that need to
8 be addressed. But what we're trying to do here today is
9 we're trying to be responsive to legislation about
10 achieving greenhouse gas emission reduction targets for
11 2020, 2030, and that's mandated.

12 And we did our due diligence there. We went
13 back. We did the scoping plan, and we identified the
14 least costly way to get to the 2030 mandated target, and
15 the least costly way includes a Cap-and-Trade Program.

16 And in designing the Cap-and-Trade Program, we
17 added several features, not just the pricing ceiling, to
18 mitigate against economic impacts to the economy, to
19 households, and to ratepayers for energy costs. AB 398
20 enhances some of those cost containment features.

21 But in looking at cost containment in the package
22 overall, and there are some new stakeholders to this
23 process, so I want to hit a couple of these points, we do
24 have features such as multi-year compliance periods to
25 help with price spikes and unexpected emissions

1 obligations year to year.

2 We do have a broad set of sources, so the market
3 is liquid, and so there isn't an opportunity to manipulate
4 prices and have price spikes in the market. We have
5 allocation to the industry to minimize for leakage, so
6 that production, emissions, and jobs don't leave the state
7 of California. AB 398 enhances that requirement by
8 mandating that there be an assistance factor of 100
9 percent. Staff is proposing an additional 100 percent for
10 the third compliance period. And when it comes to
11 individual households and energy prices, we give
12 allowances to utilities, who then go ahead consign those
13 allowances, and you see those as a climate credit twice a
14 year on your bills for natural gas and electricity now.

15 So in designing the program itself, we have
16 looked at all of these individual potential impacts and
17 tried to make sure that it has features to address each of
18 these. On the price ceiling, specifically the way that
19 it's designed. There were six or seven criteria, that
20 were included in AB 398.

21 We went through each of those criteria. I think
22 it's slide eight that speaks to what those criteria are,
23 and identified how we considered those and responded to
24 those in setting the price ceiling. Relative to the
25 current regulation, we have multiple mechanisms in this

1 package to address the concerns on high prices.

2 The first is the two reserve tiers. Those remain
3 below the current reserve and the current regulation, so
4 we are making available 156 million more allowances in
5 this proposal than would be there without this proposal at
6 lower prices. The price ceiling is set to be below the
7 existing regulation until very far into the next decade.
8 And then when it gets above that current price ceiling in
9 the next decade, it coincides when the offsets limit
10 increases. And offsets offer another containment feature
11 for the latter half of the decade.

12 We continue to allow banking. We are not
13 proposing to remove any allowances from the system, which
14 would add scarcity and increase prices today and into the
15 next decade.

16 And again, we are increasing the amount of
17 allowances that are given to industry to help them with
18 the compliance with the program, and so that they don't
19 face the full burden of compliance, and that they are
20 transitioning over year-over-year into the program, and
21 continue to do so through the next decade.

22 Now, the price ceiling, I have to reiterate
23 again, is a worst case scenario. It is for a potential
24 situation where prices get higher than expected. Models
25 predicted that we will stay close to the floor through

1 this decade into the next decade. The secondary market
2 will give us a heads up if prices are starting to inch
3 upwards.

4 We will see that priced in futures contracts.
5 It's not like it's going to happen overnight. It's not
6 going to happen a month from now. It's not going to
7 happen two months from now. So this is not something
8 that's going to be thrust upon all of us, and then we'll
9 be grappling to figure out what to do with it.

10 We will see this coming. There are many metrics
11 that are available to us to monitor the market and the
12 prices, including production data that is put out
13 annually.

14 There is also annual reporting that we do to the
15 Board, annual reports that we do to the legislature, and
16 these are things that we can include in those reports, so
17 that there is monitoring and reporting back by the staff
18 on these.

19 There is a scoping plan update, where we can
20 speak to what the programs are doing in total and
21 individually and answer questions then.

22 The four quarterly auctions are publicly posted
23 with the results, so anyone can see what the prices and
24 how they're changing over time. The IEMAC had a
25 recommendation that we also post secondary market prices

1 on our website, so that there's additional information on
2 what's going on in the market. And that's something we're
3 looking into.

4 So I feel like on the price ceiling, we've done
5 you diligence as the staff. We have the ability to
6 monitor if prices are going to get high, and we have the
7 time to react as needed, and have discussion with the
8 Board and the legislature and other stakeholders.

9 CHAIR NICHOLS: Okay. Thanks.

10 Could I just say something about that, and maybe
11 we'll get into this more as we move on towards the
12 resolution. But I have a very strong sense that we're not
13 really being told the real reason behind the very, very
14 strong opposition that clearly has been mounted by WSPA to
15 this price ceiling.

16 That is the amount that's involved 30 years from
17 today, I don't want to say it's irrelevant if --
18 certainly, if you're a poor person who can't afford to
19 fill your car, it's not irrelevant. But from their
20 perspective, this is not the game as far as whether
21 they're going to be selling gasoline in California.

22 It must have to do with something else. And
23 because they support the Cap-and-Trade Program, I don't
24 see it as, you know, an attack on cap and trade. There
25 has to be something about their own internal planning,

1 where putting a number like this into whatever the models
2 are that they use has an impact on the way they are
3 thinking about the future of their business in California.

4 I mean, I don't want to pretend that I can put
5 myself into the mindset of an executive of an oil company,
6 but I've spent enough time now, you know, talking to these
7 people that I feel like I should be able to understand how
8 they think at least. And this one is just -- it's frankly
9 puzzling. It's just puzzling. And to have mounted the
10 kind of campaign that they have around this issue is also,
11 you know, unusual, let's say.

12 So I have to think that there's something that to
13 them looks like it's going to impact maybe the
14 competitiveness of their California operation or their --
15 some internal ceilings that they're operating with on, you
16 know, investments. Does anybody have -- I mean, can you
17 really -- can you shed any light on this situation?

18 I'm sorry, I --

19 (Laughter.)

20 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
21 SAHOTA: Was that for staff for maybe the members
22 themselves of the group in the audience?

23 CHAIR NICHOLS: It could be for anybody. I
24 don't -- I would ask staff. I mean, you've been living
25 with this for -- you've conducted the multiple workshops

1 that are out there.

2 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

3 SAHOTA: So I can tell -- I will share what I have -- I
4 have had as a perception of AB 398.

5 CHAIR NICHOLS: Okay.

6 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

7 SAHOTA: We've had a program in place since 2013 through
8 2020. That program has been designed and modified
9 multiple times. I think this was the seventh regulatory
10 change to the program.

11 CHAIR NICHOLS: Right.

12 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

13 SAHOTA: And it has had a price ceiling structure that has
14 been about \$84 as the maximum. If it were extended
15 post-2020 into 2030, it would naturally extend to about
16 \$84 in 2030.

17 I think some are viewing AB 398 as a second bite
18 at the apple on the original structure of the program. AB
19 398 says to consider what the existing structure of the
20 price containment reserve looks like.

21 CHAIR NICHOLS: Um-hmm.

22 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

23 SAHOTA: And so there's been an expectation in the market
24 about what to plan against for 2020. So in setting the
25 2021 number, we didn't want to set it too far below that

1 you're de-valuing the investments that were predicated on
2 the existing program structure.

3 CHAIR NICHOLS: Right.

4 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

5 SAHOTA: And so for us, it seems like it's a second bite
6 at the apple to try and get prices lower in the program in
7 general.

8 CHAIR NICHOLS: Um-hmm.

9 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

10 SAHOTA: I don't -- there are a couple issues that play
11 out there. If you have a price ceiling, that is something
12 at \$60, and it's flat, which is essentially one of the
13 proposals that we had. It's flat from 2021 to 2030. It's
14 \$60 every year. No escalator. It's just inflation. And
15 then you add in two reserve tiers, that means those
16 reserve tiers are closer to the floor.

17 What you're essentially doing at that point is
18 flooding the market with low-cost allowances, which
19 dampens the price signal, which dampens the effectiveness
20 of the program overall. And that's something, as the
21 staff, we don't think is the right outcome for the
22 program. That's not a model that people will want to
23 replicate.

24 CHAIR NICHOLS: Right.

25 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

1 SAHOTA: But that is a model that if you don't want to
2 consider carbon in your long-term liability, or you don't
3 want to invest in technology, may work for folks who are
4 able to purchase at those prices and pass the cost onto
5 consumers.

6 What we want people to do is to think about
7 taking action today, but know that if they don't take
8 action today, there's going to be a higher compliance cost
9 tomorrow.

10 CHAIR NICHOLS: Tomorrow, that's the whole point,
11 yeah.

12 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
13 SAHOTA: Right. So from my perspective, it seems like
14 it's a second bite at the apple on just the overall
15 structure of the program.

16 CHAIR NICHOLS: Well, I think that's helpful. I
17 appreciate your willingness to enter into that
18 conversation.

19 I will now turn to the Board for questions or
20 comments that you may have. And I know, Ms. Mitchell,
21 you've did, so let's start with you.

22 BOARD MEMBER MITCHELL: Thank you, Madam Chair.
23 There's just one item that we've gone through that is of
24 concern I think to me and maybe to some others. But we
25 heard from Long Beach and Covanta on the waste-to-energy

1 situation. They are new to the program. And I know
2 historically we have provided a higher level of transition
3 assistance to people that are just coming into the
4 program.

5 So I would ask in the 15-day change that our
6 staff continue to look at that and see what might be done
7 to provide that higher level of transitional assistance.

8 Thank you.

9 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
10 SAHOTA: Of course. We'll go back and look at the
11 proposal and see what we can work with there as part of
12 the 15-day.

13 BOARD MEMBER RIORDAN: Madam Chair, I want to
14 just say I would agree, and ask staff to work with them.
15 And I think philosophically my feeling is that the State
16 of California is saying do not use landfill as a result of
17 our trash. And so -- and the recycling market is somewhat
18 difficult right now as well. So these people who are
19 involved with waste-to-energy, and as long as they're
20 operating a facility that is permitted and doing very well
21 in terms of air quality, I think we need to encourage them
22 and help them a bit. So if staff could do that in a
23 15-day change, I would be very grateful, and support what
24 Ms. Mitchell said.

25 EXECUTIVE OFFICER COREY: Yeah. We'll work on

1 that, Ms. Riordan. And just to clarify, the
2 waste-to-energy plants had an exemption the first two
3 compliance periods. And as you noted, per Board
4 direction, they were brought into the third compliance
5 period through 2024, with respect to transition
6 assistance, recognizing that they're -- then the 75
7 percent diversion from landfills would become effective.

8 So what I'm hearing is direction to really work
9 on and look at increasing the transition assistance for
10 basically the starting point, given the fact they're just
11 being brought into the requirements of the program. So
12 that's clear.

13 BOARD MEMBER RIORDAN: Yes.

14 CHAIR NICHOLS: Okay. Other questions or
15 comments on these items from the Board?

16 Looking down at -- Ms. Berg.

17 VICE CHAIR BERG: Well, you had mentioned that
18 you were going to talk about the third compliance issue.
19 I got a little confused. To be honest, I heard praise for
20 the staff and the plan that there was a smooth transition
21 period, and then I heard concern for the plan that it
22 wasn't. So I just need a little clarification just a
23 little confused.

24 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

25 SAHOTA: Sure. So the staff proposal is to smooth out the

1 amount of allowances given to industry to minimize for
2 leakage for the third compliance period. The industry
3 that is medium or low risk for leakage, for them without
4 the change, their costs increase. They almost double
5 across all of those sectors in total. And so they are
6 supportive of that.

7 There are others who are not the regulated or
8 affected entities that feel like that money is a giveaway
9 to industry, and a diversion from the GGRF funds. But the
10 truth of it is, is that there's already precedent for
11 taking a conservative approach in addressing leakage. And
12 I think twice the Board has acted in the past on previous
13 amendments to keep it at 100 percent assistance factor.

14 The legislation for AB 398 sets that assistance
15 factor at 100 percent from 2021 to 2030. And staff in the
16 spirit of taking a conservative approach on minimizing for
17 leakage is proposing that we go ahead and smooth that out
18 with 100 percent.

19 So it's the balancing of what the staff believes
20 is a conservative approach in addressing leakage versus
21 the generation of funds to be into the Greenhouse Gas
22 Reduction Fund.

23 VICE CHAIR BERG: Okay. Thank you for that
24 clarification. And then we did hear from the natural gas
25 side of the utilities a request for some parity in their

1 investment plans. Could you just kind of address that,
2 please?

3 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
4 SAHOTA: I think that's referencing the use of allowance
5 values. So both natural gas utilities and electric
6 utilities get allowances from the State to help minimize
7 impacts to ratepayers.

8 They are consigning all or some portion of those
9 allowances at auction. They get the money back, and it
10 either comes back as a climate credit or can be used for
11 certain purposes that are going to reduce greenhouse gases
12 or benefit ratepayers.

13 And originally, we had text just for electricity.
14 Then we added in text for natural gas utilities, because
15 they were phased in the program in 2015. And the ask is
16 that the way they use that money from both of those
17 consigned pools of allowances be under the same
18 requirements, that if you're going to use it for renewable
19 energy like wind or solar in the utility side, you be able
20 to use those consigned values for RNG.

21 And we believe that the language that staff is
22 clarifying as part of 15-day will make that clear.

23 VICE CHAIR BERG: Okay. Great. Thank you for
24 that. And then I think you addressed the overallowances,
25 but you also, in our briefing, had talked about a plan

1 that you had to bring more information back to the Board
2 and could you just share that?

3 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

4 SAHOTA: Sure. And then -- so AB 398 asked us to look at
5 the issue of overallocation. And this has been a hot
6 topic for over a year now. And staff has done two
7 workshops on this, put out a white paper, and we did an
8 appendix on this as part of the rulemaking package. And
9 the IEMAC did not take an official position that we have
10 an overallocation issue.

11 They called for monitoring and making additional
12 data and statistics available, and looking to see if it's
13 an issue and adding in some of other self-ratcheting
14 mechanisms as needed. So we are going to follow through
15 with that and make more data available, so it's
16 transparent for some of the stakeholders to understand
17 what the supply of allowances is relative to the emissions
18 in the program.

19 And what we propose to do is track that annually,
20 because we get emissions updates annually. The allowances
21 are -- the supply of allowances is known in the
22 regulation, but updated quarterly as to which accounts
23 they're in. And so what staff would do is take the data
24 that's already available on the public website, match that
25 up with the emissions so that it's clear what the demand

1 is against the emissions versus what some of those
2 allowances are in the marketplace, whether they're with us
3 or with the regulated entities.

4 And after 2020, we will actually know what that
5 number of unused allowances is relative to emissions that
6 have occurred through the end of this decade. There are
7 several estimates out there. They're over a wide range.
8 And so the call has been by some folks that based on those
9 estimates, we take some allowances out the system today.

10 Our analysis and several other analyses don't
11 indicate that there is an oversupply of allowances through
12 2030. But we will know in 2021 what the difference is
13 between emissions and what's left over for allowances. We
14 would report back to the Board and indicate, based on the
15 actual data, what does that mean for the ability of the
16 program post-2020 to be effective in reducing towards
17 2030.

18 VICE CHAIR BERG: Thank you very much. And my
19 last is our forever down to the last two legacy contracts.
20 I really don't want to have a large discussion about this,
21 but really do want to have staff make sure that one party
22 isn't favored over another.

23 And honestly, these last two really need to get
24 resolved. And so I can't express enough, since I've been
25 involved with this, that these need to get resolved. I

1 said this the last --

2 CHAIR NICHOLS: Yeah, I was about to say, it's
3 like I want to send you to your room, kids, if you don't
4 stop fighting.

5 (Laughter.)

6 CHAIR NICHOLS: I think we did that like three or
7 four times ago.

8 VICE CHAIR BERG: We did that last time.

9 So, staff, you know, please look at what we're
10 doing. Make sure that it keeps both parties equally to
11 the table. And that would be my recommendation.

12 Thank you.

13 CHAIR NICHOLS: Any other comments?

14 Yes.

15 ASSEMBLY MEMBER GARCIA: Thank you, Madam Chair.
16 And thank you, Rajinder, for covering those six points.
17 Some of them were part of questions that I was going to
18 raise.

19 And, you know, I'm quite surprised we don't have
20 twice as many people in line to speak, given that there
21 has been an assertive effort -- in fact, I opened the
22 mailbox here and it's the Californians for Cost
23 Containment targeted advertisement that many who are here
24 look quite different in pictures, but --

25 (Laughter.)

1 ASSEMBLY MEMBER GARCIA: Again, I'm surprised
2 that we didn't have that many more individuals. Because
3 if you tell me or any of the folks in my district that I
4 represent that we're taking on a possible regulatory
5 action that's going to increase gas prices, electrical
6 prices by a \$1.09, given the debate that occurred over the
7 course of the last year, but settled last Tuesday as it
8 relates to infrastructure investments and gas prices, I'm
9 again surprised that we don't have more people here.

10 My concern will always be, and I've raised this
11 before, are we overemphasizing in the scoping plan cap and
12 trade, and not looking at all of the other mechanisms in
13 place to help -- help us address our emission reduction
14 goals, given that cap and trade is important for our
15 industries, and who were extremely involved in the
16 development of the public policy that led to AB 398. We
17 gave a tremendous amount of options, I think, and
18 flexibility within the policy to get to a place where we
19 are today.

20 I think the one piece perhaps that you could
21 elaborate is what happens if our projections are off? And
22 you mentioned where we may be able to foresee this
23 happening. But what's the immediate action that we take
24 to try to avoid the escalating cost that has been, I
25 think, at the center of questions today? So maybe you can

1 kind of walk us through a hypothetical where we
2 identify -- you know, that we're getting into that zone
3 and what actions are we going to be taking here?

4 CHAIR NICHOLS: Good question.

5 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
6 SAHOTA: So it's appropriate to think about it in the
7 context of the scoping plan, because the scoping plan that
8 was adopted in December of 2017 is already a little bit
9 out of date. We had measures for RPS under SB 350, which
10 were 50 percent by 2030. And then since then, the bill
11 has been signed to set that at 60 percent by 2030, and
12 plan for 100 percent by 2045.

13 So by virtue of that legislation, we're already
14 minimizing the role of the Cap-and-Trade Program as we saw
15 it in the 2017 Scoping Plan.

16 Then we have the Low Carbon Fuel Standard. We
17 modeled an 18 percent carbon intensity reduction for the
18 scoping plan. But as we went through the rulemaking this
19 year, we ratcheted that up to a 20 percent carbon
20 intensity for 2030. So again, we're reducing the role of
21 the Cap-and-Trade Program.

22 Now, each of those has costs associated with it.
23 Within the Cap-and-Trade Program, it's important to know
24 that when you -- when prices start to go up, you're going
25 to start see it -- seeing it factored into demand in the

1 products that are offered in secondary markets. We're
2 going to see it in the trading volumes. We'll see it in
3 the prices that are reported in the system. We have the
4 market monitor. We have our market monitoring staff. And
5 they review that data daily.

6 So it is -- it is not that all of a sudden we
7 will read about it in a report a week after there's a
8 spike. We will -- we will review that data daily. We
9 have secondary market data subscriptions that we will
10 review daily.

11 I think the question really is what happens if
12 your long-term projects are off -- the uncertainty with
13 the long-term projections, and that was something we also
14 looked at in the scoping plan development. We did an
15 uncertainty analysis that looked at, you know, what are
16 the emissions expected to be under a wide range of fuel
17 prices, energy prices? What does it look under a wide
18 range of economic conditions, high economic conditions,
19 low economic conditions?

20 And when you look at the measures, there's
21 questions related to performance. I mean, I talked about
22 SB 100 and I talked about the Low Carbon Fuel Standard,
23 which will minimize the role of cap and trade. But then
24 you've also got some mobile source measures out there, and
25 what happens if we don't move forward with our CAFE

1 standards? And that will actually mean that there's more
2 demand on the Cap-and-Trade Program.

3 And so what we plan to do as part of ongoing
4 review of this is look at the modeling that we did in the
5 scoping plan, and look at how you adjust it for some of
6 these factors, and what the implications are for the
7 program, how the economy is impacting the
8 business-as-usual, the emissions that we thought would be
9 there, and then continue to provide those annual updates
10 to the Board. And actually your committee hearing under
11 AB 197.

12 ASSEMBLY MEMBER GARCIA: Right. Clearly,
13 balancing a real fine kind of -- you know, both the goals
14 and objectives of emission reductions and trying to keep
15 in mind the economics and implications to these industries
16 that are extremely important to California's economy.

17 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
18 SAHOTA: That's correct.

19 ASSEMBLY MEMBER GARCIA: I wanted to shift a
20 bit and talk a little bit about direct environmental
21 benefits, and the question of, you know, our direction has
22 been in several pieces of legislation now to, okay, invest
23 and mitigate and minimize impacts locally. In the context
24 of this conversation, can you kind of elaborate how we are
25 defining or looking at direct benefits at this point?

1 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

2 SAHOTA: Sure. And by direct environmental benefits, we
3 understood that we're looking for benefits beyond just the
4 greenhouse gas reductions. So whether they're air quality
5 benefits or water quality benefits or avoiding adverse
6 impacts to water.

7 So we took the actual definition directly out of
8 legislation. We didn't try to modify or reinterpret it.
9 We took it as is. And what we did in the rulemaking
10 package is say that if projects take place in the state of
11 California and if the gases that are sourced out of the
12 state of California, this is the reason those provide a
13 direct environmental benefit.

14 For example, if we're looking at something like
15 forestry in California, the forests not only reduce
16 greenhouse gases, but they actually are a scrubber for the
17 air when we think about air quality. And so for each of
18 the protocols that we had in the rulemaking documents, we
19 identified these additional benefits that they provide to
20 the state of California, if they take place here.

21 Now, if those projects are located outside the
22 state of California, we don't automatically exclude them.
23 And that is because we are walking that fine line between
24 the Dormant Commerce Clause. The burden is on any project
25 developer outside the state of California to then make a

1 scientific case for why they, and that project outside the
2 state of California, meet that definition that's in
3 legislation.

4 And as we get those, our intent is to go through
5 those and make all of the material and all of the analyses
6 that we require for those public, so that's very
7 transparent to all members of the public, and all
8 stakeholders. This is the evidence that was used to make
9 a decision in the case for this offset project.

10 Now, AB 398 also includes the creation of a
11 offset compliance task force, which is to focus on offset
12 project types in California or increase offset projects in
13 the state of California. We will be releasing a
14 solicitation for that soon so that we can staff up for all
15 of the various rules and everything that cause maybe 11
16 specific technical expertise rules that are called for and
17 public stakeholder role is in there.

18 And that group will come together and we will --
19 we will work with them, because that is a committee that
20 our task force created by ARB. We will be working
21 directly with them to try and identify additional
22 opportunities in California.

23 ASSEMBLY MEMBER GARCIA: Thank you. You've
24 answered my questions clearly. There remains, you know,
25 some uneasiness perhaps in the audience. I feel like

1 we're moving in the direction that the policy has set
2 forward. Rest assured, that January come along and you've
3 got 80 legislators on one side and 40 on the other,
4 questions will arise. I can honestly tell you that up
5 until this point, and that's not very common, I've not
6 received a single message, email, call from any of my
7 colleagues on either side of the aisle questioning the
8 regulatory framework that's before us, where typically I
9 would hear. And that doesn't mean that they're not
10 thinking about it or concerned about it. It's just not at
11 the top of their list, I guess, at this moment.

12 But rest assured that in January, right, when
13 this gets rolled out and individuals hear from their
14 respected constituencies, right, they'll be probably
15 interested in having the conversation. And I look forward
16 to convening, you know, the Joint Legislative Committee to
17 being able to carry this conversation, and again allowing
18 for a space for individuals who were here today or not to
19 voice their opinions once more, and perhaps get some
20 legislative input as well as we move forward.

21 So I just wanted to thank you for taking my
22 questions. Thank the staff for putting this work
23 together. Madam Chair, I yield my time.

24 CHAIR NICHOLS: Well, thank you. We owe you a
25 tremendous debt of gratitude. Unlike some of your

1 colleagues who are on study trips, or resting, or possibly
2 enjoying --

3 (Laughter.)

4 ASSEMBLY MEMBER GARCIA: I'm not tired. I don't
5 tired.

6 (Laughter.)

7 CHAIR NICHOLS: You're here and you're acting in
8 the liaison capacity that you took on, so we appreciate
9 that very much.

10 Supervisor Serna.

11 BOARD MEMBER SERNA: Thank you, Chair Nichols.
12 So first of all, I want to thank staff for being extremely
13 thoughtful, maybe even preemptive in terms of really
14 trying to think about the sensitivities associated with
15 this -- with this action -- this proposal. We had a very
16 good conversation, Rajinder and I did, during our briefing
17 about -- especially the price elasticity of petroleum and
18 how this might affect that, especially set against the
19 backdrop of an increasing and growing market for
20 zero-emission vehicles.

21 There's so many different fluid component parts
22 to this equation, it's difficult, I'm sure, for any
23 accomplished economist to kind of just put their thumb on
24 one thing and consider that the principle influencer here.
25 It does concern me a bit when we hear from speakers

1 that -- and their -- the leading edge of their commentary
2 is suggesting that we directly control gas and electricity
3 prices, I got to tell you.

4 But one thing that we haven't really broached -
5 and I would ask this of Rajinder to comment on it - is
6 there are so many other things that are affecting the cost
7 of housing, the cost of electricity, the cost of
8 petroleum, could some of the safeguards -- some of the
9 measures you already explained in response to other Board
10 members, could they actually be employed by this Board, by
11 the legislature? If the ultimate cost component to the
12 consumer, whether it be in the form of petroleum prices,
13 electricity, cost of housing, if it were to get
14 exorbitant, in more than a decade let's say, could it be
15 the will of this Board, could it be certainly the will of
16 the legislature to return back and make adjustments --
17 certainly within the framework of what's being proposed
18 today, to kind of take in the whole picture here, not just
19 the value price of carbon credits, but the ultimate value
20 concern for the consumer?

21 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
22 SAHOTA: So the answer is always yes. The legislature is
23 able to pass legislation, work with the administration
24 direct us to take any variety of actions. In AB 398 we
25 got very specific direction on the post-2020 Cap-and-Trade

1 Program. And a lot of it was related to costs. But I
2 think in terms of how the Board remains informed, how the
3 legislature remains informed, there are several
4 opportunities to come back together, think about what's
5 going on, and assess what to do as we move forward and
6 make adjustments as needed.

7 We have the annual updates to this Board on the
8 scoping plan and on several of the large policies that we
9 implement here. We have the legislative committee
10 hearings -- the joint legislative committee on climate
11 change, the hearings over there. We've certainly been
12 asked to present at other oversight hearings at the
13 legislature, and we've made ourselves available in
14 specific programs and just in general on the scoping plan.

15 And then we also have the periodic updates to the
16 scoping plan, where we get to actually take a little bit
17 of a step back and assess what we've done in the last few
18 years, and assess what we're going to be able to do in the
19 coming years.

20 And that really requires us to do a full economic
21 analysis, emissions modeling, looking at environmental
22 analyses. And so those touchpoints provide multiple
23 opportunities to reassess not just individual programs,
24 but also the suite of policies that we have control over
25 here at ARB.

1 BOARD MEMBER SERNA: I appreciate that response.
2 And I asked the question, not just for my own edification,
3 but I think, you know, as a county supervisor and as one
4 that represents some of our most economically
5 disenfranchised neighborhoods anywhere in this region, I
6 am extremely sensitive myself to anything that is
7 affecting the cost of living for folks that are living
8 right now on the edge in making choices between their
9 prescription drugs and their transportation costs, those
10 type of things.

11 So I want to make sure, especially for those that
12 approached us today at the podium with these concerns,
13 hear and understand exactly what you're saying
14 cumulatively in response not just to me, but some of the
15 other thematically similar questions here, because they
16 need to understand that this is not a one and done kind of
17 decision that we're being asked to make. We're making
18 incremental adjustments as we go along. And that -- that
19 is a very, very important thing to remember in the context
20 of all of it.

21 So I appreciate the -- again, the work by staff
22 especially you, Rajinder.

23 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
24 SAHOTA: Yeah. And I -- and I unfortunately forgot to
25 mention that one of the newest tools that we have is the

1 funding fro the Cap-and-Trade Program, the investments in
2 disadvantaged communities to make sure that people have
3 access to the technology, to the low carbon tools that are
4 available, and so that they're not trading off between
5 getting a electric car versus other basic needs.

6 BOARD MEMBER SERNA: Sure.

7 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

8 SAHOTA: And those are powerful tools, because when you
9 look at the suite of policies in the scoping plan -- and
10 I'll stick to the gasoline issue. When you look at those
11 policies, successfully implemented, we would see a
12 reduction in on-road fuel demand of 45 percent. But you
13 want to make sure that everybody gets to benefit from not
14 having to go to the pump and pay for gas.

15 BOARD MEMBER SERNA: Sure.

16 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF

17 SAHOTA: And so those kinds of mechanisms and the programs
18 that actually target some of those investments are
19 critical.

20 BOARD MEMBER SERNA: Thank you.

21 CHAIR NICHOLS: Other questions or comments?

22 Yes, Mr. Takvorian.

23 BOARD MEMBER TAKVORIAN: Thank you. Just a
24 follow-up on a couple of things. Thanks to staff for all
25 of the work that you've done and the public hearings that

1 you've held. It probably goes without saying, and I don't
2 know who might still be in the room that expressed
3 concerns over cost containment and the impact on low
4 income communities and disadvantaged communities, but I
5 do -- I do think it's really important that it was clear
6 that there's a really narrow understanding not only of
7 this rule and this program, but also of the programs of
8 CARB.

9 And I think it's really important -- and La Ronda
10 and I were talking about this, that as much as we can,
11 that CARB needs to really reach out to some of the --
12 especially the small business associations that were
13 represented here today. I had a conversation with Mr.
14 Scott from the African-American Farmers Association, and
15 he wasn't aware of some of the incentive programs that we
16 have.

17 And Abshi --

18 AIR POLLUTION SPECIALIST SINGH: Abajh.

19 BOARD MEMBER TAKVORIAN: Abajh -- I'm sorry --
20 was in the wrong place at the wrong time.

21 (Laughter.)

22 BOARD MEMBER TAKVORIAN: I grabbed him and we
23 started to have a conversation about it as well. He was
24 surprised that there were any programs like that. Didn't
25 understand that there was an investment side of these

1 programs. And I want to be sure, because I think that
2 many of the comments were very heartfelt and sincere,
3 obviously, about the challenges of surviving in these
4 economic conditions.

5 And I really want to ask staff what you might
6 think about how we might proceed with reaching out to some
7 of these organizations and these individuals after today
8 to get them some of that information. That's my -- I have
9 other questions, but that's my first question.

10 EXECUTIVE OFFICER COREY: Yeah. I think one of
11 the points that you mentioned, Ms. Takvorian, was I think
12 the ag funding, for instance. Actually, the source of the
13 funding is actually cap-and-trade proceeds. That a good
14 share of that actually in the last two years has gone into
15 the valley. I think it's 100 -- the legislature two years
16 in a row appropriated about 135 million. In one case,
17 130. Two in the other with about 80 percent going to the
18 valley.

19 But your point in terms of outreach, and I think
20 that is an area that we've been evolving on in the
21 organization. It certainly has been with respect to 617.
22 And with your help and the help of other Board members and
23 others, we're looking at how we can be more effective that
24 way, in looking at establishing much closer relationships
25 with a number of the community based organizations, which

1 is -- I would say we've made a number of strides in that
2 department.

3 We're looking for additional advice, counsel, and
4 any help you can provide on that we're open and interested
5 in it.

6 BOARD MEMBER TAKVORIAN: Okay. Thank you very
7 much. I know that we're getting better and better at
8 this. So that was not a critical comment. It's more -- I
9 mean, when we see the number of people who have a
10 misunderstanding I think of the programs. I think it
11 motivates us all to want to do a little bit more. So I
12 appreciate that.

13 I also appreciated the clarification that the
14 staff provided in the direct environmental benefits
15 definition. I did hear that some additional clarification
16 might be beneficial. And I wanted to ask if there were
17 plans to do that. And I did hear you respond to Assembly
18 Member Garcia, but I just wondered if there was more that
19 you might do with that, Rajinder?

20 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
21 SAHOTA: Sure. The ambiguity stems from one sentence in
22 the regulation. And the way to fix it is to just make
23 sure we repeat the same qualifier that we're looking
24 beyond GHGs for both air and water, instead of having it
25 in just one place.

1 So we will go ahead and make that change. And it
2 was something that was flagged in the IEMAC report as
3 well, and some stakeholder comment letters. And so that
4 was always the intent. We will make sure we clarify that
5 as a 15-day change.

6 BOARD MEMBER TAKVORIAN: Okay. Thank you for
7 that. And I also wanted to follow-up on the comment about
8 the retroactive allowances, and wanted to ask you if you
9 could kind of explain the rationale for the additional
10 what I think is about \$365 million worth of allowances to
11 some of the largest users of the offsets.

12 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
13 SAHOTA: I'm sorry?

14 BOARD MEMBER TAKVORIAN: Some of the largest
15 recipients of the allowances.

16 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
17 SAHOTA: Third compliance period. Yes. Okay. So I just
18 flipped it in my head. I thought you were talking about
19 oversupply. And then I got myself oriented. Sorry about
20 that.

21 Okay. So this is the third compliance period
22 concern, which is where if you're medium risk or low risk,
23 your assistance factor drops to 75 percent or to 50
24 percent. And I think you're asking specifically about the
25 refiners in the state.

1 So if you look at a refiner in the state of
2 California, they have emissions associated with their
3 facility, and they have emissions associated with the fuel
4 that they put into the rack that is used by consumers in
5 the state.

6 So, for example, one of the largest refiners in
7 the state has about a 40 million plus compliance
8 obligation. And they get no allowances for the fuels, and
9 they get some allowances for their facility.

10 When you look at the amount of allowances they're
11 getting relative to their total compliance obligation,
12 it's less than a quarter of what their compliance
13 obligation is. And so they're getting -- they've been
14 already identified as at risk for leakage. We do believe
15 that there is a risk for leakage. We've seen in the past
16 when a refinery has gone down in California, we have
17 imported in oil from other places. So there are other
18 places that can produce and provide for us this good. And
19 what you want to do is make sure that that production and
20 those jobs are protected from leakage. And the way to do
21 that is through that mechanism of allocation.

22 And so when we think about the AB 398 direction
23 to set the assistance factors from 2021 to 2030 at 100
24 percent, and we think about it's not just the refiners,
25 but also the food processors, steel manufacturing and the

1 other sectors, we took a conservative approach and are
2 proposing to set them all at 100 percent for all three
3 categories.

4 BOARD MEMBER TAKVORIAN: And how do you then
5 balance that -- and this leads to the last question I
6 have. But how do you then balance that with the impact on
7 environmental justice communities, where those users are
8 the most polluting and have reduced -- well, where there
9 actually isn't as much reduction in those communities for
10 both GHGs and co-pollutants? It seems to me there's
11 relationship there between the utilization and the lack of
12 reduction.

13 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
14 SAHOTA: So the utilization of the allocation for leakage
15 minimization?

16 BOARD MEMBER TAKVORIAN: The allocation -- the
17 allowances as well as the -- as well as the offsets
18 themselves. So where we have yet another update to the
19 study that shows us that these emissions are not reducing
20 at the level that we would hope for in those -- in those
21 communities from the refineries.

22 CHAIR NICHOLS: So the question really is what
23 would happen if you didn't give them these additional
24 allowances that they're asking for?

25 BOARD MEMBER TAKVORIAN: That's a better way to

1 ask it.

2 CHAIR NICHOLS: How can you justify that in
3 the -- if you're trying to get them to reduce their
4 emissions. And your answer would have to be, I think,
5 that they're not going to reduce their emissions just
6 because they don't get those extra allowances, but that
7 the consumers will get hurt, because they're have to pay
8 more money for imported gasoline --

9 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
10 SAHOTA: That's exactly right.

11 CHAIR NICHOLS: -- because they're not going to
12 stop buying gasoline just because the refinery didn't get
13 those extra allowances.

14 So it's a -- it seems counterintuitive, but I
15 think in reality if we could make that nice neat, you
16 know, connection between not giving the transition
17 assistance and getting the refiners -- anticipating that
18 to do more to reduce their emissions, that would be net a
19 good thing, right?

20 But it isn't going to lead, as far as we can
21 tell, to a reduction in the overall use of the product.
22 It's just going to get it from another place, which is
23 going to ship it in and charge more money.

24 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
25 SAHOTA: That's correct. And we've seen that when a

1 refinery has gone down, that that's exactly the pattern
2 they came through for over a year. We brought in -- we
3 brought in fuel from Europe and Asia to meet the demand
4 that was in California.

5 CHAIR NICHOLS: Yeah. So we have to do other
6 things to reduce the demand in California.

7 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
8 SAHOTA: Right.

9 BOARD MEMBER TAKVORIAN: I was going to say, so
10 that's -- that's the demand and supply side discussion
11 that we need to have, but I appreciate that. Thank you
12 for the clarification.

13 My last question is to ask for an update on the
14 status of the adaptive management plan, which I don't
15 think we've heard about really in terms of a substantive
16 update for a couple of years, but you did talk about it as
17 part of the scoping plan in 2017.

18 And to look at the areas in the state that are
19 most impacted by emission increases and the relationship
20 to the Cap-and-Trade Program. And I wondered what your --
21 the status on that and the update might be.

22 Thank you.

23 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
24 SAHOTA: Sure. And there's a couple of things that staff
25 has been working on related to how do you look at the

1 Trends of greenhouse gases alongside the trends of
2 criteria and toxics pollutants in the state.

3 And in the report -- in the 2017 scoping plan, we
4 had flagged and referenced that there were two reports
5 that had been done on this by external entities. There
6 was an OEHHA report. There was also the Pasteur report --
7 Cushing. Sorry. Sorry. Cushing.

8 I shouldn't have attributed it to the wrong
9 person. I apologize.

10 And both of them -- both of them spoke to data
11 gaps and the need to improve the data that we're trying to
12 use to look at this issue.

13 And so in both AB 197 and AB 617, we were
14 provided the tools to actually go and try and improve the
15 data set to explore what these relationships look like.
16 And sometimes it's not always clear. They may be inverse
17 in some cases. There might be -- even within a sector, it
18 may look like a close relationship or it may not. And so
19 better data is going to be critical to actually really
20 understanding what the means, even at individual
21 facilities.

22 And so there will be a regulation coming to the
23 Board in December, I believe, that is under AB 167 to look
24 at consistent reporting across the state for criteria
25 pollutants throughout the state. That is data

1 traditionally that comes through the air districts. And
2 it is a regulation that we'll be relying -- working with
3 the air districts to make sure it's provided consistently
4 and in a timely manner so that this -- these kinds of
5 evaluations can be done, not just by ARB, but by external
6 stakeholders.

7 The other thing that's occurred is an update to
8 the visualization tool. It now includes census tracts in
9 it, so that anyone who has access to the internet can look
10 at census tracts in their community. They can look at the
11 CalEnviroScreen scores, a list of the facilities in that
12 census tract. The individual and aggregated emissions
13 within that census tract, and charts to look at a
14 comparison of greenhouse gases, criteria and toxic
15 pollutants and emissions trends. And so the access and
16 available to that information has -- has improved greatly
17 to the level that is of interest to the folks that we were
18 getting comments from from the EJ representative groups.

19 So there is work that has been done, and we
20 are -- we're making progress to make sure that we can --
21 we can follow through on this ask.

22 BOARD MEMBER TAKVORIAN: Yeah, I think that's --

23 CHAIR NICHOLS: Okay. A Quick follow.

24 I'm sorry. Go ahead. If you're not finished, go
25 ahead and finish.

1 BOARD MEMBER TAKVORIAN: No, I think that's an
2 important point, and I do appreciate that the transparency
3 has increased. I think it's the adaptive management tool
4 was to put the cap-and-trade trends and the emissions
5 together for those census tracts. So we have all these
6 individual tools. We need to look at what the trends are
7 over -- over time, the relationship, not only to cap and
8 trade, but hopefully over time to the other regulations
9 that are coming into -- into being.

10 So do you have any update on where that
11 integration, where the -- an intersectional tool might
12 occur, so that we can actually see it over time and weigh
13 the effectiveness of the rules together.

14 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
15 SAHOTA: So in terms of looking at the data, like being
16 able to look at greenhouse data and criteria and toxics
17 data, you can do that at the census tract level now with
18 the new functionality and the visualization tool. It
19 pulls those together.

20 So we've got greenhouse gas data reported
21 separately. We've got criteria and toxics data that was
22 pulled in through a different database here. They're now
23 available in the same database in that mapping tool by
24 census tract. So the functionality exists. I think we
25 still need to continue to work on making sure that we

1 address the data gaps that have been identified, both in
2 those studies, and even that we agree with internally that
3 we need to have a better handle on to be able to do the
4 kinds of analyses I think you're asking for.

5 BOARD MEMBER TAKVORIAN: Thank you.

6 CHAIR NICHOLS: A follow-up from Dr. Balmes.

7 BOARD MEMBER BALMES: Yeah, just a short
8 follow-up. As many of the staff know, the Adaptive
9 Management Program is something I've been harping about
10 for as long as I've been on the Board. It had a different
11 name initially. And you just talked about it being
12 integrated at the census tract level. But I think the
13 original intent was at the facility level. So that's --
14 those are two different things.

15 And then another thing you said, and, you know,
16 we'll be talking about this at length in December, was
17 that there be data on emissions available for criteria
18 pollutants.

19 CHAIR NICHOLS: Um-hmm.

20 BOARD MEMBER BALMES: But it's the toxic
21 pollutants that I'd be much more concerned about at the
22 census tract or neighborhood level. So I'm looking
23 forward to our discussion in December about the emissions
24 inventory that's supposed to be statewide according to AB
25 197. And I'm pretty sure it's at the source level, not

1 the census tract.

2 CHAIR NICHOLS: Mr. De La Torre.

3 BOARD MEMBER DE LA TORRE: Thank you. I
4 appreciate a couple of the points that were made by my
5 colleagues around some of the possible adjustments that
6 need to be made. But I wanted to address the issue of the
7 ceiling, because we had so many people come talk to us
8 about the price ceiling.

9 I'll start with a paid Tweet that I got, and then
10 I also got it on my various newspapers that I check out it
11 popped up. So notwithstanding the very clever algorithm
12 that figured out to dump this stuff on me --

13 (Laughter.)

14 BOARD MEMBER DE LA TORRE: -- when I saw it, I
15 thought, well, that's not very effective. So I'll read
16 from -- from one of these.

17 "The State regulators are ignoring the
18 Legislature resulting in skyrocketing household costs for
19 food, energy, and fuel. Please re-Tweet to CARB to let
20 them know that we can't afford higher energy and fuel
21 costs".

22 And then in the little box with the picture of
23 the sad looking woman, "State regulators' actions may
24 result in skyrocketing my cost of living".

25 So I see that thing, and I'm wondering, what --

1 yea, what am I doing? Why -- why do people need to reach
2 out to me. Clearly, the algorithm found me. And, you
3 know, folks, you can spend your money however you want on
4 whatever consultants you want, but stuff like that just
5 isn't very good. Just my reaction to it.

6 In terms of the price ceiling, a couple points.
7 One, I really like symmetry. I like having something
8 that's smooth and consistent. Business is always saying
9 to us we just want consistency. We want to know what we
10 should be doing. And here we are giving you consistency,
11 not unlike what you've had for the last several years with
12 the high and a low, gradually increasing.

13 That's -- it's symmetrical. It's simple. It's
14 consistent until 2030. That's pretty good. In fact, some
15 folks came to lobby me on your behalf. And when I told
16 them that, they said, yeah, we like consistency. We like
17 to have -- as business people, we like to have some
18 foresight about what we're expected to do. So we left on
19 very friendly terms from that meeting.

20 That is what you say you want. And then when we
21 give it to you, because it's not the result that you want,
22 then we get algorithms, and Tweets, and advertising and --
23 et cetera, et cetera, et cetera.

24 Interestingly, on that Tweet, by the way, most of
25 the comments below were about AstroTurf. FYI.

1 Thank you.

2 (Laughter.)

3 CHAIR NICHOLS: Okay. Are there other Board
4 members who wanted to comment?

5 VICE CHAIR BERG: Can I make a closing comment.

6 CHAIR NICHOLS: Yes, you may make a comment.

7 VICE CHAIR BERG: You know, I just would also
8 like to thank staff. And I think that my fellow Board
9 members and Assembly Member Garcia, you would agree with
10 the fact that our -- Rajinder earned CARB's highest honor
11 this year as the Executive Officer's Award of Excellence.
12 And I think that that was presented to her last month.
13 And I think it's fair to say, on behalf of my fellow Board
14 members, that a honor very well earned. And I had hoped
15 to be there.

16 And so I did actually get to have the write-up.
17 And I would have never guessed that your bachelor's and
18 masters was only in atmospheric science, since you also
19 seem to be -- have a great expertise on markets, on data
20 collecting, on how to analyze this, and how to look at it,
21 and your team. That is quite amazing. So
22 congratulations, Rajinder.

23 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
24 SAHOTA: Thank you. I really appreciate that. It's been
25 exciting to work on this program, and especially with the

1 Board members, and the Executive Office and the staff.

2 CHAIR NICHOLS: Great.

3 But before we bring this to a vote, I neglected
4 to call on one of my Board members. So go ahead, Mr.
5 Eisenhut.

6 BOARD MEMBER EISENHUT: Thank you, Chair Nichols.

7 I heard your earlier comment about -- and by the
8 way, I wanted to get my comments in before Rajinder lost
9 her voices, so I hope I'm in time.

10 (Laughter.)

11 BOARD MEMBER EISENHUT: Your earlier comment
12 about monitoring the price ceiling because that is a
13 target that's 12 years away. And Rajinder's comments
14 about daily and annual monitoring. And I'm asking really
15 if -- because I know that staff would do the work anyway,
16 but if there were a formal inclusion of a trip-wire that
17 said if -- if the price is 80 percent of the price
18 ceiling, that it triggered a mandatory review. So that's
19 my question of staff.

20 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
21 SAHOTA: So there is actually a trip-wire, to use your
22 words, in AB 398. And in AB 398, it says if you have two
23 consecutive auctions that exceed the price in the first
24 reserve tiers, so even at that bottom tier of that three
25 tier structure, there is a report that the Independent

1 Emissions Market Advisory Committee must provide on the
2 likelihood that we would reach the prices in the price
3 ceiling.

4 BOARD MEMBER EISENHUT: Thank you.

5 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF
6 SAHOTA: So folks had already contemplated and made that
7 part of the legislation. But that's -- that was a --
8 that's a really good point.

9 BOARD MEMBER EISENHUT: Okay.

10 CHAIR NICHOLS: Okay. It's clear that not every
11 issue that anybody has with this program has been
12 resolved. But I feel like we have had enough discussion
13 at least at this point on the amendments that are in front
14 of us to be able to move on.

15 So I would like to ask for a motion on the -- and
16 a second.

17 EXECUTIVE OFFICER COREY: Hey, Chair?

18 CHAIR NICHOLS: Yes.

19 EXECUTIVE OFFICER COREY: Chairman, this is --
20 the next step is to put the 15-day out and return in
21 December for the Board vote, because we have to go through
22 the CEQA comments and response process.

23 CHAIR NICHOLS: So you're not going to just send
24 it to the Executive Officer at the end, but you're going
25 to bring it back to the Board.

1 EXECUTIVE OFFICER COREY: We have to return. We
2 have to return to the Board.

3 CHAIR NICHOLS: So at that point, then we --

4 BOARD MEMBER DE LA TORRE: As amended.

5 CHAIR NICHOLS: Yes, as --

6 (Laughter.)

7 CHAIR NICHOLS: Only as amended. So -- but -- so
8 that means you don't want us to be voting at this point
9 then?

10 EXECUTIVE OFFICER COREY: We don't -- that's
11 correct. We don't have a resolution. We'll return in
12 December for the vote after the 15-day.

13 CHAIR NICHOLS: Okay. I'm sorry. I didn't
14 understand that that was -- that that was your intention.
15 Okay. All right. That's -- we will not take a vote. The
16 record is closed. It will reopen for the 15-day comments.
17 We will receive comments at that time. We will come back
18 the Board.

19 Okay. Thank you.

20 We have to fairly brief items, neither one of
21 which requires action, but they're both important
22 information. And they are the small off-road engines,
23 what used to be called lawn and garden equipment. That's
24 mostly what it is. And we've got a bunch of the equipment
25 out there. The expo is still going on. And then the

1 legislative report, which is I think also fairly brief.

2 But I think we should probably take a brief
3 stretch break now.

4 Yes. Okay. If we take a break, I would strongly
5 suggest those who haven't had a chance to look out in the
6 lobby to go take a look before we get back, because
7 there's a lot of interesting equipment there.

8 (Off record: 4:00 p.m.)

9 (Thereupon a recess was taken.)

10 (On record: 4:11 p.m.)

11 VICE CHAIR BERG: Ladies and gentlemen why don't
12 we go back and take our seats, please, and we'll finish up
13 on our last two items.

14 I do hope you've had an opportunity to see
15 outside our small engine showcase, because many of us will
16 wake up on a Saturday morning and hear those leaf blowers,
17 or other lawn type of equipment when we think, really?
18 Can't they make those quieter?

19 So our next item on the agenda is Reducing
20 Emissions from Small Off-Road Engines: Operator Exposure,
21 Health Risks, and Pathways to Zero Emissions.

22 This is an informational item to update the Board
23 on the small off-read engines, also called SORE, which are
24 primary -- primarily used in lawn and garden equipment.

25 The Board first approved regulation for SORE in

1 December 1990 with the ultimate goal to promote the use of
2 electrical powered equipment. Not surprisingly, battery
3 performance issues and poor commercial viability have been
4 challenging. But today, as we can see right out at the
5 showcase, there are zero-emission options that meet
6 performance and power expectations of the lawn and garden
7 industry.

8 Staff will highlight several case studies where
9 the electrical equipment has been evaluated and where it's
10 already been adopted.

11 Mr. Corey, would you please introduce this item?

12 EXECUTIVE OFFICER COREY: Yes, Vice Chair Berg.

13 So small off-road engines, or spark-ignited
14 engines, rated at or below 25 horsepower are used
15 primarily to power lawn and garden equipment. And
16 currently, there are approximately 16.7 million small
17 engines in California, producing about 118 tons per day of
18 smog-forming emissions.

19 Staff last reported to the Board in November 2016
20 to propose amendments to the evaporative emission
21 requirements for small off-road engines. Staff proposed
22 various measures to increase the compliance rate with
23 existing diurnal emission standards and highlighted the
24 need to further reduce emissions in light of the
25 expectation the smog-forming emissions from small off-road

1 engines will surpass those from light-duty passenger cars
2 in the next few years.

3 The Board adopted the amendments and asked staff
4 to return and provide an update on progress toward
5 accelerating the transition to zero-emission equipment.
6 We're here today to provide that update just as you noted.

7 Staff will also update the Board on a recent
8 study that was conducted to better understand exposure to
9 exhaust and resulting health risks associated with the
10 operation of gasoline power lawn and garden equipment.

11 And with that, I'll ask Dorothy Fibiger to begin
12 the staff presentation.

13 Dorothy.

14 (Thereupon an overhead presentation was
15 Presented as follows.)

16 AIR RESOURCES ENGINEER FIBIGER: Good afternoon,
17 Vice Chair Berg and members of the Board. It is my
18 pleasure to present an informational update on CARB's
19 activities surrounding small off-road engines.

20 Today's presentation will highlight the
21 significance of the emissions associated with this
22 category, and the need to achieve further reductions. It
23 will also underscore the potential health risks to the
24 operators of this equipment. Finally, we will present
25 staff's vision to promote zero-emission equipment to

1 eliminate these issues.

2 --o0o--

3 AIR RESOURCES ENGINEER FIBIGER: Small off-road
4 engines, referred to throughout this presentation as SORE,
5 are sparking-ignited engines rated at or below 19
6 kilowatts or 25 horsepower. SORE is primarily comprised
7 of residential and commercial grade lawn and garden
8 equipment, including mowers, blowers and trimmers.

9 Utility equipment, such as generators and
10 specialty vehicles, including some golf carts, can also be
11 included in SORE. Today, we will be focusing on lawn and
12 garden equipment that falls in the SORE category.

13 --o0o--

14 AIR RESOURCES ENGINEER FIBIGER: There are two
15 pollutant emission sources from SORE. Exhaust emissions
16 occur when the equipment is in use, while evaporative
17 emissions occur primarily while the equipment is stored.
18 Approximately 60 percent of SORE emissions are from
19 exhaust.

20 --o0o--

21 AIR RESOURCES ENGINEER FIBIGER: For nearly 30
22 years, the Board has helped reduce emissions through SORE
23 regulations. In December 1990, the first emission
24 standards for SORE were adopted and set to go into effect
25 in two tiers. Tier 1 was set for model years 1994 to '98,

1 and called for a three to 55 percent reduction in exhaust
2 emissions of hydrocarbons and NOx. Tier 2 was set for
3 model years 1999 and beyond and worked to promote electric
4 equipment, but was relaxed due to a lack of reliable
5 electric options.

6 The first evaporative emission standards for SORE
7 were adopted in 2003, and 2008 saw the reduction of
8 credits -- the introduction of credits for professional
9 level zero-emission equipment. Just this year, Blount
10 became the first manufacturer to qualify for the
11 zero-emission equipment credits with their Oregon brand.

12 In November 2016, amendments to SORE evaporative
13 emissions regulations were introduced. At the time,
14 compliance with existing standards was low, so changes
15 were implemented to increase accountability. The Board
16 also asked about increased incentives for zero-emission
17 equipment, and directed staff to return in 2018 to update
18 progress towards electrification.

19 In 2020, staff will return to the Board with
20 regulatory amendments for lower exhaust and evaporative
21 emission standards.

22 --000--

23 AIR RESOURCES ENGINEER FIBIGER: As you may
24 recall from our 2016 presentation, this graph really
25 struck a chord with several Board members and showed that

1 SORE will be an increasingly important portion of
2 smog-forming emissions in the State of California.
3 Through CARB's regulatory activities, emissions from
4 light-duty passenger cars are decreasing significantly.
5 Smog-forming emissions from SORE, however, are projected
6 to rise slightly due primarily to the increasing number of
7 SORE equipment.

8 By 2031, without further regulation, smog-forming
9 emissions from SORE are projected to be about twice that
10 from light-duty passenger cars. To achieve the overall
11 mobile source emission reduction goal of 80 percent, staff
12 plan to return in 2020 with reduced standards for both
13 exhaust and evaporative emissions for small off-road
14 engines.

15 --000--

16 AIR RESOURCES ENGINEER FIBIGER: In 2016, we also
17 alerted the Board to the 50 percent failure rate observed
18 by CARB during preliminary testing of SORE evaporative
19 emissions. Since that time, staff has completed several
20 compliance tests as shown on this graph. Each symbol on
21 the graph represents test results for five engines. Green
22 triangles represent passing results, while red dots are
23 failures.

24 Overall, the compliance rate is 58 percent. The
25 2017 model year shows an improved compliance rate over

1 2016, though the difference in pass rates is not
2 statistically significant. Testing is ongoing and more
3 results will be available soon.

4 Now, I will hand the presentation over to Zoe
5 Zhang from the Research Division to talk about operator
6 exposure to exhaust emissions.

7 --o0o--

8 STAFF AIR POLLUTION SPECIALIST ZHANG: Thank you,
9 Dorothy. Operators of lawn and garden equipment can be
10 subjected to high air pollutant exposures due to their
11 close proximity to exhaust. Professional gardeners and
12 landscapers who use these devices on a daily basis are of
13 particular concern. Unfortunately, up-to-date information
14 on exposures and the associated health risks is limited,
15 so staff conducted an in-house study.

16 Pollutant concentrations were measured at
17 operators' breathing zone, while they were performing
18 typical gardening activities. Measurements included air
19 toxics such as benzene, 1,3-butadiene, xylene,
20 ethylbenzene, and formaldehyde. Real-time levels of
21 particles, carbon monoxide, and noise were also monitored.

22 --o0o--

23 STAFF AIR POLLUTION SPECIALIST ZHANG: Eighteen
24 new and one used gasoline-powered devices were tested
25 along with five new electric devices. These devices

1 included chainsaws, leaf blowers, string trimmers, hedge
2 trimmers, push lawn mowers, and riding lawnmowers.

3 --o0o--

4 STAFF AIR POLLUTION SPECIALIST ZHANG: This is an
5 infrared video of a string trimmer operator, where we can
6 see a large dark plume coming out of the exhaust pipe,
7 rising up, and reaching the breathing zone. The dark
8 color of the plume is due to the imaging technology, which
9 indicates a mixture of carbon dioxide, or the vapors, and
10 toxic chemicals, such as benzene and one 1,3-butadiene.

11 --o0o--

12 STAFF AIR POLLUTION SPECIALIST ZHANG:

13 Preliminary results showed that all gasoline-
14 powered lawn and garden equipment increased the operator
15 exposure to benzene toluene, ethylbenzene, and xylene,
16 also known as BTEX, and 1,3-butadiene. Chainsaws produced
17 the highest exposure among the devices tested, possibly
18 due to the close proximity to the operators' breathing
19 zone and relatively stationary position of the operators.

20 --o0o--

21 STAFF AIR POLLUTION SPECIALIST ZHANG: Cancer
22 risk assessments were conducted based on increased
23 exposures to carcinogens, benzene and 1,3-butadiene, over
24 a 25-year exposure period for commercial uses. While all
25 devices increased the operator's cancer risks, use of

1 chainsaws led to the highest cancer risks. In this study,
2 we tested four chainsaws and the cancer risks ranged from
3 41 to 158 with an average of 81 additional cancers per
4 million workers exposed.

5 Cancer risks from the remaining devices ranged
6 from two to six potential additional cancer -- cancers per
7 million workers consider exposed. Commercial operators of
8 gasoline-powered devices could potentially double the
9 current cancer risks from benzene and 1,3-butadiene
10 compared to baseline exposures, which are predominantly
11 from mobile sources.

12 --000--

13 STAFF AIR POLLUTION SPECIALIST ZHANG: The
14 results show that using zero-emission equipment reduces
15 operator exposure to toxic air pollutants. We would
16 expect improvements in health as a result. However,
17 limited by the small sample size and short testing
18 duration, the findings presented here should be considered
19 as preliminary.

20 Results also indicate that using zero-emission
21 equipment reduced short-term exposures to carbon monoxide
22 and noise. With noise, reduction ranged from on 10 to 70
23 percent compared to gasoline-powered devices.

24 In summary, the results suggest that moving
25 towards zero-emission technology will reduce exposures and

1 the associated health risks for expose -- for operators of
2 gasoline-powered lawn and garden equipment.

3 Now, I'll hand the presentation back to Dorothy
4 who will discuss the current state of availability of
5 zero-emission equipment.

6 --000--

7 AIR RESOURCES ENGINEER FIBIGER: Thank you, Zoe.

8 As you pointed out, zero-emission equipment, or
9 ZEE, can reduce health risks to operators. It can also
10 reduce smog-forming emissions, which is essential to
11 helping California achieve its mobile source strategy
12 emission reduction goals.

13 In 2016, when we last reported to the Board,
14 commercial electric lawn and garden equipment was fairly
15 new to the marketplace. Today, there are 12 brands of ZEE
16 that are marketed to landscape professionals. Each
17 manufacturer has optimized power, weight, and battery life
18 in different ways. Improved battery technology is key to
19 improve all facets of ZEE. Commercial operators expect
20 performance as good or better than gas-powered equipment,
21 and manufacturers have achieved this in some categories
22 and are close in others. At present, string trimmers and
23 hedge trimmers have demonstrated equivalent performance
24 while leaf blowers meet all but the highest powered demand
25 applications.

--000--

AIR RESOURCES ENGINEER FIBIGER: Over the past 18 months, staff has partnered with several manufacturers of ZEE to arrange demonstrations of the equipment with groundskeeping groups. Our goal is to have State agencies lead by example on converting to electric equipment. The demonstrations have allowed crews to test out equipment and see how ZEE fits with their current needs.

We began these demos with Capitol Park, since they are nearby and we could coordinate easily. The crew was able to test several brands of equipment under a variety of conditions.

Overall, feedback on the equipment was very positive. ZEE is especially popular in the downtown area, where noise and fumes are frequent complaints. In Capitol Park use of electric equipment allows crews to run equipment early in the morning and near outdoor presentations.

--000--

AIR RESOURCES ENGINEER FIBIGER: As a result of the demos, Capitol Park has purchased ZEE to supplement their gas-powered equipment and has plans for more. Capitol Park estimates they are at about half electric usage, though that will vary seasonally and by task, with the highest ZEE usage occurring in summer. While we are

1 concerned about operator exposure year-round, the overall
2 emissions impact is most significant in the summer when
3 ozone levels can exceed ambient air quality standards.
4 Notably Capitol Park avoids all usage of gas-powered
5 equipment on spare the air days.

6 --000--

7 AIR RESOURCES ENGINEER FIBIGER: Building on the
8 success Capitol Park, we began coordinating similar demos
9 with the grounds crew at CSU Sacramento. For similar
10 reasons, the crew was mostly positive about electric
11 equipment. The low noise of ZEE allows for use near
12 classrooms.

13 Additionally, ease of starting the electric
14 equipment made the chainsaws and polesaws particularly
15 popular. CSU Sacramento has purchased some ZEE and is
16 planning for more going forward. The CSU demonstration
17 included Husqvarna's robotic lawnmower, the Automower.
18 Honda's robotic mower, the Miimo, is currently running at
19 UC Davis. Though grounds crews thought the -- thought
20 these mowers were not practical for widespread use on
21 campuses due to landscaping layout, the heavy foot traffic
22 means many people have seen the mowers in operation. They
23 frequently remark on how quiet the mowers are.

24 --000--

25 AIR RESOURCES ENGINEER FIBIGER: Expanding on the

1 achievements of the demonstration projects in the
2 Sacramento area, we have begun promoting ZEE statewide,
3 including demos with groups from the Department of
4 Transportation, various Department of General Services
5 groups, as well as college campuses and county government.

6 Crews that work in city centers around college
7 campuses like ZEE because it's quieter and therefore much
8 less disruptive. Groups that work on less manicured
9 landscaping report high-powered needs, which are sometimes
10 difficult to meet. Newer, high-powered ZEE, can help with
11 these heavy -- with the heavy-duty work and can eliminate
12 this issue.

13 The other problem groups have is remote work
14 where they are unable to plug into the grid throughout the
15 day. There are trucks in development aimed at landscaping
16 professionals equipped with a battery bank to provide
17 all-day power for ZEE.

18 --000--

19 AIR RESOURCES ENGINEER FIBIGER: Our demos have
20 evolved into the ZEE roadshow which is a trailer with five
21 brands of commercial grade ZEE in all available equipment
22 types. The roadshow just began in October and is already
23 visited an electric vehicle showcase at UC Irvine and the
24 California Green Schools Conference in Pasadena.

25 The equipment was left with the grounds crew at

1 UC Irvine which enabled them to go all electric for
2 several weeks. The crew is enthusiastic about moving to
3 more electric equipment going forward. After today's
4 hearing, the roadshow will visit public colleges and local
5 government groups. The equipment will be left for one to
6 two weeks to allow them to test various brands and
7 equipment types and decide what works for them before
8 purchasing.

9 Many groups have had bad experiences with ZEE in
10 the past, so by letting them try out several brands that
11 work for other landscaping crews, they can overcome these
12 biases.

13 --000--

14 AIR RESOURCES ENGINEER FIBIGER: Modifying the
15 State Administrative Annual, or SAM, is another way to the
16 State is leading by example. The SAM is used statewide by
17 government groups to set policies on many aspects of
18 government grounds, including landscaping and hardscaping.

19 We have been working with government operations
20 to update the SAM language to move State groups toward use
21 of electric equipment, which will have impact statewide.
22 Matt Henigan, Deputy Secretary for Sustainability with
23 Government Operations will be speaking after this
24 presentation about those updates and our collaboration
25 with DGS.

--000--

AIR RESOURCES ENGINEER FIBIGER: To promote use of ZEE among residential and commercial users, staff has recently launched a zero-emission landscaping website. The site is aimed primarily at residential users with a comprehensive list of available ZEE and links to websites where equipment can be purchased.

This is a simple central place to direct users of lawn and garden equipment who are looking to switch to ZEE. There are also links to several review pages so users can get a sense of the variety of equipment available. Additionally, there are listings of landscape maintenance companies that use all zero emission equipment.

Commercial grade equipment is listed separately from the residential equipment to allow for easier access for landscapers looking to convert to ZEE.

--000--

AIR RESOURCES ENGINEER FIBIGER: In the U.S., sales of lawn and garden equipment are dominated by gasoline-powered versions as shown on this graph in red. While sales of electric equipment, represented by the blue, have increased 40 percent in the past ten years, in 2017, they were still only 13 percent of the total.

State level data is not available. Currently we

1 are conducting a survey of SORE population which will help
2 determine the percentage of ZEE in use in California. In
3 2020, along with new emission standards, staff will
4 propose new reporting requirements to obtain this data on
5 an ongoing basis. By continuing to promote ZEE, lowering
6 SORE emission standards, and increasing ZEE incentives,
7 our goal is to drive up the percentage of ZEE sales in
8 coming years.

9 --000--

10 AIR RESOURCES ENGINEER FIBIGER: Incentives are
11 necessary to promote ZEE, because it is more expensive to
12 purchase. Here, we show a cost comparison between
13 electric and gas ride-on mowers. This is the most
14 expensive version of ZEE and its gas equivalent, and they
15 show the most stark example of cost differences. The Mean
16 Green mower shown here has an upfront cost over twice that
17 of the gas-powered equivalent. The cost of the Mean Green
18 is driven primarily by its batteries, which are sufficient
19 to run the mower for a full day.

20 Even with this price difference, the break-even
21 point occurs in less than three years, because the
22 electric mower costs less to operate. Higher gasoline
23 prices would move the break-even point earlier as does
24 engine maintenance, which is much higher on a gas engine
25 mower.

1 Handheld equipment, which has lower power
2 demands, can have a break-even point of less than 18
3 months.

4 --o0o--

5 AIR RESOURCES ENGINEER FIBIGER: A crucial
6 component of transitioning California lawn and garden
7 equipment to ZEE is incentives to reduce the high upfront
8 cost of electric equipment. In May 2015, the Bay Area
9 AQMD implemented an exchange for commercial lawn and
10 garden equipment to help with the upfront cost of
11 switching to ZEE.

12 The program was financed with over \$800,000 in
13 settlement funds and was only available to participants in
14 Alameda and Contra Costa counties. Schools were given top
15 priority, and then other municipal agencies were allowed
16 to participate. Demand for this program exceeded
17 available funding, and there was also interest from other
18 counties.

19 Most participants said the electric equipment
20 performs comparably to gas, but spare batteries were
21 necessary for regular use. South Coast AQMD and San
22 Joaquin Valley APCD are both preparing to launch similar
23 commercial exchanges soon.

24 --o0o--

25 AIR RESOURCES ENGINEER FIBIGER: In addition to

1 the commercial exchanges, many air districts have active
2 exchange programs aimed at residential users. These
3 programs typically offer a discount when replacing
4 gas-powered equipment with electric, and have been
5 financed through a combination of Carl Moyer and district
6 funding.

7 In addition to these active exchange programs,
8 many of other districts have had similar residential
9 programs in the past.

10 --o0o--

11 AIR RESOURCES ENGINEER FIBIGER: A growing number
12 of cities have put into place local ordinances and
13 wholesale transformative practices. Over 100 cities in
14 California have ordinances limiting leaf blower use in
15 some manner.

16 We'd like to highlight two cities in particular.
17 Ojai, who's Mayor is pictured here, recently converted to
18 100 percent ZEE for landscaping thanks to a \$60,000 grant
19 funded by the Ventura County Air Pollution Control
20 District.

21 In 2016, South Pasadena became the first city in
22 the nation to earn the title Green Zone City, a
23 certification that the American Green Zone Alliance
24 awarded. All hedge trimming, lawn mowing, and leaf
25 blowing on city-owned properties is now done completely

1 with low-noise zero-emission equipment.

2 --o0o--

3 AIR RESOURCES ENGINEER FIBIGER: Through the
4 California -- excuse me. Through the California
5 Department of Education and a growing number of proactive
6 schools, green schools programs are proliferating. These
7 activities pave the way for improvements to schools'
8 landscaping practices. Staff are exploring pathways to
9 incorporate additional guidance on adoption of ZEE to
10 green schools programs.

11 --o0o--

12 AIR RESOURCES ENGINEER FIBIGER: Since last
13 appearing before the Board in November 2016, staff have
14 been working across divisions to develop commercial
15 incentive opportunities for ZEE. In October, you, the
16 Board, approved the fiscal year 2018-19 funding plan for
17 clean transportation incentives, and through that, the
18 Clean Mobility in Schools Pilot Project.

19 In that plan, zero-emission lawn and garden
20 equipment is one of several eligible components. The Carl
21 Moyer Program provides an existing framework for
22 incentives to convert to ZEE. Currently, the only
23 eligible category of landscaping equipment is lawn mowers
24 with maximum funding of \$145 per mower.

25 We are exploring ways to expand this framework to

1 include commercial equipment and equipment types beyond
2 lawn mowers, including blowers, trimmers, and chainsaws.

3 Additionally, AB 617 has funding to help achieve
4 emissions reductions in identified communities, with a
5 focus on zero-emission technologies where feasible. We
6 are working to develop methods to utilize this funding for
7 zero-emission lawn and garden equipment.

8 Lastly, since the passage of AB 1071,
9 Supplemental Environmental Projects, or SEPs, have an
10 increased focus on benefits to disadvantaged communities.
11 Staff is working to inform communities about the
12 opportunity to apply for SEPs, and that they can be used
13 to fund conversion to ZEE. These programs, combined with
14 new incentive approaches, can help the State transition to
15 ZEE.

16 --o0o--

17 AIR RESOURCES ENGINEER FIBIGER: To be able to
18 penetrate the market more broadly, we need to address the
19 needs of small businesses for whom the transition may
20 prove costly. That could be accomplished with a targeted
21 incentive approach. Small businesses, with one to ten
22 employees, make up over one-third of all landscaping
23 companies in California. To offer a 50 percent incentive
24 on ZEE, these companies would require 20 to 30 million
25 dollars in funding, which could be allocated over several

1 years.

2 This relatively small investment can accelerate
3 the use of ZEE by a sector traditionally populated with
4 older higher emission equipment. State and municipal
5 groups may also require help getting over the initial cost
6 of conversion to ZEE, which could be provided through
7 incentives.

8 Staff are working to identify additional funding
9 sources to provide the necessary incentives to help
10 transition these businesses and organizations to the use
11 of zero-emission equipment.

12 --o0o--

13 AIR RESOURCES ENGINEER FIBIGER: One hundred
14 percent ZEE is achievable, but getting there will require
15 action on multiple fronts. Significantly lower emission
16 standards for SORE will drive manufacturers to produce and
17 sell more ZEE in the state. With robust allowances for
18 ZEE credits, manufacturers can achieve reductions through
19 engine modification or production of ZEE.

20 Additionally, category-specific ZEE requirements
21 could be implemented quickly. Hedge trimmers and string
22 trimmers are both available in ZEE that is at least equal
23 to their gas-powered equivalents.

24 Finally, incentivizing purchases of ZEE can help
25 overcome the high upfront cost.

--000--

AIR RESOURCES ENGINEER FIBIGER: Going forward, staff believes a transition to quiet zero-emission equipment, like that in the showcase outside, is a essential component of meeting the emission reduction goals of the Mobile Source Strategy. Staff will return to the Board in 2020 with a proposal to lower emission standards for SORE.

We will also continue promoting ZEE throughout the state with an initial focus on communities identified through AB 617. The ZEE roadshow and collaboration with manufacturers of ZEE will allow municipal grounds crews to try equipment and determine what works for them before investing.

Staff will also continue to identify and implement further incentive programs to help small businesses, municipal organizations, schools, and other landscaping groups eliminate the use of gas-powered lawn and garden equipment. The showcase outside has many examples of the equipment available for this transition.

Thank you for the time -- for your time.

I would now like to introduce Matt Henigan, Deputy Secretary of Sustainability with Government Operations. Matt will be speaking in more detail about the updates to the State Administrative Manual and the

1 collaborative effort to require use of electric lawn and
2 garden equipment when possible.

3 MR. HENIGAN: Thank you, Dorothy.

4 I appreciate the opportunity to address the
5 Board. My name is Matt Henigan. I serve as Deputy
6 Secretary for Sustainability in the Government Operations
7 Agency. And the goal of our sustainability programs at
8 GovOps, and DGS, and State agencies is to reduce the
9 environmental impact of State operations.

10 This administration feels that it's essential
11 that State operations model best practices and lead the
12 way towards a sustainable future for the entire State of
13 California. We've made enormous progress in reducing
14 emissions from our state vehicle fleet. And our petroleum
15 reduction goals have largely been met on time and on
16 target.

17 But noise and pollution from landscape equipment
18 remains a problem that we have not made progress on.
19 That's why I was pleased to enter into a partnership with
20 the Air Resources Board Laboratory and Monitoring Division
21 and DGS to try out electric equipment in Capitol Park.

22 The outcome of this test proved that commercial
23 equipment is ready for prime time, and is suitable for our
24 uses in Capitol Park and other State facilities. And as a
25 result of the successful outcome of this test, Department

1 of General Services has drafted rules requiring the use of
2 manual and electric equipment at State facilities.

3 Our State Administrative Manual Chapter 1821.6 is
4 being updated to require sweeping and raking as the
5 preferred method of clearing debris, allowing blowing only
6 when specifically necessary, and even then requiring those
7 blowers to be electrically powered.

8 We are also requiring departments to replace
9 gas-powered chainsaws, hedge trimmers, lawn mowers, string
10 trimmers, leaf blowers, and chainsaws with electric
11 equipment as the -- as equipment is replaced on its normal
12 replacement schedule. However, cost will be a major
13 barrier to implementation and could push out the date of
14 that equipment replacement. Rebates and incentives
15 targeted at public agencies would certainly accelerate our
16 progress at reducing smog-forming emissions from State
17 operations.

18 So I'm pleased that State operations can play a
19 role in transitioning the state of California to
20 zero-emission landscaping equipment. And I thank Air
21 Resources Board and Department of General Services for
22 their partnership.

23 Thank you.

24 BOARD MEMBER GIOIA: I have a question. Can I
25 ask --

1 VICE CHAIR BERG: We have a question for you.

2 BOARD MEMBER GIOIA: Can I ask you to send over
3 to us your current policies and the policies you're
4 drafting. That would be useful, because one of the things
5 I'm sure we'll talk about at the end is the -- how we
6 encourage - there's some of us in local government - to
7 get local agencies, cities and counties, to do the same.
8 And I know we'll hear from South Pasadena and Ojai, which
9 have programs.

10 So it would be useful to see what the Department
11 is doing and to see your program -- and to see your
12 policy. If can send that over, that would be great.

13 MR. HENIGAN: I'd be happy to. And it will be
14 posted to the State Administrative Manual Website.

15 BOARD MEMBER GIOIA: Great. Great. Thank you.

16 MR. HENIGAN: Thank you.

17 VICE CHAIR BERG: Thank you.

18 Well, we do have ten witnesses, so we'll go ahead
19 and hear the witness list and then finish up with Board
20 comments. If you could please see where your place is on
21 the list, and if you're the next speaker, please come on
22 down. And you can help us keep your time at three
23 minutes, but we'll reduce the in-between time.

24 And welcome Mr. Moss.

25 MR. MOSS: Thank you. Good evening now almost,

1 Madam Chair and honorable Board members. My name is Jacob
2 Moss on behalf of the South Coast Air Quality Management
3 District. Thank you for the opportunity to comment on
4 CARB's informational update on reducing emissions from
5 small off-road engines. We appreciate the efforts by CARB
6 staff in generating the updated information, and we fully
7 support the development of more stringent exhaust and
8 evaporative standards, and the accelerated move towards
9 zero-emission equipment.

10 As many you know, I'm sure, the South Coast Air
11 Basin is facing a major challenge in meeting the
12 eight-hour ozone standards requiring significant levels of
13 NOx reductions in the range of 45 and 55 percent by 2023
14 and 2031 respectively. Both NOx and VOC reductions are
15 also needed to meet the one-hour ozone standard by 2022.

16 The SORE category represents a substantial source
17 of NOx and VOC emissions in the basin, surpassing
18 passenger vehicle emissions by 2020, as also highlighted
19 in your staff presentation. The 2016 State SIP strategy
20 includes specific emission reductions commitments for the
21 SORE category, which are critical for our ozone attainment
22 demonstrations.

23 We fully support your staff's recommendation to
24 develop stricter exhaust and evaporative standards by
25 2020, in order to achieve and even exceed the commitments

1 in the 2016 AQMP. Implementation of these standards will
2 not only reduce criteria pollutant emissions, but they
3 will also reduce air toxics exposure associated with the
4 use of this equipment.

5 According to our latest multiple air toxics
6 exposure study, benzene and 1,3-butadiene, two of the key
7 components of gasoline emissions account for about 16
8 percent of the total cancer risk in the basin. Therefore,
9 CARB's goal to move towards zero-emission lawn and garden
10 equipment would be critical for reducing air toxic
11 exposure, as well as to help meeting our 2023 ozone
12 attainment deadline.

13 We also believe that continuous implementation
14 and expansion of existing complementary incentive programs
15 is essential to maximize the potential emission benefits
16 for this source category. South Coast has been
17 administering an incentive program for accelerating the
18 use of zero-emission lawn and garden equipment since 2003,
19 which has successfully retired almost 57,000 high
20 polluting lawn mowers and 900 leaf blowers since then.

21 In summary, we strongly support the findings
22 presented in today's informational update, and we urge
23 CARB to proceed expeditiously in amending and adopting the
24 existing SORE regulation, and we are fully committed to
25 working collaboratively with CARB staff to that end.

1 Thank you.

2 MR. COLOME: Good afternoon, Vice Chair Berg and
3 members of the Board. My name is Steven Colome, a pro
4 bono consultant to the City of Ojai. And I actually
5 thought our Mayor was going to speak first, so I was going
6 to follow up with some thoughts.

7 We were able to completely convert all of our
8 public works lawn and garden equipment to battery electric
9 from a grant received by the Ventura County Air Pollution
10 Control District. And as a condition of that grant, we're
11 expected at the end of this trial year to completely scrap
12 all of the gasoline equipment, thereby taking it and its
13 CO2 emissions and everything else out of circulation
14 forever.

15 I want to leave you with several thoughts about
16 what makes this successful. This would not have
17 happened -- our city council would not have voted to
18 expend this money without the grant from the APCD. It was
19 that grant money that really made this possible.

20 The other part that helped us in enormously is
21 that we had contracted with the American Green Zone
22 Alliance. Even though we have a very good city engineer
23 and public works staff, the intricacies of putting in
24 battery charging facilities, electing what ensemble of
25 equipment would be used that would be appropriate to the

1 city required that outside expertise.

2 So I would encourage you to find ways in terms of
3 accelerating this to help monetize those who are going to
4 accelerate the penetration of that -- this equipment.

5 One thing I'd like to stress is this really does
6 appear, from the staff presentation and everything else,
7 to be extremely low-hanging fruit for CARB right now as a
8 source of emission reduction. We have alternatives to the
9 gasoline equipment. And I would -- I would encourage that
10 that be accelerated as quickly as possible.

11 I think we don't need to fine-tune exposure
12 assessment or emission numbers to have just the obvious
13 fact in front us that this is an emissions source that
14 today, with alternate equipment, can be fully retired.

15 I also think it's unlikely that emission
16 reduction plans going forward are going to be sufficient.
17 We're still -- this -- there's a matter of physics,
18 there's going to be emission from the gasoline equipment.

19 And I'd also like to leave you with a fact that
20 there's truly an environmental justice issue here. Think
21 of the Peanuts cartoon Pig-Pen. Unfortunately, these
22 workers are exposed to a cloud of toxic emissions and air
23 pollutants. And it's a class of worker that often gets
24 short shrift in our regulatory world. While I know that
25 occupational health is not your responsibility, it

1 definitely is a benefit to the worker when those emissions
2 are not in their nose.

3 Thank you.

4 VICE CHAIR BERG: Thank you for bringing --
5 making trip up to see us.

6 MR. JOHNSTON: Good afternoon. My name is Johnny
7 Johnston. I am the Mayor of the famous, or infamous, City
8 of Ojai, California, and I come in peace.

9 (Laughter.)

10 MR. JOHNSTON: I want to thank your Board, the
11 staff, and particularly the Ventura APCD, along with Dr.
12 Colome who brought this idea to me that we had to overcome
13 what was a circumstance that gave different meaning to the
14 word "sustainability". We use that frequently in our
15 town. But what we have sustained was a 20-year debate
16 over leaf blowers. We became almost the laughing stock of
17 the county, but there was a reason for it.

18 And in the end, with the partnership with APCD,
19 this incentive -- we have been able to successfully
20 implement a program that is projected to reduce the amount
21 of pollution, just from what the city does, by 40 tons in
22 one year.

23 So what Dr. Colome is saying, I mean, this is a
24 high return on the investment, and we would strongly
25 encourage you to try to perpetuate this idea with other

1 communities. And we would be more than happy to go around
2 and talk to them and tell them how important it is.

3 So thank you.

4 VICE CHAIR BERG: Thank you very much. Ojai is
5 one of my favorite places.

6 BOARD MEMBER GIOIA: Can I make a comment?

7 VICE CHAIR BERG: Yes, please.

8 BOARD MEMBER GIOIA: Let me just acknowledge that
9 effort, because, you know, I'm in local government as
10 well. I serve on a board of supervisors up in the Bay
11 Area. And what I have found in my many years on the board
12 is that it's always easier to get one's own agency to move
13 when you can point to the success of another municipality.

14 And so with what you've done in Ojai and what
15 South Pasadena has done, I think it makes it -- at least
16 we have a place to point to. So when we talk to our own
17 public works directors and say, see, it can be done. They
18 did it. Because as you know, you went through this, being
19 the first isn't easy, right? You have to break new
20 ground, under -- you know, change the old way of doing
21 things, change the old psychology.

22 And so I think it's really important to
23 acknowledge those who are first in a field, because you
24 then make it easier for others to follow. And I -- so I
25 just want to acknowledge that. And I've already been sort

1 of noting and -- it would be great if you could send us
2 any policies that your city has put in place, if there's
3 any written policies about this, or whether it's just a
4 practice, because I think part of what we can do is share
5 best practices.

6 And when -- again, when your practices are shared
7 with others, there's a greater chance of their adoption.
8 So if you can send us anything, that would be great.

9 MR. JOHNSTON: Thank you. We'd be happy to do
10 that.

11 MR. KUJAWSKI: Good afternoon. My name is Ted
12 Kujawski. I'm the sales manger for Pacific Stihl.
13 Pacific Stihl is a division of Stihl Incorporated, and we
14 are located in Visalia, just three short hours to the
15 south of us. We're a wholesale distributor serving the
16 region of Arizona, Nevada, California, Hawaii, Guam, and
17 America Samoa. We serve the end users in these region by
18 selling through independently owned full service
19 retailers, our dealers.

20 In the state of California, we have about 500
21 dealers. And these dealers each bring their own
22 personalities and expertise to the selling process. Each
23 dealer has been trained and is continuously updated on the
24 most efficient methods of trouble shooting and repairing
25 our products.

1 Each year we conduct Stihl Universities to keep
2 our dealers up-to-date regarding new products and their
3 applications. Authorized Stihl dealers have the expertise
4 to help Californians make the proper buying decisions for
5 their needs. This buying experience cannot be duplicated
6 at the big box stores or on the Internet.

7 Battery power made by Stihl. A short two years
8 ago at this expo, I remember very clearly we had about
9 nine pieces of equipment and about three batteries. It
10 was on one table. And today, we have four tables, plus a
11 couple other displays. So it's pretty incredible how fast
12 we've been able to add to the battery offering.

13 Currently, Stihl produces battery-powered
14 equipment for most every Californian, light-duty equipment
15 for homeowners with small needs, medium-duty for
16 homeowners with more needs, and, of course, the commercial
17 professional products.

18 Pacific Stihl has worked closely with the South
19 Coast Air Quality Management District down in Los Angeles
20 for about 11 years now, helping to introduce low-emission,
21 low-noise products to commercial gardeners and
22 landscapers. And for the past two years or so, we've
23 worked closely to introduce zero-emission commercial
24 battery products, also down in L.A., to gardeners and
25 landscapers.

1 For several years, we worked with the Bay Area
2 AQMD to replace gas-powered equipment on and around school
3 campuses. And we've also worked with the San Joaquin
4 Valley Air Pollution Control District to help introduce
5 battery-powered lawn mowers to the Central Valley.

6 We've learned that it takes awhile for commercial
7 gardeners to get used to the different type of power that
8 battery brings. Buying the wrong product, or a less
9 quality battery-powered product, especially by commercial
10 gardeners, will only mean a quicker trip to the landfill.
11 So that enforces the importance of our servicing dealers.

12 Those that are using Stihl equipment now like
13 Stihl equipment.

14 So in closing, Stihl battery-powered products are
15 already getting the job done throughout California.
16 Thanks to the quality of the product and our servicing
17 dealers. I hope you all had a chance to stop by the booth
18 and we really appreciate being here.

19 Thank you.

20 MR. GAULT: Good afternoon. My name is Roger
21 Gault. I'm here today representing the EMA. EMA member
22 companies produce small spark-ignition engines that are
23 used in ground-supported equipment, such as lawn mowers,
24 garden tractors, pressure washers, and generators.

25 EMA and its members have been working with CARB

1 staff on the development of its plans for a possible
2 future small SI rulemaking. We appreciate the staff's
3 providing the Board with an information update on those
4 plans. We are committed to continuing to work with CARB
5 on that development effort.

6 In that spirit, we want to make sure that the
7 Board and its staff have the most up to date information
8 concerning the small SI market, and, of course, have the
9 most accurate information on which to base their proposal.

10 As such, I'd like to note a few things for your
11 information. As you know, the SORE fact sheet is based on
12 the off-road 2007 inventory model. And that model should
13 be updated to reflect major factors that have influenced
14 both population annual use of small spark-ignition
15 engines, including the Great Recession, California
16 droughts, and California user demographics.

17 EMA member companies believe that factors
18 significantly impact the inventory contribution from SORE.
19 And as such, we encourage staff to update those models.
20 We are working on developing data that will help access
21 that process.

22 We also need to work together to determine the
23 actual and potential future penetration of zero-emission
24 equipment in California. That data also has an impact on
25 the inventory and, of course, the feasibility and possible

1 market penetration of zero-emission equipment as part of
2 the future rule.

3 I should also note that we should make sure that
4 we have the most accurate and up-to-date information on
5 evaporative emissions and operator exposure data. We
6 stand ready to work with all of those issues.

7 We also want to remind the Board that EMA
8 ground-supported SI manufacturers have previously worked
9 cooperatively with CARB through a series of three
10 rulemakings to significantly reduce emissions from our
11 products by approximately 90 percent from unregulated
12 levels.

13 We also want to remind the Board that any future
14 regulatory programs must take into account the needs of
15 the marketplace. And that marketplace and those needs
16 encompass both consumers and residential products and
17 commercial users, including large numbers of small
18 businesses who invest capital and equipment powered in a
19 manner to get the job done, and enable them to earn a
20 living.

21 EMA's small SI manufacturers are committed once
22 again to working cooperatively with the staff to develop a
23 next tier rule. We hope you'll encourage the staff to
24 work with us to make sure any future proposal is practical
25 and implementable, based on the most accurate information

1 possible.

2 Thank you.

3 MR. KNOTT: Good evening, Board members. My name
4 is Greg Knott. I'm with the Outdoor Power Equipment
5 Institute. I'm the Vice President of Standards and
6 Regulatory Affairs.

7 OPEI is an international trade association
8 representing more than 100 manufacturers and their
9 suppliers of gas-, battery-, and electric-powered outdoor
10 power equipment. As manufacturers of small off-road
11 engines and SORE-powered equipment, OPEI and its members
12 have led significant emissions reductions in this category
13 for more than 20 years.

14 We will again be working closely with staff to
15 develop what we hope are solutions that will help achieve
16 State and federal goals as well as serve our customers and
17 businesses who depend on our products.

18 OPEI wants to emphasize the importance of
19 industry and agency collaboration, openness, transparency
20 throughout the rulemaking process. The SORE equipment
21 sector is diverse and includes a wide range of unique
22 equipment applications for uses from residential lawn and
23 garden equipment used infrequently around the yards of
24 millions of homeowners, to generators and chainsaws used
25 to battle or recover from natural disasters, such as

1 California's wildfires, to commercial landscape,
2 construction, and industrial applications used daily by
3 thousands of working professionals.

4 The diverse use and types of equipment will
5 require collaborative rulemaking activities, and an
6 emissions reduction solutions that will assure safe,
7 efficient, and productive products.

8 In addition to ongoing rulemaking collaboration
9 efforts, OPEI would like to offer our support for updating
10 a ARB off-road model. An updated an accurate model is
11 pivotal to understanding the reductions needed for the
12 state to achieve attainment with federal air quality
13 goals.

14 OPEI and EMA have been working together for two
15 years to understand the existing ARB model. We believe
16 our strong understanding for the lawn and garden market,
17 supported -- excuse me, supported by member data affords
18 us valuable information that should be put to use to
19 develop an updated model that accurately represents the
20 volume and contribution of emissions from the source
21 sector.

22 For example, through our work, we have updated
23 the ARN model to reflect OPEI growth, fallout in sales as
24 a result of the mid-2000s housing crash, the recession,
25 California's decades long drought, and the rapid growth of

1 electric products in the recent years. In coming months,
2 OPEI and EMA will meet with ARB staff to discuss our
3 inventory work and the resulting SORE emissions reduction
4 trajectory.

5 We remain optimistic our comments and discussion
6 points will be considered objectively and contribute to
7 achievable goals that reflect the advancements and
8 diversity of products needed by the SORE category for the
9 foreseeable future.

10 In closing, as industry representative for gas-,
11 battery- and electric-powered equipment, I want to note
12 that OPEI members are working hard to develop products of
13 the future, regardless of power source. This is clear
14 from the impressive demonstration of equipment in the
15 lobby. However, significant questions and concerns remain
16 regarding the ability of alternative power sources to meet
17 the cost, safety, and performance need of all today's SORE
18 applications. There is no one-size-fits-all solution.

19 Thank you.

20 VICE CHAIR BERG: Thank you.

21 MS. BANKS: Good afternoon, members of the Board,
22 and thank you for the opportunity to speak. My name is
23 Jamie Banks. I'm the Executive Director of a non-profit
24 organization, Quiet Communities. We're located in
25 Massachusetts.

1 I was just at the American Public Health
2 Association presenting on this topic, so there was a
3 timely opportunity to join you today. That meeting was in
4 San Diego.

5 We do research, education, and outreach to help
6 industry, communities, and so forth transition to
7 zero-emissions, low-noise equipment. Our capabilities are
8 enhanced by a collaboration with the American Green Zone
9 Alliance to help bring on-the-ground solutions and provide
10 meaningful and positive impact data to encourage others to
11 do the same.

12 I wanted to make a couple comments. First, just
13 to thank the state of California and CARB for really
14 leading by example. We're trying hard to do the same in
15 the northeast and other regions of the country, and they
16 are looking -- they will be looking to you as an example
17 of how to do this.

18 The second thing is that I want to thank Dorothy
19 and her research staff for doing this important research
20 and going down to the American Public Health Association.
21 There's not a lot of data in this field. There's very few
22 publications. And because of the size of the problem,
23 it's really something that deserves more public attention
24 and more awareness. And I think the work here is helping
25 to do that, and hopefully, the work that we do is doing

1 the same with our research and education.

2 And lastly, I just want to say that not only is
3 there a worker issues, there's certainly a public health
4 issue here in the way that a lot of the gas machinery has
5 been affecting communities. And we hear -- we hear this
6 from many, many communities around the United States.

7 We focus today -- we've heard a lot on emissions.
8 There is also the issue of noise. And I just thought I
9 would briefly say that we have done research in this area,
10 first a pilot project with Harvard School of Public
11 Health, looking at blowers. What is it about that sound
12 that makes it so distressing to so many people.

13 What we found is that there was a strong low
14 frequency component that's carrying that sound over
15 distance. We followed up recently with a study. We just
16 submitted a manuscript to the literature comparing leading
17 models of gas to leading models of electric. Basically,
18 found the same thing, that that low frequency component in
19 the gas equipment is carrying the loudness of the
20 equipment.

21 And interestingly, we had a nested comparison
22 that compared a 65 decibel gas blower, the sound, to a 65
23 decibel electric blower - 65 decibels at 50 feet that it
24 is - and found that at further distances the loudness
25 noise over 55 decibels, which is a community outdoor

1 standard, was carried about double the distance, even
2 those machines are rated the same.

3 And so in terms of community impact, if you
4 created a circle around a neighborhood, you're squaring
5 that distance and you're affecting a much greater portion
6 of the community. So we think that that's a very
7 important point to make and something you could applaud,
8 if, in fact, you were able to reduce that impact. So
9 thank you.

10 VICE CHAIR BERG: Thank you.

11 MR. MASSMAN-JOHNSON: Hi. Thank you, Vice Chair
12 Berg, CARB Board scientists and staff. I'm Luke
13 Massman-Johnson with the American Green Zone Alliance, and
14 we deeply appreciate all your studies on SOREs over the
15 years, in particular this emissions impact for the
16 workers.

17 I'm here to encourage you simply and emphatically
18 to put an expiration date on gas-powered lawn and garden
19 equipment in California. CARB and AGZA are walking the
20 same path to create healthy and sustainable communities,
21 study, educate, change minds, and change behavior.

22 And our work supports each other. CARB's
23 eye-opening 2020 study helps AGZA convince cities,
24 schools, and hospitals that transitioning large scale
25 operations to electric is important and urgent. And the

1 success of AGZA certification and accreditation programs,
2 some of which you've heard today, give CARB proof that
3 your zero-emission goals are not only achievable, but
4 being done today at scale.

5 As you all know, the risks of inaction are
6 obvious. One, air pollution is among the deadliest health
7 threats to communities around the world. And the primary
8 cause is, of course, man-made combustion.

9 Two, climate change is fast becoming an
10 existential threat to all life on earth, and its primary
11 cause is man-made combustion. And last, most people are
12 unaware that gas-powered lawn care contributes
13 significantly to both problems, as well as to user health,
14 and they don't know that zero-emission alternatives are
15 available.

16 Happily, the solutions are also obvious. One,
17 civilizations must rid ourselves of fossil fuels with an
18 urgency and commitment not seen since World War II. Two,
19 CARB is mandated to protect the public from the harmful
20 effects of air pollution and climate change, and you have
21 the tools to do so.

22 And three, as you can see in the showcase,
23 battery electric equipment has improved dramatically in
24 just the past three years, and it is now viable for
25 all-day commercial use.

1 What is not obvious, and what lies at the heart
2 of CARB's future decision on this topic, is whether we
3 collectively will be brave enough and fast enough to make
4 the changes that are absolutely necessary to make
5 immediately.

6 To this end, and with great respect and support
7 for CARB, AGZA strongly encourages CARB to establish a
8 target date of 2025 to prohibit the sale of new gas lawn
9 and garden equipment throughout California.

10 AGZA is in a unique position to support any CARB
11 initiative, and to help us get there by shepherding
12 cities, schools, hospitals, commercial crews, and
13 homeowners to make this transition safely, effectively,
14 and profitably.

15 If this target feels too ambitious, we must
16 remember that air pollution and climate change don't
17 respect borders, and they don't care about our opinions or
18 our politics. The science and math are cold facts,
19 unrelenting and accelerating, and only are fast and
20 sweeping actions can make a difference in time.

21 Thank you for your attention today and for your
22 very important and ongoing work.

23 VICE CHAIR BERG: Thank you.

24 BOARD MEMBER GIOIA: I have a question.

25 VICE CHAIR BERG: Oh, we have a question for you,

1 sir.

2 MR. MASSMAN-JOHNSON: Oh, that's great news.

3 Thank you.

4 (Laughter.)

5 BOARD MEMBER GIOIA: Great. So you're -- I was
6 just looking at your website the American -- that's your
7 website, American Green Zone Alliance?

8 MR. MASSMAN-JOHNSON: That's right, yes.

9 BOARD MEMBER GIOIA: So -- and just in reading
10 some materials online as I was sitting here, so you
11 provide -- your organization provides some support -- it
12 sounds like you provided support to Ojai --

13 MR. MASSMAN-JOHNSON: Yes.

14 BOARD MEMBER GIOIA: -- as they thought about
15 moving forward.

16 MR. MASSMAN-JOHNSON: Sure.

17 BOARD MEMBER GIOIA: Is your organization
18 available to provide support generally to municipal
19 agencies?

20 MR. MASSMAN-JOHNSON: Yes. That's actually
21 become the core of our work.

22 BOARD MEMBER GIOIA: Uh-huh.

23 MR. MASSMAN-JOHNSON: We started by helping
24 homeowners and small crews transition from electric to
25 gas. And it became clear that to do this at scale, we

1 needed to be able to support large-scale operations and
2 full commercial operations. Municipalities have turned
3 out, as the mayor and Mr. Colome -- Dr. Colome here can
4 attest, working with municipalities inspires an entire
5 community.

6 BOARD MEMBER GIOIA: Um-hmm.

7 MR. MASSMAN-JOHNSON: You can have a small-ish
8 discussion with a finite budget, with a handful of
9 decisions makers, and affect an entire community at once.
10 So it's a powerful tool. And as they both attested,
11 having support from CARB and the air districts financially
12 to buy down the initial cost of these has turned out to be
13 kind of the turning point of this.

14 All of us can do as many studies and talk as much
15 as we want about the advantages of electric. That's all
16 fairly obvious. The health and environmental benefits are
17 a slam dunk. The question is can crews or large or small
18 scale afford to make the leap, and do they believe that
19 when they get there, they're going to get their ROI?

20 BOARD MEMBER GIOIA: Great. Thank you.

21 MR. MASSMAN-JOHNSON: So, yes, consulting is our
22 -- the core of our business.

23 BOARD MEMBER GIOIA: Thank you.

24 MR. MASSMAN-JOHNSON: Thank you.

25 MR. MAGAVERN: Bill Magavern with the Coalition

1 for Clean Air. And I think I have to say this is a sore
2 subject.

3 (Laughter.)

4 MR. MAGAVERN: Sorry. It's five o'clock humor.

5 But I do appreciate the fact that CARB has
6 continued to focus on this large and growing source of
7 emissions. And I remember two years ago the last time it
8 was on the agenda, I raised concerns about worker
9 exposure. So I appreciate the fact that staff have come
10 forward with a study. Unfortunately, it shows that we
11 have reasons to be concerned about worker exposure. And,
12 of course, we know there are also community impacts at the
13 local level, and also regional smog problems that are
14 caused by the VOCs that are emitted by this equipment.

15 So we need a regulatory approach to continue
16 ratcheting down on emissions and make that transition to
17 zero-emission equipment. And it's great to see the array
18 of products right out here in the lobby. And we also need
19 to continue the incentives to hasten the turnover from the
20 dirty equipment.

21 And also really appreciate what GovOps has done.
22 It's so refreshing to hear the State of California has
23 said that sweeping and raking are the preferred
24 alternatives. I would love to see that implemented in my
25 neighborhood, I have to tell you, because it seems like

1 people have just kind of often abandoned those very simple
2 alternatives of sweeping and raking, even when they're
3 very feasible.

4 So I look forward to being back here in two years
5 when the regulations are updated, and seeing that pathway
6 towards Transition to fully zero-emission equipment.

7 Thank you.

8 MS. GARCIA: Hello. I'm Kathryn Garcia from
9 Sierra Club California. Kathryn Phillips was not able to
10 stay this afternoon, so I'm here in her place.

11 On behalf of Sierra Club California and our
12 nearly 180,000 members statewide, thank you to the staff
13 for preparing this comprehensive report on the impacts of
14 small offshore -- excuse me, small off-road engines. We
15 have submitted a letter on this issue to the docket signed
16 by Earthjustice, the Natural Resources Defense Council,
17 and Sierra Club California. And I want to add that the
18 Lung Association also supports this research.

19 As the report reveals, these engines are an
20 important and dangerous source of air pollution.
21 Moreover, without new action, the projection is that
22 smog-forming emissions from these small engines will
23 remain steady, and even slightly increase in the future.
24 It is time that CARB take action.

25 Fortunately, zero-emission plug-in electric

1 alternatives are available, and commercial, and
2 affordable. This makes action now possible. The Board
3 can and should help transition the fleet of off-road
4 engines to zero-emissions equipment. Priority should be
5 focused on commercial users, particularly in disadvantaged
6 communities.

7 We urge the Board to direct staff to develop
8 stronger emission standards for small engines. Some
9 categories of small off-road engines deserve standards
10 that encourage a rapid transition to electric engines.

11 Additionally, CARB should also increase
12 opportunities for distribution of incentives to encourage
13 small engine users to replace gas-powered equipment with
14 battery-elect equipment.

15 Thanks again to staff for the report, and we look
16 forward to working with CARB as it moves forward to cut
17 emissions from small off-road engines.

18 Thank you.

19 VICE CHAIR BERG: Thank you.

20 That concludes our witness list.

21 There -- this is an informational item only, so
22 there's no need to close the record. Really appreciate
23 Supervisor Gioia's comments throughout the testimony, so
24 thank you for that.

25 Is there any other comments?

1 Please, Ms. Mitchell.

2 BOARD MEMBER MITCHELL: So I wanted to comment
3 that the South Coast District has, for quite a few years,
4 had a program where you bring in your old lawn mower and
5 you change it out for a newer cleaner emitting lawn mower.

6 And then recently we added leaf blowers to that
7 mix. What's pretty remarkable here, I think, is the
8 amount of equipment out there in the lobby. As was
9 mentioned, just a few years ago, there was only one table,
10 and now there is just all kinds of things out there.

11 And I know that AQMD has a program coming up --
12 the South Coast District, I should say, AQMD, but it's the
13 South District, where they are partnering with the
14 manufacturers and CARB, I believe, and the District and
15 money is going in there, so that you can get a reduced
16 rate on purchasing that equipment. Maybe Mike can comment
17 on that.

18 But one of the hurdles when I look at this is the
19 huge price differential between the gas-powered and the
20 electric. It's like more than double. And that is the
21 hurdle for now. I think we can get there, but, you know,
22 that -- we're going to need to work on that price
23 differential. Mike, may you can comment.

24 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL:

25 Yeah, just one additional comment on it, we are

1 working with the South Coast AQMD on that program. And
2 what we're doing is we're tapping into the folks that
3 participate buy submitting a questionnaire to them to get
4 their experiences on operating the equipment, both
5 positive and negative, so that we can bring that back to
6 the manufacturers to help improve the equipment going
7 forward, as well as help develop a program that the State
8 is pursuing.

9 BOARD MEMBER MITCHELL: Great. Thank you for all
10 the work you're doing on that, because it's -- like we
11 said, it's low-hanging fruit. I mean, it is a huge source
12 of emissions, but it's a vast opportunity out there for us
13 to change that landscape. Good, pun. Okay. Thank you.

14 BOARD MEMBER GIOIA: I have another comment,
15 question.

16 VICE CHAIR BERG: Thank you.

17 BOARD MEMBER GIOIA: So in our staff
18 presentation, there was a slide that indicated at least
19 for one piece of equipment that if you incorporated the
20 life-cycle cost, the payback was three years. I can tell
21 you, being in local government, that is a really important
22 piece of information to convey. And I think we can serve
23 a valuable role, if we do some analysis on other equipment
24 and have that available, because what gets agencies to
25 move towards that, and as it was indicated, while the

1 upfront costs may be greater, they will factor in the
2 life-cycle cost.

3 I know this is what our general services and
4 public works folks do in counties. They'll look at what's
5 the initial cost, what's the lifecycle cost. And so if we
6 can show that after a certain year, it -- you know, it
7 pays back the original investment, that will help move
8 them to adopt this -- adopt this new technology.

9 So can we -- can we do some of that
10 quantification? You did it on some equipment. I mean, it
11 would play a valuable role.

12 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL:

13 Yeah. Absolutely. When we come back to the
14 Board in 2020, that will be part of our cost effective
15 analysis just to show the viability of this equipment, and
16 the return on investment. I was excited to meet with Luke
17 today -- earlier today and kind of hear about some of the
18 programs that they've done to do those calculations on
19 return on investment. And I plan on reaching out and
20 hopefully get some input on what we can do to have similar
21 analyses done in -- when we come back to the Board in
22 2020.

23 BOARD MEMBER GIOIA: So though are you saying
24 then we won't have this analysis of life-cycle cost until
25 2020?

1 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL:

2 We're -- we'll be working on it up until that
3 point.

4 BOARD MEMBER GIOIA: Right. It would be useful
5 as we work on it to get that information out, so --
6 because that's -- yeah, I get that's a little over year
7 away.

8 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL: I
9 see what you're going for. Something similar to maybe
10 publishing that in a fact sheet.

11 BOARD MEMBER GIOIA: Like a clearinghouse. So
12 we're like a clearinghouse just to -- yeah, that's a great
13 idea, a fact sheet as a clearinghouse, so that those who
14 were interested in understanding that more could look for
15 our analysis --

16 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL:
17 Absolutely, we can do that.

18 BOARD MEMBER GIOIA: -- rather than try to search
19 and find it. And believe me, it helps.

20 MLD QUALITY MANAGEMENT BRANCH CHIEF MIGUEL: We
21 have the information to do that now, so we can absolutely
22 create a fact sheet. In fact, you know, we just released
23 that webpage that would be a great placeholder for that
24 type of information.

25 BOARD MEMBER GIOIA: Great. Thank you.

1 VICE CHAIR BERG: Any other comments?

2 Also, coming back in 2020, if we come back with a
3 regulation, of course, that is going to then make it a
4 compliance obligation. So funding -- incentive funding
5 will be much different. So it might be interesting to
6 give some thought about what we might be able to get out
7 to people in 2019 that the regulation is coming,
8 especially to the districts, that can then promote their
9 incentive programs as well. So we might give that some
10 thought.

11 So I do have my brochures now. And I can talk to
12 my gardeners. And I would really encourage everybody to
13 start letting people know that this great equipment is on
14 the way.

15 So thank you very much, staff. Thanks for your
16 patience for being here, second to the last.

17 BOARD MEMBER TAKVORIAN: It could make a great
18 holiday gift.

19 VICE CHAIR BERG: I'm sorry?

20 BOARD MEMBER TAKVORIAN: It could make a great
21 holiday gift.

22 VICE CHAIR BERG: It would be a great holiday
23 gift. I think I'm going to get one of these leaf blowers.

24 BOARD MEMBER TAKVORIAN: I think you should.

25 VICE CHAIR BERG: As long as they'll use it at my

1 house.

2 BOARD MEMBER TAKVORIAN: That's right.

3 (Laughter.)

4 VICE CHAIR BERG: So we have one last item, and
5 that is a 2018 legislative summary. As we change up
6 staff, I'm going to go ahead and introduce this item. Our
7 legislature continues to show considerable interest in all
8 of our programs. And in 2018, it was a very successful
9 legislative session for CARB. A list of the positive bill
10 outcomes is quite long, including AB 2381 by Assembly
11 Member Carrillo, which helps strengthen our motor vehicle
12 program in light of the VW scandal; AB 2453 by Assembly
13 Member and Board Member Eduardo Garcia, which helped
14 mitigate air pollution at schools; and SB 1403 by Senator
15 and Board Member Lara, which will provide useful insight
16 on investing in heavy-duty vehicle technology just to
17 mention a few.

18 Overall, California continues to be the leader in
19 climate arena. Earlier this year, Governor Brown set a
20 goal of five million zero-emission vehicles on California
21 roads by 2030. The legislature recognizes the challenge
22 of this goal and presents and passed multiple bills on
23 deployment of zero-emission vehicles.

24 The legislature also expanded its efforts to
25 encourage zero-emission vehicles in new sectors and modes.

1 For example, in AB 193, by Assembly Member Cervantes,
2 created the zero-emission assurance project, which
3 provides reassurance for people who buy used ZEVs, that if
4 something goes wrong with a battery or fuel cell, there
5 will be help in getting it fixed.

6 In addition, SB 1014 by Senator Skinner requires
7 CARB to establish an annual target for reducing greenhouse
8 gas emissions for vehicles used in rideshare. As many of
9 you know, rideshare services, like Uber and Lyft, have
10 seen explosive growth over the past several years. And
11 this bill will help ensure we reduce greenhouse gas from a
12 growing transportation mode in many cities. I'm really
13 looking forward to this presentation.

14 And so, Mr. Corey, will you please introduce this
15 item?

16 EXECUTIVE OFFICER COREY: Yes. Thanks Vice Chair
17 Berg. As you noted, the legislature this year showed that
18 California will continue to demonstrate leadership in air
19 quality climate, and clean vehicle policy. In looking at
20 the bills passed this year, we're headed into a very
21 transformative period in terms of zero-emission vehicle
22 deployment in all sectors really.

23 In addition to the Executive Order mentioned by
24 Vice Chair Berg, Governor Brown has also directed us to do
25 more work on public and private fleet conversion to

1 zero-emission vehicles. And note the legislative
2 direction this year is consistent with that directive, in
3 particular as Vice Berg -- Chair Berg noted, Senator
4 Skinner's SB 1014 on rideshare services.

5 It's an exciting time to be part of CARB, as the
6 legislature continues to pursue new and enhanced climate,
7 air quality, and clean vehicle policies that will take
8 California to the next level and strengthen our leadership
9 in this space.

10 I'll now ask Dominic Bulone of the Office of
11 Legislative Affairs to give the staff presentation.

12 Dominic

13 (Thereupon an overhead presentation was
14 presented as follows.)

15 LEGISLATIVE ANALYST BULONE: Thank you, Vice
16 Chair and members. Good afternoon, Chair and Members.
17 Given that we are at the end of Governor Brown's last
18 term, we thought it would be appropriate to change things
19 up a little bit and take a look back at all the key
20 legislation over the past eight years of his tenure.
21 After that, we will take a look at the 2018 legislative
22 session.

23 The legislative developments on the climate
24 change front over the past eight years have been
25 monumental. With the full implementation of the

1 Cap-and-Trade program in 2013, the Legislature took action
2 to create the framework to invest auction proceeds. SB
3 1018, AB 1532, and SB 862 created the Greenhouse Gas
4 Reduction Fund, specified how funds must be used, and
5 created the framework for the expenditure of funds.

6 As we moved closer to our 2020 goal, the
7 Legislature looked ahead and codified greenhouse gas
8 reduction targets for 2030 and clarified CARB's authority
9 to pursue that target with the Cap-and-Trade program with
10 AB 398.

11 The Legislature also expanded beyond carbon
12 dioxide to focus on short-lived climate pollutants. And
13 several bills authored Senator and Board member Lara are
14 worth mentioning.

15 SB 605 required CARB to develop a short-lived
16 climate pollutant reduction strategy, SB 1383 required
17 CARB to adopt 2030 short-lived climate pollutant reduction
18 goals, and as we'll discuss later, SB 1013 codified a key
19 federal program on hydrofluorocarbons.

20 --000--

21 LEGISLATIVE ANALYST BULONE: The past eight years
22 have also seen numerous legislative developments on
23 environmental justice. SB 535 and AB 1550 created and
24 expanded the minimum required GGRF investment in
25 disadvantaged communities and low-income households.

1 AB 197, authored by Assembly Member and Board
2 Member Garcia, added two Legislative members to the Board
3 and required CARB to focus on protecting disadvantaged
4 communities when pursuing greenhouse gas reductions.

5 AB 617 requires CARB to establish a community air
6 monitoring program, requires CARB to prepare a strategy to
7 reduce air pollution in communities with a high exposure
8 burden, and creates new control technology requirements
9 for facilities subject to the Cap-and-Trade regulation.

10 --000--

11 LEGISLATIVE ANALYST BULONE: The Renewables
12 Portfolio Standard has been a major focus of the
13 Legislature over the last eight years as well. SB X1-2
14 increased the 2020 Renewables Portfolio Standard goal from
15 20 percent to 33 percent.

16 SB 350 created a 50 percent 2030 Renewables
17 Portfolio Standard goal.

18 And SB 100, which we'll discuss later, increased
19 it to 60 percent.

20 SB 100 also created a 100 percent renewable and
21 zero carbon energy goal for 2045.

22 --000--

23 LEGISLATIVE ANALYST BULONE: Cleaner vehicles
24 have also been an area of legislative focus. SB 1275
25 created the Charge Ahead Initiative to achieve one million

1 ZEVs by 2023, and increase disadvantaged, low income, and
2 moderate income access to cleaner vehicles. As we'll
3 discuss later, SB 1014 focused on reducing emissions from
4 rideshare vehicles.

5 --o0o--

6 LEGISLATIVE ANALYST BULONE: CARB also saw
7 legislative support for the Carl Moyer Program and the Air
8 Quality Improvement Program during Governor Brown's
9 tenure. AB 8 re-authorized funding sources for both
10 programs until 2024. And AB 1274 delayed smog check
11 requirements for another two years and directed the
12 additional smog abatement fee revenue to the Carl Moyer
13 program.

14 --o0o--

15 LEGISLATIVE ANALYST BULONE: Finally, the
16 Legislature took action to reduce emissions from
17 heavy-duty vehicles. SB 1204 created the California Clean
18 Truck, Bus, and Off-Road Vehicle and Equipment Technology
19 Program. SB 1 required the Department of Motor Vehicles
20 to withhold registration from trucks that are not
21 compliant with CARB's Truck and Bus Regulation.

22 --o0o--

23 LEGISLATIVE ANALYST BULONE: Now, turning to the
24 2018 legislative year. Overall, members of the
25 Legislature introduced 2,637 pieces of legislation and

1 resolutions. 1,217 bills made it to Governor Brown's
2 desk, and 1,012 of those were signed.

3 The Legislature has taken an increasing interest
4 in CARB's programs and 2018 was no exception. CARB's
5 Office of Legislative Affairs tracked 455 bills and
6 resolutions related to air quality and climate, and
7 analyzed 122 of those bills. Of those, 48 made it to the
8 Governor's office and he signed 40. Of those 40, 33 had
9 specific requirements for CARB. The 2018 Annual Summary
10 of Air Quality and Climate Legislation, which is included
11 in your packet, summarizes each bill that we tracked and
12 includes a section that summarizes CARB's new
13 responsibilities.

14 Beyond tracking and analyzing legislation, CARB
15 participated in multiple hearings and special events at
16 the local, State, and federal levels on topics such as the
17 Scoping Plan, Cap-and-Trade, the electric grid, and urban
18 forestry.

19 --000--

20 LEGISLATIVE ANALYST BULONE: This slide provides
21 a visual representation of the Legislature's increasing
22 interest in CARB programs. While there is some
23 up-and-down movement on legislation we track and analyze
24 due to the two-year legislative session, you can see from
25 the trend line that the number of bills continues to

1 increase.

2 In the past seven years, CARB's Office of
3 Legislative Affairs has gone from tracking and analyzing
4 over 200 pieces of legislation per year to over 450.

5 --o0o--

6 LEGISLATIVE ANALYST BULONE: There were several
7 key areas of legislative interest this year related to
8 CARB, including climate change and energy, zero-emission
9 vehicles, heavy-duty vehicles, funding, and stationary air
10 pollution.

11 In the next several slides, I'll discuss the
12 critical bills in each of these issue areas.

13 --o0o--

14 LEGISLATIVE ANALYST BULONE: Climate change and
15 energy policy continue to be major areas of legislative
16 interest this year.

17 Only two short years ago, SB 350 by Senator De
18 León set a 50 percent Renewables Portfolio Standard goal
19 for 2030. And this year, SB 100, also by Senator De León,
20 increased the 2030 target from 50 percent to 60 percent,
21 and set a policy of 100 percent renewable and zero carbon
22 electricity by December 31, 2045. This is an ambitious
23 target, but it speaks to the success California has had in
24 decarbonizing its electric grid that the Legislature has
25 continually pursued more challenging renewable energy

1 targets.

2 SB 1013 by Senator and Board Member Lara was a
3 key bill this year. The Significant New Alternatives
4 Policy Program, operated by the U.S. EPA had one of its
5 key rules vacated due to an industry lawsuit. This rule
6 restricted the use of high-global warming potential gases,
7 primarily hydrofluorocarbons, that have an outsized impact
8 on climate change, and its loss posed an obstacle to the
9 State meeting its short-lived climate pollutant reduction
10 goals.

11 However, SB 1013 codifies the vacated
12 restrictions in State law, authorizes CARB to restrict
13 other substances, and creates an incentive program for the
14 replacement of high-global warming potential gases with
15 lower impact alternatives. This bill also builds upon the
16 High-Global Warming Potential Refrigerant Emissions
17 Reductions Regulation adopted by CARB earlier this year.

18 SB 1440 by Senator Hueso requires the California
19 Public Utilities Commission, in consultation with CARB, to
20 consider adopting biomethane procurement targets. For
21 several years, a variety of bills have proposed a
22 renewable natural gas standard, or procurement
23 requirement, but failed.

24 However, this year, the Legislature succeeded.
25 Over the 2017-2018 two-year session, and as a result of

1 extensive negotiations between a variety of stakeholders,
2 SB 1440 passed by both houses of the Legislature and was
3 signed by Governor Brown.

4 --o0o--

5 LEGISLATIVE ANALYST BULONE: Governor Brown's
6 Executive Order this year set a goal of five million
7 zero-emission vehicles in California by 2030 and the
8 Legislature passed several bills related to enabling
9 zero-emission vehicle deployment.

10 AB 193 by Assembly Member Cervantes created the
11 Zero-Emission Assurance Project to provide rebates for
12 replacing or servicing batteries, fuel cells, or related
13 components for used ZEVs. Lack of consumer confidence in
14 used ZEVs can be a barrier to acceptance of these vehicles
15 by low-income consumers. And this bill is key to making
16 ZEVs more appealing to these consumers by reassuring them
17 that reliability will not be an issue.

18 AB 2885 by Assembly Member Rodriguez requires
19 CARB to provide outreach to low-income households and
20 communities on the Clean Vehicle Rebate Project, and to
21 prioritize rebate payments to low-income participants.

22 SB 1014 by Senator Skinner requires CARB to
23 establish a baseline for greenhouse gas emissions from
24 vehicles used in rideshare services and establish annual
25 targets for reducing those emissions beginning in 2023.

1 Rideshare vehicles represent a meaningful and growing
2 element of California's transportation sector and this
3 bill represents an important and proactive step in
4 addressing their environmental impact.

5 --o0o--

6 LEGISLATIVE ANALYST BULONE: Moving to heavy-duty
7 vehicles, AB 2127 by Assembly Member Ting requires the
8 California Energy Commission, working with CARB, to
9 prepare an assessment of the charging infrastructure
10 necessary to meet Governor Brown's goal of deploying five
11 million ZEVs by 2030, and the State's goal of reducing
12 greenhouse gas emissions 40 percent below 1990 levels by
13 2030.

14 Notably, the bill requires this assessment to
15 include off-road and heavy-duty vehicle infrastructure
16 needs, which previously had not been accounted for in
17 California Energy Commission projections of needed
18 infrastructure.

19 This bill, along with the preceding bills on
20 zero-emission vehicles, are representative of the
21 Legislature's innovating on ZEV policy, and focusing on
22 expanding ZEV incentives and deployment into new sectors,
23 transportation modes, and vehicle types.

24 AB 2564 by Assembly Member Rodriguez imposes
25 penalties for operating a glider vehicle in violation of

1 emission standards. Glider vehicles are those with an
2 older, higher-emitting, heavy-duty engine installed in a
3 newer heavy-duty truck chassis. While the federal
4 government had required glider vehicles to meet emission
5 standards applicable to the calendar year the vehicles
6 were assembled, the federal EPA has proposed revising this
7 requirement.

8 SB 1403 by Senator Lara requires CARB to include
9 a three-year investment strategy for zero- and near-zero
10 emission heavy-duty vehicles in the annual Funding Plan
11 for Low Carbon Transportation Investments and the Air
12 Quality Improvement Program.

13 --000--

14 LEGISLATIVE ANALYST BULONE: Turning to funding.

15 AB 2381 by Assembly Member Carrillo authorizes
16 CARB to collect up to \$5 million in new fees from vehicle
17 manufacturers to enhance certification, audit, and
18 compliance activities for new motor vehicles. This bill
19 comes out of the 2015 Volkswagen scandal and will help
20 support CARB's certification and testing efforts.

21 In addition, CARB continues to receive
22 legislative appropriations from the Greenhouse Gas
23 Reduction Fund. SB 856, a follow-up to the main 2018
24 budget bill, appropriated \$845 million to CARB, including
25 \$200 million for the Clean Vehicle Rebate Project.

--000--

LEGISLATIVE ANALYST BULONE: Much of the Legislature's work this legislative session focused on stationary air pollution and AB 617 -- last year's AB 617 by Assembly Member Cristina Garcia and the recent catastrophic wildfires.

AB 2453 by Assembly Member and Board Member Eduardo Garcia makes a school or school district in a community identified by AB 617 as having high pollution exposure eligible for a grant to implement air quality mitigations. It also allows existing Leroy F. Greene school modernization grants to be used for updating air filters.

SB 901 by Senator Dodd is one of two bills aimed at dealing with the severe wildfires California has experienced over the past several years. Relevant to CARB, the bill requires CARB to develop a report assessing greenhouse gas emissions from wildfire and forest management activities every five years to help better inform the public.

Between this bill and SB 856, \$160 million in funding for fiscal year '18-'19 and \$200 million in continuously appropriated funding through fiscal years 2023-2024 has been appropriated for CalFire for forest health and fire prevention from the Greenhouse Gas

1 Reduction Fund.

2 SB 1260 by Senator Jackson is an omnibus fire
3 prevention and forestry management bill. Among other
4 provisions, the bill requires CARB and the Department of
5 Forestry and Fire Protection, in coordination with air
6 districts, to develop and fund a program to enhance air
7 quality and smoke monitoring. It also requires CARB and
8 CalFIRE to provide a public awareness campaign regarding
9 prescribed burns. This supports implementation of the
10 Governor's Executive Order on improving forest health and
11 preventing wildfires.

12 --000--

13 LEGISLATIVE ANALYST BULONE: Last week's
14 statewide election will bring new faces to the
15 Legislature, although a few races are still too close to
16 call. The Assembly will see five to new -- five to six
17 new assembly members, depending on whether Assembly
18 Members Baker, Cervantes, and Harper keep their seats.

19 The new members in the Assembly represent
20 Huntington Beach, Oakland, Oceanside, Rancho Cucamonga,
21 and Salinas.

22 The Senate will see seven new Senators
23 representing Bakersfield, Cerritos, El Cajon, Fresno, Los
24 Angeles, Salinas, and West Covina.

25 Notably, the Democrats maintained their

1 two-thirds majority in the Assembly and will start next
2 year with a two-thirds majority in the Senate.

3 --000--

4 LEGISLATIVE ANALYST BULONE: Turning towards the
5 future, I'd like to highlight some broad themes that we
6 may see in the 2019-2020 legislative session.

7 Community health will likely be of interest to
8 the Legislature as members continue to focus on how to
9 address impacts of toxic air contaminants and criteria air
10 pollution on local communities.

11 Similar to this year, the Legislature will likely
12 continue to focus on accelerated ZEV deployment across
13 multiple modes, sectors, and vehicle types.

14 We expect to see continued interest in developing
15 some form of heavy-duty inspection and maintenance
16 program, similar to the Smog Check program that already
17 exists for light-duty vehicles.

18 And finally, while there was focus on wildfires
19 this year, partly due to the ongoing catastrophic
20 wildfires in Butte County and Los Angeles County, we
21 expect there to be continued legislative interest in the
22 prevention of wildfires and the quantification of their
23 impacts.

24 We will also expect to continue attending
25 hearings and special events in the Legislature.

--o0o--

LEGISLATIVE ANALYST BULONE: The Office of Legislative Affairs relies on close coordination by a dedicated team, as well as assistance from nearly every division and office within CARB.

This year, I would like to highlight Marci Nystrom, our Deputy Director for Legislative Affairs. For the past four years, Marci has been a calm, steady presence in the office keeping everything and everyone organized. However, this year was Marci's last with the Legislative Office and she is off to a well-deserved retirement. We thank her for everything she's done for us and wish her well on the next phase of her life.

This year also brought us two new staff members. Ashley Arax is our specialist in federal issues and implementation of AB 617. And she jumped right into the position at a time when both areas have been extremely busy.

Andrew Tsiu is a new analyst in our office who covers many of the numerous Greenhouse Gas Reduction Fund bills, as well as legislation on the California Environmental Quality Act and forestry.

This concludes my presentation, and I am happy to answer any questions.

VICE CHAIR BERG: Well, thank you very much. You

1 know the lege department is often behind the scenes,
2 because you only come and speak with us once a year, but
3 the work you do is invaluable, and I know it's never
4 quiet.

5 So we certainly -- and for those of us that might
6 need a little light night reading, if you're having a
7 little bit difficulty sleeping, great read here.

8 (Laughter.)

9 VICE CHAIR BERG: Does anybody have any questions
10 or comments before we say --

11 BOARD MEMBER GIOIA: There will be test after we
12 read this, right?

13 (Laughter.)

14 LEGISLATIVE ANALYST BULONE: Right.

15 (Laughter.)

16 VICE CHAIR BERG: Right. Truly --

17 BOARD MEMBER MITCHELL: I just want to say thank
18 you to the staff, because they -- we really don't see you
19 often enough. But thank you very much for all the work
20 you do. It's really valuable to us, so -- and we're
21 saying goodbye to one of your members, so we want to wish
22 her well.

23 VICE CHAIR BERG: Yeah, absolutely. You are the
24 face across the street for us. And we know that, and that
25 isn't always easy. And so truly, truly appreciate all of

1 your hard work. Thank you.

2 We do have one comment.

3 BOARD MEMBER TAKVORIAN: Sorry.

4 VICE CHAIR BERG: Oh, I'm sorry. Oh, please.

5 Thank you.

6 BOARD MEMBER TAKVORIAN: I was just -- I had told
7 Sydney I -- that this is a really useful guide, and that
8 we really wanted it. And we were disappointed when we
9 didn't see it. So thank you for that, and for all your
10 work all year long. This is really all your work and all
11 the write-ups that you do. And then this summary at the
12 end of the year has been a really useful reference guide,
13 when we're trying to look -- remember, what was that bill
14 and what did it end up being?

15 So thank you so much for all of the work that you
16 do. I know it's not always easy.

17 INTERIM LEGISLATIVE DIRECTOR VERGIS: Thank you
18 so much for your kind words. The team works really hard,
19 so it means a lot. Thank you.

20 VICE CHAIR BERG: You're welcome. We do have one
21 public comment. So I'll ask Mark to come up.

22 MR. RIECHERS: How do I turn this on?

23 VICE CHAIR BERG: I think you're on.

24 MR. RIECHERS: I'm on. Okay.

25 VICE CHAIR BERG: Yes.

1 MR. RIECHERS: Great. Thank you for giving me
2 the time to address the Board. You should have been
3 provided with two things. This book and my testimony,
4 which I'm not going to read.

5 I am the general manager for North America for a
6 company called Microvast. What we do is really quite
7 simple, we make batteries for electric vehicles. Great
8 timing, because half of the talk today was about electric
9 vehicles.

10 Our primary focus is on EVs and hybrid electric
11 vehicles, and primarily transit buses and medium-duty
12 trucks right now. Okay. There's two issues with electric
13 vehicles. We all know them, range, charge time.
14 That's -- and then, of course, there's one that comes up
15 occasionally called safety.

16 Okay. So the reason range is so focused on is
17 because everybody thinks you've got to charge an electric
18 vehicle overnight. Well what would happen if you could
19 charge a full-sized transit bus in 15 minutes?

20 Guess what? We can.

21 Not only can we do it, we've got 27,000 vehicles
22 running around the world with our battery technology in
23 it, 8,000 of them are straight electric. It works.
24 They're just not here. They're in China. They're in
25 Europe. They're -- we just launched some in New Zealand.

1 It's time to launch them here.

2 All I'm trying to do is make you aware this
3 technology exists. It really does. It really works. And
4 we've got the documentation to back it up. And you know
5 how many of those 27,000 vehicles have had a safety
6 incident? Zero. We've figured it out.

7 So I ask you to look through the book, read my
8 testimony, and my business card is stapled on the front.
9 We are ready go in California, and rest of the country.
10 And we're working with the bus companies, but we also want
11 to work with you, drive this thing both sides, and let's
12 get it going.

13 VICE CHAIR BERG: Well, thank you very much for
14 coming and for staying at the late hour. We love these
15 new game-changer technology, because this absolutely would
16 be a game changer. We really encourage you to work with
17 our staff --

18 MR. RIECHERS: Yes.

19 VICE CHAIR BERG: -- and especially on the
20 technology details.

21 MR. RIECHERS: Yes.

22 VICE CHAIR BERG: And so we'll really look
23 forward to that. Appreciate the information you've left
24 for us. And, you know, we'd be very excited that this
25 works.

1 MR. RIECHERS: Well, here's what it does is if
2 you've got a bus out on a route, and the driver's got to
3 stop for lunch, he plugs it in, bus is ready to go for the
4 rest of the day.

5 VICE CHAIR BERG: That will be very exciting.
6 Well, thank you very much. Very nice to meet you.

7 MR. RIECHERS: Very nice to present to you.
8 Thank you.

9 VICE CHAIR BERG: Thank you.

10 So that is our agenda for today. We will
11 reconvene tomorrow morning. We start at 8:30, and so
12 please we need a quorum at 8:30. Set your alarms and have
13 a great evening. Be careful walking back to your cars,
14 and stay inside tonight.

15 Thanks.

16 (Thereupon the Air Resources Board meeting
17 adjourned at 5:41 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 26th day of November, 2018.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
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