

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

CALEPA HEADQUARTERS
BYRON SHER AUDITORIUM
SECOND FLOOR
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SACRAMENTO, CALIFORNIA

THURSDAY, FEBRUARY 21, 2019
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JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
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A P P E A R A N C E S

BOARD MEMBERS:

Ms. Mary Nichols, Chair

Ms. Sandra Berg, Vice Chair

Dr. John Balmes

Hector De La Torre

Mr. John Eisenhut

Supervisor Nathan Fletcher

Senator Dean Florez

Supervisor John Gioia

Ms. Judy Mitchell

Senator Bill Monning

Mrs. Barbara Riordan

Supervisor Phil Serna

Professor Dan Sperling

Ms. Diane Takvorian

STAFF:

Mr. Richard Corey, Executive Officer

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

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

STAFF:

Ms. Annette Hebert, Assistant Executive Officer

Ms. La Ronda Bowen, Ombudsman

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

Mr. Ian Cecere, Attorney, Legal Office

Mr. David Chen, Manager, Advanced Emission Control Strategies Section, MSCD

Ms. Heather Choi, Air Pollution Specialist, Climate Action and Research Planning Section, Research Division

Ms. Mary Jane Coombs, Branch Chief, Program Assessment Branch, Industrial Strategies Division (ISD)

Ms. Nicole Dolney, Branch Chief, Transportation Planning Branch, Sustainable Communities and Transportation Division

Mr. David Eiges, Air Resources Engineer, Advanced Emission Control Strategies, MSCD

Ms. Maureen Hand, Air Resources Engineer, Climate Change Planning Section, ISD

Ms. Stephanie Kato, Staff Air Pollution Specialist, Energy Section, ISD

Mr. Jack Kitowski, Division Chief, MSCD

Ms. Abigail May, Attorney, Legal Division

Mr. Gabriel Monroe, Attorney, Legal Office

Mr. Femi Olaluwoye, Manager, Incentives Development Section, MSCD

Mr. Anthony Poggi, Air Pollution Specialist, Alternative Strategies Section, MSCD

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

STAFF:

Mr. Scott Rowland, Branch Chief, Incentives and Technology Advancement Branch, MSCD

Ms. Rajinder Sahota, Assistant Division Chief, ISD

Ms. Tess Sicat, Branch Chief, Heavy-Duty Off-Road Strategies Branch, MSCD

Mr. Floyd Vergara, Division Chief, ISD

HAAGEN-SMIT CLEAN-AIR AWARD WINNERS:

Dr. Paul Crutzen, (not present)

Dr. Anne Douglass, represented by Ms. Allison Rapp

Mr. Hal Harvey

Dr. Barry Wallerstein

Dr. John Watson

ALSO PRESENT:

Mr. Alan Abbs, Bay Area Air Quality Management District

Dr. Alberto Ayala, Sacramento Metropolitan Air Quality Management District

Mr. William Barrett, American Lung Association

Mr. Keith Bloom, Mutual Housing California

Mr. Timothy Blubaugh, Engine Manufacturers Association

Mr. Michael Boccadoro, West Coast Advisors

Ms. Debbie Ferrari, California DMV MCP Holders

Ms. Susan Fizzel, Port of Oakland

Mr. Ryan Flaherty, Sustainable Conservation

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

ALSO PRESENT:

Mr. Don Gilbert, San Francisco International Airport

Mr. Joshua Golden, TransPower

Ms. Hannah Goldsmith, California Electric Transportation Coalition

Mr. Kevin Hamilton, Central California Asthma Collaborative

Mr. Richard Harris, San Diego International Airport

Mr. Sam Jammal, BYD

Ms. Sarah Johnson, California Airports Council

Dr. David Kayes, Daimler Trucks

Mr. Ryan Kenny, Clean Energy

Mr. Kirin Kumar, WALKSacramento

Mr. Hui Le

Mr. Jim Lites, California Airports Council

Mr. Bill Magavern, Coalition for Clean Air

Ms. Tamara McCrossen-Orr, Los Angeles World Airports

Ms. Lisa McGhee, San Diego Airport Parking Company

Ms. Urvi Nagrani, Motiv Power Systems

Mr. Michael Neuenburg, Sacramento Metropolitan Air Quality Management District

Mr. Ray Pingle, Sierra Club

Mr. Zorik Pirveysian, South Coast Air Quality Management District

Ms. Erin Rodriguez, Union of Concerned Scientists

Mr. Ryan Schuchard, CALSTART

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

ALSO PRESENT:

Ms. Phoebe Seaton, Leadership Counsel for Justice and
Accountability

Mr. Cory Shumaker, California Hydrogen Business Council

Mr. Aidan Smith, Leadership Counsel for Justice and
Accountability

Ms. Sarah Van Cleve, Tesla

Mr. Charles Watson, Proterra

I N D E X

	PAGE
Call to Order	1
Pledge of Allegiance	1
Roll Call	1
Opening remarks by Chair Nichols	3
Item 19-2-1	
Chair Nichols	8
Motion	9
Vote	9
Item 19-2-3	
Chair Nichols	9
Motion	10
Vote	10
Item 19-2-4	
Chair Nichols	10
Executive Officer Corey	12
Board Member Balmes	13
Board Member De La Torre	16
Ms. Rapp for Dr. Anne Douglass	18
Board Member Sperling	22
Mr. Harvey	25
Board Member Mitchell	29
Dr. Wallerstein	31
Board Member Riordan	33
Dr. Watson	35
Item 19-2-5	
Chair Nichols	37
Executive Officer Corey	39
Staff Presentation	40
Mr. Goldman	53
Ms. Van Cleve	56
Ms. Goldsmith	59
Mr. Barrett	61
Ms. Nagrani	63
Mr. Blubaugh	66
Dr. Kayes	68
Mr. Le	70
Mr. Schuchard	73
Ms. McGhee	74
Mr. Shumaker	76

I N D E X C O N T I N U E D

	PAGE
Item 19-2-5 (continued)	
Board Discussion and Q&A	78
Motion	89
Vote	92
Item 19-2-6	
Chair Nichols	96
Executive Officer Corey	97
Staff Presentation	98
Mr. Abbs	110
Mr. Neuenberg	112
Mr. Pirveysian	113
Mr. Shumaker	116
Ms. Goldsmith	118
Ms. Rodriguez	119
Mr. Barrett	121
Mr. Gilbert	122
Ms. Johnson	125
Ms. McCrossen-Orr	128
Ms. Fizzell	131
Mr. Harris	133
Mr. Lites	137
Ms. Nagrani	139
Mr. Kenny	140
Mr. Watson	141
Mr. Jammal	142
Mr. Magavern	144
Ms. McGhee	145
Mr. Pingle	147
Board Discussion and Q&A	149
Motion	170
Vote	170
Afternoon Session	172
Item 19-2-8	
Chair Nichols	172
Executive Officer Corey	173
Staff Presentation	175
Mr. Schuchard	197
Mr. Magavern	198
Mr. Boccadoro	200
Mr. Flaherty	202
Mr. Hamilton	204
Mr. Smith	207
Ms. McGhee	209

I N D E X C O N T I N U E D

	PAGE
Item 19-2-8 (continued)	
Ms. Seaton	211
Board Discussion and Q&A	213
Item 19-2-9	
Chair Nichols	237
Board Member Serna	237
Mr. Corless	238
Board Discussion and Q&A	253
Dr. Ayala	256
Mr. Kumar	258
Mr. Bloom	260
Board Discussion and Q&A	262
Public Comment	264
Ms. Ferrari	265
Ms. Seaton	271
Adjournment	275
Reporter's Certificate	276

P R O C E E D I N G S

1
2 CHAIR NICHOLS: Good morning, ladies and
3 gentlemen. If I could get people to take their seats.
4 We're ready to get started.

5 I'm speaking to you from the concrete bunker at
6 the top of the Byron Sher Auditorium. I want to paint a
7 mural. And if you come in here some morning and you find
8 spray painting along the front of the cement wall here,
9 I'm just saying it might happen.

10 (Laughter.)

11 BOARD MEMBER RIORDAN: I think that's a good
12 idea. We need to do something.

13 CHAIR NICHOLS: We need to do something with it.
14 This is just really not a good arrangement.

15 But I would like to welcome everybody to the
16 February 21st, 2019 public meeting of the California Air
17 Resources Board. Please come to order, which you already
18 have.

19 And let's begin with the Pledge of Allegiance.

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

22 CHAIR NICHOLS: The clerk will please call the
23 roll.

24 BOARD CLERK DAVIS: Dr. Balmes?

25 BOARD MEMBER BALMES: Here.

1 BOARD CLERK DAVIS: Mr. De La Torre?
2 BOARD MEMBER DE LA TORRE: Here.
3 BOARD CLERK DAVIS: Mr. Eisenhut?
4 BOARD MEMBER EISENHUT: Here.
5 BOARD CLERK DAVIS: Supervisor Fletcher?
6 BOARD MEMBER FLETCHER: Here.
7 BOARD CLERK DAVIS: Senator Florez?
8 Assembly Member Garcia?
9 Supervisor Gioia?
10 BOARD MEMBER GIOIA: Here.
11 BOARD CLERK DAVIS: Ms. Mitchell?
12 BOARD MEMBER MITCHELL: Here.
13 BOARD CLERK DAVIS: Senator Monning?
14 Mrs. Riordan?
15 BOARD MEMBER RIORDAN: Here.
16 BOARD CLERK DAVIS: Supervisor Serna?
17 Professor Sperling?
18 BOARD MEMBER SPERLING: Here.
19 BOARD CLERK DAVIS: Ms. Takvorian?
20 BOARD MEMBER TAKVORIAN: Here.
21 BOARD CLERK DAVIS: Vice Chair Berg?
22 VICE CHAIR BERG: Here.
23 BOARD CLERK DAVIS: Chair Nichols?
24 CHAIR NICHOLS: Here.
25 BOARD CLERK DAVIS: Madam Chair, we have a

1 quorum.

2 CHAIR NICHOLS: Thank you very much.

3 I'm going to make a couple of announcements
4 before we get started. This morning, first of all, as we
5 always do, we remind people that they should check out
6 where the emergency exits are. And in the event of a fire
7 alarm, we're required to evacuate this room immediately
8 using the stairs to go down to the first floor and
9 assemble outside in the park across the street.

10 Anyone who wishes to testify either on one of the
11 items on the agenda or during the public comment period at
12 the end, would -- we would request that you please fill
13 out a request to speak card. They're in the lobby or
14 available from the clerk. And we appreciate it if you
15 could do this before the item you want to speak on, so
16 that we can have a sense of how many people are going to
17 be speaking, and plan our time accordingly. The Board
18 will impose a three minute time limit, unless we get to
19 the point where there's so many people, which I don't
20 think we will today, but we have been known to shorten
21 that time when we get to the point where people have
22 already covered most of the points.

23 Now, we have two new Board members who will be
24 joining us today. One of them Senator Monning, who is the
25 Senator who is an ex officio appointee will be coming

1 after floor session in Senate. Our other new Board
2 member, Supervisor Nathan Fletcher is here. And we
3 welcome here as the San Diego representative. He is in
4 the seat that was formerly occupied by Supervisor Ron
5 Roberts. And Supervisor Roberts was termed out of office
6 and retired. And we were very fortunate that a brand new
7 supervisor was willing to join us. So thank you very
8 much, and look forward to having you with us for a long
9 time to come.

10 I also have a couple of personnel announcements
11 that I wanted to make this morning. One is that we have a
12 new executive team member who is also sitting with us at
13 the front table today. And that is Annette Hebert who is
14 the Assistant Executive Officer for our Southern
15 California Headquarters. I say those words with great
16 enthusiasm. Southern California Headquarters. And she is
17 the Assistant Executive Officer and Annette is known
18 already as the go-to person for all things that are
19 related to vehicle and engine emissions, on-board
20 diagnostics, and vehicle certification. And she has the
21 respect and trust of the staff, as well as the Board and
22 our stakeholders.

23 Our programs and our presence in Southern
24 California have expanded and diversified over the 50 years
25 of the Board's existence. And as a result, we realized

1 that there was a need to have representation of the
2 Executive Office in Southern California to oversee the
3 issues of importance to the entire organization.

4 And as we prepare to occupy new headquarters
5 moving from El Monte to Riverside, we need more focus on
6 staff recruitment, retention, succession planning, and
7 mentorship to assure a smooth transition.

8 While it's important to get this started now,
9 this is going to be an ongoing need into the future as
10 Southern California continues to grow.

11 So creating a new position for Southern
12 California was part of the commitment that the
13 organization is making to strengthen our Southern
14 California operation.

15 She'll be overseeing the headquarters operations,
16 as well as certification and compliance. And she'll be
17 working with Steve Cliff.

18 So, Annette, welcome. Do you want to say any
19 words at all? You weren't asked to, but you could say a
20 word. Oh, there's a little technical problem here this
21 morning. Yeah. So the Board members mics are all
22 working, but the microphones for the staff are not.

23 (Laughter.)

24 CHAIR NICHOLS: So this could be a recipe for
25 mischief. But what we're going to do is pass a microphone

1 back and forth among the staff who are speaking. So you
2 now have a mic.

3 ASSISTANT EXECUTIVE OFFICER HEBERT: Thank you.
4 I just.

5 Here, go we.

6 I'll make it quick since we only have one mic.
7 But thank you very much. I look very forward to
8 continuing to work with the staff, and the Executive
9 Office and the Board on our very, very important programs.
10 And especially being a representative of the Southern
11 California Headquarters, I think it's a very good step.
12 And we do have a lot of work to do in the next couple
13 years. It's only two years away now, before we move into
14 our new Southern California headquarters. So there's a
15 lot of prep work there, but we're all very excited about
16 it. So thank you.

17 CHAIR NICHOLS: Thanks.

18 And also, before we get started, I want to
19 recognize one of our long-time colleagues who's going to
20 be leaving us at the end of this month, that is this is
21 her last Board meeting, after nearly a decade of service
22 at ARB. She's one of the first people that I recruited
23 when I came back to ARB. And that's La Ronda Bowen who's
24 served with distinction as our Ombudsman since 2009.

25 Her work has helped us to create a new level of

1 engagement with small businesses throughout the state.
2 And through the Small Business Opportunities Advisory
3 Panel that she created, La Ronda and her team have worked
4 to engage small business stakeholders in our policy
5 process, and helped them to take advantage of many of the
6 incentive programs to save energy, cut emissions, and
7 become more efficient and profitable in the process.

8 Since 2009, La Ronda has overseen ARB's annual
9 CoolCalifornia Small Business Awards Program, and has
10 recognized -- helped to recognize more than 130 businesses
11 and organizations for exemplary environmental leadership.

12 In recognition of her outstanding work, in 2017,
13 La Ronda -- 2017, la Ronda was awarded the National Small
14 Business Environmental Assistant Program's highest award
15 for sustained and outstanding service.

16 So I hope you will all join me in thanking La
17 Ronda for her very notable services to the State, and to
18 the people of California.

19 La Ronda, thank you.

20 (Applause.)

21 CHAIR NICHOLS: And if you have any parting words
22 of advice, you're invited to give them to us at this time.

23 OMBUDSMAN BOWEN: Thank you, Mary and thank you
24 to the Board members who have been so supportive and to
25 the staff who have been so gracious and supportive and

1 encompassing of small business concerns.

2 So I just want to say to our new Board members,
3 this is a wonderful team that you're inheriting and that
4 you'll be able to be a part of. Small business issues
5 continue to be critical. They're a critical part of our
6 economy, as well as our implementation of our regulations.

7 I just want to thank you, Mary, especially and
8 former Governors Schwarzenegger and Brown for allowing me
9 to serve. It's been an honor to work with you, and I've
10 learned so much more than I imagined, which is part of why
11 I stayed so much longer than I thought I would. Thank you
12 all. I appreciate you.

13 CHAIR NICHOLS: Thank you.

14 OMBUDSMAN BOWEN: Continued success and I'll just
15 keep you in mind forever.

16 Thank you.

17 CHAIR NICHOLS: Thank you. Blessings and good
18 luck in your future ventures.

19 All right. We now actually have some work to do.
20 But fortunately this morning's agenda is not too onerous.
21 It's all good.

22 So we can begin with our consent calendar. We
23 have one research proposal, and -- before us. And it is
24 on consent, unless anybody wishes to take it off of
25 consent. Are there any people who have asked to comment?

1 BOARD CLERK DAVIS: (Shakes head.)

2 CHAIR NICHOLS: All right. Hearing none. Then
3 we'll close the record on this item and ask if all the
4 members have had an opportunity to review resolution, and
5 if so, would you give me a motion and a second?

6 BOARD MEMBER RIORDAN: I would move that we adopt
7 the Resolution 19-3, Madam Chairman.

8 BOARD MEMBER BALMES: Second.

9 CHAIR NICHOLS: All in favor please say aye?

10 (Unanimous aye vote.)

11 (Board Member Serna was not present.)

12 CHAIR NICHOLS: Any opposition?

13 Any abstentions?

14 Okay. It's approved. Thank you very much.

15 And we have one other item on consent, and that
16 is -- excuse me -- Proposed 2018 Amendments to the Area
17 Designation for State Ambient Air Quality Standards. We
18 did receive a comment on this item during the public
19 comment period, and it has been reviewed and considered.
20 And I believe that we can determine that it is not
21 substantive, and are therefore able to proceed with this
22 item as a consent matter.

23 There is a copy of the comment at the table
24 outside the room, if anybody wants to see it. But I need
25 to ask the clerk if anybody has signed up to testify?

1 BOARD CLERK DAVIS: (Shakes head.)

2 CHAIR NICHOLS: No witness have asked to speak.

3 Okay. Are there any Board members who want this
4 item to be removed for discussion?

5 Seeing none, then let's go ahead also, and I'll
6 close the record on that, and again ask for a resolution.

7 VICE CHAIR BERG: I move resolution 19-5.

8 CHAIR NICHOLS: Okay. Do we have a second?

9 BOARD MEMBER EISENHUT: Second.

10 CHAIR NICHOLS: A second from Mr. Eisenhut.

11 Excuse me.

12 All in favor, please say aye?

13 (Unanimous aye vote.)

14 (Supervisor Serna was not present.)

15 CHAIR NICHOLS: Opposed?

16 None. Okay. It carries. Thank you.

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

19 CHAIR NICHOLS: All right. Now, we move to the
20 most important item of our morning, and that is the
21 Haagen-Smit awards.

22 Over the last 50 years, many major milestones
23 have been realized in the pursuant of clean air,
24 scientific discoveries, groundbreaking policies, like the
25 Clean Air Act, and numerous other achievements have helped

1 us to tackle air pollution and climate change. Since
2 2001, the Air Board has given annually the distinguished
3 Haagen-Smit Clean Air Awards to extraordinary individuals,
4 whose career accomplishments in air quality and now
5 climate change have been fundamental to the progress that
6 we've achieved.

7 The awards are named in honor of Professor Arie
8 Haagen-Smit, because of his important contributions to air
9 pollution science, as well as the significance of the fact
10 that he left his laboratory and became the first Chairman
11 of ARB.

12 Arie Haagen-Smit was a native of the Netherlands.
13 He was a bioorganic chemistry professor at Caltech in
14 Pasadena for 16 years, studying natural products like
15 rubber and pineapples. In 1948, he embarked on air
16 pollution research when we was asked by the County of Los
17 Angeles to investigate the chemical nature of what we now
18 call smog.

19 His research found that most of California's smog
20 resulted from photochemistry, when exhaust from motor
21 vehicles and industrial facilities react with sunlight to
22 create ozone. This breakthrough provided the scientific
23 foundation for the development of California's, and the
24 nation's, earliest air pollution control programs.

25 Leaving his studies behind, he continued working

1 in the field of air pollution research and control and
2 took the smog problem in Los Angeles head on. He became
3 CARB's first Chairman in 1968. In 1973, in recognition of
4 his contributions, Dr. Haagen-Smit received the National
5 Medal of Science, this country's highest scientific honor.

6 He passed away in 1977, but his legacy continues
7 to inspire both scientists and policymakers alike.

8 --o0o--

9 CHAIR NICHOLS: Over the last 18 years, more than
10 50 acclaimed scientists and policymakers have received
11 this award for their contributions. Five recipients are
12 being added to that list today.

13 And so I would now ask Richard Corey to introduce
14 the Board members who in turn will be announcing the
15 awards.

16 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair
17 Nichols. So we're pleased to honor the recipients of the
18 2018 Haagen-Smit Clean Air Awards. Each of the winners,
19 as you noted, will be introduced by a Board member. After
20 their introduction, the winners who are in attendance will
21 come down to the podium. They'll be handed the award --
22 their award and the winner will have an opportunity to
23 provide a few remarks.

24 We'll also take a group photo with the Board at
25 the end of the presentation.

1 --o0o--

2 EXECUTIVE OFFICER COREY: And with that, the
3 first winner today is Paul Crutzen in the category of
4 International Air Pollution Research. This award
5 acknowledges his work identifying the causes of, and
6 ultimately curbing the depletion of stratospheric ozone,
7 as well as expanding the scientific understanding of human
8 cause climate change. Professor Crutzen, could not be
9 here today, but Board Member John Balmes -- Dr. John
10 Balmes will share more information about Dr. Crutzen.

11 BOARD MEMBER BALMES: Thank you, Mr. Corey.

12 I'm honored to share the pathbreaking
13 achievements of Professor Paul Crutzen with the audience
14 here today. Professor Crutzen played a fundamental role
15 in establishing the link between human activities and
16 ozone in the atmosphere. In the late 1960s and early
17 1970s, Crutzen exposed the power of nitrogen oxides to
18 destroy ozone. His work was an essential step toward
19 discovering the ozone hole and identifying its causes.

20 Now, that's the good ozone, stratospheric ozone,
21 which protects us from ultraviolet radiation. It's the
22 tropospheric ozone that we're busy trying to reduce.

23 Crutzen's findings help galvanize a global
24 political response to the threat of ozone depletion,
25 leading ultimately to the 1987 signing of the Montreal

1 protocol for global protection of the stratospheric ozone
2 layer. Probably the most successful international
3 environmental agreement.

4 In 1995, Crutzen shared the Nobel Prize in
5 Chemistry for advancing our understanding of the ozone
6 layer, with co-recipients Mario Molina and Sherwood
7 Rowland. I've had the opportunity to meet both Professor
8 Molina and Professor Rowland. And it's an honor to be
9 able to speak about their co-recipient of the Nobel Prize,
10 Paul Crutzen.

11 So closer to earth, Crutzen also explored the
12 effects of agriculture, biomass burning, and industrial
13 processes on ozone formation, which can damage human
14 health and food production. Yeah, we often forget,
15 because we're busy dealing with the public health impacts
16 of ozone, that it also has devastating effects on
17 agriculture.

18 His deep understanding of the interaction between
19 earth's upper and lower atmosphere, lead Crutzen to
20 conceive of the theory of nuclear winter, underlying the
21 catastrophic environmental consequences of nuclear war.

22 Crutzen's publication record is one of the most
23 prolific in the geosciences. He has held appointments at
24 universities Germany, San Diego, Georgia, Stockholm, the
25 Netherlands, and South Korea.

1 "Meteorology is very much an intuitive science",
2 Crutzen has said, "And you need intuition to focus on the
3 right questions". Crutzen's questions consistently traced
4 the theoretical arc connecting human activities to their
5 environmental consequences. And his answers revealed the
6 means to mitigate these impacts.

7 For all of his questions and answers which helped
8 define and confront a profound existential challenge to
9 our planet, the California Air Resources Board is honored
10 to bestow Professor Paul Crutzen with a 2018 Haagen-Smit
11 Clean Air Award.

12 Professor Crutzen could not be here with us
13 today, but he sends his deepest gratitude.

14 (Applause.)

15 CHAIR NICHOLS: Thank you.

16 (Thereupon a phone rang.)

17 EXECUTIVE OFFICER COREY: Music. Accompanying
18 music.

19 --o0o--

20 EXECUTIVE OFFICER COREY: Next is us Dr. Anne
21 Douglass in the category of Atmospheric Research. This
22 award recognizes her innovative research on stratospheric
23 ozone and her lifelong dedication to improving climate and
24 atmospheric chemistry analytical tools. Dr. Douglass
25 could not be here today, but her friend Allison Rapp is

1 here to accept her award.

2 Board Member Hector De La Torre will present more
3 information to us.

4 Hector

5 BOARD MEMBER DE LA TORRE: Thank you, Mr. Corey.

6 It is my privilege to recount the many reasons
7 that Dr. Anne Douglass is receiving this award.

8 One of the world's leading scientists who studies
9 the earth's ozone layer, her stellar research and
10 influential publications reset the scientific paradigm on
11 atmospheric mixing and its contribution to ozone
12 pollution.

13 As project scientists at NASA's Goddard Space
14 Flight Center, Douglass led a large and diverse
15 international team of scientists responsible for launching
16 the Aura satellite in 2004. For more than a decade,
17 Douglass also managed the day-to-day twists and turns of
18 Aura's operation, ensuring the uninterrupted flow of data
19 from the satellite's instruments. To this day, Aura's
20 measurements provide an array of useful information for
21 hundreds of scientists and local and national
22 policymakers. Yet, another example of federal and State
23 collaboration. Truly constructive federalism.

24 Known for her scientific acuity, objectivity,
25 honesty, and community building, Douglass has shown a

1 remarkable talent for improving atmospheric models.
2 Atmospheric chemistry and climate models have benefited
3 immensely from her creative exploration of the interplay
4 among atmospheric observations, conceptual models, and
5 their numerical implementation.

6 While serving on the leadership team for the
7 Goddard's Earth Observing System Chemistry Climate
8 Model -- they really like wordy titles to their things.

9 (Laughter.)

10 BOARD MEMBER DE LA TORRE: -- Douglass continues
11 to support the incoming Aura satellite project scientist,
12 and to foster communications among the many groups at NASA
13 with a stake in the honor -- Aura program.

14 In short, even working half-time in phased
15 retirement, Douglass continues to exceed the expectations
16 for a full-time scientist.

17 Today, for her years of leadership studying
18 atmospheric chemistry and strengthening its toolbox, for
19 her inclusive nurturing of young scientists, and for her
20 incisive communication of ozone science to policymakers,
21 which is never easy, and the broader public, CARB is
22 honored to bestow Dr. Anne Douglass with the 2018
23 Haagen-Smit Clean Air Award.

24 We now ask Allison Rapp to join Mr. Corey at the
25 podium to accept Dr. Douglass award and share her words

1 with us.

2 (Applause.)

3 MS. RAPP: Thank you for your kind introduction
4 and to the California Air Resources Board. My name is
5 Allison Rapp not Anne Douglass. And if you knew Anne, you
6 would know that she's taller, has strawberry blond hair,
7 and actually understands everything that's being said here
8 today.

9 (Laughter.)

10 MS. RAPP: That's a regret not being -- but I
11 have to tell you there are a couple of things I'd like to
12 say before I read the words that Anne asked me to say.
13 And one thing is that Anne and I have been friends.
14 Because of an alphabetical situation in college, we got
15 put in the same room in 1967. And we talk an hour every
16 week. And Anne is so self-effacing that the things are in
17 this booklet I didn't know.

18 (Laughter.)

19 MS. RAPP: So I just want you to know, if you
20 haven't read this, please read it. She's won more awards
21 than I can count, and she doesn't talk about them to her
22 friends.

23 So what she wanted me to tell you is that we
24 start -- we started at Trinity College in 1967, which is
25 a -- was, at that time, a small liberal arts college in

1 Washington D.C. And that that was a very extremely
2 important part of her formation as a scientist, because
3 she, at that time, developed a broad background in all of
4 the arts, the sciences, the history, philosophy,
5 everything that's important to being able to talk with
6 people.

7 We had an international community at school and
8 her ability to get along with people has carried her, as
9 you can see from these awards and why you're honoring her
10 today, very much into the scientific community in a way
11 that has made it possible for people to talk to each
12 another all around the world.

13 In graduate school in th 1970s, Anne began her
14 scientific talents direction by pointing toward
15 environmental issues that were related to stratospheric
16 ozone to composition and to climate. And in 1981, she
17 went the Goddard Space Flight Center in the Atmospheric
18 Chemistry and Dynamics Branch, where she learned
19 photochemistry from Rich Solarski. She was working in
20 one-, two-, and three-dimensional models along the way to
21 developing an interactive chemistry climate model.

22 Working at Goddard puts you in daily with
23 measurements. The instruments can be on the ground, in
24 the air, on a balloon, in the stratosphere on an aircraft,
25 or on a satellite. And one of the most important things

1 to understand is that the models and the modelers learn
2 the most if they develop a deep respect for the data, no
3 matter how it's obtained.

4 She was part of the project science team for the
5 upper atmospheric research satellite that made
6 observations from 1991 to 2005, and then from the
7 Earth-observing system Aura satellite launched in 2004,
8 which is still taking data.

9 The goals of the team sound simple. Basically,
10 it's about building strong links between teams taking
11 validation data and the satellite instrument teams, and
12 then building strong links between the data teams and the
13 modelers who are charged with projecting the state of our
14 protective ozone layer, even as composition and climate
15 change.

16 The challenge comes from interacting with
17 literally hundreds of scientists who were trained as
18 independent thinkers, and encouraging them to really
19 listen to each other and to prioritize the goals of the
20 enterprise over the goals of the individual.

21 People like to call it herding cats. But the
22 truth is that there's tremendous energy and cooperation
23 toward the goal of understanding and protecting the earth.
24 The Montreal Protocol and its amendments halted production
25 of chlorofluorocarbons, the man-made gases, known as CFCs,

1 that had many industrial uses, including refrigeration and
2 air conditioning, and threatened the ozone layer by
3 releasing chlorine and bromine into the stratosphere.

4 CFCs are also important greenhouse gases, because
5 they absorb infrared radiation at different wavelengths
6 than carbon dioxide and water vapor. Now, that CFC
7 production is banned, attention has focused on the new
8 man-made gases that are being used to do refrigeration and
9 air conditioning.

10 And the Kigali amendment to the Montreal Protocol
11 that entered into force this year will reduce the use of
12 the refrigerant compounds HFCs to -- that don't contain
13 chlorine or bromine, but still are going to contribute
14 nearly half a degree of global warming in the coming
15 century.

16 There are a few broad lessons that follow the
17 ozone story and the Montreal Protocol. One is that the
18 nations of the world continue to act together to be
19 successful in protecting the ozone layer. Another is that
20 earth sciences are interconnected. Ozone-destroying
21 substances play a role in climate change. Aerosols play
22 roles in air quality and climate change, and the list goes
23 on and is very long.

24 Anne felt fortunate to be involved with UARS and
25 with Aura at the same time as working to develop

1 full-coupled three-dimension models. This satellite data
2 have opened our eyes showing both long and -- both local
3 and long-range impacts of natural and human emissions.

4 Anne is proud and humbled to have been part of
5 the community that has developed the scientific
6 understanding of the ozone layer, recognizing that she is
7 only one of a group that has devoted their careers to this
8 worldwide environmental problem.

9 She hopes that observations, models, scientists,
10 earth system interactions, policymakers, and the
11 international community will build on the success of the
12 international effort to protect the ozone layer and find
13 pathways to protect air quality and climate worldwide.

14 Again, on her behalf, thank you.

15 (Applause.)

16 EXECUTIVE OFFICER COREY: Next is Mr. Hal Harvey,
17 in the category of Climate Policy.

18 --o0o--

19 EXECUTIVE OFFICER COREY: This award recognizes
20 his leadership on energy and climate philanthropy that has
21 catalyzed national climate policy efforts and inspired
22 international action. He'll be introduced by Board Member
23 Daniel Sperling.

24 BOARD MEMBER SPERLING: Thank you, Mr. Corey.

25 It is indeed my great pleasure to introduce Hal

1 Harvey right here. And he has truly been -- and I say
2 this with full sincerity and sincereness, that he has been
3 one of the most important leaders in advancing climate
4 policies in the U.S. and around the world. Perhaps his
5 most important and long-lasting contribution has been to
6 elevate the practice of strategic philanthropy on behalf
7 of environmental issues.

8 I've seen that firsthand for the two plus decades
9 I've known and observed Hal. He founded the Energy
10 Foundation in the 1990s, the ClimateWorks Foundation in
11 2008, both of which continue to be hugely influential in
12 supporting research and advocacy for climate policy, and
13 both, I would note, are located, headquartered in
14 California.

15 He also headed the Environmental Program at the
16 William and Flora Hewlett Foundation. And more recently,
17 has been leading a San Francisco based energy and
18 environmental policy firm called Energy Innovation, which
19 continues his commitment to influencing energy investments
20 and energy, and climate policy.

21 And I would note he's done all this and he's
22 still so young.

23 (Laughter.)

24 BOARD MEMBER SPERLING: He's also written two
25 books. His first, *Money Well Spent: A Strategic Plan for*

1 *Smart Philanthropy*, was especially important in laying out
2 strategies to enhance environmental protection. That book
3 highlights Hal's most important contribution, at least
4 as -- from my perspective, and that is to pioneer the
5 aggregation of philanthropic dollars for the design and
6 adoption of impactful climate policies.

7 And I think I would ad-lib that in this time --
8 day and time, it's -- that role of philanthropy has become
9 especially important.

10 --o0o--

11 BOARD MEMBER SPERLING: And so he's accomplished
12 this by the founding of Energy and Climate Work Foundation
13 and his leadership at the Hewlett Foundation. At those
14 foundations, he orchestrated campaigns to spur climate
15 action on everything from California Building Codes to
16 Chinese emissions standards.

17 His second book released this past year,
18 *Designing Climate Solutions: A Policy Guide for Low-Carbon*
19 *Energy*, highlights the other major contribution in his
20 career, and that is designing and advocating strategies
21 and policies to solve climate change.

22 One of the most notable qualities of Hal is that
23 he's always focused on actions that are impactful. He
24 always focuses on opportunities that are really going to
25 make big changes.

1 And I would note he's also, no big surprise here,
2 a true believer of the cause of climate environment. I
3 recall earlier in his career he was designing and building
4 solar homes. And this, I recall very clearly,
5 retrofitting an electric car for his commute. And this
6 was before -- this was the old days. I did say he's
7 young, but electric cars are recent.

8 So he's received the 2006 Heinz Award for the
9 Environment, the 2018 United Nations Clean Air and Climate
10 Change Award, in recognition of his accomplishments.

11 So we are here today to affirm his huge impact.
12 CARB is honored to bestow Hal Harvey with a 2018
13 Haagen-Smit Clean Air Award for his many efforts in
14 supporting the design and adoption of impactful climate
15 policies.

16 Please --

17 (Applause.)

18 (Laughter.)

19 MR. HARVEY: Well, this is indeed an honor.
20 Sometimes I feel like I'm a full-time PR representative
21 for the California Air Resources Board.

22 It turns out, of course, that significantly
23 reducing air pollution or climate change gases is complex,
24 and it begins with science. And the very idea of the
25 Haagen-Smit Awards is how science can contribute to the

1 future of humanity.

2 There is no agency in the world as sophisticated
3 and capable at controlling air pollution as the Air
4 Resources Board. This is an amazing gift to the citizens
5 of California, and increasingly to the citizens of the
6 world. Everything from the core science -- and this is
7 very hard science, because you cannot do it in a lab. You
8 have to do it in the real world -- from the core science,
9 to the evaluation of science, to its understanding on
10 human health exposure, to the beginnings of inventories,
11 to the policymaking that can control those inventories, to
12 the socializing of that policymaking, to the permitting,
13 to the monitoring, to the enforcement.

14 This is an enormous job with enormous
15 consequences. I have worked in a dozen countries on air
16 quality and climate change policy. And all the time, I
17 come back to the methods pioneered by the California Air
18 Resources Board. It's really amazing work. And I've been
19 able to watch the Air Board migrate from just conventional
20 pollutants into the climate change world full force to
21 begin to take the leadership nationally with fuel
22 efficiency standards for cars. Never called that of
23 course. They are climate change and emissions standards.

24 And then with the advent of the carbon cap in
25 California -- by the way, it's the most successful one in

1 the world -- to begin to understand how to control CO2
2 emissions at scale. A very complicated business.

3 And then it's becoming a funding agency because
4 of the proceeds from that. And it's become an engine of
5 equity in this state on top of everything else.

6 In the spirit of no good deed goes unpunished,
7 however, I want to invoke for you some further duties.

8 (Laughter.)

9 MR. HARVEY: When I started work in China more
10 than 20 years ago, they had 250 people in their EPA for a
11 country of 1.4 billion with unspeakable pollution
12 problems. There were five people in charge of mobile
13 sources in the entire Chinese government. They need
14 advice and help. And they need it from a technical
15 perspective. It's not a political question. It's a
16 question of designing and building systems that work.

17 What Dan mentioned before, we need first-order
18 decisions made to create large-scale change in climate
19 change gases and air pollution. This is the same the
20 world over. We hosted a breakfast years ago with Jim
21 Lents who ran the South Coast Air Quality Management
22 District and officials from Brazil. And Jim Lents,
23 amazing man, sat there and typed up the Brazil Clean Air
24 Act over breakfast. And it became law in Sao Paulo, which
25 is a state with a population and GDP of Argentina and the

1 size of France. So this is the kind of influence that the
2 Air Board has in the world.

3 So my request for you all, since no good deed
4 goes unpunished, is to open the doors wider, to become a
5 home not on an ad hoc basis, but on a permanent basis for
6 air quality experts around the world to come and learn on
7 both climate change and conventional pollutants how to
8 produce the human health -- human health outcomes and how
9 to reduce the threat of climate change.

10 There is simply no substitute for the kind of
11 work that you are doing, but it is unfortunately N equals
12 1. We don't have enough of it in the world.

13 So thank you for your work. Thank you for this
14 incredible honor. Thank you for your leadership. And
15 get -- get ready for a lot more.

16 (Laughter.)

17 (Applause.)

18 MR. HARVEY: Books for each of you will be signed
19 and delivered.

20 (Laughter.)

21 EXECUTIVE OFFICER COREY: The next recipient, Dr.
22 Barry Wallerstein in the category of Environmental Policy.
23 The award acknowledges his life-long dedication to
24 improving air quality and protecting public health in
25 Southern California communities. He'll be introduced by

1 Board Member Judy Mitchell.

2 BOARD MEMBER MITCHELL: Thank you, Mr. Corey.

3 It's a great honor to have Dr. Barry Wallerstein
4 here today. And it is a particular pleasure for me, as a
5 member of the Governing Board for the South Coast Air
6 Quality Management District. I had the distinct pleasure
7 of working with Dr. Wallerstein for a number of years.
8 And he's a great instructor, I will say that about him.
9 He a good way of taking complicated subjects and
10 distilling them into an understandable form.

11 In the early days of his career, Dr. Wallerstein
12 worked right here at California Air Resources Board. He
13 was assigned to develop tailpipe regulations for
14 motorcycles. And during his employment at CARB, he
15 sharpened his expertise for developing sound policy design
16 and for handling the regulatory process.

17 In 1984, he moved to the South Coast Air Quality
18 Management District, where he faced very challenging
19 situations, as the District worked to address severe
20 non-attainment with the National Air Quality Standards for
21 ozone and fine particle pollution.

22 In 1997, Dr. Wallerstein succeeded James Lents,
23 the gentleman mentioned by Mr. Harvey, as Executive
24 Officer of the District. And he remained in that position
25 for 19 years, striking a balance between the agency's

1 mission to improve public health, and the realities of
2 political, economic, and environmental pressures in this
3 four-county, 10,000-square mile region.

4 --o0o--

5 BOARD MEMBER MITCHELL: Under Dr. Wallerstein's
6 leadership, the South Coast Air Quality Management
7 District identified diesel engine exhaust as the primary
8 source of community cancer risk from air toxics. In
9 response, the District developed the nation's first local
10 Air Toxics Control Plan, which reduced exposure to air
11 toxics by more than 50 percent between 2005 and 2012.

12 Dr. Wallerstein also spearheaded the agency's
13 Clean Fleet Vehicle rules to help clean the air in
14 impacted neighborhoods close to railyards, ports,
15 freeways, and warehouses, and, at the same time, still
16 supporting the region's thriving goods movement industry.

17 In 2016, Dr. Wallerstein was appointed Senior
18 Policy Fellow at UC Riverside School of Public Policy.
19 Dr. Wallerstein has held senior policy positions on many
20 advisory boards, including the U.S. EPA, the National
21 Research Council, CARB, and CalEPA.

22 For a lifetime of service and commitment to
23 clean, healthful air for all of Southern California, CARB
24 is honored to recognize Dr. Barry Wallerstein with the
25 2018 Haagen-Smit Clean Air Award.

1 Dr. Wallerstein, please join Mr. Corey at the
2 podium.

3 (Applause.)

4 DR. WALLERSTEIN: Good morning. This is in --
5 really indeed a pleasure, and I'm very honored, and quite
6 honestly it's quite humbling, especially when you look at
7 the list of past award winners. And so this really means
8 a lot to me personally. And so I want to thank the Board,
9 the staff, and also your outside advisory committee
10 members that worked on this for you.

11 I have to also thank my family that was very
12 giving of its time to allow me to do the work that I've
13 done over the years. And, of course, I also have to thank
14 the South Coast District Board and staff for all of their
15 efforts and support over the years.

16 You know, as Board members, you're really mentors
17 for those of us that are the staff people, much like our
18 college professors were mentors and prepared us for our
19 careers. And that role is very important. And one of the
20 things that I'd like to say this morning is there are
21 times when we have interactions with our colleagues, or
22 those that we're working with, and we might just think
23 it's a routine event.

24 But, in fact, for the person that you're
25 interacting with, it helps to form the person that they

1 are and what their life will be in whatever that
2 particular area is, or what we're discussing here this
3 morning, cleaning the air, protecting the public health,
4 and doing the many good things that we do in our
5 profession of clean air.

6 So Chair Nichols, I don't know how well you
7 remember the first time we met. And it was on the
8 motorcycle issue in your El Monte office. And as a
9 relatively green staffer, a year and a half out of
10 college, I'm sitting with the chair of the Board, and I
11 won't tell everyone the details this morning of what you
12 said to me --

13 (Laughter.)

14 DR. WALLERSTEIN: -- but it's -- it's something
15 that I've carried with me the rest of my career. And it
16 was wise and sage advice. And this is -- recanting this
17 is just me saying to all of you on the Board, and all of
18 the staff members how much you've touched others and
19 prepared others to do the good work that we do.

20 I also want to thank my colleagues at the
21 California Air Pollution Control Officers Association, the
22 kind of fraternity that exists -- well, it's a fraternity
23 and sorority that exists there. It has really helped also
24 to formulate my views on a lot of issues, as has the
25 National Association of Clean Air Agencies.

1 But a special thank you to the community members,
2 the business owners, and other stakeholders that I've had
3 the privilege of working with over the years. The input
4 and information that they have provided really has helped
5 us do good policy work.

6 And, of course, it is just being part of a clean
7 air team and being able to work on so many interesting and
8 important ideas, and strategies, and policies is just an
9 incredible, you know, life's work for me. And I am so
10 thankful that I've been blessed to be able to do that.

11 So again, I'd like to just thank the Board for
12 this recognition today.

13 (Applause.)

14 --oOo--

15 EXECUTIVE OFFICER COREY: And lastly, Dr. John
16 Watson in the category of Air Pollution Research. This
17 award acknowledges his contribution to transforming the
18 scientific understanding of atmospheric aerosols, and
19 their sources in California and around the world. He'll
20 be introduced by Board Member Barbara Riordan.

21 BOARD MEMBER RIORDAN: Today, we recognize Dr.
22 John Watson for over four decades of innovation in air
23 quality science. Dr. Watson spurred numerous advances in
24 aerosol measurement, source apportionment, and assessment
25 of air pollution's impacts on visibility, ecosystems, and

1 cultural heritage.

2 He developed technology used by U.S. EPA and by
3 scientists throughout the world to estimate contributions
4 to airborne particulates and volatile organic compounds.
5 A prolific researcher, author, and editor, Dr. Watson
6 served as a principal investigator for over 120 air
7 quality studies and produced hundreds of peer-reviewed
8 journals -- publications.

9 A research professor at Nevada's Desert Research
10 Institute since 1982, Dr. Watson guided the development of
11 real-world multi-pollutant measurement technologies, and
12 played a key role in advancing methods to measure black
13 carbon and organic carbon.

14 In the 1990s, he guided measurement and modeling
15 for the San Joaquin Valley Air Quality Study. It
16 confirmed the regional connection between the Bay Area
17 emissions and summertime air quality in the San Joaquin
18 Valley.

19 Later, Dr. Watson worked on several CARB
20 projects, during which he developed source apportionment
21 software, and directed the California Acid Deposition
22 Monitoring Program.

23 --o0o--

24 BOARD MEMBER RIORDAN: Two years as a physics
25 instructor for the Peace Corps in Peru opened Dr. Watson's

1 eyes to air quality issues abroad. He initiated decades
2 of work mentoring students, professors, and regulators
3 from countries throughout Asia, Africa, and Latin America.
4 As an adjunct professor at the Chinese Academy of
5 Sciences, Dr. Watson has collaborated with Chinese
6 scientists on more than 60 publications on topics
7 ranging -- ranging from spatial or temporal distribution
8 of pollutants in Chinese cities to adverse impacts on
9 China's cultural heritage, like the terracotta warriors.

10 For his extraordinary contributions to science
11 and technology of air pollution measurement and
12 management, and for sustained leadership of collaborative
13 research that has benefited the public health around the
14 world, CARB is honored to bestow Dr. John Watson with the
15 2018 Haagen-Smit Clean Air Award.

16 If you would join Mr. Corey, please, and accept
17 your award and share some thoughts.

18 (Applause.)

19 (Laughter.)

20 CHAIR NICHOLS: You wouldn't think it would be so
21 hard.

22 DR. WATSON: Well, of course, it's a great honor.
23 I appreciate it, not only accepting it on behalf of
24 myself, but on behalf of many of the other people I worked
25 with on this studies throughout the state.

1 I'm most grateful to the Air Resources Board for
2 the better part of my education. And I don't want to tell
3 you how much that cost over the last 40 years or so.

4 It's taken me all over the state from Calexico to
5 Gasquet in the north, from Bodega Bay out to Shoshone,
6 Tacoma Hot Springs and Olancha along the Owens Lake.

7 I've spent countless -- fortunately countless
8 weeks in Fresno, California in the heat of the summer and
9 in the cold of the winter as well. And in that part, I'd
10 come to appreciate how much this state represents a
11 laboratory, where we have discovered things that are
12 applicable throughout the world. And so I found many
13 parallels that I think we've discovered here that are
14 helping other people in more polluted situations to make
15 progress.

16 I also appreciate the fact that the ARB has such
17 a good scientific staff. I've really enjoyed working with
18 the people in the past. And it's also a place where
19 several of our graduates that have gotten degrees at
20 University of Nevada, some of our post-doctoral
21 candidates, and even some of our assistant professors are
22 now trying to serve. And I hope that this is a place
23 where we can send more of our graduates, and we'll try to
24 continue some of these important research studies in the
25 future.

1 Again, thanks for this great honor, and it's a
2 pleasure to be here.

3 Thank you.

4 (Applause.)

5 EXECUTIVE OFFICER COREY: Now, if the Board
6 members and award recipients will meet in front of the
7 dais here for a group photo.

8 (Thereupon photos were taken.)

9 (Off record: 9:59 a.m.)

10 (Thereupon a recess was taken.)

11 (On record 10:07 a.m.)

12 CHAIR NICHOLS: I'm sorry to say we have to get
13 back to work or perhaps get to work. Mr. Corey, you're in
14 your seat. Good for you. Is the sound system working?

15 Sound?

16 Can you hear me in the audience?

17 Hello.

18 It's not working.

19 Can I be -- yes, it's working. Okay. Great. I
20 was afraid my sound had gone out. That would be tragic.

21 Thanks everybody. That was -- that was really
22 fun.

23 The next item on our agenda this morning is the
24 Proposed Alternative Certification Requirements and Test
25 Procedures for Heavy-Duty Electric and Fuel-Cell Vehicles

1 and Proposed Standards and Test Procedures for
2 Zero-Emission Power Trains.

3 As we move forward in the transition to
4 zero-emission technology in the transportation sector,
5 it's important to ensure that vehicles deployed as a
6 result of the State's regulatory efforts and investments
7 are not only reliable, but capable of serving the needs of
8 California fleets.

9 At the same time, it's equally important to
10 maintain an environment that continues to encourage our
11 industry partners to invest in and improve heavy-duty
12 zero-emissions technologies.

13 To that end, the staff is proposing to establish
14 a new optional certification framework for heavy-duty
15 electric and fuel-cell vehicles that would both encourage
16 industry best practices and promote continued
17 zero-emission technology innovation.

18 So this is a voluntary certification process that
19 we're working on. This is the first of two Board hearings
20 for anyone who has been -- is new to this process. So
21 after today's hearing, there will be further action, but
22 this is an important time for the Board to become familiar
23 with the proposal and to give input to the staff, as well
24 as to hear from those who are affected by and interested
25 in the proposal.

1 So on that note, Mr. Corey, would you please
2 introduce this item?

3 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair
4 Nichols. The proposed requirements before you today would
5 place an important role, as you noted, in complementing
6 CARB's other efforts, including both regulatory measures
7 and incentive programs geared towards increasing
8 deployment of market ready zero-emission technology.

9 Several of CARB's planned technology-forcing
10 measures will target heavy-duty vehicle applications in
11 which zero-emission technology is already deemed ready for
12 broader deployment. For these heavy-duty applications,
13 it's important that safeguards are put in place to
14 establish and ensure a long-term sustained zero-emissions
15 market.

16 To address this, we'll be proposing a measure
17 that would build upon the existing certification process
18 for establishing a new alternative certification process
19 aimed at market-ready heavy-duty electric and fuel-cell
20 vehicles and address some of the key barriers to broader
21 market adoption.

22 Staff believes the proposal would establish a
23 balanced certification framework that supports
24 California's efforts to accelerate zero-emission
25 technology deployment in market-ready applications, while

1 still promoting technology innovation in more cutting-edge
2 technology applications.

3 I'll now ask David Eiges of the Mobile Source
4 Control Division to begin the staff presentation.

5 David.

6 (Thereupon an overhead presentation was
7 presented as follows.)

8 AIR RESOURCES ENGINEER EIGES: Thank you, Mr.
9 Corey.

10 Good morning, Chair Nichols and members of the
11 Board. I'll begin this presentation with some background
12 on the goals for the proposed Zero-Emission Powertrain
13 Certification Regulation, which I'll be referring to as
14 ZEPCert.

15 --o0o--

16 AIR RESOURCES ENGINEER EIGES: The proposed
17 ZEPCert is intended to promote the development of
18 effective and reliable heavy-duty, electric, and fuel-cell
19 vehicles. It would assist in the transformation of the
20 heavy-duty sector by protecting consumers purchasing
21 vehicles as part of future technology-forcing
22 zero-emission measures and incentive programs.

23 Although we have seen tremendous growth in the
24 deployment of heavy-duty zero-emission vehicles over the
25 past few years, many of the fleets that have adopted such

1 vehicles have had less than perfect experiences. Some
2 fleets receive products with poor workmanship, some
3 experienced extended downtime, while others did not have
4 the access to consistent product support. These bumps in
5 the road, however, were not unexpected as this was and
6 still is a new and emerging market.

7 That said, the technology itself is ready for
8 greater deployment, and as such, staff is moving towards
9 fleet rules that require the purchase of zero-emission
10 vehicles as well as greater investments in heavy-duty
11 zero-emission technology. But new-market issues are still
12 a concern. So additional safeguards are now appropriate
13 to continue providing good stewardship over public funds
14 and to protect fleets from purchasing products that could
15 poison the well, and could possibly lead to reduced demand
16 for ZEVs.

17 Ultimately, fleets need these vehicles to work.
18 If they don't, fleets will return to using fossil fuel
19 vehicles instead.

20 --o0o--

21 AIR RESOURCES ENGINEER EIGES: In December 2018,
22 the Board approved the Innovative Clean Transit
23 Regulation, which represents the first regulatory step in
24 a broader statewide strategy to transition the heavy-duty
25 sector to zero-emission technology.

1 Addition measures to support the continued growth
2 of the heavy-duty zero-emission industry are just around
3 the corner. The first of these measures is the
4 Zero-Emission Airport Shuttle Proposal, which will be
5 presented to the Board for consideration later today.

6 A number of other items are slated to be brought
7 before the Board in the next few years. The growth and
8 successful adoption of heavy-duty ZEVs, which will lead to
9 reductions in mobile sources emissions, is critical to
10 California meeting its air quality standards and GHG
11 reduction goals.

12 --o0o--

13 AIR RESOURCES ENGINEER EIGES: To date, ARB as
14 administered over 500 million dollars to fund heavy-duty
15 zero-emission vehicles. And that number is expected to
16 continue to grow. This money has come from sources
17 designated to provide cleaner transportation, such as
18 Cap-and-Trade, and the Goods Movement Emission Reduction
19 Program.

20 Funding has gone towards commercially available
21 heavy-duty zero-emission vehicles through first-come
22 first-served programs, as well as a variety of other
23 projects designed to fund zero-emission trucks and buses
24 in their pre-commercial stages through pilot and
25 demonstration programs.

1 The State is at a point now where it is
2 appropriate to have a process such as ZEP Cert to ensure
3 that investments prioritize well-supported zero-emission
4 vehicles

5 --o0o--

6 AIR RESOURCES ENGINEER EIGES: Current
7 certification requirements for heavy-duty vehicles with
8 zero-emission technology are minimal, and provide little
9 assurance that manufacturers will provide adequate support
10 for their product. The proposed ZEP Cert would modify the
11 existing certification process for heavy-duty vehicles and
12 establish certification conditions consisting of expected
13 industry best practices for battery-electric and fuel-cell
14 heavy-duty powertrains and vehicles.

15 Although the ZEP Cert proposal would be an
16 optional process, upcoming zero-emission regulations and
17 future incentive programs could make it mandatory as part
18 of their specific measures.

19 In addition, as an optional process, some
20 manufacturers may voluntarily choose to certify through
21 ZEP Cert as a selling point to instill more confidence in
22 consumers looking to purchase their product.

23 --o0o--

24 AIR RESOURCES ENGINEER EIGES: The requirements
25 in the proposed ZEP Cert are designed to provide great

1 transparency and consistency in the information provided
2 to fleets, and ensure effective product support for the
3 vehicles they purchase.

4 In addition, the proposed ZEPCert would create a
5 balanced certification framework that includes robust
6 requirements that help strengthen the market for more
7 mature applications, while still allowing cutting-edge,
8 newer applications to continue to be certified through the
9 less-stringent certification process that currently
10 applies today.

11 --o0o--

12 AIR RESOURCES ENGINEER EIGES: The ZEPCert
13 proposal would establish separate processes for certifying
14 powertrains and vehicles. Certifying a vehicle to the
15 proposed ZEPCert would require the use of a ZEPCert
16 powertrain. Each ZEPCert powertrain would be subject to
17 the requirements in the ZEPCert Powertrain Procedure.

18 Each vehicle would be subject to the requirements
19 in the ZEPCert Vehicle Procedure, which would be an
20 alternative process included in the Heavy-Duty Phase 2
21 Greenhouse Gas Certification Program. This program's
22 structure mirrors the existing certification paradigm for
23 heavy-duty internal combustion engines and vehicles, and
24 would allow manufacturers to certify a single
25 zero-emission powertrain that could be installed in

1 multiple different ZEPCert vehicle configurations.

2 --o0o--

3 AIR RESOURCES ENGINEER EIGES: The powertrain
4 certification would cover the electrified portions of the
5 power system. This includes the components and ancillary
6 systems that store energy and manage the energy source,
7 and convert the electrical energy to mechanical energy.

8 More specifically, a powertrain would include the
9 battery, the motor, and other components such as those
10 listed here.

11 --o0o--

12 AIR RESOURCES ENGINEER EIGES: The vehicle
13 certification, on the other hand, would cover the
14 mechanical components found in a typical internal
15 combustion vehicle downstream of the powertrain. These
16 components, collectively referred to as "vehicle
17 integration components", include the driveshaft,
18 transmission, and axles.

19 --o0o--

20 AIR RESOURCES ENGINEER EIGES: Now, I'll be going
21 over the proposed requirements for the optional
22 zero-emission powertrain certification process.

23 --o0o--

24 AIR RESOURCES ENGINEER EIGES: The ZEPCert
25 powertrain requirements are designed to ensure that

1 manufacturers are providing consumers with consistent,
2 transparent information in order to assist in informing
3 fleet purchase decisions, assessing operating efficiency,
4 and evaluating the condition of the battery.

5 In addition, ZEP Cert would require manufacturers
6 to provide sufficient product support, including making
7 available repair and diagnostic information and tools to
8 third-party repair facilities, providing vehicles with a
9 minimum warranty, and recalling vehicle models in which
10 pervasive and severe problems have been identified.

11 --o0o--

12 AIR RESOURCES ENGINEER EIGES: All manufacturers
13 Perform a battery capacity test today, but ZEP Cert would
14 require all applicable zero-emission powertrains to be
15 tested using a standardized SAE protocol.

16 This is a simple test that would provide battery
17 capacity information that is consistent and useful to
18 fleets when comparing vehicles for purchase, and establish
19 a baseline that can be used later to assess the battery
20 state of health.

21 --o0o--

22 AIR RESOURCES ENGINEER EIGES: Complementing the
23 batter capacity test would be the requirement to design
24 powertrains to provide users with battery capacity and
25 throughput information on board the vehicle. Battery

1 capacity information would be useful to fleets for
2 determining energy usage when evaluating the impact of
3 different roots or payloads.

4 In addition, both capacity and throughput
5 information would be useful for sales on the secondary
6 market, as the battery state of health could be assessed
7 prior to the transaction.

8 The information would also support any battery
9 capacity warranties a manufacturer provides.

10 --o0o--

11 AIR RESOURCES ENGINEER EIGES: Because the
12 zero-emission market is still new, the limited repair
13 network has made it difficult for some fleets to quickly
14 and effectively receive vehicle repairs. A key element of
15 ZEPCert would ensure that repair and diagnostic
16 information is well documented and made available along
17 with repair tools to third-party repair facilities, and
18 fleets who wish to do their own repairs.

19 This aligns with the Right-to-Repair MOU, which
20 is an agreement between all of the major manufacturers and
21 the repair industry applicable to the repair of heavy-duty
22 internal combustion engines and vehicles. In addition,
23 information on battery voltage and fault codes must be
24 made communicable through a generic scan tool, a common
25 and widely available device used to retrieve diagnostic

1 information from engines and vehicles.

2 --o0o--

3 AIR RESOURCES ENGINEER EIGES: Under ZEP Cert,
4 manufacturers would be required to provide a warranty that
5 covers basic powertrain component failures for three years
6 or 50,000 miles. Manufacturers could also be subject to a
7 recall during the required warranty period for failures
8 that render a vehicle inoperable. Recall would be
9 required if the number of failures of a certain powertrain
10 component meets or exceeds the greater a four percent of
11 all powertrains sold within a certification family, or 25
12 total failures. If this threshold is reached, the
13 manufacturer would be required to notify fleets and offer
14 a free -- a repair free of charge. The recall provisions
15 would ensure that manufacturers are proactive rather than
16 reactive in handling powertrain failures.

17 This is a significant benefit, especially in a
18 market where repair options are limited, because it would
19 allow fleets to plan for anticipated downtime, rather than
20 being caught off-guard when the vehicles actually fail.

21 --o0o--

22 AIR RESOURCES ENGINEER EIGES: I'm now going to
23 go over the proposed requirements that manufacturers
24 seeking an optional ZEP Cert vehicle certification would be
25 required to meet.

1 --o0o--

2 AIR RESOURCES ENGINEER EIGES: The proposed
3 requirements for vehicle certification largely share the
4 same object -- objectives as those being proposed for
5 zero-emission powertrain certification. They are designed
6 to ensure that information regarding vehicle performance
7 and warranty is clearly and consistently communicated to
8 fleet purchasers, and to facilitate greater product
9 support for electric and fuel-cell vehicles.

10 --o0o--

11 AIR RESOURCES ENGINEER EIGES: Manufacturers
12 would be required to make certain disclosures, both at the
13 point of sale and in the vehicle owner's manual. This
14 disclosures are intended to ensure purchasers understand
15 the scope and limitations of the warranty, whether the
16 warranty covers operating range, the process of initiating
17 vehicle repairs, and performance considerations of which
18 fleets should be aware when transi -- when transitioning
19 from internal combustion to zero-emission vehicles.

20 In addition, the manufacturers would be required
21 to make battery capacity and vehicle efficiency
22 information available to fleet users, which is expected to
23 help fleets maximize the utility of their vehicles.

24 Because these requirements would result in
25 better-informed fleet purchasers, they are expected to

1 increase the likelihood of a successful transition to
2 zero-emission technology.

3 --o0o--

4 AIR RESOURCES ENGINEER EIGES: The repairable --
5 repairability requirements for the vehicle would be
6 similar to those for the powertrain. Again, the
7 requirements to make repair information and tools
8 available to third-party repair facilities align with the
9 Right-to-Repair MOU and would be useful for issues that
10 arise when vehicle components, such as axles or
11 transmissions, fail due to poor or improper integration of
12 a zero-emission powertrain into a vehicle.

13 --o0o--

14 AIR RESOURCES ENGINEER EIGES: While being
15 proposed as an optional process, staff chose to complete a
16 conservative cost analysis using the assumption that all
17 vehicles in HVIP, the Hybrid and Zero-Emission Truck and
18 Bus Voucher Incentive Project, a program designed for
19 commercially ready zero-emission products would certify
20 through the ZEP Cert process.

21 The cost for reporting, testing, labeling, and
22 preparation of certification applications were included in
23 the analysis under the assumption that these were
24 requirements above and beyond common industry practice.

25 However, tasks like developing an owner's manual

1 or diagnostic and repair manual were considered actions
2 manufacturers would already be taking to produce a robust
3 product, so those costs were not included in the ZEP Cert
4 cost analysis.

5 In total, the estimated cost ZEP Cert would be
6 \$720 per vehicle and would cost California businesses
7 approximately \$250,000 during the first five years of the
8 program.

9 --o0o--

10 AIR RESOURCES ENGINEER EIGES: The ZEP Cert
11 Regulation was included in a Joint Environmental Analysis
12 with the Zero-Emission Airport Shuttle Regulation. It
13 concludes that ZEP Cert would not result in potentially
14 significant adverse environmental impacts.

15 However, staff will present the final
16 Environmental Analysis and written response to comments to
17 the Board at the next hearing anticipated in May 2019.

18 --o0o--

19 AIR RESOURCES ENGINEER EIGES: Staff has
20 continued to work with stakeholders subsequent to the
21 release of the 45-day package, and if so directed by the
22 Board, will continue to work with stakeholders to address
23 outstanding technical issues as part of the 15-day change
24 process. These proposed changes would include changes
25 intended to clarify the intent and streamline the

1 regulatory requirements, as well as add additional
2 flexibility to specific provisions that will still achieve
3 the intended goals of the regulation.

4 This would include clarifying that manufacturers
5 would not be required to bring in a specific number of
6 powertrains for repair. Other than making the repairs,
7 their obligation would be to notify all affected fleets.
8 And to emphasize that only failures that render vehicles
9 inoperable are used to determine if the recall thresholds
10 have been met.

11 Staff would also propose to streamline recall
12 requirements by removing redundant provisions simplify
13 warranty reporting requirements by aligning warranty
14 reporting thresholds with recall thresholds, and add
15 flexibility in how the diagnostic information is obtained
16 from the vehicles.

17 Lastly, staff is proposing to make other small
18 editorial updates to add clarity and eliminate redundancy.

19 --o0o--

20 AIR RESOURCES ENGINEER EIGES: In summary, the
21 proposed ZEP Cert would create a certification framework
22 for heavy-duty, electric, and fuel-cell vehicles and their
23 powertrains that would assist in California's transition
24 towards a successful self-sustaining zero-emission market.
25 It's part of a balanced approach that would provide

1 important safeguards that protect California's incentive
2 investments, as well as the fleets that would be mandated
3 to purchase zero-emission technology without hindering
4 continued in the -- innovation.

5 Therefore, staff recommends the Board adopt the
6 resolution directing staff to evaluate and respond to any
7 public comments, modify the regulatory language with any
8 appropriate 15-day changes, and return with a final
9 proposed regulation.

10 The 15-day changes are expected to be released
11 for public comment in March or April 2019, and we are
12 anticipating bringing back the item for a second hearing
13 in May 2019 to finalize Board adoption.

14 This concludes my presentation. Thank you for
15 your consideration.

16 CHAIR NICHOLS: Thank you. I -- we have a list
17 of witnesses, which has now been posted on the Board
18 behind me. I think if it's okay with the Board, we'll
19 just proceed to hear from those who have signed up, and
20 then we can move it to discussion by the Board.

21 So let's begin with Joshua Goldman, and we'll
22 just have to continue to pass the microphone back and
23 forth, until we can get the sound system fixed.

24 MR. GOLDMAN: Hello. Good morning.

25 CHAIR NICHOLS: Good morning.

1 MR. GOLDMAN: My name is Joshua Goldman. I am
2 Vice President of sales and marketing for TransPower.
3 TransPower is a start-up based in Escondido, California,
4 in San Diego County.

5 Hi, Supervisor Fletcher.

6 And we are a powertrain kit manufacturer to
7 support truck and bus OEMs in the electrification of
8 medium- and heavy-duty vehicles. We've developed vehicles
9 such as semi trucks, yard tractors, refuse trucks, school
10 buses, heavy forklifts, and final mile delivery box
11 trucks.

12 Over the past eight years, TransPower and our
13 project partners at ARB, the California Energy Commission,
14 South Coast Air Quality Management District, San Joaquin
15 APCD, Bay Area AQMD, San Diego APCD, the Port of L.A.,
16 Port of Long Beach, Port of San Diego, Port of Oakland,
17 and many truck OEMs, such as Peterbilt and Kalmar; global
18 commercialization partners TransPower, the; truck axle and
19 brake manufacturer, Meritor; and our -- most notably, our
20 growing lists of fleets, such as Ikea, Dole, Harris Ranch,
21 Grimmway Farms, Raley's, Torrance Unified School District,
22 Sacramento County Department of Waste Management, TTSI,
23 Biagi Brothers and many, many more all signing up to
24 demonstrate these next generation zero-emission trucks.

25 We thank the ARB and your staff for all your

1 efforts in this early prototype development, and in
2 commercialization of zero-emission trucks and buses.
3 Having personally been working in this space starting in
4 engineering, and now in sales and marketing, for the past
5 20 years, I have seen the advancements, thanks to your
6 efforts, in commercialized advanced heavy-duty zero- and
7 near zero-emission trucks and buses. And these efforts
8 will continue through this powertrain regulation to
9 commercialize the future of off-the-shelf trucks and
10 buses.

11 We support the efforts of ARB and staff in this
12 proposed Alternative Certification Requirements and Test
13 Procedures for these heavy-duty electric and fuel-cell
14 vehicles, and the standards for zero-emission powertrains.

15 TransPower recognizes that this modern
16 commercialization of these trucks and buses is still in
17 the early stages. And we thank all of our project
18 partners for their efforts in going from the bleeding edge
19 of technology into vehicles that will work and displace
20 diesel in the marketplace.

21 As that, we also recognize that we are still
22 learning from all these trucks and buses. And all the
23 data that we collect and provide to ARB, and the federal
24 government, and the air districts, and the ports, and our
25 project partners is all of us learning about where this

1 future is going and how we can support all your efforts.

2 So, in summary, I support this program, but we
3 will continue to work with staff and ARB to ensure that
4 these systems are robust and reliable, and able to meet
5 the market demands through early incentives, and
6 eventually as a low-cost solution so that the
7 zero-emission future can be realized helping the state,
8 and the nation's, and the global clean air requirements.

9 Thank you.

10 CHAIR NICHOLS: Thank you.

11 MS. VAN CLEVE: Good morning, Chair Nichols and
12 members of the Board. My name is Sarah Van Cleve. And
13 I'm here with Tesla with some comments on the ZEP Cert.

14 First off, obviously, we agree that zero-emission
15 trucks will play a critical role in helping California
16 achieve its public health and climate goals. But as the
17 Chair alluded to earlier, it is important to balance the
18 sometimes competing objectives of growth, durability, and
19 innovation.

20 As currently drafted, the ZEP Certification
21 provides transparency to purchasers, but also includes
22 provisions that may have a negative effect on the growth
23 of zero-emission trucks with limited additional benefit to
24 the purchasers.

25 Tesla greatly appreciates staff efforts to date

1 to work with stakeholders, to ensure that the proposed ZEP
2 Certification continues to enable the growth of heavy-duty
3 ZEVs in California. Modifications have been made on many
4 of the initial proposals that better reflect the current
5 state of the industry. One such positive change was the
6 change to maintain the certification as voluntary at this
7 point.

8 Unfortunately, however, we have one remaining
9 concern, and that's related to the mandatory recall
10 provision. We certainly recognize that there is a need to
11 ensure that vehicles are compliant with emissions
12 requirements and why emission recalls are important. But
13 it's not clear why heavy-duty zero-emission vehicles,
14 which, by definition, produce no emissions should be
15 subject to similar recall requirements.

16 We expect that this provision will require
17 unnecessary and expensive recalls amongst many of the
18 heavy-duty EV manufacturers, where otherwise these
19 vehicles could continue to operate safely and produce no
20 emissions. And this would also add some nuisances for the
21 fleet managers operating these vehicles.

22 Given the potential 15-day language changes
23 outlined in staff's proposal today, we are optimistic that
24 staff is moving in the right direction, and that staff is
25 going to continue their evaluation of alternatives to a

1 mandatory recall provision.

2 As outlined, staff plans to remove the influenced
3 recall section, simplify the voluntary recall language,
4 and limit the recall language to specifically apply to
5 failures that render the vehicle inoperable. These
6 changes are positive, specifically in that they focus on
7 the recall provision around failures that will render the
8 vehicle inoperable.

9 We've also heard that there is some consideration
10 of replacing the term "recall" with a concept that's more
11 in line of a maintenance plan. And we really support this
12 change, particularly given that staff has indicated that
13 they are envisioning this process as more of a
14 notification process that doesn't require repair
15 completion rates that would be binding on the vehicle
16 owner. In essence, it's a recall in notification only.

17 Therefore, we recommend that staff continue
18 working with stakeholders to develop alternatives to a
19 mandatory recall provision, such as a notification based
20 maintenance plan concept.

21 Tesla looks forward to continuing to engage in
22 these discussions and helping grow heavy-duty vehicles in
23 California.

24 CHAIR NICHOLS: Thank you.

25 MS. GOLDSMITH: Good morning. My name is Hannah

1 Goldsmith. I'm the Deputy Executive Director the
2 California Electric Transportation Coalition. We've been
3 coordinating an internal working group of around 20
4 manufacturers, including CalETC members and others to
5 review and provide feedback on the Zero-Emission
6 Powertrain Certification Proposal over the last year or
7 so. We also submitted detailed comments on the 45-day
8 regulatory language.

9 CARB staff have put in a lot of time to work with
10 us on this proposal, and we appreciate staff's commitment
11 to taking our feedback seriously and willingness to work
12 with us on amendments. We look forward to continuing to
13 refine the regulations with staff during the amendment
14 process that was laid out today.

15 The proposed regulations would require many
16 changes to current engineering, manufacturing, warranty,
17 recall, documentation, and reporting practices from
18 medium- and heavy-duty zero-emission vehicles. A
19 particularly challenging ZEV market segment and one CalETC
20 believes is essential to meet the state's clean air,
21 climate change, and economic goals.

22 The proposed regulations will add costs to the
23 final zero-emission product. CARB staff have shared a
24 proposal for amendments to address most of our concerns
25 with the ordered recall provision and other provisions of

1 the current regulations. With these anticipated
2 amendments, as well as other amendments we're working on
3 with staff, we believe that the regulations will become
4 workable. We recognize that a balance must be struck
5 between the objectives of this certification program and
6 promoting and accelerating zero-emission vehicle
7 deployment.

8 With the amendments we have seen and will
9 continue on work on with staff, and with careful tracking
10 as the regulation is voluntarily implemented, we believe
11 the regulations will strike the right balance. Because
12 the regulations will still result in substantive changes
13 to current manufacturing practices and add significant
14 costs to the manufacturing of zero-emission vehicles, we
15 have worked with CARB staff to recommend that the
16 certification process remain voluntary until at least
17 2023.

18 We believe that keeping certification optional
19 for an appropriate amount of time will allow for
20 manufacturers, fleets, stakeholders, and CARB staff to
21 work together to implement the certification process and
22 refine the regulations, if necessary, to ensure they
23 support the objectives of the regulation and accelerate
24 and promote ZEV deployment.

25 We also recommend that staff report back to the

1 Board on implementation of the regulations, once adopted
2 and implemented, and before the regulations are made
3 mandatory through a funding program or a regulatory
4 action.

5 This review could be similar to what was included
6 in the resolution for the Innovative Clean Transit
7 Regulation.

8 Thank you.

9 CHAIR NICHOLS: Thank you.

10 MR. BARRETT: Good morning. I'm Will Barrett
11 with the American Lung Association. I was having a
12 conversation with my youngest daughter about penmanship
13 and the importance of it. And I certainly didn't do a
14 good job on have my card earlier with getting my name
15 spelled wrong on this.

16 (Laughter.)

17 MR. BARRETT: She'll be delighted.

18 So the American Lung Association strongly
19 supports the strong ZEV requirements that ARB is moving
20 forward to improve air quality and public health. We
21 strongly support the goals and efforts of the Board and
22 staff to develop the strongest possible regulations to
23 really spur the transitions to zero-emission
24 transportation.

25 Zero-emission technologies are a critical

1 component to meeting our clean air and climate change
2 goals and to protecting public health. So with all of
3 that, we -- we do appreciate the intention to provide
4 consumer and fleet confidence in zero-emission
5 technologies. Boosting consumer confidence and comfort
6 with zero-emission vehicles is a key step forward for
7 expanding the market to accelerate clean air and climate
8 benefits that we're all trying to achieve.

9 The certification process supports growing
10 consumer confidence and growing the market. We do
11 appreciate the responsiveness of CARB and the staff -- or
12 Board and staff to the manufacturers' concerns that have
13 come up throughout the process. We appreciate that the
14 staff have been working closely with zero-emission
15 manufacturers to adjust the proposals in a way that builds
16 the confidence and allows continued progress to strong --
17 to strengthening the market and building those clean-air
18 benefits.

19 So we do also encourage the ongoing work on the
20 remaining issues, some of which have been mentioned, and
21 clarifications that I know staff is looking at through the
22 15-day changes.

23 As the discussion continues, we encourage the
24 continued focus on building and accelerating the market.
25 We think that this program can be a strong part of that,

1 and think that the clear zero-emission targets across the
2 heavy-duty sector, consumer acceptance, coordination with
3 the market leaders who are building these vehicles, are
4 really all critical pieces of moving to that clean air
5 future. So we urge you to move forward, continue working
6 with the stakeholders on these improvements and
7 clarifications in the program, and really setting the
8 course forward.

9 So thank you very much.

10 CHAIR NICHOLS: Thank you.

11 MS. NAGRANI: Good morning. I'd first like to
12 thank staff. You know, this has been a very long road and
13 there have been substantive changes, which I appreciate.
14 However, I'm here on behalf Motiv Power Systems to
15 actually oppose this measure, as it is currently written,
16 because as the summary and impacts begins, there are no
17 quantifiable emission benefits associated with this
18 proposal.

19 Fundamentally, Motiv as a company is here with a
20 mission statement to free fleets from fossil fuels. We
21 believe the best way to do that is developing a product
22 line that can go into numerous applications, enabling more
23 and more fleets to move away from the diesel engines that
24 they currently use.

25 The challenge with this is the cost analysis

1 assumes a single product line and a large base for which
2 to spread your cost basis across. If, for example, you
3 are a transit bus and you are building one type of bus,
4 that is one manual that you will use for your entire
5 product line. If, however, you are a powertrain like
6 ours, where you can serve a flatbed truck, a book mobile,
7 a blood mobile, delivery vehicle, a box truck, school
8 buses of different weight classes, it quickly balloons
9 where your component costs might be one component, but
10 your end-use application could be seven or eight vehicles.

11 In doing that, you are going to end up having a
12 scenario in which every new end-application, while
13 technically feasible and innovatively possible as a new
14 market, is financially prohibitive. Every time you
15 increase the cost of a new application, you are reducing
16 consumer choice to move away from diesel. This is
17 something that is unique to the medium- and heavy-duty
18 marketplace.

19 Whereas, on consumer vehicles, if you buy a
20 Nissan Leaf, for example, you can select the seats and the
21 trim, but fundamentally your emissions system is the same
22 across the product line. When you're looking at a
23 long-haul vehicle, you've got a medium basis of similarly
24 configured vehicles that are just hauling goods.

25 But for medium- and heavy-duty trucks in that

1 intermediate space, the difference between a bucket truck
2 a volume-dependent, truck a weight-dependent truck, are
3 all very different. And so when you think about things
4 like displaying in increments of five percent what your
5 battery capacity is, that's actually misleading for a
6 driver. Because if you go out with an empty truck, fill
7 it up, and come back, and think you have 30 miles left and
8 you actually have 15, because your weight load has
9 changed, you're giving somebody inaccurate information.

10 And so while the intent is good, the amount of
11 predictive algorithms needed to quantify what that batter
12 means to any specific end-use application is much more
13 software intensive than staff gives credit for.

14 The complexity of medium- and heavy-duty
15 applications has been a theme in various incentive work
16 groups, as well as in discussions of the medium- and
17 heavy-duty truck rule manufacturer requirements. But in
18 this powertrain rule that has been insignificantly
19 analyzed.

20 Specifically, within the ISOR package, the cost
21 effectiveness of this and the linked shuttle bus measure,
22 on one hand, suggests that maintenance costs will go down
23 to the end user. But even in the Shuttle Bus Rule, it
24 does not reflect that for the end customer.

25 Given these issues --

1 CHAIR NICHOLS: Your time is up.

2 MS. NAGRANI: -- I strongly urge the Board --

3 CHAIR NICHOLS: Thank you. Thank you.

4 MR. BLUBAUGH: Good morning. I am Tim Blubaugh
5 with Truck and Engine Manufacturers Association. Today's
6 proposed rule would impose a broad and complex set of
7 certification requirements for zero-emission powertrains,
8 and the medium- and heavy-duty commercial vehicles in
9 which they are installed.

10 Although the extensive list of proposed
11 certification requirements are stated as optional, that is
12 misleading. These certification requirements become
13 mandatory with the Airport Shuttle Regulation, and they
14 will be adopted even sooner as a mandatory element of
15 essential ZEV incentive programs. We have submitted
16 extensive written comments outlining multiple significant
17 concerns with today's proposed rule.

18 In briefest summary, the proposed ZEP
19 Certification requirements exceed ARB's legal authority,
20 impose significant excessive costs on manufacturers,
21 which, among other things, will impede the market
22 acceptance of ZEV products, will cause manufacturers to
23 divert limited technical experts away from developing and
24 improving ZEV products, and may require expensive and
25 counterproductive recall campaigns.

1 We recognize ARB's goals in adopting the ZEP
2 Certification requirements. However, we feel that the
3 current proposal will serve as an impediment to the
4 successful roll-out and customer acceptance of
5 zero-emission commercial vehicles.

6 Rather than enhance the marketability of ZEVs,
7 the proposed ZEP Certification requirements likely will
8 create an obstacle to growing the medium- and heavy-duty
9 ZEV market.

10 We have been working very closely with staff
11 since 2017 to provide input on the ZEP Certification Rule,
12 and that constructive dialogue continues through today.
13 We sincerely appreciate staff's willingness to listen and
14 make changes to try to make -- to try accommodate our
15 concerns.

16 In that spirit, we support the changes to the ZEP
17 Certification Rule that staff is proposing to make with
18 the 15-day notice. Those additional changes are crucial.
19 And they will go a long way toward making the ZEP
20 Certification Rule workable and implementable for
21 manufacturers.

22 Further, EMA and its members look forward to
23 continuing to work with you and your staff to make the ZEP
24 Certification Rule as successful as possible for the
25 zero-emission commercial vehicle market.

1 I'm happy to answer any questions.

2 CHAIR NICHOLS: Thank you.

3 DR. KAYES: Hello. My name is David Kayes. I'm
4 an engineer at Daimler Trucks North America. My key
5 comment today is in line with David Eiges' comment that
6 the intention of the Board -- the staff, rather, and
7 similarly the intention of manufacturers is to streamline
8 and add flexibility to the ZEP Certification Regulations.

9 Daimler Trucks North America is headquartered in
10 Portland, Oregon. And we manufacture under the brands
11 Freightliner and Thomas Built, among others, including the
12 electric Cascadia, the eM2, and the Juli electric bus.

13 We have extensive therefore concerns about the
14 difficulty and resource burden of the ZEP Certification
15 regulations. Without waiving the issue of the ARB's
16 authority and some of the other concerns that were raised
17 in our EMA comments before, I would like to say I
18 appreciate that ARB staff is working with us. They've
19 been very responsive on a number of topics, including for
20 example minimizing the amount of extensive requirements
21 placed on battery testing.

22 We still have, however, some concerns. For
23 example, in the system monitoring and diagnostic
24 requirements, there are requirements to make available,
25 through the broadcasting, any voltage and temperature that

1 might be useful in repair of a vehicle.

2 There could be dozens, hundreds of battery cells
3 and modules, each with different voltages and temperatures
4 that might be easily readable through a thermometer
5 temperature gun or through a volt meter. But adding the
6 requirement to broadcast all the information about all of
7 these things through communication protocol meant to
8 broadcast simply diagnostic faults or other key
9 information adds a lot of extensive burdens to us.

10 Similarly, requirements that we make available
11 extensive documentation about any changes to the system
12 monitoring and diagnostic requirement will force us to
13 divert engineering resources from developing new
14 diagnostics into documenting existing ones.

15 ARB staff has made clear the intention not to
16 dictate monitoring diagnostic requirements, and just
17 recently to streamline these provisions. And we greatly
18 appreciate that. What we'd like to see is that in the
19 upcoming work that we do that we can still further
20 streamline the regulations and work on ways to improve the
21 cost effectiveness.

22 We, and I believe that ARB, share the concern of
23 speeding zero-emission vehicles to the market and we -- we
24 want to minimize the impediments to that.

25 CHAIR NICHOLS: Thank you.

1 MR. LE: Good morning, Air Board members and
2 Chairman. My name is Huy Le. I'm just actually a regular
3 citizen of -- I'm an owner/operator, and I own my own
4 truck. I have one truck only. And the reality of this is
5 that you guys -- you know, initially you guys did the
6 whole -- you know, the filter for our trucks. You know,
7 it was a great idea. The only problem is that the
8 maintenance was really high.

9 As an Air Board, you know, you guys gave us maybe
10 30 to 60 thousand to replace our trucks or to retrofit it.
11 But if you think about it, for the first year when I
12 bought my truck, you know, actually I bought a used one.
13 It's 2012 -- 2012 truck I bought in 2014. It had about
14 300,000 miles. And within two years, I spent 30,000 on
15 just the filter. And each -- every -- about every two
16 months, I would drop my truck off at Peterbilt or
17 Kenworth, and it would cost me about four to five
18 thousand.

19 And over the course of two years, Peterbilt and
20 Paccar decided to give me a brand new filter after 35,000
21 of truck repair. So I'm -- the reality, it's really
22 hurting a lot of the regular owners and, you know, small
23 business owners. A brand new truck would cost -- back
24 then a brand new truck cost about 120,00. After the
25 retrofit a brand new truck cost about 160,00 tow to

1 240,000 on average. So whatever you guys gave us was
2 actually -- was barely enough for us to buy a brand new
3 truck.

4 As you know, there's about several hundred
5 thousand -- millions of drivers out there, if you're
6 trying to convert us all to electric, you have to think of
7 the -- actually, I just got a solar for my home, but I
8 didn't get the battery. Because I asked the guy why
9 shouldn't I get battery? It cost me \$6,000 more and 30
10 percent -- I could write off 30 percent on my taxes, you
11 know, on the battery, whatever I bought.

12 I didn't do it, because he said the battery only
13 lasts about 10 years. And I asked him how much would a
14 battery cost? We don't know yet. You know, it could cost
15 another seven, eight thousand. But then they wouldn't
16 guaranty me that it would last 10 years on the battery.

17 Now, think about this, that new law you guys have
18 was what, three years or 50,000 miles warranty, whichever
19 comes first. An average truck driver would drive about 50
20 to 200,000 miles a year. A trip from Bay Area, San
21 Francisco to L.A. is about over 1,000 miles. That's
22 not -- you know, and if you bring -- okay. So we drive --
23 we've six months of warranty, if that. So when the truck
24 breaks down, who pays for it? The driver, the owner.

25 I've dropped my truck off so many times, it's

1 ridiculous. You know, you think about, a repair for
2 Peterbilt, it's always backed up. So you're talking about
3 two weeks of unemployment. I can't work for two weeks,
4 and the repair is \$5,000. I make about 10,000 a month, if
5 that before any, you know, fuel all that, costs.

6 So you -- if you implement these kind of rules,
7 do it on it -- like, just sit on it, like maybe a
8 California -- like -- like on the California like vehicles
9 first, before you do it on like a commercial vehicle. You
10 know, we're -- all we're trying to do is we're trying
11 build roads, homes, and businesses. And now with the new
12 law talking about business owner cannot -- cannot, you
13 know -- cannot work, you know what I'm saying.

14 VICE CHAIR BERG: Thank -- sir, we need you to
15 conclude because your time is up. Thank you so much

16 MR. LE: Okay. I just want to say that, you
17 know, any of these laws you guys make, just think about
18 the regular user first. It's very expensive. And that's
19 about it.

20 And last but not least, there's not a lot -- too
21 many laws against us. We just want to work. We're just
22 regular citizens, you know. So thank you, Board.

23 VICE CHAIR BERG: And thank you very much for
24 coming and testifying. We, appreciate.

25 MR. SCHUCHARD: Good morning, Vice Chair Berg,

1 Board members. I'm Ryan Schuchard with CALSTART. Mostly,
2 we commend CARB for its portfolio of zero-emission vehicle
3 programs and appreciate that the combination of very
4 nuanced requirements and sticks is so important to moving
5 the markets and the technology fast enough to meet -- to
6 meet our very difficult climate change problem.

7 And we greatly appreciate staff's being so
8 responsive to our feedback and others and incorporating
9 into the feedback we've seen today -- or I should say the
10 proposed plan we see today. The issue that we've been
11 most focused on is improving the recall measure, which
12 we -- we have heard from member companies and
13 manufacturers does add costs and uncertainty. But based
14 on the feedback that we've heard and seen in -- and seen
15 incorporated, we do think things are headed in the right
16 direction. We also do recognize that ongoing support and
17 dialogue is happening in other areas as well.

18 But with respect to the recall issue
19 specifically, we are -- we are -- we feel like things are
20 going in the right direction, and we look forward to
21 continuing to be engaged and thank staff for its -- its
22 work with the measures shown today, which we do support.

23 Thanks.

24 VICE CHAIR BERG: Thank you very much.

25 We do have two additional people I think have

1 been listed.

2 MS. MCGHEE: Good after -- good morning. My name
3 is Lisa with San Diego Airport Parking Company. I really
4 appreciate CARB's insight into understanding that fleets
5 really need confidence. This is about reliability. This
6 is about safety. And it's been long overdue.

7 The lessons learned are obvious and this is the
8 reason for this measure. Complying to regulations is a
9 part of moving and being on the roadways. That's never
10 been any different with any other technology, except for a
11 ZEV in the medium- and heavy-duty space.

12 The ZEP certification is long overdue and a
13 voluntary is option not enough. Fleet -- facts are is
14 that the taxpayers have spent over 37 million in the
15 medium- and heavy-duty ZEV sales, 242 vehicles are on the
16 road today with an additional 365 that are by extinct
17 OEMs.

18 The reasons are based on lessons learned. SD --
19 SDAP has been subject long downtimes, and then procuring
20 diesels over ZEVs due to this issue. So ZEVs, when down,
21 do create emissions. Fleets need reliable safe product.
22 These are 100 percent proprietary vehicles with no
23 requirement for garage services. We've had over nine
24 years to be very flexible and innovative.

25 But when adding thousands of pounds of battery

1 packs to base gasoline vehicles or chassis, it impacts the
2 performance, the wear and tear, and many existing ZEV OEMs
3 are new manufacturers in this space, as seen on the HVIP
4 OEM sales list. This is about safety. We are motor
5 carrier commercial operator drivers with strong
6 willingness to support the technology if CARB can provide
7 fleets with useful standards.

8 Warranties, recalls, and defects to correct the
9 issues. These standards are the same as any other vehicle
10 and technology that shares the roads with all other
11 light-duty, medium-duty, and heavy-duty vehicles. We are
12 moving thousands of pounds of passengers and freight.
13 Testings and standards are necessary to comply with
14 standard applicable government regulations that should be
15 no different for the ZEV technology.

16 Downtime creates emissions. Manufacturers should
17 be require to achieve high commitment to robust excellence
18 by ensuring product with quality standards. Additional,
19 the program should not only be mandatory, it should also
20 include Class 2B and Class 3 vehicles. This class has a
21 large market share. And SDAP has provided written
22 comments to support the facts on this segment.

23 Imagine vehicles that can only be repaired by one
24 OEM and commercial operators that run 24/7. Accelerated
25 adoption will only be achieved with robust product.

1 MR. SHUMAKER: Okay. Good morning, California
2 Air Resources Board. The California Hydrogen Business
3 Council and its members support the efforts of the
4 California Air Resources Board and the proposed
5 Zero-Emission Powertrain Certification Regulation. The
6 CHBC commends the collaborative work that the staff
7 members of CARB and the stakeholders in the zero-emissions
8 technology have dedicated to refining this regulation over
9 the past several months.

10 We are supportive of the spirit and intent of the
11 proposed regulation to provide additional transparency,
12 consistency, and stability to heavy-duty zero-emissions
13 markets. These factors are critical for the consumers and
14 users of these vehicles to give them the confidence they
15 need to rapidly expand their adoption of these vehicles,
16 leading to the achievement of California's zero-emission
17 goals.

18 The proposed regulation can accomplish this,
19 particularly with the following additional element to help
20 ensure consumer protection and public confidence in State
21 and private investments in these technologies.

22 A purchase guidance statement is recommended,
23 which would be an additional requirement for a
24 manufacturer specification of key performance parameters,
25 such as power output across the operational temperature

1 range of the powertrain at both beginning of and at the
2 end of the service of the powertrain.

3 Such reports must ensure data be aggregated and
4 anonymized to sufficient degree as to prevent
5 identification of particular manufacturers or fleets,
6 while providing CARB decision-makers sufficient detail to
7 assess incentive programs as they evolve.

8 The suggested addition provides a purchaser the
9 information needed to discuss vehicle operation across the
10 varied climates of California, and over the lifetime of
11 the vehicle with the vehicle manufacturer, while leaving
12 it to the discretion of the purchaser and the manufacturer
13 as to how to ensure these claims are maintained
14 contractually.

15 This reinforces the consistency of vehicle
16 performance and adds stability to the market by clarifying
17 consumer and manufacturer expectations over the varied
18 operational environments of the vehicles.

19 This CHBC applauds CARB and its staff and its
20 forward-looking efforts to rapidly advance the commercial
21 markets for zero-emission heavy-duty powertrain
22 technologies, and looks forward do assisting in this
23 effort for the benefit of the citizens of California.

24 We appreciate your consideration of our comments
25 and offer further discussions with your team to answer

1 potential questions.

2 Thank you.

3 VICE CHAIR BERG: Thank you. And with the last
4 witness then, I'm going to turn back to staff and see if
5 there's any final thoughts before I call on the Board
6 members to see if anybody has any questions.

7 Mics are live.

8 (Laughter.)

9 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
10 CARTER: I can start. Mike Carter. You've heard a lot of
11 testimony today from the witnesses. It's obvious there's
12 been a lot of back and forth between staff and industry,
13 especially in the last two or three weeks. We certainly
14 recognize the concerns and that's why most of our time is
15 spent primarily intending to clarify what staff's intent
16 is all along. And so most of the 15-day changes that
17 you'll eventually see, or hear about, basically do just
18 that. They clarify what our intent is.

19 We tried to strike a balance -- a modest balance
20 between protecting California's investments, making sure
21 these vehicles are durable, they last, they don't -- they
22 don't die after two or three months, especially after a
23 regulatory measure that may come along that may require
24 the purchase of these vehicles. We balance that versus
25 not being overly burdensome to an industry that's

1 relatively new, because we agree we don't want to hinder
2 the acceleration of the heavy-duty market.

3 So just in closing, I think what you've heard
4 today reflects the fact that we did try to do a modest --
5 a modest balanced approach, so...

6 VICE CHAIR BERG: Well, thank you very much, Mr.
7 Carter. And I did hear from several stakeholders that
8 staff was very diligent in listening and learning. And we
9 are developing from a blank sheet of paper, once again,
10 brand new technology. And so I'm sure we'll hear from the
11 Board that we encourage you to continue to do that.

12 Supervisor Gioia.

13 BOARD MEMBER GIOIA: Thanks.

14 Yeah, my understanding is that there's been some
15 flexi -- more flexibility sort of incorporated into the --
16 into this after discussions with those out in the field.
17 The one question I still have is on this mandatory recall.
18 There have been comparisons made that, gee, there's no
19 mandatory recall with zero-emission light-duty vehicles,
20 so that the heavy-duty vehicles here are being treated
21 differently. And there were some comparisons, I think
22 in -- some of that was laid in out in the Tesla letter.
23 Can you talk a bit about that and explain? There does
24 seem to be a difference in treatment. So explain sort of
25 the rationale and your response to that comment.

MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

1
2 CARTER: Sure. Sure. I think the one fundamental
3 difference between the light-duty program and what we're
4 proposing today in this particular category, with the
5 light-duty program, the Teslas, for example, nobody is
6 telling anybody they must buy a ZEV vehicle. This
7 particular rulemaking, albeit optional and will set a
8 framework, future regulatory measures will mandate that
9 fleets or purchasers buy an electric vehicle.

10 And so if we, as the Board, are requiring that
11 that kind of a mandate for fleets to buy these vehicles,
12 we think there should be some protection involved in that.
13 It's -- we think it's our responsibility for that. So
14 that's the big fundamental difference.

15 BOARD MEMBER GIOIA: And the issue is also -- in
16 some cases, it's technically not recall. There's --
17 there's other steps that can be taken. Is the -- and
18 there seems to be some concern over the use of the word
19 "recall" that it -- that may sound worse than what
20 actually will happen.

MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

21
22 CARTER: Right. Well, a traditional recall on the -- on
23 the internal combustion side, if you will, the main
24 difference is the traditional recall requires a minimum
25 capture rate. The manufacturers must bring in a certain

1 percentage of vehicles to get fixed. That may require the
2 manufacturer to provide incentive monies to have people
3 come in and get the thing fixed. The other main
4 difference is there's a DMV tie-in, which would deny
5 registration if the vehicles don't get fixed.

6 What we're proposing today, it does not include
7 any of that. The only responsibility that the
8 manufacturer would have, other than fixing the vehicle, of
9 course, is to properly notify the fleet owners that, hey,
10 there is a recall. Come in get your vehicle fixed. And
11 the responsibility for the manufacturer, other than fixing
12 the vehicle, as I said, ends at that point. So that's the
13 main difference.

14 And with regard to the comment about the word
15 "recall", frankly, staff used the word recall, it is what
16 it is, although, it may be a little bit different. The
17 recall has a very common understood meaning, what it
18 means. And we didn't feel it was necessary to dilute
19 that, and perhaps even confuse people, in terms of what it
20 is and what you can do to get your vehicle fixed. So in
21 staff's view, we don't -- we're not in favor of changing
22 that word.

23 BOARD MEMBER GIOIA: Thank you.

24 VICE CHAIR BERG: Thank you. Are there other
25 Board members that would -- Ms. Mitchell.

1 BOARD MEMBER MITCHELL: Thank you.

2 And I want to say also to staff that thank you
3 very much for working with the stakeholders on this. I
4 understand that a lot of work has been done and there's
5 still more to be done apparently.

6 We heard some main themes from people today,
7 recall one of them, battery testing, the documentary --
8 documenting the changes to the vehicle, the burden that
9 might be imposed on OEMs, and an urgency to streamline the
10 process. So we expect you to keep working on this, and
11 we'll hear back from you as -- as this gets worked out.

12 And I think the Board would like to hear from you
13 as the -- as the -- as the regulation as voluntary as this
14 program is implemented. So we look forward to further
15 work on the project and thank you, staff, for being
16 flexible, working with our stakeholders. We appreciate
17 that.

18 CHAIR NICHOLS: I take it -- I apologize. I had
19 to leave the room. I've had a couple of calls this
20 morning relating to the announcement that the White House
21 put out today about closing off the discussions with
22 California about the vehicle -- light-duty vehicle
23 greenhouse gas emission standards and the CAFE rules,
24 which I would be happy to report on to you in a moment,
25 but we're kind of in the middle of things. And so I just

1 want to make sure that we are at the stage where the staff
2 is responding to comments that they heard from the
3 audience, and then I want to close the record so we can
4 have a more robust conversation among the Board members.

5 So if your question or comment has been
6 addressed, then -- okay. Then I'll just call on anybody
7 else who may have a question for the staff this stage?

8 And if not, then I will close the record. I'm
9 sorry. Excuse me, Dan.

10 BOARD MEMBER SPERLING: I guess I do have some
11 clarification questions. I'm trying to get my head -- I
12 guess I didn't fully understand this rule. Basically,
13 we're doing this because -- for -- because we're mandating
14 the purchase of electric trucks, is that right?

15 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
16 CARTER: Well, as I said earlier, this -- this is an
17 optional measure that will set the foundation for future
18 regulatory measures that want to use this procedure as
19 part of their rulemaking. So as you'll hear in the next
20 measure, the airport shuttle rule, they will reference
21 this measure as a mandatory measure in subsequent years,
22 in 2026. But you'll hear about that later.

23 BOARD MEMBER SPERLING: But it won't apply to
24 purchases of trucks or buses that are not under some
25 mandatory purchase requirement?

1 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
2 CARTER: No. As I said, this is an optional rule as it --
3 by itself, it's an optional rule.

4 BOARD MEMBER SPERLING: Okay.

5 CHAIR NICHOLS: But it is pretty clear the
6 foundation for incorporated into some rules that will be
7 mandates, yeah.

8 BOARD MEMBER SPERLING: Okay. And I guess just
9 before we get into this discussion, just a clarification.
10 On one of the pages, it said there was a \$720 cost per
11 vehicle. Is that per vehicle model or actual vehicle?
12 Because when I do the math, you say the total cost is
13 \$250,000 over five years, which would imply there's only
14 300 vehicles going to be sold in five years. I guess, I
15 didn't understand.

16 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
17 CARTER: Yeah. Well, I'm going to ask my staff to answer
18 that in details. But the \$720 per vehicle, that is a per
19 vehicle price. That's correct. But just to clarify in
20 the general terms of the cost estimates this the staff
21 have or they estimated, those costs are what we view are
22 above and beyond what the manufacturers would be doing
23 anyway. And to be even more conservative, some of those
24 costs do include what the manufacturers do anyway. But we
25 included them just to be conservative. And maybe, David,

1 if you could add more detail.

2 MSCD ADVANCED EMISSION CONTROL STRATEGIES SECTION

3 MANAGER CHEN: Sure. This is David Chen.

4 So the actual \$720 number comes from the impact
5 on all companies that were in the analysis -- cost
6 analysis that we'd be making that made zero-emission
7 vehicles for HVIP. And so that -- what you see that
8 250,000 only includes the California businesses -- the
9 cost to California businesses. And so you can't really
10 get from that number directly to the \$720.

11 BOARD MEMBER SPERLING: Okay. Okay. And I'll
12 defer other --

13 CHAIR NICHOLS: Okay. Thanks.

14 I will officially close the record at this point
15 and remind everybody that this is the first of two Board
16 hearings. And that the record will be reopened when the
17 15-day notice of public availability is issued. Written
18 or oral comments received after that date but before the
19 15-day notice is issued will not be accepted as part of
20 the official record on this agenda item.

21 When the record is reopened for a 15-day comment
22 period, then the public may submit written comments on the
23 proposed changes, which will be considered and responded
24 to in the Final Statement of Reasons.

25 So that's -- that is our process now. It's a

1 two-part process. So at this point, however, we do have a
2 resolution in front of us, which instructs the staff to
3 work on the 15-day changes and to return to the Board. So
4 we have an opportunity, at this point, if the Board wishes
5 to do so to give some explicit instructions to the staff
6 about what we would like them to put into these 15-day
7 changes.

8 And I know there's been a couple of issues raised
9 about the recall provision. I think that's pretty much
10 where it's at -- the only area of any real controversy at
11 the moment.

12 And I have to say, there is a -- definitely a
13 balance here between our desire to make sure that as we
14 are in the business of promoting electric trucks and
15 buses, that we be providing a level of assurance to the
16 fleet owners that are going to be purchasing these things
17 that they're going to have some recourse if they don't
18 work as they were supposed to versus the fact that any
19 requirement also has the potential to slow down or make
20 people less willing to invest in these new technologies at
21 additional cost to the people who are making them.

22 I feel like we probably will improve our ability
23 to refine these provisions as time goes on. But I think
24 having a recall provision is certainly useful. Frankly, I
25 think making it applicable only when it's -- the thing is

1 inoperable may be asking for -- you know, almost asking
2 for vehicles to become inoperable, which we certainly
3 don't want to have happen.

4 So I -- I'm open to finding a better way, but I
5 can't really think of one at the moment. That's -- that's
6 not a very helpful statement, I realize. But anyway, I
7 would ask any Board members who wish to comment on this
8 point before we bring the resolution forward to do so.

9 BOARD MEMBER SPERLING: Yeah. Just a little bit
10 of follow up on that, because I was a little confused,
11 because the Tesla person -- I don't -- maybe they were
12 referring to an earlier version, but they were saying
13 that, you know, because it's -- this is different, there
14 are no emissions, and that it should only apply if they're
15 inoperable. But I thought that is what the rule says. Is
16 that -- is that right? So was it Tesla -- okay, yeah.

17 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
18 CARTER: Actually, the existing -- the 45-day -- the
19 original, no, it does not say that. So part of the
20 15-day, we are making it crystal clear that we're talking
21 about inoperable. Yes, so it will be part of that.

22 CHAIR NICHOLS: So there's been conversations
23 going on, I think, on an ongoing basis. But what's
24 actually in front of us does not include that.

25 BOARD MEMBER SPERLING: Okay.

1 CHAIR NICHOLS: Yeah. Any other -- yes, Ms.
2 Mitchell

3 BOARD MEMBER MITCHELL: I'll just follow up on
4 that. Because right now, CARB and South Coast are doing
5 some pilot programs that are involving electric trucks.
6 And I think this is really critical that we're working on
7 this and getting to -- eventually to a standard that
8 people will know they have to meet. So I -- and as --
9 as -- these -- we've had these conversations with some of
10 the stakeholders as your working on this. So
11 understanding the confusion about what was in the original
12 proposal that you put out, and what you're now proposing
13 in the 15-day changes is much different.

14 So we look forward to when you come back and
15 hopefully you will have worked out many of those
16 differences. But I do think this is a critical program,
17 because of things that are ongoing right now, and
18 particularly in South Coast, but, you know, other places
19 across the state with pilot programs.

20 Thank you.

21 CHAIR NICHOLS: So are we prepared to act on the
22 resolution at this point then?

23 VICE CHAIR BERG: I'd just like make a comment.

24 CHAIR NICHOLS: Yes. Go ahead.

25 VICE CHAIR BERG: I just want to make sure that

1 staff feels that they have the direction from the Board to
2 continue to work with stakeholders on all the things that
3 you have been doing, because there has been tremendous
4 progress, understanding one size doesn't fit all, looking
5 at the various cost issues. So when you come back to us,
6 that you feel we have the best product forward to start on
7 this voluntary measure, understanding that we are setting
8 a standard to go forward to become non-voluntary at some
9 point. You're good to go?

10 CHAIR NICHOLS: I see heads nodding.

11 Say yes.

12 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

13 CARTER: Yes.

14 CHAIR NICHOLS: Okay.

15 VICE CHAIR BERG: Okay. Good. I'm ready, Madam
16 Chair.

17 CHAIR NICHOLS: Are you now making a motion to
18 approve the resolution.

19 VICE CHAIR BERG: I will make the motion to
20 approve the resolution.

21 CHAIR NICHOLS: Okay. Thank you.

22 BOARD MEMBER MITCHELL: Second.

23 CHAIR NICHOLS: And Ms. Mitchell is seconding.

24 Any further comments?

25 If not --

1 BOARD MEMBER SPERLING: Yes. No, I would like
2 to --

3 CHAIR NICHOLS: Yes.

4 BOARD MEMBER SPERLING: So I'd like to add to
5 what Vice Chair Berg said that I think that we want to be
6 cautious. This is a new product, one that we promote,
7 that we want. And I think -- I would suggest that going
8 forward we -- I mean, we can -- this is essentially a
9 lemon law. And we should -- and we're protecting the
10 consumer. But I think we should be a little light-handed
11 going forward both in terms of the -- you know, any sense
12 of onerousness or cost. That we do want to protect the
13 consumer, but we want to be gentle in how we approach
14 that. And I'm not going to quantify gentle, but --

15 (Laughter.)

16 BOARD MEMBER SPERLING: -- as has general
17 guidance.

18 CHAIR NICHOLS: Yeah. Having -- let's just say I
19 don't know that you were directly involved, but I think
20 you were on the Board at the time, but when we were
21 dealing with the complaints from the truck owners who were
22 unhappy about the particulate filters that we mandated,
23 there was nothing gentle about that process --

24 (Laughter.)

25 CHAIR NICHOLS: -- at any stage. So I think

1 people remember that. And frankly, you know, to the best
2 extent we can, without impeding progress, we really want
3 to try to make sure that we don't end up with a backlash
4 on the part of the people who buy these things.

5 BOARD MEMBER RIORDAN: Yes. Madam Chairman, I do
6 remember that, and -- very well. And so it's a delicate
7 balance that we have to have here. And -- but I also
8 remember that we had to do a lot -- an awful lot of work
9 and -- to try to help those people who had purchased some
10 of those filters. And I think, you know, there's --
11 there's -- it's important that staff go forward sort of
12 again with your delicate balance that you have to somehow
13 create there, but I -- I do remember the failures. And I
14 remember that -- what we had to do to accommodate those.
15 So thank you.

16 CHAIR NICHOLS: Well, you know, what this really
17 means is that the cost of having to maintain
18 responsibility over time will get built into the cost of
19 the product. That's -- that's how it will actually end
20 up.

21 Ms. Takvorian.

22 BOARD MEMBER TAKVORIAN: Yeah. Just -- I
23 appreciate and agree with all the cautions and direction,
24 in terms of the changes. But I just want to say, and I've
25 talked about this with staff, that I think this is so

1 going to increase confidence for those that can be early
2 adapters. And I think that we know that many of them are
3 adjacent to or in environmental justice communities. So
4 we're looking for those changes to happen more quickly, so
5 we won't be hearing the lack of confidence come forward --

6 CHAIR NICHOLS: Right.

7 BOARD MEMBER TAKVORIAN: -- so -- so much. So I
8 really appreciate the work that the staff has done. And I
9 think that's really going to help us all to have more
10 confidence, so that we can move more quickly. So thank
11 you very much.

12 CHAIR NICHOLS: Thank you.

13 All Right. We have a motion on the table and a
14 second. I think we can do this with a voice vote.

15 So would all who are in favor please say aye?

16 (Unanimous aye vote.)

17 (Board Members Serna and De La Torre were
18 not present.)

19 CHAIR NICHOLS: Any opposed?

20 Any abstentions?

21 Okay. Great. Thank you. And we will look
22 forward to hearing back again one this one. And I think
23 we should be able to take up now the Airport Shuttle
24 Regulation. Do we have a need to change staff or take a
25 break here?

1 Okay. Just while the presenters are moving
2 forward.

3 So while they're -- while they're moving, I think
4 probably everybody knows by now that The White House
5 issued a press release this morning - there had been
6 rumors about this for days - saying that they were
7 breaking off negotiations with California, because
8 California had failed to present an alternative to their
9 proposed so-called SAFE rule, which is the rollback of the
10 emissions standards for light-duty trucks and cars from
11 2022 to 2025. This is a saga that's been going on
12 since -- well, really, since 2012.

13 But since the Trump administration has been in
14 office, they have been working very steadily in the
15 direction of trying to get rid of these Obama era
16 standards. And we're already in litigation with the
17 administration over former administrator Pruitt's finding
18 that these standards were no longer feasible or necessary.

19 And now we've got a new proposal out there which
20 is going to be turned into a final. There have been
21 several meetings, at least five meetings that I know of,
22 between us and members of the Trump administration, as
23 well as many meetings with the auto companies separately
24 to try to find whether there was a way to give some relief
25 to the companies who feel like they're having difficulties

1 complying, particularly with the CAFE requirements, given
2 changes in their model mix, and what people are buying,
3 and other cost-related issues, as well as the
4 Administration, which has been threatening, from the very
5 beginning, to try to override California's waiver and, you
6 know, try to take away our authority to -- to adopt don't
7 standards.

8 So the proposal that -- it's not a proposal.
9 It's a press release that came out today, it doesn't talk
10 about waivers or preemption. It only talks about the fact
11 that they're not going to talk to California anymore, but
12 are going to proceed to a final rule.

13 And so many people are now trying to figure out
14 how to respond to this statement as you can imagine. But
15 from our perspective, I think the important thing is that,
16 you know, we're doing this not only for ourselves, but for
17 other states and the people of all these states who follow
18 our rules, and for the United States as a whole now,
19 because this is the single most important climate
20 protection measure that we have at this stage as a
21 country.

22 And so eliminating it or drastically cutting back
23 on it would really be a very bad thing for -- for the
24 country as a whole. And even the auto companies, although
25 they are trying hard to avoid getting caught in the middle

1 of this, have recognized publicly that the proposal that's
2 coming out of the Trump administration is not good for
3 them either. That it actually will hurt them with their
4 consumers. It will hurt progress that they've made. So
5 it's -- it's just a bad situation.

6 But unfortunately, in terms of, you know,
7 crafting public comments on this, nothing has actually
8 happened. You know, there's -- there is nothing new out
9 there. We've been saying for a long time that there
10 really weren't any negotiations going on, because that was
11 true. And so now we just have to wait to see what will
12 actually emerge from the federal process, which is now at
13 the Office of Management and Budget, and drafting is going
14 on with the DOT and EPA.

15 And eventually, sometime, potentially as early as
16 April, but more likely later, because of the government
17 shut down, as well as the volume of comments that they've
18 received and that they have to respond to, more likely it
19 will be May or even June, we will see a final rule. And
20 at that point, we will have to be prepared to take action.

21 But we are -- we are prepared, so that's what's
22 going on. But in the mean time, as usual, whenever
23 there's any sign of some movement on this, lots of people
24 get excited.

25 (Laughter.)

1 CHAIR NICHOLS: So I had to go take some phone
2 calls in the midst of our morning's activities. I'm happy
3 to give anybody more details if they want as we go
4 forward.

5 But we are now ready to talk about airport
6 shuttles, and zero-emission airport shuttles. So I think
7 we should -- I'll just say briefly that these vehicles put
8 a lot of miles on. And so anything we can do to help
9 reduce emissions is going to be important. These vehicles
10 are typically owned and operated either by the airport
11 itself or by other public and private business. And we
12 can certainly see that there will be a benefit from an air
13 quality perspective and a climate one as well.

14 And apparently, we've seen technology emerging
15 that's quite workable for this, and some airports, in
16 fact, already converting their fleets to zero-emissions
17 operations. As we understand it, there's about 110
18 zero-emission shuttles, either in use or already on order.
19 And this obviously -- our proposal that's before us today
20 would accelerate the transition and expand the market for
21 these kinds of vehicles.

22 So again, this is the first of a two-part Board
23 action, and we can turn to the staff for a presentation.

24 Mr. Corey.

25 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

1 And as part of the State Implementation Plan,
2 this Board identified this sector as one that would help
3 expand the implementation of zero-emissions medium- and
4 heavy-duty vehicles.

5 A successful transition in this sector will
6 contribute to CARB's air quality and climate goals, while
7 providing a bridge towards zero emission pathways and
8 other sectors. Now, as you mentioned, airport shuttles
9 frequently operate on fixed short routes, which make them
10 excellent candidates for transitioning to zero-emission
11 technologies.

12 The proposed regulation will require public and
13 private airport shuttle fleets, including operators of
14 parking facilities, rental car agencies and hotels to
15 transition -- to transition to zero-emission vehicles by
16 2035. Staff proposals will encourage the conversion to
17 cleaner technology, while ensuring that airports and other
18 shuttle operators have a sustainable, economic path
19 forward that will include the opportunity to compete for
20 federal and State incentive funding.

21 In addition, the proposed regulation will be the
22 first to take advantage of the Zero-Emission Powertrain
23 Certification process that was just discussed for 2026 and
24 later model years. Heavy-duty zero-emission airport
25 shuttles will be required to certify to these

1 requirements.

2 I'll now ask Anthony Poggi of the Mobile Source
3 Control Division to give the staff present.

4 Anthony.

5 (Thereupon an overhead presentation was
6 Presented as follows.)

7 AIR POLLUTION SPECIALIST POGGI: Thank you, Mr.
8 Corey. Good morning, Chair Nichols and Board members.

9 Today, I will present for your consideration our
10 proposed Zero-Emission Airport Shuttle Regulation. Staff
11 has worked closely with airports, businesses, and
12 environmental groups and other stakeholders over the past
13 two and a half years to develop a zero-emission airport
14 shuttle proposal that achieves criteria and greenhouse gas
15 emission reductions and advances zero-emission technology,
16 while remaining mindful of how airport shuttle operators
17 plan, operate, and maintain their vehicles.

18 --o0o--

19 AIR POLLUTION SPECIALIST POGGI: In this
20 presentation, I will describe why zero-emission vehicle,
21 or ZEV, technology is a good match for the airport sector
22 and present staff's Zero-Emission Airport Shuttle
23 proposal, the economic and environmental impacts, and our
24 next steps.

25 --o0o--

1 AIR POLLUTION SPECIALIST POGGI: Staff developed
2 this proposal to fulfill a commitment to the 2016 State
3 Implementation Plan, or SIP. The SIP called for an
4 airport shuttle measure to complement existing programs to
5 achieve NOx and greenhouse gas reductions through the use
6 of zero-emission technology.

7 By transitioning airport shuttles to
8 zero-emission technology, the regulation will help expand
9 the reach of the first wave of this technology in the
10 heavy-duty sector.

11 --o0o--

12 AIR POLLUTION SPECIALIST POGGI: In developing
13 this proposal, we needed an approach that would work for
14 stakeholders of varying sizes. California airports are a
15 diverse group, categorized as small, medium, and large
16 hubs, according to the annual number of passenger
17 enplanements.

18 California contains two of the 10 busiest
19 airports in the United States. And the airports listed on
20 this slide represent 90 percent of all passenger traffic
21 in California. These airports, along with large and small
22 private businesses, utilize shuttles to transport
23 passengers around airport property, as well as to and from
24 private businesses, such as hotels and parking facilities.

25 --o0o--

1 AIR POLLUTION SPECIALIST POGGI: This
2 transportation is provided by a variety of vehicle types,
3 ranging from Class 2b and 3 typical 12-passenger vehicles
4 and cutaways to low-floor transit style buses. These
5 vehicles have an average useful life of 12 years.

6 On-airport shuttles are comprised mostly of low
7 floor buses, while Class 4 16-passenger cutaways make up
8 the majority of off-airport shuttles.

9 Nearly 80 percent of the total inventory is
10 fueled by CNG, while gasoline, LPG, diesel, and
11 battery-electric ZEVs make up the remaining 20 percent.

12 --o0o--

13 AIR POLLUTION SPECIALIST POGGI: In fact, ZEV
14 shuttles are already operating throughout California.
15 Four California airports, as well as private businesses
16 serving eight airports have purchased ZEV airport
17 shuttles. In addition to the 48 ZEVs currently operating,
18 62 additional zero-emission shuttles have been ordered and
19 awarded incentive funding. These 110 shuttles represent
20 over 10 percent of all the shuttles in California.

21 --o0o--

22 AIR POLLUTION SPECIALIST POGGI: The move to
23 zero-emission shuttles is not limited to California.
24 Airports across the United States are also adopting ZEVs.
25 Seven airports across the United States currently operate

1 or have ordered ZEV shuttles.

2 Internationally, Schipol Airport in the
3 Netherlands and Sydney Airport in Australia have a
4 combined 81 ZEVs in operation or on order. Projects
5 across the United States and the world further demonstrate
6 the technological and market readiness of zero-emission
7 shuttles for airport operations.

8 --o0o--

9 AIR POLLUTION SPECIALIST POGGI: The reason for
10 the widespread adoption of ZEV shuttles is that they are a
11 good fit for airport operation. They operate up to 200
12 miles per day on short, fixed routes with low average
13 speeds and stop and go operation. ZEVs have an advantage
14 over internal combustion vehicles in terms of energy and
15 fuel efficiency, as well as maintenance costs in this type
16 of duty cycle. Airport shuttles are essentially
17 maintained and fueled, which presents opportunities for
18 overnight and mid-day charging. As the technology
19 evolves, costs and performance will continue to improve
20 furthering the transition to ZEVs into the airport shuttle
21 sector.

22 --o0o--

23 AIR POLLUTION SPECIALIST POGGI: The
24 cornerstone -- cornerstone of our proposal, which drives
25 that transition is the in-use fleet ZEV requirement. In

1 addition to that, we are also providing -- we are also
2 proposing reporting requirements and a no backsliding
3 provision.

4 Beginning in 2022, fleets will be required to
5 report the details of their zero-emission shuttles.
6 Reporting will serve as a compliance check, and will be
7 used by airports prior to granting access to airport
8 property. Staff will work with stakeholders to improve --
9 improve efficient and practical enforcement through a
10 registration process.

11 Starting in 2023, if fleets are replacing a ZEV
12 shuttle, the replacement vehicle must also be a ZEV. This
13 no backsliding provision provides assurances to funding
14 programs that ZEV operation will be maintained.

15 To ensure fleets get reliable ZEV shuttles, the
16 staff proposes that beginning with model year 2026,
17 shuttles must comply with the Zero-Emission Powertrain
18 Certification Regulation in order to be counted towards
19 Compliance with the Zero-Emission Airport Shuttle
20 Regulation.

21 The in-use -- the in-use fleet requirements are
22 phased in beginning in 2027 as shown here. It allows for
23 fleets consisting of less than three vehicles to have
24 additional time prior to purchasing their first zero
25 emission shuttles.

1 A fleet of two vehicles will not have to purchase
2 their first ZEV until 2031, and a single shuttle fleet
3 would have until 2035. This schedule is designed to allow
4 fleets to remain eligible for incentive funding for
5 several years, use their current shuttles for the
6 remainder of their useful life, and provides adequate time
7 for infrastructure planning and installation.

8 --o0o--

9 AIR POLLUTION SPECIALIST POGGI: In order to
10 recognize the variable nature of airport operations, the
11 proposal includes a number of compliance flexibilities
12 that allow airports and businesses to transition
13 zero-emission shuttles while maintaining their normal
14 operation.

15 The proposal allows for fleets to maintain a
16 low-mileage, combustion-fueled, reserve fleet. Reserve
17 vehicles will be limited to 3,000 miles per year. As part
18 of a 15-day change, staff will address the issue of
19 emergency operation of these reserve vehicles.

20 The proposal also allows fleets to apply to the
21 Executive Officer for compliance extensions, if
22 infrastructure construction is delayed due to site
23 restrictions or other circumstances outside of the fleet's
24 control.

25 Finally, this proposal exempts all transit

1 vehicles that are already subject to the Innovative Clean
2 Transit Regulation.

3 --o0o--

4 AIR POLLUTION SPECIALIST POGGI: Economically,
5 the switch to zero-emission vehicles will result in
6 long-term savings. Staff has prepared an economic
7 analysis detailing potential economic impacts.

8 This analysis shows that zero-emission shuttles,
9 like most new technologies, may have a higher upfront
10 cost, but they have a lower operating cost than their
11 internal combustion counterparts. Overall, our analysis
12 estimates that the proposal will yield cost savings of \$30
13 million to airport shuttle operators from 2020 to 2040.

14 Savings are due to reduced fuel and maintenance
15 costs and include the use of Low Carbon Fuel Standard
16 credits for electricity. Although each shuttle fleet is
17 different, we found that zero-emission airport shuttles
18 have a positive payback over their useful life and that
19 overall savings begin to outweigh the overall costs during
20 the 8th year of operation.

21 This payback occurs even in the absence of
22 available incentive opportunities that can reduce or
23 eliminate much of the upfront costs of ownership.

24 --o0o--

25 AIR POLLUTION SPECIALIST POGGI: This is an

1 example of the lifetime cost savings of a typical ZEV
2 airport shuttle compared to a CNG shuttle. We feature a
3 Class 4 cutaway in this example, because it is the most
4 common airport shuttle type. The shuttle purchase takes
5 place in 2027, which is the first year of the proposal's
6 fleet composition requirements. Amortizing the vehicle
7 and infrastructure clock -- costs, including fuel savings,
8 maintenance savings, and LCFS credits results in an
9 overall savings of over \$80,000 throughout the 12-year
10 life of the vehicle.

11 You'll note at the bottom, we included the Hybrid
12 or Zero-Emission Voucher Incentive Program, or HVIP,
13 amount. HVIP provides up to \$90,000 in incentive funds
14 for a Class 4 vehicle. Use of incentive funds like HVIP
15 can drastically decrease the cost of the shuttle and the
16 charging infrastructure causing the net savings of a ZEV
17 purchase and operation to occur as early as the third year
18 of operation.

19 --o0o--

20 AIR POLLUTION SPECIALIST POGGI: In addition to
21 HVIP, there are several other State and federal programs
22 that provide access to incentive funding for zero-emission
23 buses, infrastructure, or credits for the usage of
24 low-carbon fuels. These programs can drastically reduce
25 the fleet owner's costs.

1 While we recognize the funds are not dedicated
2 exclusively for airport shuttles, and that there are never
3 enough funds to go around, we want to be clear that
4 opportunities exist. The proposed regulation is designed
5 to allow airport shuttle owners the opportunity to access
6 these incentive funds, if they act early. Fleets of less
7 than three vehicles will have more time to access
8 incentives.

9 --o0o--

10 AIR POLLUTION SPECIALIST POGGI: As support for
11 the proposal, staff also prepared a Draft Environmental
12 Analysis or EA. The Draft EA was released for a 45-day
13 comment period on January 4th of 2019.

14 The public comment period closed on February
15 19th, 2019 and staff will be preparing written responses
16 to all the Draft EA comments received. Staff will present
17 the Final EA and written response to comments on the Draft
18 EA to the Board at a second hearing later in 2019.

19 --o0o--

20 AIR POLLUTION SPECIALIST POGGI: The analysis
21 shows that the proposal will contribute to air quality
22 improvement throughout the state, including low-income and
23 disadvantaged communities, especially those in proximity
24 to major airports. The results of the analysis included
25 statewide emission reduction of 138 tons of NOx, and a 90

1 percent reduction in GHGs from the airport shuttle sector
2 by 2040.

3 Although the total tons of reductions are not
4 high, the proposal yields additional important benefits.
5 The deployment of ZEVs will also reduce reliance on
6 petroleum fuels and support job creation from the
7 manufacturing of ZEVs, and the installation of fueling
8 infrastructure. It will also support the SIP goal to
9 increase adoption of ZEV technology in the heavy-duty
10 sectors.

11 By requiring ZEP Certification, not only will
12 shuttle purchasers benefit, but the proposal will also
13 encourage increased manufacturing and support educational
14 elements, like workforce training, as well as operations
15 and maintenance expertise. We're committed to partnering
16 with stakeholders to augment these processes, which will
17 increase consumer confidence in zero-emission vehicles.

18 --o0o--

19 AIR POLLUTION SPECIALIST POGGI: As mentioned, a
20 benefit of the proposal is that it would help serve some
21 highly impacted communities. The majority of emission
22 reductions from the proposed regulation will occur in the
23 South Coast Air Basin and the San Francisco Bay Area Air
24 Basin, shown in the maps on this slide.

25 Regulated airports are highlighted in red, and

1 disadvantaged communities are highlighted in orange. The
2 shaded circles illustrate the 15-mile radius in which
3 shuttles subject to the proposed regulation operate.

4 --o0o--

5 AIR POLLUTION SPECIALIST POGGI: I'd also like to
6 note that this proposal is only one of several efforts to
7 reduce emissions associated with airports. South Coast
8 AQMD is working with their airports on memorandums of
9 understanding to achieve additional emission reductions.
10 They hope to finalize their process later this year.

11 Additionally, the recently approved Senate Bill
12 1014 will require transportation network companies to
13 reduce greenhouse gases and transition to ZEVs. Staff is
14 also developing a proposal that would achieve emission
15 reductions by requiring zero-emission airport ground
16 support equipment.

17 Finally, it should be recognized that airports
18 have also implemented other efforts, such as electric rail
19 and links to public transit that may reduce their reliance
20 on airport shuttles.

21 --o0o--

22 AIR POLLUTION SPECIALIST POGGI: In conclusion,
23 staff recommends that the Board adopt the resolution
24 directing staff to return with a final version of the
25 proposed regulation to ensure the transition to

1 zero-emission airport shuttles.

2 The proposed changes will be made available for
3 public comments for an additional 15-day comment period,
4 and those changes will be presented to the Board at a
5 future hearing.

6 Staff will consider suggestions in the public
7 comments for additional improvements, and expects to make
8 changes available for public comments in the April time
9 frame. The second hearing is anticipated in May of this
10 year to finalize the Environmental Analysis and for the
11 Board to vote on the updated proposal.

12 This concludes my presentation.

13 Thank you.

14 CHAIR NICHOLS: Thank you. Just for planning
15 purposes, we have 20 witnesses who've signed up to speak
16 on this item. So if each of them took three minutes and
17 there was no time in between, that would be a full hour.

18 We could possibly break in the middle of all of
19 this, which might be good for everybody, including the
20 court reporter. I think maybe what we should do is just
21 establish a time for a break now and then make it a short
22 one, so that we keep moving forward without too much
23 disruption of people's days.

24 But I think we'll just go down the list in order
25 then beginning with Alan Abbs. Hi.

1 MR. ABBS: Good morning, Chair Nichols and
2 members of the Board. I'm Alan Abbs with the Bay Area Air
3 Quality Management District. I want to begin by thanking
4 the Air Resources Board for the opportunity to comment on
5 this process, and ARB staff for their work in developing
6 the proposed Zero-Emission Airport Shuttle Regulation.

7 Overall, we strongly support the proposed
8 regulation that would accelerate the adoption of
9 zero-emission vehicle technology in airport shuttles, and
10 transition these fleets to full ZEV adoption by 2035.
11 Over the past two decades, the Bay Area AQMD has provided
12 over \$7 million to 21 projects, and has eliminated over
13 330 diesel-powered vehicles serving Bay Area airports,
14 including new purchases of or retrofit to CNG vehicles
15 when CNG was the best available clean-air vehicle
16 technology.

17 The proposed regulation would move one step
18 further and virtually eliminate tailpipe emissions from
19 airport shuttles, including those operating at and around
20 three Bay Area airports, San Francisco, Oakland, and San
21 Jose, which are among the 13 largest California airports
22 that will be regulated by the proposed regulation.

23 The accelerate transition of airport shuttles to
24 zero is an important step to accelerate the use of
25 advanced technologies in medium and heavy-duty vehicles to

1 meet the Bay Area's air quality climate and public health
2 goals, including our district's newly establish Diesel
3 Free by '33 initiative.

4 IN addition, along with other technology
5 transformation regulations, such as the Innovative Clean
6 Transit Regulation, the proposed regulation will
7 contribute to technology advancement, deployment of
8 charging and fueling infrastructure, increase of public
9 visibility of zero-emission vehicle technologies, and the
10 expansion of zero-emission technologies to other medium-
11 and heavy-duty off-road and on-road sectors.

12 We appreciate CARB's consideration of this
13 regulation. We look forward to continuing our partnership
14 with CARB staff and support -- and to support the
15 successful implementation of this regulation.

16 Thank you very much.

17 CHAIR NICHOLS: Thank you.

18 BOARD MEMBER BALMES: Madam Chair?

19 CHAIR NICHOLS: Yes.

20 BOARD MEMBER BALMS: May I make a quick comment?

21 CHAIR NICHOLS: Yeah.

22 BOARD MEMBER BALMES: So I just want to recognize
23 that it's CAPCOA's loss and the Bay Area Air Quality
24 Management's gain in terms of Alan's change in position.

25 BOARD MEMBER GIOIA: We're glad to have Alan in

1 the Bay Area.

2 (Laughter.)

3 MR. NEUENBURG: Good morning, Chair Nichols, CARB
4 Board, and staff. I'm Mike Neuenburg and I'm representing
5 the Sacramento Metropolitan Air Quality Management
6 District today. It's a pleasure for me to speak to all of
7 you today in support of the proposed Zero-Emission Air
8 Shuttle Regulation.

9 The Sacramento International Airport is a major
10 source of emissions in the Sac Metro Air District's
11 jurisdiction. And the use of zero-emission airport
12 shuttle buses will reduce overall exposure to air
13 pollution for airport workers and travelers. This
14 regulation complements the strong regional efforts of the
15 Sac Metro Air District, SACOG, and the City of Sacramento
16 to promote zero-emission vehicles and mobility options.

17 We are closely working with our transit partners,
18 like Regional Transit, who is receiving a 2.2 million
19 green region grant from SACOG, and another two million
20 SECAT grant from our agency to provide many zero-emission
21 buses. Some of them will be traveling between the airport
22 and downtown Sacramento on a regular basis.

23 Connecting zero-emission transit with
24 zero-emission airport shuttles is clearly a priority for
25 our region. Our local SECAT, Moyer, and Community Air

1 Protection Programs are already funding similar
2 zero-emission vehicles throughout the Sacramento region,
3 such as electric school buses, heavy-duty trucks and buses
4 and microtransit vehicles as well.

5 Currently, the Sacramento International Airport
6 shuttles are using CNG technology. With many airlines
7 using zero-emission ground equipment, incorporating
8 zero-emission parking shuttles will be a helpful and
9 viable commit -- visible commitment to clean vehicle
10 technology.

11 Sacramento International Airport is also working
12 with SMUD, our local utility provider, to support fast
13 charging and upgrade the electrical service to support
14 heavy-duty electric vehicles. Airport staff have already
15 secured funding to help cover the cost of the technology.
16 And the implementation timeline will allow the airport to
17 incorporate the zero-emission purchases into their normal
18 vehicle turnover. I just want to thank you for allowing
19 our agency the opportunity to speak to you today.

20 CHAIR NICHOLS: Thank you.

21 MR. PIRVEYSIAN: Good morning, Madam Chair and
22 Honorable Board members. My name is Zorik Pirveysian,
23 Planning and Rules Manager with South Coast Air Quality
24 Management District.

25 Thank you for the opportunity to comment on

1 CARB's proposed Zero-Emission Airport Shuttle Regulation.
2 SCAQMD staff appreciates the efforts by CARB staff in
3 developing this proposed regulation to transit airport
4 shuttle fleets to zero-emission technology, implementing
5 one of the key measures of CARB's 2016 SIP strategy, and
6 SCAQMD's 2016 Air Quality Management Plan.

7 As you know, the South Coast Air Basin is facing
8 a major challenge in meeting the 8-hour ozone standards,
9 requiring significant -- significant levels of NOx
10 reductions in the range of 45 and 50 percent by 2023 and
11 2031 respectively.

12 Transition to zero- and near zero-emission
13 technologies will be absolutely essential for the South
14 Coast Air Basin to meet these attainment goals.

15 The proposed regulation would require airport
16 shuttle fleets to phase-in zero-emission shuttles starting
17 with 33 percent implementation in 2027 to 100 percent ZEV
18 fleets by 2035. We fully support the proposed regulation
19 as it will accelerate the use of zero-emission
20 technologies in airport shuttles, providing clean air and
21 health benefits to air travelers as well as surrounding
22 communities around airports.

23 In addition, the proposed regulation will further
24 facilitate the development and deployment of zero-emission
25 technologies for other heavy-duty vehicles sector. All of

1 this will help achieve much needed NOx and PM2.5 emission
2 reductions for our basin, as well as reaching the State's
3 GHG emission reduction goals.

4 We also believe that the continuous
5 implementation and even expansion of incentive programs
6 for airport shuttles will be critical in achieving
7 emission benefits in the early years prior to 2027
8 compliance date. Finally, as you heard already, South
9 Coast AQMD is currently in the process of developing MOUs
10 with the commercial airports in our basin to achieve
11 additional emission reductions from this sector.

12 These MOUs will further help achieve the emission
13 reduction goals established for further deployment of
14 clean technologies measures in AQMD's 2016 plan and the
15 State SIP Strategy. We will work with the airports to
16 develop MOUs that will complement the proposed regulation
17 for airport shuttles.

18 In summary, AQMD staff strongly supports the
19 adoption of the proposed emission -- Zero-Emission Airport
20 Shuttle Regulation. We also urge CARB to proceed
21 expeditiously in developing and adopting the remaining
22 measures in AQMD's 2016 Air Quality Management Plan. We
23 are fully committed to support and work collaboratively
24 with CARB staff on these important efforts.

25 Thank you.

1 MR. SHUMAKER: It's still morning. Good morning
2 again. California Air Resources Board. The California
3 Hydrogen Business Council applauds the Air Resources
4 Board's efforts in taking action to recognize the
5 importance of powering airport shuttles with zero-emission
6 technology, either battery or fuel cell.

7 The CHBC is encouraged by the support given by
8 both electric charging infrastructure and to hydrogen
9 refueling, infrastructure needed to implement both ZEV
10 technologies.

11 These are all the essential -- all essential to
12 California's climate and clean air efforts given that
13 utility electricity and hydrogen fuel supplies are moving
14 towards becoming zero -- - 100 percent, not zero --
15 renewable and carbon free, both through SB 100 mandates
16 and industry commitments, like the CHBC's and hydrogen
17 council's.

18 We urge you to consider the inherent bias for one
19 technology over another that funding preferences can
20 create when fleet operators evaluate the business cases.
21 Those biases can skew adaptation towards a particular
22 technology that may not be optimized for long-term
23 sustainability.

24 Depending on the fleet deployment and operations
25 requirements, fleet operators must be free to adopt the

1 ZEV technologies best suited for their application. BEVs
2 and fuel-cell electric vehicles offer different value
3 propositions due to the difference primarily in battery
4 recharge time and hours versus hydrogen refueling time in
5 minutes, but also in weight, range, and performance.

6 Increased adaptation of fuel-cell vehicles will
7 enable ARB to address more total emissions than if it only
8 encourages battery electric vehicles.

9 A funding parity policy will therefore be crucial
10 to success of air quality improvement, initiatives, and
11 will allow airport shuttle fleet operators to make the
12 best ZEV technology choice based on their particular
13 business and operational considerations over a broad time
14 horizon.

15 CHBC offered a number of recommendations in our
16 written comments and invite you to look over those,
17 including some comparisons of costs between the battery
18 electric and fuel-cell electric.

19 In sum, the choice of zero-emission vehicle
20 technology is multi-faceted, time-phased, and dependent on
21 actual usage. Only a thorough business case evaluation
22 can determine the best technology choices for each fleet
23 operator.

24 Those evaluations should be made with parity of
25 incentive funding. We appreciate your consideration of

1 our comments and offer further discussions for your team
2 to answer potential questions.

3 Thank you very much.

4 CHAIR NICHOLS: Thank you.

5 We need to get you the microphone or is it.

6 Oh, good. They're on.

7 MS. GOLDSMITH: Hi. Hannah Goldsmith again with
8 the California Electric Transportation Coalition. We
9 support the proposed Zero-Emission Airport Shuttle
10 Regulation. However, I have to note that because the
11 regulation would be the first to make the Zero-Emission
12 Powertrain Certification rules mandatory in regulatory
13 forum, that doesn't include through a funding program.

14 Our support is contingent upon seeing a number of
15 changes to the certification proposal. And I just want to
16 very briefly follow up on something that was said during
17 the certification testimony about it applying existing
18 safety rules to zero-emission vehicles. I just want to
19 note that those types of requirements are already applied
20 to zero-emission vehicles and that is not part of the
21 proposal on Zero-Emission Powertrain Certification.

22 So anyway, we support the proposed Airport
23 Shuttle Regulation achieving 100 percent zero-emission
24 airport shuttle fleets in California by the end of 2035.
25 This measure is an important step to transition our

1 state's fleets to zero-emission vehicles, and will help us
2 meet our climate change and clean-air targets.

3 We believe the proposed regulatory timeline is
4 appropriate and conservative. It allows for about seven
5 years of planning time before the first regulatory
6 purchase requirements kick-in at the end of 2027.

7 We hope that this timeline will encourage fleets
8 to take advantage of both vehicle and infrastructure
9 incentive opportunities in the interim from public
10 entities, and utilities, and others. We appreciate
11 staff's commitment to involve us and other stakeholders
12 throughout the development of this proposed regulatory
13 item.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 MS. RODRIGUEZ: Good morning, Chair Nichols and
17 members of the board. My name is Erin Rodriguez, and I'm
18 a policy advocate at the Union of Concerned Scientists.
19 We fully support the Zero-Emission Airport Shuttle
20 Standard. This standard will help the state reduce air
21 pollution and global warming emissions from the
22 transportation sector. In addition to zero tailpipe
23 emissions, battery-electric buses on today's grid in
24 California have 75 percent lower lifecycle global warming
25 emissions than diesel and natural gas buses.

1 Airport shuttle buses are well suited for today's
2 electric vehicle technology. Shuttles operate on fixed
3 short routes, have frequent stops and return to a home
4 base when not in operation. In addition to their clean
5 and quiet operation, electric shuttle buses offer the
6 potential for significant savings on fuel and maintenance.

7 These characteristics, along with significant
8 State fundings currently available, could lead to a faster
9 transition to electric shuttle buses than the standard 100
10 percent 2035 target.

11 But the standard provides an important backstop
12 and the market signal needed for fleets to make this
13 transition. The Airport Shuttle Standard represents the
14 first regulatory linkage to measures proposed under --
15 under the Zero-Emission Powertrain Certification item
16 heard earlier. We support CARB's intent to ensure vehicle
17 consistence and reliability, and urge CARB to continue
18 working with zero-emission vehicle manufacturers to ensure
19 a certification standard does not add unnecessary
20 regulation or financial burden that impedes the rollout of
21 zero-emission vehicles such as airport shuttles.

22 Thank you.

23 MR. BARRETT: Hello again. Will Barrett with the
24 American Lung Association in California.

25 And first off, we strongly support moving forward

1 with this rule on the zero-emission airport shuttles and
2 thank staff for all your work on this. The Airport Rule
3 provides another example of the ongoing dedication to
4 achieving clean air and climate goals through regulations
5 targeted to specific transportation categories that are
6 most ready to shift to zero emissions, and really pursuing
7 that 100 percent target in those categories as quickly as
8 possible.

9 The Zero-Emission Airport Shuttle Regulation is a
10 commitment identified in the SIP to help California
11 achieve health-protective air quality standards, and we
12 must move forward with this commitment as quickly as
13 possible to achieve clean air. The proposal provides a
14 gradual pathway to 100 percent zero-emission fleet of
15 airport shuttles for California, allows for flexibility
16 and access to grant funds as noted in the presentation to
17 support implementation and infrastructure needed in the
18 early years. We believe that that is a critical element
19 that -- of that and a solid design point of this
20 regulation.

21 The transition to zero-emission transportation is
22 a key health priority for clean air and a healthy
23 environment. The Zero-Emission Airport Shuttle Program
24 was included in the call to action on climate change,
25 health, and equity recently endorsed by dozens of

1 California health organizations. Similarly, the airport
2 shuttles were included in a letter signed by over 100
3 health professionals supporting this transition to
4 zero-emission vehicles as quickly as possible across the
5 transportation sector as a whole.

6 I included Links to both of those documents in
7 the letter that I submitted to the Board. So, in closing,
8 we encourage you to move forward with this rule with the
9 continued transportation-electrification effort that the
10 Board has taken on, and we look forward to working with
11 you as you implement this policy and essentially move
12 forward with the road to clean air.

13 So thank you very much.

14 MR. GILBERT: Madam Chair and Board members. I'm
15 Don Gilbert. I represent San Francisco International
16 Airport. SFO certainly shares CARB's overall goals for
17 the State, and in particular the goals for this proposed
18 regulation. We do have some comments that really pertain
19 to practical issues involving airport operations and
20 investments. And we've left detailed written comments
21 with you. I'll just briefly summarize the four main
22 points.

23 The first goes to the mileage threshold for a
24 reserve fleet, which I believe is proposed at 3,000 miles
25 annually per vehicle. We suggest that that be increased

1 to 5,000 miles annually, because the way our fleet works
2 is we need -- to ensure that the reserve fleet is in
3 proper working condition, we need to operate each vehicle
4 once every 10 days, and that translates into approximately
5 5,000 miles.

6 If we don't -- if we don't have that situation,
7 then we won't be able to reliably know that that back-up
8 fleet is available. And we believe that some other
9 airports are similarly situated.

10 We would also like to see an exemption for that
11 cap for emergency response circumstances, where some more
12 mileage might be added to a reserve vehicle under those
13 exigent circumstances. We don't think they -- that should
14 be counted.

15 And similarly for, our third comment is, an
16 exemption for a short-term condition where we need to
17 contract with a third-party provider who is unable to
18 provide -- we are unable to get anywhere electric -- I'm
19 sorry ZEV shuttles. And that circumstance we'd also like
20 an accommodation.

21 Finally, the major comment here is we want to
22 make sure that when it's time to purchase these products
23 that they're good reliable products, so we would encourage
24 the Board to specify reliability and longevity standards.
25 And our written comments go into great detail on this.

1 Really appreciate the opportunity to comment and
2 look forward to continuing to work with you and the staff.

3 Thank you.

4 CHAIR NICHOLS: Thank you.

5 BOARD MEMBER GIOIA: Can I just make a comment?

6 CHAIR NICHOLS: Yes.

7 BOARD MEMBER GIOIA: So I just wanted to note. I
8 no the airport is under different management than the --
9 than the -- than Muni, but Muni did come and -- and set a
10 goal of 2035 for -- for its whole fleet, as I understand,
11 and has been confident of moving that forward. So I don't
12 know if -- what discussions you've had with Muni sort of
13 under the same city government structure.

14 MR. GILBERT: Yeah. Supervisor, I'm sorry. I'm
15 not familiar. I don't represent Muni and I'm not --

16 BOARD MEMBER GIOIA: Right.

17 MR. GILBERT: Oh, but I have some help coming.

18 BOARD MEMBER GIOIA: Okay. Okay.

19 MR. GILBERT: Perfect.

20 BOARD MEMBER GIOIA: So I'd be interested to
21 hear, yeah, sort of the -- just trying to get the
22 differences between the different departments.

23 MS. JOHNSON: Yes. And SFO has committed to
24 transitioning their shuttle bus fleet to 100 percent
25 electric.

1 CHIEF COUNSEL PETER: Would you say your name?

2 BOARD MEMBER GIOIA: Yes.

3 MS. JOHNSON: Oh, sorry. My name is Sarah
4 Johnson. I'm with the California Airports Council, which
5 represents the 32 commercial service airports in the
6 State.

7 And to answer your question, I was just going to
8 State that SFO has committed to going 100 percent
9 electric. They foresee this timeline by 2027.
10 Thankfully, they have the AirTrain at the airport, so
11 they're foreseeing reducing their shuttle operations to
12 about, I believe, 12 full-time electric shuttle buses, but
13 they still need to have a contingency fleet to respond to
14 emergency situations when the rail service goes down.

15 So that's why they're asking for those additional
16 mileages, so that they can have a fleet ready when the
17 rail services isn't available to push into service to
18 serve the entire airport.

19 BOARD MEMBER GIOIA: Thank you.

20 CHAIR NICHOLS: This were -- you were signed up
21 next to testify.

22 MS. JOHNSON: Yes.

23 CHAIR NICHOLS: Do you want to just go ahead now?

24 MS. JOHNSON: Yeah, yeah.

25 CHAIR NICHOLS: All right.

1 MS. JOHNSON: I can go ahead and do it.

2 So again, I'm Sarah Johnson with the California
3 Airports Council representing the commercial service
4 airports in the state.

5 Over the past three years, much progress has been
6 made on this measure. However, we the airports believe
7 that there is still work to be done. We were urged that a
8 productive and transparent -- transparent collaboration
9 continues through the 15-day process. And our comments
10 today are presented as a partner as we agree with
11 implementing green policies that reduce greenhouse gas
12 emissions. And you will find past precedent with the
13 airports having strong environmental policy. You can see
14 this with Los Angeles International Airport's Alternative
15 Fuel Policy for all of their airport-owned fleets and for
16 off-airport providers.

17 San Francisco has their AirTrainin service.
18 Oakland International Airport has just installed 100
19 percent electrification for their ground support equipment
20 at the airport, so we -- we agree with putting in green
21 policies for the airports, but we do need some conditions
22 to help with operational and applicability issues within
23 this measure.

24 So first, as currently written, the proposal
25 doesn't include any language for unplanned emergencies or

1 temporary operations at the airport. We appreciate staff
2 agreeing to add some emergency language into this language
3 as airports need to have a redundancy plan in place to
4 handle unexpected circumstances, or high influxes of
5 passengers due to local situations.

6 We would like to see, in addition, to have those
7 temporary situations when airports have one-time events,
8 such as the Olympics, the Super Bowl, Comic-Con, where
9 they need to contract and have additional providers in to
10 help with the additional number of passengers moving
11 through the airport.

12 Second, as mentioned by SFO, we need to have an
13 additional allowance for the reserve fleet at airports.
14 Three thousand miles is not high enough for the readiness
15 testing that they need at each airport to be able to
16 respond to plan maintenance needs and also to past
17 required inspections.

18 So we're suggesting that this mileage be raised
19 to 5,000 miles. This is not for everyone. This is only
20 for the largest -- largest airport-owned and contracted
21 fleets in California. And we're projecting that's only
22 about 35 buses of the over 950 airport operating shuttle
23 buses in the state.

24 Third, airports do not want to be responsible for
25 collecting and storing compliance certificates for

1 off-airport providers. This is onerous on staff and CARB
2 has past precedent of allowing industries to confirm
3 compliance through on-line databases. We urge that a
4 similar format is implemented here through the TRUCRS
5 database.

6 And finally, overall applicability of the measure
7 was determined by the airport size. We do not believe
8 that the small hub airport should be included in this
9 regulation. No small hub airport owns or contracts
10 shuttle bus operations due to the limited size of the
11 airport footprint. So it doesn't make sense to have them
12 in this regulation at this point.

13 But we hope to continue working with staff going
14 forward. And we appreciate you taking the emergency
15 language, but there's still items that need to be included
16 to make this a workable and effective solution for
17 airports.

18 Thank you.

19 MS. McCROSSEN-ORR: Good morning. I'm Tamara
20 McCrossen-Orr from Los Angeles World Airports. LAWA, as
21 we're known, we're the owner and operator of Los Angeles
22 International Airport, and the Van Nuys General Aviation
23 Airport in Los Angeles.

24 LAWA too shares CARB's commitment and the South
25 Coast Air Quality Management District's commitment to

1 cleaning the air, especially from mobile sources. LAWA
2 has been committed to cleaning up its mobile fleets since
3 at least the 1990s and maybe before. We have one of the
4 largest, if not the largest, alternatively fueled vehicle
5 fleet of any airport in the nation. We start that
6 transition in the 1990s.

7 We are now transitioning that fleet to
8 zero-emission vehicles. We have an -- on order and we
9 expect to be delivered 20 zero-emission buses, 60-foot
10 articulating buses for our airfield. We expect those to
11 be delivered this summer. Our board is committed to
12 converting our shuttle bus fleet by 2030 to zero emission.

13 In addition to that, we don't just have
14 requirements for our fleet. As Sarah mentioned, we have
15 an alternative fuel vehicle requirement or a clean vehicle
16 requirement for our third-party operators. We just
17 updated that requirement last year, and we're having an
18 amazing success with the new program.

19 In addition, we recently launched an incentive
20 program for our third-party operators. So LAWA is using
21 \$500,000 of our own money to help our operators of
22 heavy-duty vehicles convert to zero-emission vehicles.

23 It's not a lot of money. We're searching for
24 more money to support this program, but I think it shows
25 LAWA's commitment to cleaning -- to cleaning up the air,

1 especially in the shuttle bus sector.

2 I'm here today to ask the Board to consider
3 adding exemptions from the proposed regulation requiring
4 zero-emission vehicles for emergency situations for
5 temporary operations, and in the situation of the
6 unavailability of zero-emission vehicles.

7 Irregular emergency operations encompass
8 situations that require airports to respond quickly and
9 efficiently. That -- that would be incident security
10 threats, terminal evacuations, or even the closure of an
11 airport rail system.

12 Actually, I forgot to mention LAWA also has a \$14
13 billion modernization program that includes connecting to
14 the regional metro system, and consolidating our rental
15 car facilities, and bringing zero-emission light rail that
16 will connect those off-airport -- off-airport facilities
17 to the airport.

18 It's a significant commitment. In the case,
19 let's say, that rail goes down, LAWA would need to bring
20 in a large number of shuttles and buses to continue to
21 move passengers safely and effectively. In this
22 situation, we need the flexibility to bring on the buses
23 that we can get.

24 I'll just finish out.

25 We would -- there -- not only would we need the

1 ability, but we could lack the infrastructure to support
2 charging of those vehicles, and we --

3 CHAIR NICHOLS: Okay. Your time has expired.

4 MS. McCROSSEN-ORR: -- excessive charge for those
5 vehicles.

6 Thank you.

7 CHAIR NICHOLS: Okay. Thank you.

8 MS. FIZZELL: Good afternoon, Board. Thank you
9 for the opportunity to make comments here today. My name
10 is Susan Fizzell, and I'm with the Port of Oakland --
11 Oakland -- which owns and operates Oakland International
12 Airport.

13 As other airports have mentioned, we also share
14 CARB's and the Bay Area Air Quality Management District's
15 commitment to cleaning the air. We have recently, as
16 Sarah mentioned, installed 100 percent infrastructure at
17 all of our gates to charge electric GSE. We also have
18 preconditioned air at 100 percent of our gates as well as
19 400 hertz. So those aircraft do not have to turn on their
20 engines while they're parked at gates and GSE can charge
21 from our power.

22 So I wanted to mention that Oakland is a medium
23 hub here in Northern California. We serve 13 plus million
24 annual passengers and we have nine medium-duty CNG
25 shuttles in our fleet. I want to make two comments

1 related to this proposed regulation.

2 As many of you can appreciate, reliability is our
3 top priority at the airport and other California airports.
4 The proposed regulation mandates the purchase of electric
5 shuttles that are not yet widely available on the market.
6 I'm talking about some of the medium-duty cutaway shuttles
7 that we're not seeing too many of on the market yet. And
8 I -- introducing unproven electric shuttles into our
9 operations can cause significant disruptions to critical
10 operations. So I would like to please encourage you to
11 consider including flexibility in the language, so that
12 the regulation doesn't force the purchase of unproven
13 models or manufacturers.

14 And secondly, I would like to mention that
15 Oakland permits one -- hundreds of GT, ground
16 transportation, operators annually. And while we can
17 update our rules and regulations to reflect the new rule,
18 the way the proposed regulation is written, it places an
19 unreasonable administrative burden on airport staff and
20 puts us in a position of enforcing the new rule by
21 requiring us to collect and track compliance.

22 We encourage you to implement an on-line
23 searchable database, as is done with other CARB programs,
24 and other State programs to allow staff to confirm
25 compliance prior to issuing operating permits, but reduces

1 that burden of paperwork.

2 Lastly, I wanted to mention that in reading the
3 Board's summary, I find that it does overstate the
4 available incentive funding that is available for
5 airports. It also over -- understates the infrastructure
6 costs that are very significant. And the maintenance and
7 fuel costs are also not accounted for. Some airports are
8 not eligible for funding from investor-owned utilities.
9 We're are -- we're under municipal-owned utilities. And
10 so that funding source is also not available to us.

11 So I look forward to working further with staff
12 to fine-tune the regulation. Thank you.

13 CHAIR NICHOLS: Thank you.

14 I think we might as well just plow through this
15 at this point. We won't try to break.

16 MR. HARRIS: I'm really glad you said that.

17 (Laughter.)

18 MR. HARRIS: I didn't want to have to come back
19 after lunch. Madam Chair, Richard Harris from the
20 Nossaman firm on behalf of the San Diego County Regional
21 Airport Authority, the San Diego International Airport.

22 To be brief, I will associate my remarks with Don
23 Gilbert from San Francisco. San Diego, as you know, is
24 one of the top three largest airports. We have the same
25 concerns about the reserve fleet number. We think that

1 the 5,000 miles would make -- make a lot of sense in terms
2 of that.

3 The other -- the other issue for us is the
4 temporary operations exemption. San Diego is a convention
5 destination, Comic-Con, others. We think there should be
6 a way to work with staff to come up with something that
7 makes sense on the temporary exemption for San Diego and
8 the other larger airports. I want to raise one issue here
9 that I think you might hear a little bit more about, and
10 which is of importance to -- maybe even to the larger
11 airports who qualify and have qualified in the past for
12 funding from the FAA. And I noticed it was on the screen
13 earlier as one of the pots of money, and this is FAA
14 funding.

15 One of the problems with FAA funding is that it
16 is for voluntary actions over and beyond regulatory
17 requirements. And so if those volun -- if we can
18 together, because the airports are good actors here. And
19 we want to try to accomplish the same goals that you do as
20 a Board. We ought to be able to work together to come up
21 with a mechanism, where the airports are still able to
22 compete for that FAA funding, and bring in that -- bring
23 in those federal dollars like we have in the past, and use
24 those federal dollars here to accomplish these same goals.

25 That funding actually is a great program with a

1 50 percent match. And it brings large dollars. We just
2 think that together we ought to be able to think of a way
3 to come up where we can get to the same goal without it
4 being that -- that strict of a regulation that keeps us
5 from qualifying for the FAA funds.

6 So I want to get that on the record. Appreciate
7 your consideration. We look forward to continuing working
8 with the staff here in the comment period. And Supervisor
9 Fletcher good to see here you today.

10 Congratulations. Thank you.

11 CHAIR NICHOLS: Thank you.

12 I think maybe we can break for a moment here just
13 in the testimony and answer that question, because this
14 has come up before. And I was under the impression that
15 we were convinced that this was not actually a -- going to
16 prevent people from getting FAA funds, but maybe we should
17 just clarify this point.

18 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

19 Sure. This is Jack Kitowski. I'd be happy to
20 start that discussion. We -- as you know, this Board has
21 allocated a significant amount of funding towards --
22 towards incentive programs, with a focus on zero emission.
23 So I think part of the story is the potential pot, as we
24 showed in the presentation, is much larger than just the
25 FAA funding. And the amount of funding we have actually

1 is quite a bit more significant than the roughly \$7
2 million that the FAA has for that.

3 CHAIR NICHOLS: That's total for the entire
4 country?

5 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

6 Yes. I will say though that, you know, we've
7 heard these concerns, and so we did have discussions with
8 FAA staff themselves, and discussions on how we could
9 structure the rule. Their program is very similar. It's
10 a -- you know, earlier extra -- it's a surplus kind of
11 metric that they use, very similar to you our Moyer
12 program. So we have a lot of experience with how that
13 should be structured. And we use that information in the
14 discussions their to structure our rule in such a way that
15 we think there still will be eligibility, as long as you
16 act early or extra to the -- to what we have in place.

17 And I'm sorry. I should clarify. I just got
18 notice. It's seven million that we've got in California,
19 not nationwide.

20 CHAIR NICHOLS: Oh. Okay. Good. That's at
21 least better.

22 BOARD MEMBER RIORDAN: That sounds better.

23 CHAIR NICHOLS: Exactly. Okay. Sorry for the
24 interruption. Please go ahead.

25 MR. LITES: Good afternoon, I think. Jim Lites.

1 I'm the Executive Director of the California Airports
2 Council. And I am here to speak to the question you just
3 asked. And I'm not sure Mr. Kitowski has this
4 information. The regulation was released on December 31st
5 during the federal government shutdown. We were not able
6 to get comments from the FAA on the impact of the
7 regulatory language on our grant programs until the
8 shutdown ended a couple of weeks ago.

9 They basically told us that we are -- we would
10 not get any further funds from the grant program for ZEV
11 acquisition or deployment. The reason for that is, as
12 follows: They were -- they told us we are always welcome
13 to apply, but if we cannot demonstrate how the funding
14 will take us beyond the requirement of the mandate, that
15 we will not get any funds because, as Richard indicated,
16 it is a strictly voluntary program.

17 So what that means is even though you have an
18 outyear 2035 deadline for 100 percent, it's impossible for
19 us to show how we can go beyond 100 percent. So we are,
20 what I call, functionally ineligible for further federal
21 grants.

22 And Madam Chair, in your opening comments, you
23 noted how several airports have begun the electrification
24 process. Other speakers previous to me have also said the
25 same. Those were commenced with these federal grants.

1 CHAIR NICHOLS: Um-hmm.

2 MR. LITES: So according to the FAA, we'll no
3 longer have that as a source of money to finish the job.
4 So airports wanted to get that on the record, understand
5 the -- and ensure the Board understands this dynamic. We
6 offered throughout the last couple of years to meet every
7 timeline and hurdle that was presented in Mr. Poggi's
8 presentation earlier, but do so within a structure that
9 maintains our eligibility for the FAA grants. And we were
10 told that frankly was just not an option that the Board
11 would entertain.

12 So we really want to ensure that we understand,
13 as other speakers have said, the costs for the
14 infrastructure are just now coming into airports. We're
15 finding, as an earlier speaker said, Susan, that it does
16 exceed some of the projections. And so we're that much
17 more concerned that we could lose the access.

18 California airports, for all GHG emission
19 reductions projects, have drawn down about \$32 million
20 across a variety of programs in the last six years. Fifty
21 percent match, that means an equal investment on part of
22 the airports. The programs that have been cited and we've
23 been directed to, in lieu of federal funds, do not pay
24 50/50 at all.

25 And so we're really talking apples and oranges.

1 And so while there might be ample dollars available, they
2 do not pay for the projects in the same manner. And we
3 want the board to understand that.

4 Thank you.

5 CHAIR NICHOLS: Thank you very much.

6 MS. NAGRANI: Urvi Nagrani from Motiv Power
7 Systems.

8 I'd like to say I'm strongly in support of this
9 rule as it will help emissions reductions around our
10 airports. But I would encourage the Board to consider
11 unlinking it from the Zero-Emission Powertrain Regulation,
12 specifically because there will be some zero-emission
13 solutions that are in the market today that do not
14 currently meet that ZEP Rule, which will have greater
15 on-road validation than new product lines, which might
16 meet the certification requirement.

17 However, when you have two different
18 zero-emission solutions, one with more on-road data and
19 one with a better warranty, but not necessarily on-road
20 data, that is a customer choice of to which you want to
21 trust more, a business assurance or the data that you've
22 seen in the real world. Most of our customers tend to go
23 with real-world data.

24 And so if there's an option in which fleets can
25 choose to buy a not ZEP certified product that is a

1 zero-emission system, we would encourage that.

2 Thank you.

3 CHAIR NICHOLS: Thank you.

4 MR. KENNY: Hi. Good morning, Chair Nichols,
5 members of the Board. I'm Ryan Kenny with Clean Energy.
6 We're the nation's largest provider of renewable natural
7 gas transportation fuel. And we have just a few comments.

8 In the spirit of collaboration, I think, you
9 know, we do share a lot of the concerns that have been
10 expressed. But also, we are concerned about the -- this
11 being more of a longer term strategy addressing especially
12 NOx, if not greenhouse gas emissions. We do think that
13 2023 is very important, just like 2031 for nonattainment.
14 And we do believe that there should be an off-ramp for
15 technologies that are ready now to also participate in the
16 regulation.

17 We do believe the Board should direct staff to
18 perform an alternatives analysis before adoption to
19 include off-ramps should specific benchmarks not be met.

20 We also would ask the Board provide authority to
21 scale back the regulation, if staff's projections on
22 costs, operational reliability, and technology readiness
23 fall short.

24 I think you've heard a few of those concerns
25 today. And I think, you know, pointed what we've seen

1 with another article in the LA Times this week on the
2 Albuquerque, New Mexico disaster with their EV fleet. The
3 city is now suing the manufacture. They're ditching their
4 EV pursuits and now going towards diesel shuttle buses.

5 And I think, you know, the concern that this
6 might be overly optimistic based on operational, and
7 finance, and cost, in addition to even problems that we've
8 seen with New Mexico.

9 So we do off -- ask that the Board consider
10 off-ramps should this not work out, and that the staff
11 projections are not realistic.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

14 MR. WATSON: Good afternoon, Chair and Board
15 members. Charles Watson on behalf of Proterra. Thank you
16 for the opportunity to provide comments on the proposed
17 Zero-Emission Airport Regulation. We strongly support
18 adoption and implementation of a robust rule and applaud
19 the actions of the Board and staff to meet California's
20 important air quality goals.

21 The proposed rule is a balanced approach that
22 will allow airports sufficient time to plan and procure
23 zero-emission shuttle buses and infrastructure, while
24 promoting the development and use of zero-emission airport
25 ground transportation to reduce emissions.

1 As previously noted, some California airports are
2 already deploying zero-emission buses, including San Jose
3 and Sacramento, which have already purchased and will soon
4 launch zero-emission shuttle buses made in California by
5 Proterra. As the leading manufacturer of zero-emission
6 buses, Proterra will continue to innovate and implement
7 strategies to make battery-electric buses the most
8 competitive and fuel efficient choice for our customers,
9 including airports, and prove -- and improve our
10 technology to make battery-electric transit options the
11 number one choice of fleet operators, bus drivers,
12 maintenance staff, and public riders alike.

13 We urge your support for this proposal.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 MR. JAMMAL: Good afternoon. My name is Sam
17 Jammal with BYD. I want to first thank you all for your
18 leadership on the Innovative Clean Transit Rule, and just
19 this marker and conversation on really setting California
20 apart. And we look forward to working with you to meet
21 these goals, as well as help show California as a national
22 model.

23 BYD we've, to date, delivered 84 zero-emission
24 electric buses with an additional 157 on the way.
25 Nineteen public transit agencies have utilized our product

1 in California. We have 115 buses to public and private
2 entities including universities throughout California.

3 On the airport side, we have three projects at
4 airports right now. We have 20 60-foot electric buses
5 that are going to be delivered to LAX. We have, in Kansas
6 City, four 30-foot buses on the way, two of those I
7 believe are in use to date. And in Atlanta, we have
8 another two that are going to be delivered. And so we're
9 already seeing across the country airports start to adopt
10 this stuff.

11 This rule really would help show we're serious
12 about this. We believe the technology is reliable, and
13 can actually deliver a service, especially with the
14 defined routes that we see on airports.

15 And so we want to thank you for that, and also
16 just make the quick request of making sure there's
17 reliable funding for these programs. As everyone
18 mentioned, you know, we need to make sure that there is
19 the funds to help with those incremental costs. Because
20 if we're serious about this, we want to make sure that
21 folks know that steady resources are along the way. And
22 we'll do our part to continue to educate folks across the
23 street -- or down the street I guess I should say on the
24 need for these resources.

25 And we look forward to working with your team as

1 well. So thank you.

2 CHAIR NICHOLS: Thank you.

3 MR. MAGAVERN: Good afternoon, Madam Chair and
4 Board Members. Bill Magavern with the Coalition for Clean
5 Air. We support this rule. I think it's actually a
6 cautious timeline, and the airports will have no trouble
7 meeting it, I expect.

8 This is clearly not the largest sector that you
9 regulate, but airports are the source of a lot of
10 emissions. So it's appropriate that we do everything we
11 can to reduce emissions at airports. And this will also
12 be visible, these vehicles will be visible to the
13 traveling public, so it's an opportunity to educate them
14 about zero-emission transportation.

15 I do want to note that other than the emergency
16 exemption, we would oppose any further exemptions to these
17 requirements. The 3,000-mile threshold we think is
18 already generous. We would probably prefer 1,000 miles.

19 So we urge no further weakening of the rule, and
20 look forward to seeing it enacted when it comes back the
21 second time.

22 Thank you.

23 CHAIR NICHOLS: Thank you.

24 MS. MCGHEE: Good afternoon. This is Lisa with
25 San Diego Airport Parking Company.

1 And SDAP is actually currently a site host for
2 the green shuttle pilot project for the SB 350. So we're
3 moving forward with a project with the airport shuttle
4 right now. It is the perfect vocation for ZEVs, but it is
5 not like any other's vocation. Its has high vehicle miles
6 traveled, high hourly use, high loads and a short duty
7 cycle. Yet, there has been no Demonstration with these
8 vocations to understand how a short-range vehicle that
9 averages over 100 miles daily can confidently stay in
10 services if the power level for charging is not
11 three-phase power and 480 volts.

12 All airport operators create emissions. It
13 should be the responsibility of all airport commercial
14 operators to achieve the same compliance, not just
15 Heavy-duty shuttles. For example, taxies, TNCs, and limos
16 have several hundred permitted vehicles per each mode in
17 San Diego, whereby off-airport and on-airport have 30 and
18 60 vehicles.

19 We move multiple people each way, greatly
20 reducing emissions. Taxis, TNCs, and limos move one per
21 one way. The cost analysis is not correct. For example,
22 the \$0.17 kilowatt hour is not at all the cost to the
23 average kilowatt hour in SCE, PG&E, SDG&E territory.
24 Thereby, the calculation results require modification.

25 Additionally, the fuel costs should be an

1 apples-to-apples comparison, thereby the fuel gallon costs
2 should remove the \$0.93 diesel gallon cost or the \$0.68
3 gasoline gallon costs. The kilowatt hour cost does not
4 include all other fees, such as the customer monthly fixed
5 charge, franchise and State tax fees that are the
6 out-the-door kilowatt hour kilowatt costs on your invoice.

7 The Low Carbon Fuel Standards is not the
8 applicable -- is not applicable -- is not applicable
9 unless you own the charger and do not fuel elsewhere.

10 Additionally, monetizing the credits is
11 not a guarantee nor can they easily be monetized with low
12 volume credits, as brokers want high volume credits.

13 Support an opportunity to manage charging with
14 vehicles that go through the reserve is a challenge
15 without EV fuel rates that are a benefit. The cost can be
16 more than other technology choices. For example, SDG&E
17 just requested a modification to its priority review Green
18 Shuttle Pilot Program to add more DC/FC and eliminate the
19 Level 2 chargers for airport shuttles due to this
20 challenge. Power level matters. This means all shuttle
21 sites require a 480-volt transformer to support this
22 regulation. This can be expensive.

23 HVIP rebates. The cost since 2015 for my same EV
24 vehicles has gone up, and the rebate went down. Small
25 fleets and private fleets make up a large number of

1 transportation operators. An expansion of the funding to
2 invest in this technology is necessary. My request is to
3 fairly consider the impact on small businesses and private
4 fleets.

5 I support the measure with modification to
6 include light-duty, medium-duty, heavy-duty vehicles at
7 the airport, as the ozone areas require a change.
8 Infrastructure supports -- all right. Thank you.

9 CHAIR NICHOLS: Thank you.

10 Mr. Pingle.

11 MR. PINGLE: Hello, all. My name is Ray Pingle.
12 I'm with Sierra Club, California. We strongly support the
13 proposed Zero-Emission Airport Shuttle Bus Rule. More
14 than adequate funds are available to assist airport
15 shuttle bus fleet operators in paying for the capital cost
16 of the transition to ZEVs. The total cost of ownership
17 for this transition is positive without any grant funds.
18 But in the early years additional capital is needed.

19 There are a host of incentive programs to pay for
20 the incremental cost of electric buses, including FAA's
21 annual grant program, such as the Volunteer Airport Low
22 Emissions, or VALE, Program, the Zero-Emission Vehicle and
23 Infrastructure Program. There's also the HVIP Program,
24 Carl Moyer, Community Air Protection Incentive Funds,
25 that's the 617 funds, the VW Mitigation Trust Fund, and

1 many others.

2 And it's noteworthy, as actually Anthony pointed
3 out as well, that when you add in the additional revenues
4 from these incentive funds, the total cost of ownership
5 increase even more producing even more savings for the
6 operators.

7 The electrical infrastructure is being paid for
8 by the utility programs under SB 350, and combined with
9 HVIP and other incentives can cover the majority if not
10 all of these costs. We would to express our appreciation
11 to the staff that work on this project and develop a
12 simple and easily-to-understand rule, but yet is also cost
13 effective and that will achieve the GHG and pollutant
14 reduction objectives.

15 This rule offers many benefits, including
16 reductions in criteria pollutants, especially in
17 disadvantaged communities, reductions in GHGs to mitigate
18 climate change, growing the California economy, creating
19 new good paying jobs, improvements in worker health,
20 long-term financial savings for airports and shuttle
21 operators, and once again offering a model for airports
22 throughout the nation on how to transition cost
23 effectively to zero-emission vehicles.

24 Thank you.

25 CHAIR NICHOLS: Thank you. That concludes the

1 list of witnesses that we have. So I think, at this
2 point, unless the staff has any additional points that
3 they wanted to put on the record here, we can proceed to
4 Board discussion. But I know Board members are going to
5 have questions, so let's start to my immediate right
6 here.

7 Mr. Fletcher

8 BOARD MEMBER FLETCHER: Thank you, Madam Chair.
9 I have a question for staff. On the FAA funds that are in
10 dispute at being at risk, is it -- am I correct in
11 understanding that those funds are to help airports get to
12 zero-emission vehicles and shuttles? Is that -- do I
13 understand correctly that's what those FAA funds are for?

14 AIR POLLUTION SPECIALIST POGGI: That's part of
15 it. That's -- zero-emission vehicles are one aspect of
16 it.

17 BOARD MEMBER FLETCHER: One aspect of it.
18 And in the slides, we have a list of many
19 California airports that are adopting zero-emission
20 airport shuttles.

21 AIR POLLUTION SPECIALIST POGGI: That's correct,
22 yeah

23 BOARD MEMBER FLETCHER: So would it be as
24 perplexing to you as it is to me if an airport came and
25 complained about potentially not being able to get funds

1 that they don't appear to be using anyway?

2 AIR POLLUTION SPECIALIST POGGI: They have used
3 them in the past. FAA funds have been used in the past.

4 BOARD MEMBER FLETCHER: Right. No. No. But like
5 a particular airport, if they were using those funds to
6 get zero-emission airport shuttles, wouldn't they appear
7 on our list?

8 AIR POLLUTION SPECIALIST POGGI: Yes.

9 BOARD MEMBER FLETCHER: They would. So if
10 they're not on our list, then they're probably not
11 accessing those FAA funds?

12 AIR POLLUTION SPECIALIST POGGI: That would be
13 correct.

14 BOARD MEMBER FLETCHER: So it would be perplexing
15 that they'd be complaining about potentially losing funds
16 this they don't access?

17 AIR POLLUTION SPECIALIST POGGI: I guess so,
18 yeah.

19 (Laughter.)

20 BOARD MEMBER FLETCHER: It's perplexing to me.

21 I want to -- I want to thank the staff for
22 helping, as a new Board member, get up to speed. And I
23 appreciate that. And I'm just getting to know a lot of
24 the stakeholders in this room, and I look forward to
25 hearing from all of you and hearing your concerns as well.

1 Because I'm not as familiar with a lot of you who came and
2 spoke, being a new Board member, but I do know a little
3 something about San Diego.

4 In San Diego, our air quality is steadily
5 worsening. According to the American Lung Association,
6 it's 42 percent worse -- 42 percent increase in unhealthy
7 days since 2015. We recently announced in San Diego that
8 we're not going to come close to our SB 375 greenhouse gas
9 emission funds. I also am familiar with our San Diego
10 Airport. And over the last decade we've had no meaningful
11 action on transit to the airport. We've had not
12 meaningful engagement on these types of issues. We've had
13 no meaningful commitment for how we may get there. And so
14 we arrive at a point in today's world, where this morning
15 when I went to the airport, I had no option to get to the
16 airport, other than drive my car.

17 I will note that our airport is the only large
18 airport who's not participating in movement to try and do
19 these things, utilizing the same FAA funds they complain
20 about not being available.

21 I will commend our airport on the incredibly
22 beautiful and massive parking structure that we've been
23 able to build.

24 (Laughter.)

25 BOARD MEMBER FLETCHER: I would encourage my

1 airport to maybe apply that same motivation and focus
2 towards trying to help us address air quality and
3 greenhouse gas emissions in San Diego. And I want to be
4 clear, my comments don't expand to anyone else's airports,
5 because I don't know anything about you. I look forward
6 to learning more.

7 But as we move forward, I would just, from my
8 perspective as a new Board member, encourage staff to move
9 aggressively. And swiftly in an area so that we can begin
10 to see some meaningful efforts, because I know the people
11 of San Diego are certainly counting on it.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

14 Mr. Gioia.

15 BOARD MEMBER GIOIA: Sort of two comments. One
16 is I think a lot of what we heard from some of the air --
17 from some of the airports was not unlike some of the
18 hesitation we heard from public transit agencies, but it's
19 my understanding our staff has really been working hard to
20 provide flexibility in this -- in this regulation. And I
21 think just like this Board went ahead and adopted the
22 Innovative Transit Rule in December dealing with public
23 transit, I think we should go forward and move this as
24 quickly as possible.

25 There is flexibility in this rule to accommodate

1 a lot of the comments that people made about checking in,
2 about technology. In fact, the rule that we passed in
3 December is going to drive this industry and this
4 technology in this state. I mean, the fact that by 2029
5 every public transit agency is going to have to -- every
6 new vehicle -- new bus purchased has to be zero-emission
7 is already ramping up investment in this industry right
8 here in California, creating jobs here in California. And
9 that's going to benefit the airport shuttles.

10 You are a much smaller piece of this picture than
11 public transit. You're an important piece, but that
12 public transit rule is going to drive this technology
13 quicker, the lifecycle costs are cost competitive -- are
14 becoming more cost competitive and will be.

15 So I think -- I think moving forward helps
16 drive the industry. And it reminds me of a comment. I
17 was talking last night to one of our honorees that are
18 were recognized earlier the morning. And he said, you
19 know, it's really bold action that is going to solve this
20 problem and not incrementalism. And that regulations
21 that -- like this that create change in a field, in an
22 industry is what's going to move -- make us make progress
23 on air quality and climate change, not sort of incremental
24 action.

25 So -- and I do want to acknowledge the work of

1 the airports who are -- who are doing work on this. We're
2 just trying to continue to move this along. And I will
3 then raise an issue that I raised when we talked about the
4 Innovative Transit Rule. And that's how we can look at
5 applying this same standard to the many Google buses
6 and -- that we see. I'm not sure if we -- you have them
7 as much in Southern California. We see them in the Bay
8 Area, who often take the place of public transit. So we
9 raised that at that -- last fall. I'd be interested to
10 hear from staff any additional thinking about how we can
11 include those types of transit in a rule like this. Do
12 you have more -- have you had a chance to look at that
13 more since we sort of raised it last fall?

14 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

15 Yes, a little. Let me -- let me talk a little
16 bit about that. So in the context of the Transit Rule, as
17 we'd talked about then, it didn't fit. That was public
18 agencies --

19 BOARD MEMBER GIOIA: Right, I understand.

20 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

21 -- and the scope of who was being regulated was
22 different.

23 And the scope of this rule, it doesn't quite fit,
24 because this is -- has to be touching airports for it to
25 be applicable. But where we think it has applicability

1 is in the upcoming Advanced Clean Truck Rule or what's
2 been called the Local Truck Rule. And right now, we're in
3 the stages of defining the scope and focus of that rule.
4 We're looking to come to this Board around December of
5 this year, and we will certainly have that as part of the
6 public process.

7 BOARD MEMBER GIOIA: So those privately operated
8 buses -- bus fleets will be included in that -- in that
9 rule?

10 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:
11 Well, I can tell you we're starting the
12 public discussion.

13 BOARD MEMBER GIOIA: Process, right.

14 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:
15 As a matter of fact we have a work group on
16 Monday --

17 BOARD MEMBER GIOIA: Right.

18 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:
19 -- associated with that. And there is a lot of
20 debate about, you know, what that structure should look
21 like, manufacturer rule, fleet rule, a combination of the
22 two. So we have a -- we have a long public process in
23 front of us, but this is certainly one of those areas that
24 we have on our list to engage on.

25 BOARD MEMBER GIOIA: Great. Okay. And just

1 to -- and my final comment is, I mean, we the skept -- the
2 concern and caution that -- that airport shuttle agencies
3 have. And my response is I think the staff under -- has
4 heard that, understands that, and will be working through
5 changes as this gets implemented just like on the
6 Innovative Transit Rule, and I'm optimistic.

7 CHAIR NICHOLS: Okay. Thank you. We have a
8 number of folks down on this side as well. I think --
9 well, where will we start? Were you up? Whoever is
10 first. Go first. Dan, you want to start first.

11 BOARD MEMBER SPERLING: I just have a short
12 question. I think this is great rule. It's like we have
13 found a -- the sweet spot for an application -- early
14 application as -- as the staff pointed out.

15 Just one little question is on the -- there was a
16 question raised about LCFS credits. I mean, part of it is
17 like how much money of those in your calculations
18 estimates, you know, is due to the LCFS for these buses,
19 and the question about getting those credits? So if the
20 airport operates the charger obviously, they get the
21 credits. But an argument is made -- the assertion was
22 being made that - I didn't quite understand it - that they
23 thought they were not going to host the chargers or maybe
24 they were thinking they were going to go running off
25 somewhere else. I'm not sure exactly what the thinking or

1 what the concern is.

2 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI: I
3 think the concern had to do with small fleets having
4 challenges, if they were utilizing somebody else's charger
5 and trying to get the value of the -- monetize the value
6 of those credits back to themselves. And that is
7 something that we would have to, you know, work on to see
8 if it -- it really is an issue or not. I'm not sure, at
9 this point, whether it is or it isn't.

10 The value of the credits, and staff may have more
11 details, but is going to vary significantly depending on
12 the size. You're talking about a 12 shuttle van versus a
13 transit one -- transit style. In general, the transit
14 style I can tell you that the ports most commonly use
15 is -- runs similar mileage to a transit bus. And that was
16 10 to 12 thousand dollars year per bus use. So the others
17 would obviously be smaller.

18 BOARD MEMBER SPERLING: Okay. Thank you.

19 CHAIR NICHOLS: Okay.

20 Mr. Serna.

21 BOARD MEMBER SERNA: Thank you.

22 So I, too, agree with Professor Sperling, I'm
23 very supportive of this rule, and appreciate the comments
24 by my colleagues, Supervisors Fletcher and Gioia earlier.
25 It should be no surprise that I think you're initially

1 hearing from those members of this Board that also serve
2 in a county elected capacity first, and with some real
3 vested interested, since we kind of have feet in both
4 places, in terms of the airport systems that we're
5 affiliated with. And I want to thank those
6 representatives that provided testimony representing their
7 individual systems here today.

8 I think it's incredibly important that as
9 implementation of this moves forward that we continue to
10 think carefully and perhaps even very creatively about how
11 do we centralize not just reference to federal resources
12 to help implement the rule, but I think there's a real
13 opportunity to look at lessons learned as we're
14 proceeding, especially here in Sacramento County, in the
15 rollout of the Green Cities Initiative and Electrify
16 America's investments, especially as they relate to the
17 fact that in addition to so many other elements of what
18 we're doing here in -- here in Sacramento with those
19 resources, we are looking at deploying an electric bus
20 through our Regional Transit district here that will run
21 out to Sacramento International.

22 So I'd be very interested to know what staff's
23 thinking is today or in the not too distant future about
24 how we could actually be kind of a -- function as a
25 central clearinghouse for the multitude of resources that

1 can help airports system, counties, implement this rule,
2 work with other shuttle operators, and not just leave it
3 kind of at their whim to -- and wish them good luck in
4 terms of finding what's necessary to implement this.

5 But I think there's so many different moving
6 parts and opportunities, we somewhat have a responsibility
7 I believe to do just that. So I would encourage us to
8 think carefully about that. And if there's any reaction
9 or comments from staff immediately to that suggestion, I'd
10 be interested to hear it.

11 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

12 Thank you, Supervisor. Yes, I would like to
13 comment, because your choice of the word "responsibility",
14 I think is -- is right on. When we came here to -- in
15 front of this Board with the Transit Regulation, we came
16 saying we are partners. And we're not partners not just
17 at the Board hearing, but we're partners through the
18 implementation. To make the transformation from
19 combustion to zero-emission work, we -- we need to be
20 there through the step -- through every step of this, and
21 that includes not just monitoring the technology, that
22 includes a number of -- and helping them work through --
23 folks work through infrastructure, but a number of other
24 areas that we've talked about like workforce training, and
25 incentive programs.

1 I will point out a couple of weeks ago, we held a
2 two-day symposium for the transit operators. Very well
3 received, where this -- this was different than the
4 regulatory process. We went through the nuts and bolts.
5 We had people up here who've been through the good and the
6 bad of trying to start a zero-emission fleet, and the
7 lessons learned, and what do you need to do, and who do
8 you need to call, and what do you need to think about.

9 And we went through two days of that. And I
10 thought it was very effective. Heard great feedback from
11 the transit fleets on that. And our plan is, you know, we
12 certainly have, you know, to think about how, as we
13 expand, we incorporate more and more of that, but, you
14 know, a variety of different tools and measures to be able
15 to inform fleets and assist in the transformation.

16 BOARD MEMBER SERNA: That's good to hear. I
17 would also include some of the more -- and I'm biased
18 here, but some of the more progressive, forward-thinking
19 utilities. Of course, we have SMUD here locally that has
20 been a -- you know, a notable innovator when it comes to
21 how to deploy more and more zero-emission vehicles, and
22 their partnership with local government, and the state to
23 do just that.

24 So, you know, this should be a big tent -- be
25 perceived as a big tent opportunity.

1 Thank you.

2 CHAIR NICHOLS: Okay. Yes, Ms. Mitchell.

3 BOARD MEMBER MITCHELL: Thank you.

4 I'll start out by saying I'm very supportive of
5 the rule. I think it's -- that we're going the right
6 direction. But I have a couple of questions.

7 One of the issues raised was the emergency
8 exemptions. Suppose you need to evacuate the entire
9 airport because of who knows what terrorism, weather,
10 something like that, do you think that there's a real
11 problem there and we need that kind of an exemption?

12 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

13 What we have said in our presentation and our
14 discussions is -- there was a lot of discussion on the
15 comments about exemptions in general. And I'll say staff
16 does not agree with all of those exemption requests. We
17 think actually just the opposite. On the Olympics, for
18 example, we think we should be planning for a very
19 zero-emission Olympics.

20 But in terms of emergency exemptions, we do
21 believe that's a place where we should be looking at our
22 language over the 15-day process and working with them,
23 and defining what constitutes emergency situations, and
24 providing additional flexibility for those instances, yes.

25 BOARD MEMBER MITCHELL: Okay. Thank you.

1 The other question I have is about the technology
2 for the cutaway buses. Do we know what the range would be
3 for one of these cutaways? There's two different classes,
4 so I guess the ranges are different. And how well does
5 that work in with the duty cycle of those buses, because
6 they're used quit a lot at most of the airports?

7 AIR POLLUTION SPECIALIST POGGI: So the range of
8 a cutaway on a single charge is about 100 miles, maybe a
9 little bit less depending on conditions.

10 BOARD MEMBER MITCHELL: And then someone
11 testified that the duty cycle of one of these shuttles was
12 normally 100 miles a day, is that your --

13 AIR POLLUTION SPECIALIST POGGI: That -- that's
14 more than average, and that would be assuming that there
15 was no charging at all during a 24-hour period.

16 BOARD MEMBER MITCHELL: It looks like if it's 100
17 miles a day, and they have a 100-mile range, a single
18 charge might work -- overnight charge would work for most
19 of those, is that right?

20 AIR POLLUTION SPECIALIST POGGI: That's correct.
21 We expect some mid-day charging as well. Just a few
22 minutes here and there can help get you over the hump.

23 BOARD MEMBER MITCHELL: The other issue that
24 brings up with this regulation is that this regulation
25 reaches to private fleets, but we didn't hear from a

1 single private fleet owner. Have you guys heard from
2 them? What are -- what are their -- what's their thinking
3 on this?

4 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

5 Yeah, let me start that discussion and others may
6 jump in. So we have had extensive outreach toward the
7 private fleets. Our own outreach we've coordinated
8 with -- we've coordinated with various associations
9 that -- that would be dealing with this. The airports
10 assisted quite a bit. Our Ombudsman's Office assisted in
11 this outreach, as well as surveys to get more involved.
12 It's one of those lead a horse to water but you -- you
13 know, you can't make them come to the Board hearing to
14 testify.

15 (Laughter.)

16 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

17 So we -- so I think there's a general awareness
18 out there. We've got some engagement from private fleets,
19 mostly the off-airport parking. Lisa McGhee was here.
20 And so we appreciate that.

21 Always would like to get more. I think as we
22 talk -- go through the outreach component and the sort of
23 training component that we had talked about earlier, that
24 will be a goal of ours to reach more of those.

25 The benefit is many of those off-airport parking

1 are smaller fleets, so they will have additional time in
2 this process to become aware of the rule.

3 BOARD MEMBER MITCHELL: I would just say I think
4 that's important. I know at -- well, certainly at LAX, I
5 would say 50 percent of the traffic going around the
6 horseshoe loop is, you know, these smaller fleets. And
7 it's hotels, parking lots, and rental car places. That's
8 going to change, because there's a lot of improvement
9 plans at LAX, including the new light rail, and the
10 consolidated rental facility.

11 So -- but I would say engaging our private fleets
12 is pretty important here, because it's going to be a big
13 impact for them. So I'm very supportive of the rule. I
14 think we're -- this is going the right way, and it's a
15 good opportunity to kind of experiment here.

16 Thank you.

17 CHAIR NICHOLS: Thank you.

18 Hector.

19 BOARD MEMBER DE LA TORRE: Yeah. I have a
20 follow-up question on private fleets. Are we talking
21 about all the private fleets that come in and out of the
22 airport or are we only talking about private fleets that
23 are under some kind of contract with the airport to
24 provide services?

25 MSCD INCENTIVES DEVELOPMENT SECTION MANAGER

1 OLALUWOYE: Yes. The contractors are actually covered
2 under our on-airport fleets. So those would be the ones
3 that are -- that do go to-and-from the airport -- or
4 actually, I should say those that go around the airport.
5 The off-airports are the private fleets that do go from a
6 different location to the airport.

7 BOARD MEMBER DE LA TORRE: Like the parking ones
8 and all those others.

9 MSCD INCENTIVES DEVELOPMENT SECTION MANAGER

10 OLALUWOYE: Correct.

11 BOARD MEMBER DE LA TORRE: So it in -- this will
12 apply to all of them?

13 MSCD INCENTIVES DEVELOPMENT SECTION MANAGER

14 OLALUWOYE: Well, of them in a 15-mile radius of the
15 airport, as well as ones that go un -- beneath 30 miles as
16 a total route.

17 BOARD MEMBER DE LA TORRE: Okay. And then the
18 second -- thank you. And the second was just a comment on
19 somebody was talking about off-ramps. Everything we do
20 here has off-ramps. We have shown -- this Board has shown
21 numerous times over the years that if something isn't
22 going in the direction we think it is, we pause, we
23 analyze, and sometimes we change. So that is always the
24 case.

25 It isn't that we're not hearing the concerns. We

1 think this is where things are headed, and we're very
2 confident of that. But if something changes. The economy
3 has a dip, which is likely in the next few years -- next
4 couple of years, things might change. And so, you know,
5 at that point, we'd look at that situation on a
6 case-by-case basis.

7 So don't -- just because there's nothing explicit
8 here about that doesn't mean we don't acknowledge that it
9 might happen down the road.

10 Thank you.

11 CHAIR NICHOLS: Thank you.

12 Sandy.

13 VICE CHAIR BERG: Thank you. I would just like
14 to also offer my support, but -- with no buts, I offer my
15 support. I do think that this is a duty cycle that
16 absolutely should work. And if it doesn't work, then we
17 have some other issues that we really need to go back to
18 the drawing board and take a look at. So I'm really
19 encouraged that this is a duty cycle that should work.

20 I would like to encourage staff to take a look at
21 the next five, six years is going to be really a game
22 changer, because we're going to have so many more examples
23 within the fleets and things working. And so this no
24 backsliding that you have in 2023, which I think is very
25 important, I would offer that you might want to take a

1 look at the balance of encouraging people to purchase
2 ahead of time versus some of the concerns they have
3 through the exemptions that they're looking at. And maybe
4 there's some sort of sunseting to encourage people to go
5 out in front, but they have a no backsliding provision
6 then in 2023.

7 So is there something we can offer until the
8 actual 2027, where you have 33 percent? So it isn't a
9 full exemption on the rule, but it might be some comfort
10 to allow people to absolutely get out in front of this and
11 cover the no backsliding. So just a thought for you.

12 Thank you.

13 CHAIR NICHOLS: Okay. I think we've pretty much
14 exhausted the topic here. I don't have anything in -- I'm
15 sorry? Excuse me. You were being hidden somehow.

16 BOARD MEMBER TAKVORIAN: Thank you. I just
17 wanted to offer my support also for the rule. And a
18 couple of my questions have already been covered, but I
19 wanted to -- just, one, I think it's an extension of what
20 Supervisor Serna saying, but I was very interested in the
21 concept of centralization of infrastructure and shared
22 resources, and wanted to hear more from staff about what
23 you think about that?

24 In San Diego, we have an airport, Port of San
25 Diego, and our metropolitan transit system that are all

1 within two or three miles of each other. And the rules
2 are moving towards zero-emission heavy-duty in all of
3 those areas. So is it possible that CARB -- I know CARB
4 can't do everything. So don't start with that. But is it
5 possible that CARB could help -- and perhaps the MPOs
6 could be engaged in this process to really put together a
7 shared infrastructure, because we're having all these
8 heavy-duty vehicles that are needing to charge and get to
9 zero-emission, and could that be cost savings, could that
10 be more efficient? So that's one question I hope that you
11 would respond to.

12 And my second one is in regards to the exemption
13 process. And I appreciate that you're saying that you're
14 going to be looking at the emergencies and defining those.
15 And I'm concerned about a slippery slope with exemptions.
16 And I understand from the slides that -- in your
17 presentation that there's really not a public process for
18 exemptions. And I want to suggest that we consider that
19 there should be a public process.

20 It's concerning to me that there's a lot of
21 concerns from the airports. And I think that we really
22 need -- we're putting a lot of resources from staff
23 resources, all of the outreach that you've done, the
24 Board's attention to this. So I think if a major airport
25 is seeking exemptions, the public ought to be part of that

1 process. So I wanted to hear what your thoughts might be
2 about that as well. Thanks.

3 CHAIR NICHOLS: Thank you. I support both of
4 those comments absolutely. And I would agree that if
5 there is going to be a process for waivers that it should
6 be one that is open and accessible to the public for sure.

7 I think the infrastructure point is one that I'd
8 like to see us exploring further for a lot of reasons.
9 But as you've pointed out and as some of the witnesses
10 indicated, we're dealing, in some cases, with multiple
11 fleets and multiple locations, and the potential for
12 duplication, waste, overlap, et cetera is high.

13 There's also a real need for new charging
14 facilities to go in here, which could be potentially
15 available not only for the airport's own shuttles, but for
16 other charging needs that are out there as well.

17 So I'm particularly thinking about those
18 beautiful parking structures and places where you might
19 want to come in and charge as a member of the public,
20 because we know there's a lot of activity going on at and
21 around the airports. All you have to do is look at the
22 freeways that are clogged, you know, during commuter hours
23 with people going to and from the airports and what about
24 their potential need for charging as well.

25 So I think between now and the time this comes

1 back, I'd like to ask the staff to at least give some
2 thought to whether there's somehow we could incentivize a
3 increase in the amount of charging, and the convenience of
4 charging that's associated with this rule. I don't -- I
5 understand sometimes you can load something down with too
6 many different, you know, great new ideas. And I don't
7 mean to do that, but I think maybe there's an opportunity
8 here that we haven't -- that we haven't fully considered.

9 Okay. I think we're ready, at this point, to
10 move -- do we have a motion?

11 Yes

12 BOARD MEMBER DE LA TORRE: I'll move the item.

13 CHAIR NICHOLS: A motion.

14 BOARD MEMBER SERNA: Second.

15 CHAIR NICHOLS: Second.

16 All in favor, please say aye?

17 (Unanimous aye vote.)

18 CHAIR NICHOLS: Any opposed?

19 None.

20 No abstentions on this one great.

21 So at this point, I think we take a lunch break.

22 But I'd like to try to keep it to a half an hour, given
23 the schedules that people have for the rest of the day.

24 So we'll try to be back here at 1:30.

25 Thanks, everybody.

(Off record: 1:00 PM)

(Thereupon a lunch break was taken.)

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

2 (On record: 1:51 p.m.)

3 CHAIR NICHOLS: Okay. Ladies and gentlemen,
4 sorry for the long -- longer-than-anticipated lunch break.
5 Having a larger Board means we have more people at lunch,
6 which means more fun.

7 (Laughter.)

8 CHAIR NICHOLS: But it is a little hard to get
9 our troops so organized today, apologies.

10 We have a couple of informational items on our
11 agenda for this afternoon. And they're important, but no
12 votes need to be taken. So that reduces the stress a
13 little bit, I guess. The next item on the agenda is an
14 update on the 2017 Scoping Plan Implementation. Just over
15 a year ago, this Board approved California's 2017 Climate
16 Change Scoping Plan, establishing a number of discrete
17 actions that will enable California to reduce greenhouse
18 gas emissions to achieve our 2030 target, and put us on a
19 trajectory for continued emissions reductions.

20 The 2017 Scoping Plan update includes a portfolio
21 of policies all of which address greenhouse gas emissions
22 and, in most cases, are also designed to reduce
23 traditional air quality pollutants as well. Today, we
24 will hear about implementation progress on the scoping
25 plan. And I would note that we, as a Board, have been

1 taking action almost every time we get together once a
2 month to support these efforts, but it -- we don't often
3 get to see them as a whole. So this is an opportunity to
4 kind of take stock of where we are.

5 California is recognized as a global leader in
6 addressing climate change impacts, and as we continue down
7 that path, we also continue to improve the tools for more
8 effectively addressing our localized air quality concerns,
9 especially in the most burdened communities.

10 It's also more important than ever to maintain
11 our progress in reducing greenhouse gas emissions. The
12 scoping plan provides a useful framework, but it's really
13 only through adopted programs that our reduction targets
14 will be met.

15 Planning is important, but it's only the first
16 step. So the staff will highlight in this presentation
17 sectors where we need additional attention to actually
18 making sure that these plans are getting carried out.

19 In late -- in light of the latest science
20 pointing towards the imperative for even greater
21 greenhouse gas emissions reductions, staff will also share
22 their thoughts on activities that they plan to undertake
23 this year.

24 So, Mr. Corey, please introduce this item.

25 EXECUTIVE OFFICER COREY: Thank, Chair.

1 California is on track to achieve our 2020 greenhouse gas
2 emissions goal, through successful implementation of
3 targeted measures. And as you noted, our 2016 GHG
4 inventory shows we're below 1990 levels four years earlier
5 than mandated by AB 32. Many of the measures implemented
6 will not only reduce GHGs, but they also reduce localized
7 air pollutants in the State's most vulnerable communities.

8 At the same time, the policy and science
9 landscape continues to evolve. As you noted, the
10 Intergovernmental Panel on Climate Change recently
11 redetermined that limiting the temperature rise to 1.5
12 degrees Celsius through drastically reducing emissions and
13 increasing carbon sequestration is essential to avoiding
14 the worst impacts of climate change.

15 The staff presentation will summarize our
16 progress on implementation of the 2017 scoping plan and
17 preview staff activities for this year. The discussion on
18 how to both reduce emissions and increase carbon
19 sequestration will require critical dialogue with
20 stakeholders over the coming months and years.

21 I'll now ask Maureen Hand of the Industrial
22 Strategies Division to begin the staff presentation.

23 Maureen.

24 (Thereupon an overhead presentation was
25 presented as follows.)

1 AIR RESOURCES ENGINEER HAND: Good afternoon,
2 Chairman Nichols and members of the Board. This
3 informational item is annual update called for in the
4 resolution from December 2017, where the Board voted to
5 adopt the 2017 Scoping Plan Update.

6 Today, I will provide a high level summary of
7 steps we have taken to implement the 2017 Scoping Plan
8 Update. I will also describe planned climate change
9 related activities for 2019.

10 --o0o--

11 AIR RESOURCES ENGINEER HAND: This slide should
12 look very familiar, but it's a good reminder of the key
13 statutes and Executive Orders that guide our climate
14 targets. In 2006, AB 32 set our initial target for 2020
15 to return to 1990 greenhouse gas emission levels. Then SB
16 32 called for a 40 percent reduction in greenhouse gas
17 emissions below 1990 levels statewide by 2030.

18 The 2017 Scoping Plan lays out a cost effective
19 and achievable path for this target. This 2030 target is
20 on the path toward achieving the goal of reducing
21 greenhouse gas emissions 80 percent below 1990 levels by
22 2050. We anticipate that last year's executive order
23 calling for carbon neutrality by 2045 will build on our
24 successes in reducing greenhouse gases from fossil fuels,
25 and emphasizes our need to focus on our natural and

1 working lands and other sequestration. Carbon neutrality
2 will require both reductions in greenhouse gas emissions,
3 as well as increased carbon sequestration.

4 --o0o--

5 AIR RESOURCES ENGINEER HAND: California's annual
6 greenhouse gas inventory is a publicly available resource
7 that provides a comprehensive assessment of greenhouse gas
8 emissions from each of the primary economic sectors.

9 Transportation is the largest emitting sector. When we
10 include the emissions associated with producing and
11 refining fossil fuels, nearly half of the state's annual
12 greenhouse gas emissions are associated with meeting
13 transportation demands.

14 --o0o--

15 AIR RESOURCES ENGINEER HAND: We have made
16 important progress in reducing our greenhouse gas
17 emissions. The greenhouse gas emissions inventory, shown
18 here by the light blue line, is also an important tool for
19 establishing historical emission trends and tracking
20 California's progress in reducing GHGs. We see that our
21 greenhouse gas emissions have followed a declining trend
22 since 2007, and are 13 percent lower than peak levels in
23 2004. The dashed line is the 2020 target established by
24 AB 32, a return to 1990 emission levels.

25 Last summer, we announced that emissions fell in

1 2016 fell below 1990 levels for the first time. The dark
2 blue line represents emissions reported by California's
3 largest greenhouse gas emitters under the mandatory
4 reporting regulation. The state's largest emitters,
5 including industrial facilities, fuel suppliers, and
6 electricity generators and importers report to CARB
7 annually and represent about 80 percent of the state's
8 greenhouse gas sources. This preliminary look at 2017
9 greenhouse gas emissions indicates a continued downward
10 trend

11 --o0o--

12 AIR RESOURCES ENGINEER HAND: As was previously
13 mentioned, the Board adopted the 2017 Scoping Plan Update
14 in December 2017. The Scoping Plan identifies measures
15 that together are expected to reduce economy-wide
16 greenhouse gas emissions to 40 percent below 1990 levels
17 by 2030.

18 The figure illustrates the contributions that
19 will be needed by the six primary measures. These
20 measures reflected legislation or policies that were known
21 at the time the Scoping Plan was developed. Since
22 adoption of this Scoping Plan, new legislation has been
23 signed, and we have completed some rulemakings.

24 Per SB 100, the Renewables Portfolio Standard, or
25 RPS, was increased from 50 percent by 2030 to 60 percent

1 by 2030, and calls for planning for 100 percent zero
2 carbon electricity by 2045.

3 And the Board adopted amendments to the Low
4 Carbon Fuel Standard that increased the stringency of the
5 car been intensity reduction target to 20 percent by 2030.
6 The Scoping Plan target was 18 percent in 2030.

7 Reducing greenhouse gas emissions from
8 short-lived climate pollutants is a significant element of
9 the strategy. And the fugitive sources of methane and
10 high global warming pollutant emissions are not covered by
11 the Cap-and-Trade Program.

12 --o0o--

13 AIR RESOURCES ENGINEER HAND: Emissions inventory
14 data is an important tool for tracking progress toward
15 meeting the State's targets. The greenhouse grass
16 inventory provides emission data for all California
17 economic sectors. In addition to this annually updated
18 data, the Board recently adopted a regulation to allow for
19 enhanced reporting of criteria and toxics data as called
20 for in AB 617.

21 There are a number of program metrics that are
22 useful in tracking progress toward meeting the state's
23 greenhouse gas emission goals. These include measures of
24 economic activity, fuel type and use, growth in renewable
25 energy, and adoption of new technologies or practices that

1 alter transportation energy demand.

2 A number of State agencies, in addition to CARB,
3 maintain data to support these metrics, for example, the
4 Department of Finance and the Energy Commission.

5 The Climate Change Investments Reports also
6 include information on the benefits of projects funded by
7 the Cap-and-Trade Program.

8 --o0o--

9 AIR RESOURCES ENGINEER HAND: The Board took
10 numerous actions last year to implement the Scoping Plan.
11 Many of the actions also improve air quality. The Board
12 adopted GHG planning targets that most of the state's
13 retail electricity providers are using to inform
14 procurement decisions that will impact the electricity
15 sector's greenhouse gas emissions in 2030. The Board also
16 adopted updated regional greenhouse gas emission reduction
17 targets for the state's Metropolitan Planning
18 Organizations. A number of regulations were strengthened
19 and extended. These regulations will reduce traditional
20 air pollutants and GHGs, and include vehicle standards,
21 clean fuels and Cap-and-Trade.

22 These regulations provide long-term certainty for
23 technology and clean energy investments. Additionally,
24 the Board adopted a new regulation restricting the use of
25 high global warming potential hydrofluorocarbons last

1 year. Each of these rulemakings included its own public
2 process and analyses to inform Board action.

3 --o0o--

4 AIR RESOURCES ENGINEER HAND: California Climate
5 Investments support the state's low-carbon transition to
6 a -- support the state's low carbon transition and its
7 climate air quality and environmental justice goals.
8 Since 2012, the Governor and the Legislature have
9 appropriated over \$8 billion in California Climate
10 Investments funding received through the State's
11 Cap-and-Trade auctions.

12 Investments are successfully reducing greenhouse
13 gas emissions, strengthening the economy, and improving
14 public health and the environment, particularly for the
15 most vulnerable Californians.

16 \$1.4 billion was appropriated for fiscal year
17 2018-2019. These monies were provided to over a dozen
18 agencies for a variety of programs. At CARB, the Low
19 Carbon Transportation Program accelerates the transition
20 to low-carbon freight and passenger transportation modes.
21 Rebates are provided for purchases of battery electric,
22 plug-in hybrid electric, and fuel-cell electric vehicles.

23 Incentives target replacement of fleet vehicles
24 including trucks and buses. Other projects demonstrate
25 low-carbon technologies, particularly for heavy-duty

1 vehicles and off-road vehicles.

2 Funding for the natural and working lands sector
3 will be applied towards projects in program areas that
4 include climate adaptation, wetlands and watershed
5 restoration, healthy soils, prescribed fire, sustainable
6 forests, regional forest health, and urban greening.

7 These are just a few examples of the types of
8 investments funded by the Cap-and-Trade Program auction
9 proceeds. Importantly, as reported in the 2018 annual
10 report to the Legislature, 51 percent of investments to
11 date are benefiting disadvantaged communities.

12 --o0o--

13 AIR RESOURCES ENGINEER HAND: The 2017 Scoping
14 Plan includes several policies to address the
15 transportation sector. And if successfully implemented,
16 they would reduce on-road fuel demand by 45 percent by
17 2030. While overall, statewide greenhouse gas emission
18 reductions are down, emissions in the transportation
19 sector increased two percent from 2015 to 2016.

20 Because this sector is heading in the wrong
21 direction, and the Board directed us to continue to keep
22 evaluating ways to reduce greenhouse gas emissions, we
23 held two workshops in the summer of 2018 on additional
24 opportunities to reduce emissions in this sector.

25 In the first workshop, staff heard from experts

1 about opportunities to reduce greenhouse gas emissions
2 from Petroleum transportation fuels. External panelists
3 highlighted the need to address both emissions of the
4 vehicle fleets and vehicle miles traveled. The
5 discussions also underscored the need to think broadly
6 about the impact of all sectors and land-use decisions on
7 transportation emissions, as well as the need to better
8 incentivize innovation and technology development in this
9 sector. Panelists highlighted the need for resilient
10 policies that reduce petroleum demand.

11 In the second workshop, we explored new actions
12 to accelerate deployment of zero-emission vehicles. This
13 workshop focused on increasing use of ZEVs in both light-
14 and heavy-duty vehicle fleets. Potential areas of ongoing
15 and future analysis include vehicle technology
16 assessments, fueling infrastructure needs, estimates of
17 the size of each type of fleet, and impact on emissions,
18 among others.

19 --o0o--

20 AIR RESOURCES ENGINEER HAND: A key aspect of
21 reducing transportation sector greenhouse gas emissions
22 requires changing the way we meet our transportation needs
23 in this state. The Scoping Plan assumes that VMT can be
24 reduced seven percent by 2030 and 15 percent by 2050 from
25 projected levels. We know that we need to do more to

1 will now focus on the second largest measure in the
2 Scoping Plan, the Short-Lived Climate Pollutant Strategy.
3 This strategy is critical to achieving our 2030 limit.

4 The majority of California's methane emissions
5 originate from the dairy and livestock sector, primarily
6 from manure management and enteric fermentation. Methane
7 emissions can be avoided via projects that change manure
8 management practices. Also, methane emissions can be
9 captured using dairy digesters that put the resulting
10 biogas to beneficial use. Unfortunately, barriers exist
11 that impact the development of these dairy methane
12 emissions reduction projects.

13 To address these barriers, the Dairy and
14 Livestock Greenhouse Gas Emissions Reduction Working Group
15 was formed in May 2017, which included CARB, the
16 California Department of Food and Agriculture, or CDFA,
17 the Energy Commission, and the California Public Utilities
18 Commission, or CPUC.

19 Three subgroups, identified in the figure on this
20 slide, were also formed to address specific topic areas
21 and develop recommendations.

22 To provide a balanced approach, each subgroup was
23 made up of representatives from a diverse group of
24 stakeholders, which included industry, project developers,
25 and others you see listed on this slide.

1 Especially important was the participation of
2 representatives from environmental justice organizations,
3 who brought to the table the perspective of communities
4 that are affected by dairies and dairy emissions reduction
5 projects. These subgroup members identified potential
6 issues and proposed future research to achieve the dual
7 goals of improving public health and reducing methane
8 emissions from California's dairy and livestock sector.

9 The three subgroups met dozens of times over a
10 two-year period. They developed recommendations designed
11 to guide State policies, accelerate dairy methane
12 reduction projects, and overcome barriers. The subgroup
13 recommendations to the Dairy Working Group were presented
14 to the State agency principals last December and are
15 posted on CARB's Dairy and Livestock Working Group
16 webpage.

17 --o0o--

18 AIR RESOURCES ENGINEER HAND: Because of tight
19 profit margins, one key recommendation we heard last
20 December was to continue publicly funded grants and
21 incentives to encourage new dairy projects. In the past
22 few years, California Climate Investment funds have played
23 a major role in achieving reductions in dairy methane, pry
24 primarily through CDFA's Dairy Digester Research and
25 Development Program, and also their Alternative Manure

1 Management Program.

2 To date, over 60 digester projects and nearly 60
3 alternative manure management projects have been funded,
4 with the majority of funds going to digester projects due
5 to their greater potential to obtain large methane
6 emission reductions.

7 In addition to supporting emissions reductions,
8 digester projects also contribute to the state's renewable
9 energy efforts, because the biomethane that's produced can
10 display -- can displace fossil natural gas for
11 transportation, electrical generation or industrial uses.

12 This is not to downplay the importance of
13 alternative manure management practice projects, which
14 reduce the creation of methane in the first place. These
15 practices can reduce methane emissions on dairies where
16 digesters are not feasible.

17 California's 2018/2019 budget includes another
18 \$99 million for these two CDFA grant programs with awards
19 expected to be announced in September 2019. In addition
20 to grant funding administered through CDFA through Senate
21 Bill 1383, the Legislature tasked the Public Utilities
22 Commission with implementing at least five dairy
23 biomethane pilot projects to demonstrate interconnection
24 from dairy digesters to our natural gas pipelines
25 infrastructure.

1 Last fall, the CPUC announced the selection of
2 six projects intended to capture biomethane from a total
3 of 45 dairies in California. The infrastructure cost for
4 these projects, nearly \$319 million, will be ratepayer
5 funded through natural gas utilities.

6 --o0o--

7 AIR RESOURCES ENGINEER HAND: To ensure continued
8 progress on methane emissions reductions in the dairy and
9 livestock sector, and to support the production and use of
10 dairy biomethane, CARB staff identified the following next
11 steps.

12 First, per SB 1383, CARB, in consultation with
13 CDFA, will analyze the dairy and livestock sector's
14 progress in reducing methane emissions including progress
15 in overcoming technical and market barriers. This
16 analysis will be completed by July 1, 2020.

17 Second, CARB staff will consider subgroup
18 recommendations as we move forward with our existing
19 programs and new efforts.

20 Third, we will explore ways to improve the
21 competitiveness of in-state renewable natural gas.
22 Currently, a significant portion of California's renewable
23 natural gas supply comes from out of state.

24 Last, we will continue to research ways to reduce
25 emissions from the dairy and livestock sector. The Dairy

1 Research Prospectus developed by the Dairy Working Group's
2 Research Subgroup provides a guide to potential future
3 research efforts.

4 --o0o--

5 AIR RESOURCES ENGINEER HAND: Starting with this
6 slide, I will provide some information on global
7 discussions related to climate change and how those relate
8 back to California. Last year, two seminal climate change
9 reports were published, one with global scope and the
10 other focused on the United States.

11 The IPCC special report provides a global
12 perspective on impacts of global warming of 1.5 degrees
13 Celsius above pre-industrial levels. The Fourth National
14 Climate Assessment assesses climate change impacts across
15 the United States now and throughout this century.

16 Our climate is already changing and these two
17 reports describe similar impacts and risks associated with
18 continued warming of the planet.

19 Although, there are numerous mitigation and
20 adaptation efforts underway globally and in the United
21 States, the scale and speed of these actions is not
22 considered sufficient to avoid substantial damages.

23 Global warming impacts will not be distributed
24 equally, both at the global and national scale.
25 Disadvantaged and vulnerable populations, as well as

1 communities dependent on agriculture or coastal
2 livelihoods are at higher risk of adverse consequences.

3 In summary, these two reports further
4 substantiate what we already know. While actions we take
5 here in California will reduce greenhouse gas emissions
6 and provide public health co-benefits, the reports confirm
7 that unless others take similar actions, we are still
8 susceptible to the adverse impacts of climate change.

9 --o0o--

10 AIR RESOURCES ENGINEER HAND: Our thinking about
11 how to preach the climate challenge is evolving. And the
12 concept of carbon neutrality is gaining in importance.
13 The concept is that to add -- the concept is that to
14 address climate change, the carbon dioxide and other
15 greenhouse gas emissions generated by sources, such as
16 vehicles, power plants, and industrial processes must be
17 less than or equal to the amount of carbon dioxide that is
18 removed and stored, both in natural sinks, such as
19 forests, and mechanical sequestration, such as carbon
20 capture and sequestration.

21 The magnitude of climate change impacts will
22 depend upon when carbon neutrality is achieved. The IPCC
23 special report finds that to limit global temperature
24 increase to 1.5 degrees Celsius, we need to reach global
25 carbon neutrality by mid-century.

1 The report also indicates that on a global scale,
2 some regions may remain net emitters, while others are
3 better suited to be sinks. Last September, the Governor
4 signed an executive order for carbon neutrality by 2045,
5 consistent with the IPCC report findings.

6 In short, the framing of near zero emissions is
7 not sufficient to limit global warming to 1.5 degrees
8 Celsius. We need our greenhouse gas emissions flux to be
9 at zero or net negative, where we remove more greenhouse
10 gases than we emit.

11 --o0o--

12 AIR RESOURCES ENGINEER HAND: The IPCC special
13 report also explored policy paths to reduce emissions.
14 Rapid and far-reaching transitions in all sectors are
15 needed to achieve carbon neutrality by mid-century, and to
16 limit global warming to 1.5 degrees Celsius.

17 Innovation and international cooperation will be
18 critical moving forward. Innovation policies may be more
19 effective when they combine public support for research
20 and development within incentives for technology
21 development. Behavior changes consistent with adapting to
22 and limiting global warming to 1.5 degrees Celsius can be
23 accelerated when policies are combined with education,
24 information, and community approaches.

25 Together, policies, increased investment, and

1 accelerated technological innovation and behavior change
2 can enable economy-wide transformation that can lead to
3 carbon neutrality by mid-century.

4 This has always been the California approach. We
5 have consistently pursued a portfolio of incentives,
6 prescriptive regulations, and carbon pricing to achieve
7 the State's greenhouse gas emission goals. Our reductions
8 in greenhouse gases lend proof that our approach is
9 working, while the economy has grown.

10 --o0o--

11 AIR RESOURCES ENGINEER HAND: Others are taking
12 steps to adopt or develop carbon neutrality goals. Each
13 of these efforts involves serious consideration of unique
14 attributes of the jurisdiction in question. The European
15 Commission developed a long-term strategy that outlines a
16 vision of the deep economic and societal transformations
17 required, engaging all sectors of the economy and society
18 to achieve the transition to a climate neutral economy by
19 mid-century. This goal is an aggregate goal across a
20 region of 28 member states.

21 Sweden's climate policy framework includes a goal
22 net zero GHG emissions by 2045, and negative emissions
23 thereafter. Their plan is to reduce 85 percent of their
24 emissions within their border, but they will need to rely
25 on investments in out-of-region actions for balancing the

1 remaining 15 percent of emissions.

2 Costa Rica is developing plans to offset all
3 carbon emissions. They're implementing measures to
4 address transportation sector emissions, as well as
5 considering a carbon certificate market.

6 --o0o--

7 AIR RESOURCES ENGINEER HAND: In the slide, I
8 will describe some implications of carbon neutrality for
9 California. The path to carbon neutrality requires
10 actions on both sources and sinks. Today, we track
11 statewide greenhouse gas emissions from transportation
12 electricity, commercial, residential, industrial,
13 agricultural, and waste management sectors, including high
14 global warming potential gases.

15 We also track emissions and sequestration in our
16 natural and working lands. Currently, these lands are a
17 source of GHG emissions, releasing more carbon than they
18 are sequestering. Some amount of emissions from this
19 sector are part of the natural cycle, and are necessary
20 for healthy systems. This includes some periodic fires.

21 However, decades of fire suppression in our
22 forests, years of drought, and the tree mortality crisis
23 are exacerbating these losses. Moving toward carbon
24 neutrality will -- will require us to determine what level
25 of emissions are expected from healthy and resilient

1 ecosystems and what is needed to get our landscapes into a
2 healthy and resilient state.

3 We also need to consider activities like land
4 conversion for housing or other uses, which not only
5 removes the land from being a potential carbon sink, but
6 can promote additional greenhouse gas emissions associated
7 with transportation.

8 Today, California emits greenhouse gases from
9 fossil energy and industrial sectors, as well as from our
10 natural and working lands. To achieve carbon neutrality
11 by mid-century, we must minimize emissions from our fossil
12 energy and industrial sources, and transition our natural
13 and working lands from a source to a sink, such that we
14 achieve net negative greenhouse gas emissions.

15 As we start to consider the concept of carbon
16 neutrality, our starting point is the existing accounting
17 framework, which includes the major greenhouse gas
18 emissions and not just carbon dioxide.

19 --o0o--

20 AIR RESOURCES ENGINEER HAND: It's easy to look
21 at carbon neutrality as simply balancing emissions with
22 sequestration, but it is more complex than that. I
23 mentioned different approaches being considered or adopted
24 by other governments in an earlier slide. We will also
25 have to evaluate options for California, as we move

1 forward.

2 We need to understand how much more we can reduce
3 fossil energy and industrial sector emissions. What is
4 the minimum level of greenhouse gas emissions that will be
5 technically feasible, cost effective, and scalable. We
6 know that our natural and working lands currently store
7 carbon and can become a valuable emissions sink. We know
8 they are emissions sources today. What is the long-term
9 potential for storage and sequestration in resilient
10 forests, and when could these lands transition from
11 emissions source to sink?

12 What are options for mechanical sequestration
13 technologies that can extract carbon emissions and store
14 them through geologic sequestration or other forms? This
15 past year, we took an important step. The Board adopted a
16 carbon capture and sequestration protocol for projects
17 that capture CO2 and sequester it in geologic formations.

18 We know from the 2017 Scoping Plan analysis that
19 a suite of policies including cap-and-trade is four times
20 less costly than other options to achieve the 2030 target,
21 with the least impact on the economy and jobs, and the
22 greatest affordability for households. What is an optimal
23 mix of carbon pricing with complimentary policies as we
24 move past 2030?

25 Evaluating this new framework requires tools to

1 assess economic and environmental outcomes associated with
2 carbon neutrality under different scenarios. And it's
3 important to assure that co-benefits for vulnerable
4 communities are maximized. While we continue to look at
5 additional ways to reduce greenhouse gases that can
6 complement the programs we already have, we must consider
7 affordability for low-income households and design
8 programs to maintain political and public support for
9 climate action.

10 --o0o--

11 AIR RESOURCES ENGINEER HAND: The 2017 Scoping
12 Plan established a strategy to achieve the State's SB 32
13 target. We must diligently monitor and be willing to
14 adjust the scoping plan measures as needed to ensure we
15 achieve the 2030 target.

16 Last month, staff held an introductory webinar on
17 carbon neutrality and the work that lays ahead. Staff
18 also hosted the Bioresources Economy Summit in partnership
19 with Lawrence Berkeley National Laboratory and the
20 University of California at Berkeley.

21 The summit provided a forum to discuss how
22 California can further facilitate a circular sustainable
23 economy built around bioresources that contributes to our
24 environmental, economic, and equity goals.

25 In the coming months, workshops will provide a

1 forum to explore specific topics focused on energy demand
2 and supply, transformation across economic sectors, and
3 sequestration activities.

4 In addition, we will continue to work with other
5 agencies, academics, and international partners, while
6 also engaging with the legislature.

7 Our State and local partners have expertise and
8 authority that are critical in helping the state reduce
9 its greenhouse gas emissions.

10 We also want to leverage external resources. The
11 next year provides an opportunity to engage with academics
12 and researchers who may already be evaluating paths to
13 deep decarbonization. Our plan discussions can help
14 inform their research agendas. International partners are
15 facing similar challenges in considering similar options.

16 We just keep our seat at the international table
17 to learn from others and share our experiences. The path
18 forward for addressing climate change must include both
19 reducing emissions and sequestration. This must happen
20 globally for us to avoid the most adverse impacts of
21 climate change around the globe and at home.

22 --o0o--

23 AIR RESOURCES ENGINEER HAND: Thank you.

24 CHAIR NICHOLS: Thank you. We have a list with
25 eight names on it of people who have signed up to comment

1 on this presentation. So I think we should hear from them
2 starting with CALSTART.

3 MR. SCHUCHARD: Good afternoon, Chair Nichols,
4 Board members. Ryan Schuchard with CALSTART. And I'm
5 also one of the -- the co-chairs of the Dairy Working
6 Group. And I just wanted to say mostly thank you for
7 entrusting CALSTART, as one of the members of that working
8 group. And secondly, more importantly, I just wanted to
9 commend Floyd, and I think I saw Marcelle back there and
10 the whole team for executing such a professional and
11 comprehensive process over two years. It had just an
12 enormous amount of stakeholder input, information, and did
13 such an impressive job of synthesis.

14 And just two comments on the outcome. CALSTART
15 is very pleased with the overall portfolio of
16 recommendations that emphasize both the actions needed for
17 near-term near zero-emission technologies that are ready
18 today and can accelerate projects, while also having a
19 good program for putting dairy methane to use in advanced
20 vehicles and technologies.

21 And then secondly, one of the key findings was
22 that, surprise surprise, we can do this, but we need the
23 durable sufficient incentive funding for the vehicles for
24 multiple years to come. And as always, we continue to
25 work with CARB and the Legislature to make that a reality.

1 And we look forward to being a continued resource
2 in the Dairy Working Group space and other working groups
3 as you might find us a resource.

4 CHAIR NICHOLS: Thank you. I think you are
5 accompanied by a helper today? Did you bring someone with
6 you?

7 MR. SCHUCHARD: She's trying to keep a low
8 profile, but yeah. That's Madelyn back there.

9 CHAIR NICHOLS: Oh, okay.

10 (Laughter.)

11 CHAIR NICHOLS: Thank you. Thank you.

12 Mr. Magavern.

13 MR. MAGAVERN: Yes. Thanks.

14 Bill Magavern, Coalition for Clean Air.

15 My comments will focus on the transportation
16 sector, which as the presentation noted is the biggest
17 source of greenhouse gas emissions in California, and also
18 the only sector that is growing. And I thought it was
19 commendable that last year when it became clear that we
20 were falling short in reducing emissions from
21 transportation, CARB did not go into denial or pretend
22 that everything was fine, which is sometimes the way
23 government agencies react, but instead started convening
24 discussions about how we can do better.

25 And I participated in both of the workshops that

1 were referred to, and suggest that CARB should move ahead
2 in both those areas. One was reducing emissions from the
3 petroleum sector, and the second was fleet rules.

4 So a couple suggestions along those lines. First
5 of all, I very much agree with Supervisor Gioia's
6 suggestion this morning that private bus fleets should be
7 subject to fleet rules. That, I would say, should be at
8 least as aggressive as those that the public transit
9 agencies are now subject to.

10 We also think that you could move more quickly
11 than has been proposed so far on zero-emission trucks.
12 And I'll be at the workshop next Monday to talk about
13 that.

14 On cars, clearly, we need to set aggressive
15 post-2025 clean car standards for greenhouse gas
16 emissions, and for zero-emission vehicles. And again, in
17 that area, we could benefit from fleet rules, including
18 for the transportation network carriers, which will now be
19 regulated by the Clean Miles Standard that was enacted
20 into law last year. And I know that the implementation
21 for that is due to start soon, and we'll be working with
22 your staff on that.

23 And then beyond what's clearly within CARB's
24 jurisdiction, I know it's sometimes said that CARB is the
25 agency that regulates everything that moves. But we know

1 that actually there's a lot in the transportation world
2 that is outside of your hands and really requires
3 multi-agency cooperation. And when we're talking about
4 reducing vehicles miles traveled, we really do need to see
5 that cooperation.

6 And I think you need also stronger statutory
7 tools. I believe, and I think that Mayor Steinberg, the
8 author of SB 375, believes that that authority needs to be
9 strengthened, because we're especially falling short when
10 it comes to reducing emissions that come from increased
11 miles traveled by our vehicles. Gasoline and diesel use
12 are going up, and so we need to make our communities more
13 sustainable, more livable, and give people choices in the
14 way they get around.

15 Thank you.

16 CHAIR NICHOLS: Thank you.

17 MR. BOCCADORO: Thank you, Madam Chair, and
18 members. And I have handouts for the Board, if I could
19 provide those to the clerk.

20 Michael Boccadoro on behalf of West Coast
21 Advisors and our client here is Dairy Cares, which is the
22 environmental coalition that's been working so closely
23 with the Air Resources Board. I also want to thank Floyd
24 and his team for the work that they did on the dairy
25 subgroup. I had the pleasure of serving as one of the

1 co-chairs of the Dairy Digester Working Group.

2 I thought staff did an outstanding job of sharing
3 with the Board the progress that the dairy industry is
4 making. To put a caveat on it, we'll have 250 projects in
5 the next couple of years that are up and operating on
6 California dairies, half of those being digesters, half of
7 those being alternative manure management practices.

8 Those projects are going to deliver massive
9 amounts of methane reduction. And it's very effective,
10 and we need to keep it going. Which brings me to a couple
11 of points that are part of the recommendations of the
12 Dairy Subgroup, keeping the funding going.

13 We have \$99 million on the street today through
14 CDFA, which was last year's budget allocation. That's
15 critical. There's only \$25 million in the Governor's
16 currently proposed budget. So why this program is getting
17 cut back, at this time, despite the fact that it's
18 providing more GHG reductions than any other program being
19 funded by the State, and is providing those reductions at
20 a cost of \$8 for every ton of GHG reduction CO2E.

21 So if anything, this should be a program that
22 we're doubling down on, not reducing funding for going
23 forward.

24 A critical point, these projects, I think as
25 staff also pointed out, not only provide GHG reduction,

1 but they provide tremendous criteria pollutant benefits as
2 well. Almost all the new projects are pipeline biomethane
3 for transportation fuel, which means we're going to be
4 replacing diesel with renewable natural gas in San Joaquin
5 Valley and South Coast. And that's going to lead to
6 tremendous criteria pollutant reductions. And so we're
7 just building on the tremendous success that this can have
8 from a methane standpoint.

9 I want to point out too, I agree with staff that
10 we need to find a way to prioritize in-state biomethane.
11 I think there's a lot of California taxpayers that would
12 probably lose their mind to find out that we're paying
13 more for gasoline in California to provide windfalls to
14 projects, pig projects coming out of the Carolinas or
15 dairy projects coming out of the midwest, where the State
16 is receiving zero benefit in terms of GHG reduction. Yet,
17 those projects are eligible for LCFS and are getting a
18 windfall in California.

19 And we need to stop that. We need to make sure
20 that these projects in California, whether they're dairy,
21 wastewater, or others are getting the benefits of our
22 dollars here in the state.

23 Thank you.

24 CHAIR NICHOLS: Thank you.

25 MR. FLAHERTY: Good afternoon, Chair Nichols and

1 Board. My name is Ryan Flaherty with Sustainable
2 Conservation. We're an environmental nonprofit that's
3 been working to find solutions for cross-media impacts
4 to -- from dairies for manure management for 20 years.
5 I'm also -- I was also the co-chair for the Non-Digester
6 Subgroup. And so I'll speak to that portion of the work.

7 I'll echo the others that it was an absolute
8 pleasure to work with Floyd and his team. Did an
9 outstanding job.

10 You can access the full recommendations. I just
11 have three thoughts to share. One, if we're going to meet
12 the 40 percent reduction goal, we need multiple tools in
13 the toolbox. And digesters are one tool, and these
14 non-digester practices and technologies are those other
15 tools, and they're very important tools.

16 So things like solid separators, flush to scrape,
17 compost pasture don't sound very compelling to the
18 layperson, but they're actually really interesting to
19 dairy producers, and to a wide array of dairy producers,
20 from small to large, regionally diverse of all types. So
21 they're really important in that aspect and they can be
22 quite cost effective.

23 So looking at the CDFA program solid separators,
24 and flush to scrape in particular are as cost effective or
25 more cost effective than digesters on a cost per CO2

1 equivalent.

2 And so I would agree with Michael that we should
3 continue funding. I think on the non-digester side, we're
4 currently pretty limited in our options. And so another
5 recommendation the subgroup had was to look at a process
6 in investments to expand those options, so that we can get
7 more benefit, and particularly, I would argue those that
8 have water quality co-benefits.

9 And that brings me to the third point, which is I
10 know this is not in your jurisdiction, but we do have a
11 very serious nitrate leaching to groundwater issue that we
12 can't ignore. And some of these projects offer a really
13 good opportunity to address both methane and water quality
14 impacts from dairies. And so I encourage investment in
15 those types of technologies and practices.

16 And with that, thank you very much, and I'm
17 looking forward to working with ARB and sister agencies in
18 implementing the recommendations.

19 Thank you.

20 CHAIR NICHOLS: Thank you.

21 There you are. Hi. Over there.

22 (Laughter.)

23 MR. HAMILTON: Good afternoon, Chair Nichols --

24 CHAIR NICHOLS: Good afternoon.

25 MR. HAMILTON: -- members of the Board. Good to

1 see you again. It seems like we're on a 1383 theme here.
2 So I'm just going to continue with that, since I was on
3 subgroup 2. I want to compliment Floyd and his team for
4 pulling together and CDFA for pulling together this --
5 this whole endeavor. I felt like there was a lot of good
6 communication that happened, and a lot of great
7 discussion. And to some extent, the concerns of the
8 environmental justice community were recognized, and, in
9 occasional moments, even added into the recommendations.

10 But I have some real concerns with moving forward
11 with this. But I first want to state that we were told
12 this would be a separate item at the beginning of the
13 month or maybe a little sooner. I'm not clear when it was
14 pulled and put in the scoping plan.

15 I think you can see by the kind of attention it's
16 getting --

17 CHAIR NICHOLS: Um-hmm.

18 MR. HAMILTON: -- that this is probably a real
19 top-line item within the scoping plan that's imminent.
20 And so I think it really deserves another look and another
21 meeting where it's pulled out as its own agenda item, so
22 we can talk about it more completely, and especially these
23 recommendations.

24 But just more generally, I'm concerned about
25 several things. One, there's very little focus at the

1 health impacts of these projects, whether it's on the
2 front end or back end of the cow, so to speak, which would
3 be the alternative manure management practices on the
4 front end, and on the back end, of course, the dairy
5 digesters. That work is not complete.

6 Some of it's in process at CPUC, but there seems
7 to be a run for the door here. Let's take the money while
8 we can get it, and get these things built before we even
9 have the final data from those projects that haven't
10 finished their pilot phase yet. So the first scoping
11 decision raised some significant safety concerns regarding
12 something called siloxane that this gas brings to it, the
13 pipeline. We've already had enough problems with our
14 pipeline. We don't need to blow up anymore communities.
15 So, you know, I think that we need to flesh that all out.
16 And there's a process going on that's doing that at CPUC.

17 I'm very concerned that the financial
18 underpinnings for these projects put the State of
19 California at tremendous financial risk. So if we're
20 going to underwrite these things and make sure that should
21 the LCSF -- FS prices drop, as happened recently, when we
22 modeled on \$100 credit, and it dropped to \$62 in a month,
23 what do we do when that happens?

24 So we're going to pay some underwriters a hideous
25 amount of money to take on some of that risk, but the rest

1 of that risk would be taken on by the State of California.
2 Again, I'm very concerned about that kind of approach.
3 And if this is so great, and if we're going to make a lot
4 of money here selling renewable natural gas to
5 transportation folks for these trucks -- which I agree, by
6 the way, I'm a heavy-duty diesel natural gas guy for at
7 least 20 years -- I want to see the money.

8 So we should be making money there and we should
9 be able to take that money and invest it in these
10 projects. So where are those guys from that industry
11 coming out of the walls saying, hey, we want to put some
12 money in this.

13 So right now, this is entirely done by the State,
14 funded by the State. And again, health, safety, all those
15 things are not complete. We don't have enough information
16 yet. We are building these things like nobody's business.

17 So I think there's potential. It could all be
18 true. I'd sure like to have some data to support that.

19 Thank you for your time.

20 CHAIR NICHOLS: Thank you.

21 Hi.

22 MR. SMITH: Hello. My name is Aidan Smith. I'm
23 here representing the Leadership Counsel for Justice and
24 Accountability. I wanted to offer some comments on the
25 scoping plan.

1 I think we can all agree that we're not seeing
2 sufficient progress on transportation-related emissions.
3 CARB must take seriously its SB 150 report, and demand
4 that locals do more to improve land use, housing, and
5 transportation patterns, investments, and trends, so that
6 we can reach both our state's climate and equity goals.

7 While it is unfortunate that the time may have
8 passed to influence 2018 Sustainable Community Strategies
9 in the San Joaquin Valley, CARB should, at the very least,
10 require regular updates on progress toward's VMT
11 reductions, ensure funding programs, support local and
12 regional projects that will promote VMT reductions, and
13 promote climate resilience while investing in pilots and
14 scaling up pilot -- and scaling up pilots that work in
15 diverse regions of the state such as the Van y Vienen
16 project.

17 CARB must also be more aggressive in directing
18 climate investments towards equitable climate resilience,
19 including ensuring that no climate investments result in
20 negative impacts in local communities, ensure cooperation
21 with impacted communities, and eliminating barriers to
22 climate investments in some of the most vulnerable
23 communities of the state, including disadvantaged,
24 unincorporated, and rural communities.

25 Similarly, CARB should better align funding

1 programs with other agencies, both local agencies and
2 statewide agencies to develop and implement a strategy --
3 a strategy to achieve both climate and equity goals.
4 Without such integration and alignment, we risk agency --
5 local agencies will continue to undermine climate change
6 preparedness with road and highway expansions that come at
7 the expense of both air quality and needed investments in
8 transit -- and needed investments in transit and active
9 transportation.

10 Finally, we are disappointed that there continues
11 to be minima -- a minimal discussion of environmental
12 justice in CARB self-assessment. As we and our partners
13 have raised for several years, climate policy will only be
14 successful if aligned with strategies designed to create a
15 more equitable and environmentally just California.

16 Thank you.

17 CHAIR NICHOLS: Thank you.

18 MS. MCGHEE: Lisa with San Diego Airport Parking
19 Company.

20 Improving grid charging. The electricity power
21 mix sources is expected to reduce carbon intensity.
22 Distributed resources planning requires generating more
23 energy by renewables. The lowest carbon intensity hourly
24 window provides an opportunity to gain benefits, while
25 reducing carbon intensity when grid charging.

1 If tailpipe emissions is being exchanged for
2 upstream emissions by grid charging, reducing emissions in
3 the ZEV medium- and heavy-duty sector is progressive and
4 targets are still required. Electricity is one of the
5 highest emitters. Why not require the best zero-emission
6 grid charging?

7 Create a requirement for fleets to install a
8 percentage of peak time charging of battery storage. This
9 has many cost-saving benefits, when there is high
10 utilization and enables more flexible charging at peak
11 time when off the grid, and peak -- and via peak battery
12 storage equipment.

13 This achieves the lowest carbon intensity hourly
14 window of kilowatt hours, and allows fleets to have a
15 benefit. Additionally, this achieves a cost-effective
16 solution, including increases in capacity at a site, no
17 additional trenching requirements, can avoid demand
18 chances, can avoid upgraded transformers, and can charge
19 as fast as the equipment can, requires no three-phased
20 transformer, reduces emissions, creates emergency backup,
21 and reduces the kilowatt hour costs.

22 This action establishes a reduction in emissions.
23 The transportation medium- and heavy-duty sector needs
24 more regulations towards ZEV adoption in order to achieve
25 progress. More funding without -- with incremental costs

1 in the medium- and heavy-duty sector is required.

2 Why not consider repowers the same as school
3 buses are allowed? This achieves a ZEV at a lower
4 up-front cost or why not create a leasing program with a
5 residual that the HVIP pays for, and thereby maintains the
6 same average monthly payment that fleets are accustomed
7 to. This makes it more feasible for all who displace.

8 CHAIR NICHOLS: Hi.

9 MS. SEATON: Phoebe Seaton also with Leadership
10 Counsel for Justice and Accountability. I'm going to
11 dedicate most of my comments to 1383. I was also on a
12 subgroup. I was on the alternative manure management
13 program subgroup. I want to again focus though however on
14 the digester program primarily.

15 Kevin Hamilton mentioned a lot of the issues and
16 the concerns that we have. Just to highlight a few of
17 those, I think the funding piece, we've already seen in
18 CARB's materials that it looks like about a half a billion
19 dollars have already been invested in dairy digesters with
20 unproven results in terms of GHG reductions. These are
21 very new technologies, unproven technologies. That the
22 reason for the CPUC proceeding, which saw \$320 million of
23 investment in cluster projects, was to kind of test out
24 the viability from a -- from an economic, fiscal, and
25 environmental perspective.

1 And I think it behooves all of us to look at
2 those environmental and fiscal implications of clusters
3 and dairy digesters before investing another penny of
4 State resources into those funds. There's also been a lot
5 of discussion about transitioning to carbon neutrality,
6 getting off of gas onto clean -- clean energy. And we
7 question the investment in biomethane as we're moving
8 towards a no-gas future.

9 And it seems that we're putting hundreds of
10 millions of dollars into technologies that really double
11 down into a fuel that will soon be a fuel of the past.

12 We also are extremely concerned about the
13 environmental justice impacts of the dairy program,
14 especially with respect to its impact on concentrating
15 dairies for the purpose of producing biomethane. And as
16 we incentivize the production of biomethane, what does
17 that mean for an incentive structure around CAFOs and air
18 quality and water quality.

19 We don't -- again, I think we're looking for the
20 data on that. One of our biggest concerns is a lot of the
21 data around dairies and dairy digesters is hidden,
22 obfuscated, or protected as a trade secret. And we hope
23 that in the 2020 analysis, or before that, there's public
24 access to data around dairies, and the impact of dairy
25 digesters on the dairy industry.

1 There's also, I think, on the bridge between the
2 digester program and GGRF investments benefiting
3 disadvantaged communities, we're going to release a report
4 in the next few weeks that questions whether the dairy
5 digester projects that are classified as beneficial to
6 disadvantaged communities actually have any benefit
7 whatsoever.

8 The digester program is, of course, the program
9 we know and love the best, but are concerned that CARB may
10 be attributing benefits to disadvantaged communities in
11 other programs. And so we'd request a deeper dive, a
12 deeper look into what programs and projects are being kind
13 of classified as beneficial to disadvantaged communities,
14 in which programs are actually beneficial to disadvantaged
15 communities.

16 And it looks like my time is up, but look forward
17 to the discussion.

18 CHAIR NICHOLS: Thank you.

19 That concludes the list of witnesses on this
20 item. So it's available for any comments or questions
21 that Board members may have. This is obviously just an
22 update on where we are in implementing the Scoping Plan.

23 And it's interesting. I'm not quite sure what to
24 make of it that, you know, by far the most attention seems
25 to have been on the dairy digester portion on this, which

1 is a relatively small aspect. Although, it does deal with
2 an important -- an important pollutant, methane, one of
3 our targets for short-term action.

4 And it seems to have focused a lot of attention
5 on dairies per se, and how people feel about them. But
6 the transportation section, which is much bigger, is also
7 the one that's probably the most lacking in big new ideas
8 that are really what we need to be focusing on, I think,
9 to get beyond where we are today.

10 So, you know, I've -- I expected to have more
11 representation from our friends in the environmental
12 community, frankly, coming in and pounding on the desk and
13 demanding more aggressive action on transportation work,
14 but I guess that's just where we are at the moment.

15 So we're going to have to do a lot of work here
16 though in the -- in the coming year, as I see it, to bring
17 the plan up to speed for where needs to be to achieve the
18 kind of speed and scope that we need from this plan. And
19 I know a lot of work is going on at the staff level, but
20 they're not quite ready to unveil it all just yet.

21 So this is just kind of an interim report. And
22 it's -- you know, a lot is going on. There's no question
23 that -- you know, we -- I don't think we should feel
24 embarrassed about where we've gotten to at this point.
25 Clearly, we have a lot to show and tell others about, and

1 a lot of work to be done to try to encourage other
2 jurisdictions to join with us and many are, I know, at
3 least looking at doing. And that's going to be another
4 important activity I think for ARB over the coming year.

5 But if any Board members have any particular
6 questions?

7 Yes, Judy, and then Dan.

8 BOARD MEMBER MITCHELL: I'll just mention that
9 there's a number of --

10 (Thereupon a cell phone rang.)

11 BOARD MEMBER MITCHELL: Wow.

12 Hector, I'll let you take care of that.

13 (Laughter.)

14 BOARD MEMBER MITCHELL: But there's been quite a
15 lot of action in the Legislature --

16 CHAIR NICHOLS: Yes.

17 BOARD MEMBER MITCHELL: -- on things relating to
18 housing, housing near transit.

19 CHAIR NICHOLS: Right.

20 BOARD MEMBER MITCHELL: And there was an item
21 that came before a Committee that I serve on in the SCAG
22 region that suggested that -- I think it was legislation
23 that our joint meetings with the CTC also include HCD.
24 And then a glimmer of a suggestion that we also include
25 CEC. That gets to be a pretty big gathering.

1 But when it comes to the Scoping Plan, I mean, we
2 deal with a lot of different agencies, and we're all kind
3 of in our little separate silos. So some of that's a good
4 idea, you know, that we are working closer together. And
5 so just wanted to mention that that has been -- that's
6 being discussed in various areas and in the Legislature.

7 CHAIR NICHOLS: It's a very good point, that ARB
8 is not solely responsible for implementation of the plan.
9 We're responsible for doing it, but -- for making the
10 plan, but others also have key roles in making this a
11 reality, so -- and I think we're going to be hearing more
12 actually in the next report on that.

13 So thank you.

14 Dr. Sperling.

15 BOARD MEMBER SPERLING: So let me follow up on a
16 couple of those themes, and that is -- let me actually
17 start even with the biogas, the digesters that everyone is
18 so excited about. I was actually -- the staff showed me
19 some numbers, and I forgot what they were, but the amount
20 of reduction that we can get from the dairy digesters
21 stunned me how big a number it was.

22 CHAIR NICHOLS: Um-hmm.

23 BOARD MEMBER SPERLING: So actually just I would
24 be interested in someone just giving me that number in a
25 second for everyone's benefit.

1 But it -- starting to follow up on this theme of
2 working with collaboration. I mean, I think we're
3 learning more, the deeper we get into this, how absolutely
4 critical it is to have these partnerships --

5 CHAIR NICHOLS: Um-hmm.

6 BOARD MEMBER SPERLING: -- not only with other
7 State agencies, but with the locals, and with a lot of
8 local governments as well, you know, land use, housing,
9 equity. You know, I think we do -- you know, Hal Harvey
10 kind of was cheering us on this morning. And in many
11 ways, we've taken that responsibility to be leaders. And
12 people look to us. And so I think that we do need to
13 think, and we do, way beyond our specific authorities, you
14 know, to collaborate.

15 And so, you know, two points. One is the dairy
16 digester, is that unless this has changed in the past
17 year, there were huge credits given to the biogas coming
18 out of those digesters, if it was used for transportation,
19 but not for electricity. And that's just a function of
20 how our programs are. And it's an example of how we
21 really do need to partner and figure out how to get all of
22 these different policies and programs, not only
23 compatible, but synergistic.

24 I don't think we've solved that one from what
25 people were saying. But it does illustrate, you know, the

1 huge challenge as we go forward on, you know, working with
2 the others, and getting the price signals, and getting the
3 incentives aligned right.

4 Which brings me, of course, to transportation.
5 Not -- no surprise. And, yeah, it's the same story there.
6 We've got to figure out how to get others to work with us
7 and to follow some of these ideas. And one of the very
8 biggest is aligning transportation funding with our
9 environmental goals. I mean, I think that's probably the
10 most important.

11 And we've had the meetings with the CTC. They
12 haven't been fruitful yet, let me say, but we need to do
13 that. And that's the way we're going to make SB 375 work
14 is by rewarding cities and counties for, you know,
15 basically doing the right thing. And that's probably the
16 primary mechanism to be able to do that.

17 So -- and the other is that this whole -- I think
18 we're getting more and more comfortable with two ideas
19 that are important. One is working more closely with
20 locals on land-use issues. When I came here 10 years ago,
21 it was -- you know, don't even mention cities and land use
22 in the same breath with CARB. And I think now there's a
23 much bigger appreciation that indeed we do have to be
24 somehow figuring that out.

25 And the other part is pricing. You know, we

1 don't like to use the word "pricing" a lot, so I often
2 call it incentives and disincentives. But again, we've
3 got to do this -- so on transportation, we've got to
4 create the incentives and the disincentives that encourage
5 pooling with microtransit, use of micro-mobility, you
6 know, even -- you know, first/last mile access with
7 transit. We kind of know what -- we kind of have an idea
8 what can be and should be done, but we don't quite have
9 the path to get there in terms of the specific
10 instruments, and the specific acts, and there's politics
11 around it.

12 So it's challenging, but I have hope.

13 (Laughter.)

14 CHAIR NICHOLS: That's a good conclusion.

15 Okay. Diane.

16 BOARD MEMBER TAKVORIAN: Thank you.

17 Okay. You know, we've been thinking about the
18 scoping plan or working on the scoping plan for more years
19 than I think any of us want to recognize. So, you know,
20 the scoping plan is really important. I think that's why
21 there's a lot of attention on it. It's also exhausting,
22 so I think that's why there isn't as much attention on it
23 to your point. And I want to just appreciate the folks
24 that are here, especially from, you know, the
25 environmental justice organizations that are trying to

1 lift up these issues related to dairies and that sector.

2 And to the other folks who have come to testify
3 today, I think -- I think it's important. And the reason
4 the scoping plan is important, it's the overview of how
5 we're doing on GHG reduction overall. You know, we're
6 taking all these measures and we're excited about them,
7 and we are -- you know, we're enthusiastic. We're pushing
8 forward. We're working through all of this.

9 But this is supposed to be the place where we
10 look overall. And, you know, I hate to say it, but I feel
11 like, yes, there was all this reference to these global
12 reports that we're not doing so well. But I don't feel
13 like there was much recognition on the part of staff to
14 how well or not well we're doing from a CARB perspective.

15 I mean, I think the transportation aspect was
16 totally glossed over. There was no reference to SB 150 in
17 this presentation. I -- you know, that was a stunning
18 report that said we're not making it. The MPOs aren't
19 making it. SB 350, we had the argument about that. And
20 maybe 19 percent was the right place because they're not
21 hitting that. So then why set targets at all?

22 And I'm not saying we shouldn't, but I just feel
23 like we need to be more rigorous in this place. So if,
24 Mary, you were looking for somebody to pound on the table,
25 I'm happy to do that. I guess that's -- that's what I'm

1 doing here is that the AB 398 removes the refinery
2 measure. So staff grew the Cap-and-Trade aspect of the
3 scoping plan and that was supposed to cover what
4 refinery -- the refinery part of the measure was going to
5 cover. So there wasn't an explanation of so where are we
6 on that very explicitly. I'd like to see that.

7 I would like to see the relationship with the SB
8 150. I'd like to see where we are on the reports on
9 direct emission reductions. There's supposed to be a
10 report on environmental justice and health that was called
11 out in the resolution. And I understand if it's not done
12 yet. But why wasn't there a reference to where it is or
13 what the status of it is?

14 Where's the -- there's supposed to be a report on
15 the air emissions data. And you referenced that, but it's
16 not -- that it's coming, but not a clear timeline on when
17 it's coming.

18 And then there was also a report on the
19 collaboration with OEHHA on the benefits and impacts of
20 GHG emission limits adopted by CARB within disadvantaged
21 communities.

22 So those are all things that I think we all care
23 about. I know that CARB cares about those things, and
24 that I think should have been focused on in this report,
25 so at least we could see where are they coming and when

1 are they coming and what's their status.

2 So I have to say that I feel disappointed in the
3 overarching report, even though I feel enthusiastic about
4 some of the measures that we see coming forward. So I
5 think that the SB 150 report was a really important one,
6 in that it was bold and it told a lot of truths that I
7 think we all have to face. So I'd like to see us carry on
8 in that spirit. And I'd love to hear more about what some
9 of the responses are to those reports and when they --
10 they may be coming. Thank you.

11 CHAIR NICHOLS: Dr. Balmes and then Mr. Gioia.

12 BOARD MEMBER BALMES: Well, Diane already stole
13 my line about doing some pounding. And, you know, I
14 think -- it's really hard for me to be as optimistic as
15 Dr. Sperling on the transportation side of things. I've
16 actually been getting -- despite all the good work we've
17 done as an agency and in partnership with others over the
18 years, correct me if I'm wrong, but vehicle miles traveled
19 went up last year in California.

20 So we're kind of losing the battle. And I think
21 affordable housing, which the Governor has correctly
22 identified as an important - one of his major areas of
23 work is part of the problem. Maybe one of the major
24 contributors to vehicle miles traveled. Until we have
25 land use that doesn't cause working-class people have to

1 drive miles and miles from places where they can afford to
2 their jobs, we're going to continue to have this problem.

3 And I don't have the magic Bullet solution. I
4 wish I did. But I think we really have to get, as Mr.
5 Magavern said, much more serious about California's love
6 affair with cars, which even with cleaner vehicles coming
7 out, is still a major source of greenhouse gas emissions
8 and climate change. So I just encourage us as a Board to
9 double down on the transportation initiatives that we'll
10 need to meet our goals.

11 And on the -- the dairy issue, in part because I
12 work with some of the folks that came to testify in the
13 San Joaquin Valley, I know how important this issue is to
14 the environmental justice community in the SJV. Yes,
15 we're concerned about capturing that methane and doing it
16 in a clean way. But they're very concerned about
17 potential impacts of that new technology.

18 And I understand that. They don't trust that
19 we're going to get it right, unless we have good data from
20 pilot projects. And I hear that, and I actually support
21 that position.

22 Thank you.

23 CHAIR NICHOLS: I'll just take all these comments
24 sort of in order, and then I'm going to try to engage in a
25 conversation with Richard. So let's -- let's hear from

1 folks about their concerns.

2 (Laughter.)

3 BOARD MEMBER GIOIA: Oh. Okay. There it is.
4 Sorry.

5 I think Dr. Balmes and Diane really opened the
6 door to really continuing to focus on this -- the issue of
7 VMT and transportation. Clearly, two pieces of bad news
8 here. Transportation sector, GHG emissions increased,
9 right, two percent from 2015-2016? VMTs are up. And
10 actually a third, the SB 375 regional targets do not
11 achieve The VMT level called for in the scoping plan.

12 So I think we have to be careful to applaud
13 ourselves on the progress we've made. And there has been
14 progress, but there's a lot of hard work left on the
15 transportation VMT side. And this does get to the issue
16 of building more housing, building more housing in the
17 right place where it counts to reduce VMT. And how -- I
18 think we should focus on how we can exercise more
19 leverage - and I say this as someone coming from local
20 government - over local government in meeting these needs.

21 There's a reason I think the Governor rightly
22 sued a Southern California city over housing. Our
23 colleagues in local government, and especially in city
24 government, are not building hou -- enough housing period,
25 and not building -- approving and having built enough

1 housing in the right places.

2 And it's this -- it's this same tension between
3 State, regional, and local government. But until we
4 exercise a bit more authority in this area and look at how
5 we can leverage transportation funding -- I know we've
6 been having these discussions with the California
7 Transportation Commission, which really haven't yielded
8 anything, I think, meaningful yet - I hope they do - that
9 we really do need to start using the transportation
10 funding as leverage to get housing built in the right
11 location to reduce VMT and to make housing affordable.

12 And so I'm sort of singularly focused on that
13 area. I think if we really focus on that area and really
14 say our job is working to link the funding and develop
15 other leverage mechanisms, I don't think incentive dollars
16 work all the time, that you need to have the stick.

17 And that's not popular to say in local
18 government, but we've failed. And so it's the strategy of
19 figuring how to do this in a way that doesn't develop too
20 much pushback, but is still effective at achieving the
21 goal of getting the right housing in the right place and
22 reduces VMT and GHGs, and improves health.

23 So I'd like staff to think about how we focus on
24 a strategy there, not just in the discussions with CTC,
25 but in the work that we're doing as we approve the

1 Sustainable Communities Strategies from around the region.

2 CHAIR NICHOLS: Thanks.

3 So, you know, this conversation, the comments,
4 are all very well taken and very appropriate. The
5 conversation that the report is frustrating obviously.
6 And part of me wants to say we just -- you shouldn't
7 present a report like this unless you've got something
8 actually to recommend in terms of strategies. But it's
9 actually a little bit unfair, because, you know, what the
10 staff is doing is kind of reporting on their piece of a
11 much bigger problem. That it's the only part that they
12 can report on is sort of what they've actually been able
13 to do, unless we're going to go out and report on what
14 everybody else has done or failed to do. And there's a
15 lot, you know, as a society, clearly that -- a lot more
16 that needs to be done.

17 We make ourselves responsible for all of it by
18 doing this plan when we don't actually have the -- all the
19 tools, or resources, or authority to actually cause it all
20 to be carried out. But I think the comment that was made
21 earlier about using leverage that we do have was very --
22 was very well taken.

23 I just want to give Richard a chance to respond a
24 little bit. Hopefully, not to be defensive, but just to
25 sort of indicate --

1 (Laughter.)

2 CHAIR NICHOLS: -- because -- well, what I mean
3 is it's -- there's -- it's easy to be defensive. And I
4 feel that way sometimes myself, but -- as I did yesterday,
5 you know, when I was being cross-examined in front of the
6 Senate Environmental Quality Committee, not because they
7 were being so critical, but just because, you know, people
8 want to know why haven't you solved this problem already,
9 you know.

10 (Laughter.)

11 CHAIR NICHOLS: I mean, you've been working on
12 it. You should have -- should have gotten it done.

13 So why don't you add whatever you would like to
14 at this point about sort of where you want to see this
15 report taking us next.

16 EXECUTIVE OFFICER COREY: No. Thank you, Chair.
17 Thanks for the opportunity.

18 I'm going to break this down, one, on the few
19 broader scoping plan questions, then I want to go to
20 specifically to SB 150 Report, which frankly the
21 conversation and dialogue amongst the Board members is
22 excellent. You're just going to get complete support,
23 one, for recognizing the challenge in front of us, and I
24 think some pass forward.

25 But to the broader scoping plan, I think this is

1 really a challenge with an update. But, you know, I'm
2 taking some message from this dialogue and this discussion
3 thinking about future status reports on the scoping plan,
4 because Ms. Takvorian's point about what the purpose of
5 the scoping plan is right on point. It is a broader plan
6 for how are we moving forward to meet both our SB -- or AB
7 32 and SB 32 GHG reduction targets.

8 And, you know, I was reflecting on when the Board
9 acted on the '27[SIC] Scoping Plan, the Board acted on a
10 resolution that had a number of directives to us. In
11 fact, there are 19, in terms of -- and what we didn't do
12 is talk about everyone of those 19 measures. In fact, if
13 I had, or if we had, done that, I think we would have
14 actually portrayed a much more encouraging report on
15 action. The Board updated a -- doubled the stringency of
16 the low carbon fuel standard, the zero-emission transit
17 item, moved forward on a regulation to require annual
18 reporting of toxics, a public mapping tool so people can
19 look in their communities, where are the facilities
20 located, what are the emissions from those facilities, and
21 another dozen measures. Not all are done. Absolutely,
22 that's the case that we have not finished a subset of
23 them. Work continues to them.

24 But I'm going to think about what's a more
25 effective means. I mean the public exchange is really

1 valuable for a report to the Board. But to get at some of
2 the detail I'm describing, it may require a supplemental
3 written report, because it just -- it's a lot of detail
4 and a lot of activities in terms of the range of actions.
5 And I'm talking about the 19 that are just under our
6 purview. There's several, as Chairman Nichols mentioned,
7 that other agencies are tasked with.

8 With respect to the SB 150 report, and what we
9 appreciate -- what I appreciate is kind of the honest
10 assessment of, yes, in aggregate, we did beat our target,
11 but we also know transportation represents 50 percent of
12 our GHG emissions, 80 percent of NOx, 95 percent of our
13 diesel PM. If we don't get in front of it, that trend
14 won't continue. It won't. And I think we all know that,
15 and I think that's why the strategies, including doubling
16 down on electrification, on the light-duty and heavy-duty
17 side are going to be important.

18 That's why when I gave a report in Fresno to the
19 Board in January, this Board asked for a specific report
20 on SB 150. That happens next month. So we're going to
21 have a focused discussion of -- and it won't be -- what
22 you won't get is a straight up here are the solutions. I
23 think we have a lot of work to do, but I think Professor
24 Sperling and several others had noted we aren't going to
25 get there without strong partnerships at a local level.

1 There's no doubt that we have an intersection of
2 housing, access -- mobility, equity, GHG, criteria
3 pollutant exposure issues, VMT. These things are all
4 connected to one another and there's not a silver bullet
5 solution, but there clearly are, I'm going to say,
6 incentives and disincentives to encourage where that
7 development takes place to open access, to increase
8 mobility, to reduce VMT.

9 Professor Sperling. When we met with the last
10 meeting of the CTC and CARB, one outcome -- a positive
11 outcome, by the way, was that Professor Sperling committed
12 to hold some roundtable discussions with MPOs, with
13 locals, and hopefully down the road I think developers in
14 terms of let's just get the problem statement on the
15 table, so we are all talking the same language. Let's
16 talk about what it will take to move forward and get in
17 front of this thing. That process is beginning. There's
18 been a few of those meetings already.

19 And after me, Jim Corless with SCAG is going to
20 be talking about some activities that are underway -- that
21 are underway from an MPO standpoint that a direct
22 outcropping of the 150 -- SB 150 report in terms of
23 pilots, in terms of some opportunities to begin to take
24 this issue on.

25 So I'm not putting -- sugarcoating this. There

1 are some real challenges in front of us. There's no
2 doubt. And I think to get at it, it's an honest
3 conversation like we're having, but there's certainly a
4 lot of success that we -- that you have had, and your
5 direction in a number of measures that move forward. Even
6 on today, the discussion of the shuttle bus measure as
7 part of the SIP is part of our climate strategy. So maybe
8 I'll end on that point.

9 CHAIR NICHOLS: Okay. Well, much to do.

10 (Laughter.)

11 BOARD MEMBER RIORDAN: Yes.

12 CHAIR NICHOLS: Lot's of work ahead of us. And,
13 you know, I think the Board members are probably going to
14 want some opportunities to think in a more comprehensive
15 way about some of these issues. We have, you know, the
16 good fortune of having a number of people who represent
17 local governments, who serve on this Board, and who have
18 opportunities to weigh-in on ways in which they think we
19 could be more effective and engaging at the local level,
20 not just their frustrations, but also hopefully some ideas
21 about what we could be doing that might be more effective.

22 And it would be good to have kind of an open
23 workshop about that -- about that at the Board level. I
24 think everybody, especially, you know, before we get too
25 much farther along in the year, would benefit from that

1 kind of a conversation. So that's just one suggestion.

2 Yes.

3 BOARD MEMBER TAKVORIAN: Yeah, I like that
4 suggestion, because I think that we are taking -- CARB has
5 taken on so much and been so successful in so many arenas.
6 And I think that, in a way, those successes get conflated
7 with the ineffectiveness or the lack of action on the part
8 of some of our partners and other folks that need to act.
9 And I feel like we need to pull those apart a little bit
10 in order to be more direct about where we need more help,
11 and where more folks from local government, as Supervisor
12 Gioia has said, need to come into the -- into the arena.

13 And I feel sometimes like we kind of cover it in
14 a way. And I don't think that's the intention, but that's
15 what ends up happening, so that it's not really clear.
16 You know, local government, you -- you're going to have to
17 do this. And even if CARB doesn't have the authority for
18 that, I think we have friends sitting with us from the
19 Legislature and who are listening who might say, oh, well,
20 maybe there's some action that we might take there, or
21 maybe some local government folks will wake up to what are
22 some of the things they can do.

23 So I guess I just want to peel back the curtain a
24 little bit, both to celebrate the successes and point to
25 those, but also to point where those, you know, partners

1 are, and where they may be lacking. So I think an open
2 discussion that includes --

3 CHAIR NICHOLS: Um-hmm.

4 BOARD MEMBER TAKVORIAN: -- representatives from
5 those governments as well would be really a welcome thing
6 to happen. Love it.

7 BOARD MEMBER SERNA: Chair Nichols, if I could.

8 CHAIR NICHOLS: Yes, please.

9 BOARD MEMBER SERNA: I wanted to add to that,
10 because I totally agree with the concept of having some
11 kind of convening to vet this further. There's only a
12 quarter of us on this Board that serve in a local
13 government capacity as elected people. And so we think --
14 naturally, we think differently about how do we implement
15 the things that we do here, whether it's rulemaking or, in
16 this case, a very complex, a lot of moving parts plan --
17 scoping plan.

18 And I would only add that if we're going to have
19 this convening and certainly invite local planners,
20 executive directors of MPOs, planning directors, whatnot,
21 that we perhaps also open that up a little more broadly to
22 include those that represent the market. You know, local
23 government can work all day long with the best intentions
24 to lay the greatest plans. And in many respects, we work
25 in a very reactionary environment where we're responding

1 to regulations -- a regulatory environment that comes
2 either from the State or the federal government. But
3 we're working with local partners, developers that are
4 taking real risks, whether they're doing brownfield, or
5 infill, or greenfield.

6 So I think we ought to open that up to perhaps
7 include some folks from the development community to give
8 us some real-life anecdotes about the challenges, the
9 difficulties, and quite frankly the opportunities to do
10 exactly what we're all trying to do which is reduce
11 vehicle miles traveled, reduce greenhouse gas emissions.
12 I think that would be a little more insightful.

13 CHAIR NICHOLS: Yeah. I'm envisioning a really
14 interesting program here. Yes.

15 BOARD MEMBER SPERLING: Let me follow up just a
16 bit on that. So as Mr. Corey said, after the last meeting
17 we had with CTC, we have started a series -- as a result
18 of that, we have started a series of roundtables. It's
19 being led by the university people from UC Institute of
20 Transportation studies from around the state. But
21 we've -- so Richard -- so, yes, we had a meeting that
22 had -- it's roundtables. We're holding five of them
23 around the state. We had one in Sacramento. We had many
24 of the leaders of the administration -- new administration
25 there. We had Mayor Steinberg there, and, of course, CARB

1 and CTC staff there as well. We held a meeting two days
2 ago in Fresno, and Mr. Corey was there, and CARB staff.
3 And so we're having another one in the Bay Area, and then
4 one in San Diego and L.A.

5 So what we're basically doing -- and CTC is fully
6 involved in these. What we're doing is kind of softening
7 up, you know, the people out there. I mean, 375, the
8 first time through really aroused a lot of antagonism in
9 the transportation community and local governments,
10 because like, you know, who are you, CARB, you know,
11 intruding in our territory.

12 And that's gone, but it's still -- you know,
13 there's a lot of softening up that has to go -- continue.
14 And I think we're doing the first round of that. And so
15 these follow-ups with CARB Board and others I think should
16 follow on that, but with a much more focus on specific
17 actions --

18 CHAIR NICHOLS: Um-hmm.

19 BOARD MEMBER SPERLING: -- and to get specific
20 engagement and commitment to some of the proposals that
21 we're just talking about vaguely now. So that's -- you
22 know, before we jump, I just want to kind of slow us down
23 a little bit, because this -- you know, these local -- the
24 locals and the others -- you know, like we were in Fresno
25 two days ago. Yeah, greenhouse gases is important to

1 some, even many. But with transportation, there's a lot
2 of other big, big concerns there and challenges, and a lot
3 of disruption happening.

4 So we should go into this with our eyes open. I
5 think -- you know, I said before, I was hopeful. Hopeful
6 in a sense that there are ideas, but it is going to take a
7 lot of work. And, you know, we should be in this for the
8 long haul and figure out -- we need a strategy on how to
9 do that.

10 CHAIR NICHOLS: I take your point, and I agree
11 with you. I don't think we should just jump out and
12 announce a workshop and have everybody come in and talk at
13 each other, and say a lot of the same old generic things
14 that people have been saying for years about whose job it
15 is to do what, and how difficult it all is. We will just
16 all leave even more frustrated than we started. So I
17 accept that as good advice.

18 But I don't want to give up on the notion that
19 given our responsibilities on climate, we have an
20 obligation to figure out what our role is in all of this,
21 and how to be effective. And I think we haven't quite got
22 there yet. But I'm sure as a result of these workshops
23 that you're doing, you could be helpful in sort of
24 designing what the discussion topics should be, and how to
25 get people to come and talk about them. And I think I

1 would ask you to do that. I'm sure you would volunteer
2 anyway.

3 But I really would like to see staff -- I'd
4 really like to see staff begin to flesh out some ideas
5 about how we could engage. And it -- maybe it's just in
6 the beyond 375 discussion what comes next. Maybe just
7 narrow it down to that. That in and of itself would be of
8 great value I think.

9 Well, we have another report today and it follows
10 rather logically on this -- on this one. So I'd like to
11 ask if our Board Member from Sacramento would like to
12 introduce this item

13 BOARD MEMBER SERNA: Sure. Thank you, Chair
14 Nichols, and I'll be brief.

15 So you're right this does dovetail nicely from
16 the previous conversation. And as you, Mr. Corey,
17 referenced, the last item today is really to hear from the
18 Executive Director of SACOG, our local MPO here
19 representing our six-county region, about the progress
20 that has been made to date in the thinking and application
21 of a fairly unique attempt to meet the state's most
22 stringent goal -- greenhouse gas reduction goal as it
23 relates to the implementation of SB 375. I think as many
24 know, 19 percent reduction compared to 2005 levels by 2035
25 is a pretty tall order.

1 And we have not spent a lot of time and energy
2 trying to be combative or to dissuade partnership with
3 CARB. In fact, CARB staff have been very good about
4 working with our local staff, our SACOG staff, to figure
5 out a means to conduct somewhat of a pilot project using
6 some pretty innovative thinking to get us to that
7 extremely tall target of 19 percent reduction.

8 And so this afternoon, we are going to hear from
9 our esteemed Executive Director, Mr. James Corless from
10 SACOG about -- about that progress.

11 Take it away, James.

12 (Laughter.)

13 (Thereupon an overhead presentation was
14 Presented as follows.)

15 CHAIR NICHOLS: Good afternoon.

16 MR. CORLESS: Thank you, Supervisor Serna, Chair
17 Nichols, and members of the Board.

18 I really hope this is going to build on our last
19 discussion about the scoping plan and transportation. It
20 couldn't have seemed to be a better -- a better setup in
21 many ways. And I want to really give you a sense kind of
22 from the ground from a council of governments that really
23 is the conduit, if you remember, to local government. We
24 have every local government in our six-county region on
25 our board.

1 --o0o-- core

2 MR. CORLESS: And maybe perhaps also just by way
3 of background, I was actually working in the Bay Area for
4 a long time for the Metropolitan Transportation
5 Commission. Supervisor Gioia and I remember each other
6 from long ago, where I actually had --

7 BOARD MEMBER GIOIA: We remember you well and al
8 of your good work in the Bay Area.

9 (Laughter.)

10 MR. CORLESS: And I -- my job was to essentially
11 figure out how to make housing money -- or housing an
12 incentive for transportation funds, right? So you produce
13 more housing, you get more transportation dollars. It was
14 also to figure how when we extended mass transit
15 corridors, we required local governments to upzone along
16 those transit corridors. And those were very, very
17 difficult conversations to have.

18 But I do believe they are -- they are essential.
19 So I want to give you also just a reintroduction perhaps
20 to our region -- our Sacramento region. And I really want
21 to just today make a pitch that we want to be a region
22 that is willing to tray anything to get to this 19
23 percent.

24 And as transportation planner -- I often say I'm
25 a recovering transportation planner.

1 (Laughter.)

2 MR. CORLESS: It's been 25 years. And the
3 answers that we have today are not the answers that we had
4 just five years ago. And we have to have an honest
5 conversation about your notation about VMT going up and
6 emission going up. We just can't solve today's problems
7 with the stuff that just comes right off the shelf.

8 Frankly, we can't afford it from a cost
9 perspective, and it's not going to, I think, get us where
10 we need to go. So a reintroduction to our region. As you
11 can see on this map, I am not speaking to you from just
12 the City of Sacramento. I'm speaking to you from a really
13 large region that extends from UC Davis to Lake Tahoe,
14 from Galt and Isleton all the way up to Live Oak, and the
15 border of Butte County.

16 We're six counties, 22 cities, two and a half
17 million people. And as you can kind of tell from this
18 map, and hopefully you've experienced our region enough,
19 we are a rural region. We have a lot of ag. We have a
20 lot of rural poverty. We feel more akin perhaps to the
21 valley than we do the coasts.

22 We also, because we believe we're in the front
23 yard of the State Capitol, as I'm going to keep repeating,
24 we would like to be the place that you try things. And we
25 believe that we are at the point right now with our region

1 where we are willing to admit mistakes. We're willing to
2 tell you the truth about what works and what doesn't work.
3 And frankly in transportation, we've probably got more of
4 what doesn't work right now.

5 --o0o--

6 MR. CORLESS: If you remember back to SB 375 and
7 the targets and Supervisor Serna introduced this by saying
8 we have a 19 percent target as does the coastal
9 metropolitan regions. Again, we often say we have one
10 foot in the coastal economies one foot in the valley
11 economy. It is going to be extremely hard for us to reach
12 this 19 percent greenhouse gas target.

13 But that said, we worked with our Board and our
14 local governments to say -- to ask them essentially
15 honestly what would it take? If you could really think
16 about all the strategies that would get us to this target,
17 what would it look like?

18 And whether you noticed it or not, I'm sure --
19 I'm sure you paid great attention to a little asterisk
20 next to the 19 percent target for the Sacramento region.
21 We certainly did and it was really your staff's
22 acknowledgement that our region is -- is different. We
23 believe -- again, we have this interesting place where
24 we're a foot in the valley and a foot in the coast. When
25 we're trying to build affordable housing and infill

1 housing, we have Bay Area labor costs, and we have
2 Sacramento region price points. And that differential
3 alone makes it very hard.

4 So we've come up with a pilot program. We've
5 worked with our local governments all across the region.
6 And there's three elements of this pilot program that we
7 believe need to be implemented to reach the greenhouse gas
8 target. This is not about modeling to 19 percent,
9 although we're doing that. And now I think with SANDAG's
10 news we may be first out of the gate on 19.

11 But there's three buckets, accelerating infill
12 development, accelerating your travel choices and travel
13 options - that does now always mean fixed route transit -
14 and accelerating deployment of electric vehicles, and
15 especially accelerating all of those things in places, not
16 just wealthy neighborhoods, but the folks that really need
17 it the most. Those are the three buckets we're focused
18 on.

19 We're calling this pilot program Green Means Go.
20 I don't have to explain to you, I think, the green. But
21 in transportation, we love green lights and we love
22 accelerate things. And frankly, we don't think we have
23 much time to waste.

24 --o0o--

25 MR. CORLESS: I talked to some of you about a

1 program that we brought here to this region. And it's a
2 little example I hope of the kind of innovation and
3 creative thinking we want to bring to problems. It's a
4 program we're calling Civic Lab. We're into our second
5 year of Civic Lab. This comes off my experience working
6 at a national level in the Smart Cities Collaborative in
7 the Smart Cities space with Columbus, Ohio, and many of
8 the cities that lost that Challenge grant under the old
9 U.S. DOT, but had great ideas.

10 And the notion of Civic Lab is, as Winston
11 Churchill I think once said, "Gentlemen, we've run out of
12 money, now we have to think".

13 (Laughter.)

14 MR. CORLESS: So we -- as I said, we don't have
15 the resources to actually fix all the problems like we
16 used to think we could fix all the problems, so now we
17 have to think. We want a partner with a private sector.
18 We want to use technology. And Civic Lab is a program --
19 it's like a mini university. It's nine months for cities,
20 and counties, and transit districts, our public sector.
21 We told them the first year to come in with their
22 transportation problems, not the solution. So I said
23 don't assume that you know how to fix this, but come in
24 with a problem that you're trying to solve, and let's run
25 through this.

1 We're going to bring some start-up folks. We're
2 going to bring some private sector providers, and help you
3 work through the problem and come up with a pilot project.
4 And we're going to try to test this pilot project. SACOG
5 Board put a million dollars into this. We leveraged
6 another \$800,000 for a \$1.8 million pot of money. In the
7 transportation arena, that's relatively small. And so we
8 went off and running.

9 --o0o--

10 MR. CORLESS: We had teams from around the
11 region. We put different disciplines together. Different
12 cities actually collaborated. So I'm just going to run
13 through a couple of examples here. And I'm sure that in
14 some of your regions, if you're outside the Sacramento
15 region, you may have seen these kinds of things.

16 This is a test in West Sacramento, just across
17 the river from here, with a private a provider named Via.
18 Via does door-to-door shuttle service that's on-demand
19 point to point. It's sort of like Uber marrying a public
20 transit bus, and this is what you get as the offspring.
21 It's on-demand. It's tech forward. It goes door to door.
22 And we've so far seen a tremendous success with people
23 being able to use this shuttle.

24 The goal, of course, from your perspective under
25 VMT reduction, is to take single occupancy cars off the

1 road. The ultimate goal, of course, would also have this
2 to be an electric shuttle service, so that we're not just
3 doing shared, but we're doing electric.

4 --o0o--

5 MR. CORLESS: Just today, on the campus of
6 Sacramento State University, we were very proud to have
7 launched a local motors autonomous shuttle. This is
8 actually -- this shuttle has been roving around the Sac
9 State campus for a couple of weeks with its doors closed
10 learning the map of the campus, so that it can understand
11 where to go and the routes to go. And pretty soon it's
12 going to open its door to students. We're testing this on
13 the campus of Sacramento State, because we are still -- we
14 have some regulations in California that won't allow
15 autonomous on public right of way, which I think is a
16 hindrance. Although I understand some of the safety
17 concerns.

18 But we're excited about this. And this came out
19 of our Civic Lab team again. And we were able to actually
20 put some of those pilot project funds onto this and be the
21 local match. The Sacra -- Sacramento and Phoenix were the
22 two cities that won this first round of these tests.
23 Again, I know there's a couple around the state like this.
24 But we're really excited to be testing this and deploying
25 it in a place like Sacramento State.

1 And again, those -- those dollars that we had as
2 a local match, we could -- we could deploy really quickly,
3 and we helped win Sac State that deployment

4 --o0o--

5 MR. CORLESS: I know you all know about bike
6 share. We've got bike share that's happening all over the
7 place. This frankly, in my two years here at the helm of
8 SACOG, was a fascinating project, because we started bike
9 share two years ago. And Alberto Ayala is here from the
10 Air District who put the original grant application in, as
11 a public -- 100 percent publicly funded bike share system.
12 And in the span of those two years, we switched it to a
13 100 percent private system with the public funding going
14 to fund the infrastructure, and going to buy down a low
15 income discount program.

16 So I'm happy to tell you -- although, we're still
17 getting the numbers in -- we have a boost low-income
18 annual membership for \$5, if you qualify. We're trying to
19 get -- make sure that we get bikes redeployed every night
20 into low-income neighborhoods and we're assessing the
21 data.

22 I can tell you overall big mixture, we're now
23 getting more Jump bike rides than Uber rides on the grid
24 in Sacramento. So we're getting bikes to surpass Uber.

25 --o0o--

1 MR. CORLESS: That's why Uber bought Jump by the
2 way.

3 (Laughter.)

4 MR. CORLESS: That was a good business move.

5 Davis also in our Civic Lab program. The City of
6 Davis, as you know, has the Capitol Corridor, the Amtrak
7 route. One of the busiest in the nation. I think the
8 third or fourth busiest. And because of that, as you can
9 see with this platform and all the people on it, parking
10 lot fills up every morning. This is problem all over,
11 right? We have trail -- rail systems and Amtrak systems
12 where the parking lot fills up. Is the answer to build
13 more parking?

14 Well, perhaps not. So in Davis, we're working
15 with Lyft. We don't have Lyft Line. So you might be
16 familiar with UberPool and Lyft Line, the shared versions
17 of Uber and Lyft for TNCs. We don't have them in places
18 like Sacramento or the valley, but we're actually looking
19 to underwrite and work using public funds to work with
20 Lyft to provide Lyft Line to do shared rides to the Davis
21 Amtrak station every morning, so you can get there on time
22 and catch your train. And we don't have to build another
23 parking garage.

24 --o0o--

25 MR. CORLESS: A great example of a team through

1 Civic Lab, Rancho Cordova, Sac County, City of Sacramento,
2 Folsom, and looking at first/last mile in suburban areas.
3 This is a map of the light rail networking in Sacramento.
4 We have a -- we have a network here. We need to utilize
5 bet better, and we need to figure out how we actually make
6 those suburban connections. Again, a fixed route bus.

7 And believe me for years, I would say transit,
8 walking, and biking; transit, walking, and biking. The
9 game has completely changed. And we need to rethink
10 whether fixed route service can work in suburban and rural
11 areas. And largely, it is proving to be very challenging
12 and difficult.

13 So in this situation we're looking at
14 door-to-door microtransit services in these suburban
15 areas.

16 --o0o--

17 MR. CORLESS: And I just also finally want to
18 again just give you a little bit of an aerial, a little
19 community called Knights Landing in Yolo County. We're
20 working with Knights Landing and Yolo County Transit
21 District to look at a microtransit service to get people
22 to jobs, to get -- to get workers to farms and ag jobs.
23 And even in a place like Knights Landing, a very small
24 community that's very ag based, fixed-route transit is not
25 serving the community. It is not working the way we need

1 it to work. And so us putting more money into those kinds
2 of fixed route services, we have to -- we have to rethink.

3 --o0o--

4 MR. CORLESS: I just want to say one more thing
5 about Civic Lab in this first year that was, again, I
6 think a benefit from the Council of Governments
7 perspective. We did a -- we did a umbrella procurement.
8 We went out with an RFQ and we pre-procured about 13
9 vendors who came in. And then our local governments were
10 able to pull off our umbrella procurement, and actually
11 deploy many of these services. That's how we won the Sac
12 State Olli service.

13 All right. I want to talk a little bit about
14 land use and housing and infill development, and then get
15 your questions. We know that transportation alone isn't
16 going to solve this, as important it is to crack the
17 transportation challenge.

18 --o0o--

19 MR. CORLESS: Again, this is a map of our region.
20 This is the map that we -- we have something called the
21 blueprint in our six-county region. In 2004, all the
22 jurisdictions got together and looked at a 50-year growth
23 strategy. The gray areas are established communities.
24 And those red areas that are quite small are the 100
25 percent places that we need affordable housing. These are

1 the places that have services, that have retail, that have
2 jobs. We need to attract development here. They are very
3 hard to attract development to.

4 --o0o--

5 MR. CORLESS: Along comes our next year of Civic
6 Lab. So again, we've just launched a second year Civic
7 Lab. This time it's focused on taking old retail
8 corridors with businesses that are closing and strip malls
9 that are empty and trying to rethink those commercial
10 corridors as mixed-use, multi-family housing on top, flex
11 space on below, because we're potentially over-retailed.

12 We have 13 teams, five of our six counties are
13 represented, everywhere from Sacramento County to the
14 little Isleton business corridor down in the Delta. We
15 are going to be taking this -- these teams and setting
16 them up to do, what we call, a developer marketplace
17 working with the Urban Land Institute. It's kind of like
18 speed dating for cities and developers.

19 I'm just trying to get your -- you know, trying
20 to keep it going here.

21 (Laughter.)

22 MR. CORLESS: Connecting cities, and their
23 properties, and the -- their kind of places that they
24 really want to think about how can we get infill
25 development and multi-family to happen with even some

1 national developers who have had experience doing this and
2 are well capitalized. We're setting them up. We're doing
3 pro formas. We're doing the financials. So because we
4 need a different products type, we are -- we are vastly
5 undersupplied, but we have a demand for smaller lot,
6 multi-family. A lot of these commercial corridors provide
7 that -- that space and that opportunity. But the
8 economics are not working.

9 --o0o--

10 MR. CORLESS: This is what we want more of in our
11 region. It's not the tall sky-scraper high rise. It's
12 the four, five, six-story housing product that we're
13 missing. We're missing a whole middle of housing in our
14 region and we need to stimulate it.

15 --o0o--

16 MR. CORLESS: It could be a corner in any one of
17 your jurisdictions up and down the state.

18 --o0o--

19 MR. CORLESS: And we're trying to basically
20 transform these kinds of places with development that
21 looks like this, lively, active, affordable, mixed income.
22 And we have plentiful supply of these kinds of corridors
23 and parking lots all over our region.

24 They're also, by the way, the places where we
25 actually do have some of the better fixed route transit

1 service that's already under -- underway.

2 --o0o--

3 MR. CORLESS: Just again, I want to tell you a
4 little bit about our Civic Lab teams. Now, we've kind of
5 said this pilot program we want cities to go even further
6 and look at their policies, and really step you and put
7 their hands up in terms of what they'd be willing to do to
8 do things like streamline line permitting and approval
9 processes, and things like accessory dwelling units,
10 affordable housing.

11 These communities and others are stepping up. We
12 haven't even put a financial incentive on the table yet,
13 and they're saying want to help. We want to do something.
14 We want to figure out how to understand the housing
15 challenge and how to contribute. And I think that's a big
16 deal.

17 --o0o--

18 MR. CORLESS: So just to close, our region being
19 the front yard of the State Capitol, being a partner with
20 CARB, being a partner with the State, we want to be the
21 place where accelerate these new solutions. We want to be
22 a test bed. We are willing to admit when things don't
23 work. And there's a lot of things right now that are not
24 working. Our Civic Lab program is an incubator for a lot
25 of new ideas. And working with folks like UC Davis and

1 Sacramento State, we're also partnering with universities
2 and colleges to do the quantitative data gathering, that
3 does this work does, it not work?

4 And we're willing to tell you that. We're
5 willing to tell the State that. And we just really want
6 to be your partner. Because again as important as that
7 18, 19, 20 percent is, the future is harder to predict
8 than ever before. And transportation it's never been more
9 uncertain.

10 So we need demonstration projects in the here and
11 now. We need to generate excitement about these things,
12 and we want to be the place where that happens.

13 I thank you for your time. I'd be happy to
14 answer any questions

15 CHAIR NICHOLS: Thank you for the presentation,
16 and for your generally thoughtful and collaborative
17 approach to all of this. I don't know that we have any
18 questions at the moment.

19 Did you want to comment?

20 BOARD MEMBER SPERLING: Yeah. I'll actually --
21 so Mr. Corless was that Sacramento roundtable we had.

22 CHAIR NICHOLS: Um-hmm.

23 BOARD MEMBER SPERLING: And he and Mayor
24 Steinberg teamed up very effectively to make the argument
25 that one of the things that we need is a pool of money to

1 support these kinds of pilot projects and demonstrations,
2 this experimentations. And I think that's a really good
3 idea. So for those that are involved on the money side,
4 think about that.

5 MR. CORLESS: I will say that U.S. DOT Smart
6 Cities Challenge Grant that the Obama Administration put
7 out in 2016, it was \$40 million. One city, which is kind
8 of a big deal.

9 CHAIR NICHOLS: Um-hmm.

10 MR. CORLESS: We usually spread stuff around like
11 peanut butter. But that challenge grant got so many
12 cities to rethink transportation, to rethink their
13 approach, and their readiness to shared, and connected,
14 and electric. It was remarkable. That's why we tried to
15 swoop in, in my former career, and take about 16 of those
16 cities that didn't win the grand prize, I think if you --
17 it does not take a lot of money to get our attention.

18 And if you could do that in a -- sort of a race
19 to the top type of model, I think there would be a ton of
20 support, and interest, and enthusiasm.

21 CHAIR NICHOLS: And what is the money needed for?
22 What's the money for?

23 MR. CORLESS: Pilot projects. Demonstration
24 programs. I mean, I was saving, Chair Nichols, that in
25 our Civic Lab that first year, we had 1.8 million. We ran

1 that through the procurement process that we pre-procured.
2 That's a relatively small amount of money to get a lot of
3 demonstration projects out there.

4 CHAIR NICHOLS: Um-hmm.

5 MR. CORLESS: I will say the bigger nut to crack
6 is infill development. We honestly have a major problem.
7 If you want land use to change, and you want to get into
8 housing and talk about that, many of you know this from
9 the local level, we have serious infrastructure needs out
10 there. So Florin, Lightview[SIC] rail station just down
11 here in South Sacramento --

12 CHAIR NICHOLS: Um-hmm.

13 MR. CORLESS: -- about \$10 million to upgrade
14 wastewater. And just even the water network was never
15 built when it was part of the unincorporated county to
16 actually sustain even, you know, six stories of moderate
17 density affordable housing.

18 We have major, major problems like that. And
19 it's not enough for one developer and one project to take
20 on that risk, to take on that expense. That's a -- that's
21 a higher price tag, but it is absolutely needed.

22 CHAIR NICHOLS: Thanks.

23 Okay. We have 3 people who've signed up to speak
24 on this item also. So I think we should give them a
25 chance to talk. First from the Sacramento AQMD, Albert

1 Ayala.

2 DR. AYALA: Good afternoon, Chair Nichols and
3 members of the Board. Thank you for giving us the
4 opportunity to be here today. Albert Ayala, Director of
5 the Sacramento Metro AQMD.

6 My message here today is simple. We are here to
7 express support for SACOG and to tell you, the Board, that
8 SACOG is not alone. Because as you can gather, I say
9 transportation is the glue that brings us together,
10 because we're all coming at it from different
11 perspectives. You know, we're coming at it from emissions
12 and air quality standpoint. And, of course, SACOG
13 greenhouse gas reductions, VMT, et cetera.

14 And what we want to do is we want to do better at
15 locally coordinating and collaborating on these -- on
16 these efforts. Because when you look at the buckets that
17 Mr. Corless described, infill, better travel options,
18 electrification of transportation, those are all areas
19 that ring very familiar and true to, as you know, the
20 things that we at the air districts are trying to put in
21 place with your help.

22 So what we want to tell you is communicate that
23 we are ready to step you to the challenge. We agree the
24 19 percent is going to be a tall order, but we're ready to
25 do what we can to help SACOG get us over the hump and

1 participating in being part of the solution.

2 Since leaving ARB a year and a half ago, I've
3 refined my thinking. And now instead of just simply
4 thinking about better transportation, I think about better
5 mobility. And the reason I like this phrase is because I
6 think it's emblematic of what we're trying to do, right?
7 And the bike sharing, the Jump bikes, is really a good
8 example about that, because what we're trying to do is not
9 just simply take people away from combustion cars into
10 electric vehicles. Because if we only do that, we're
11 still going to end up with the issue of congestion and
12 many other problems.

13 So what we're trying to do, as you know, is try
14 different things, become an experiment. Bike sharing, car
15 sharing, microtransit, better land-use planning, because
16 air districts have a very robust and key role in land-use
17 planning and CEQA development.

18 And similar to what we are doing at the local
19 level, becoming a more integrated, more strategic group of
20 agencies that are pushing our local governments in
21 supporting this transformation. We're here to thank you
22 for your help, and certainly we want to invite you -- as
23 we've communicated to Professor Sperling, thanks for
24 making us part of your roundtable.

25 We want to invite you to work with us and to

1 try -- and to help us experiment, because I do think that
2 we have an opportunity to better optimize our relationship
3 that we, at the local level, have with the State. Because
4 as the Board deliberated before, we have a lot of work to
5 do ahead of us. And I think it's going -- it's going to
6 take multiple efforts, including I do believe better
7 alignment of the State and local policies, so that we can
8 push ahead.

9 So again, the message today here for us is
10 simple, we want to stand in support of SACOG, to tell you
11 that they're not alone in making this happen and want to
12 thank for your attention.

13 CHAIR NICHOLS: Thank you.

14 MR. KUMAR: Chair Nichols, members of the Board,
15 thank you. My name is Kirin Kumar. I'm the Executive
16 Director to WALKSacramento and also representing a group
17 called Design for Active Sacramento. We're a regional and
18 community-based organization that works throughout the
19 Sacramento region. And our mission is to advance health,
20 equity, sustainability, and economic development through
21 the built environment.

22 I'm here today to share with you the urgent need
23 for a pilot program like this, and to express our support
24 for the work that the Sacramento Area Council of
25 Governments are doing.

1 In order to address and achieve our 19 percent
2 reduction goal, as well as the co-benefits of healthier
3 communities, improved air quality, and economic
4 resilience, we must accelerate our infill development in
5 the Sacramento region.

6 And we have to do that by reducing barriers to
7 this kind of development. We've seen necessary
8 transportation projects in the Sacramento region in
9 disadvantaged communities stalled because of the high
10 costs of utility infrastructure projects.

11 One of the first -- transportation nerdy stuff.
12 But the first Class 4 elevated facility in Sacramento,
13 fantastic project along the Franklin Boulevard corridor
14 ballooned in price because of the utility infrastructure
15 costs necessary to move that project forward.

16 We've seen our transit-oriented development
17 communities slow to come onboard, because of these infill
18 barriers. And then, of course, our low-income communities
19 suffer the most from this lack of investment.

20 The program that we're talking about here today,
21 and that SACOG is working on developing represents a bold
22 strategy not only for achieving our greenhouse gas
23 reduction goals, but also creating a significantly more
24 livable region.

25 As a capital region, and one of the most

1 geographically and socially diverse communities in all of
2 California, we have an opportunity to set an example for
3 the rest of the state.

4 So thanks for your consideration.

5 CHAIR NICHOLS: Okay.

6 MR. BLOOM: Good afternoon. Keith Bloom with
7 Mutual Housing California. We're a Sacramento based
8 non-profit affordable housing developer. I'm here today
9 to speak in support of the Green Means Go Program, and all
10 the details that come with it suggested by Mr. Corless a
11 few moments ago. It's obviously very important to
12 incentivize the infill development in the Sacramento
13 region.

14 From an affordable housing developer's
15 perspective, and specifically in the Sacramento and the
16 SACOG region, it has been very difficult for a group like
17 mutual housing to develop infill housing. And simply due
18 to the fact that there is a lack of funding.

19 There was hope beginning in about 2015 when the
20 State Affordable Housing and Sustainable Communities
21 Program was rolled out. We have worked on a handful of
22 projects that have applied for those funds, and
23 unfortunately haven't been successful in obtaining them.

24 The challenge has been is that the program is
25 structured such that it tends to favor the communities in

1 the Bay Area, as well as in the Southern California area,
2 because those programs -- those projects that are proposed
3 include not only housing but also significant
4 transportation projects. That's how the AHSC program is
5 structured.

6 So the problem in the SACOG area is there are
7 just not significant enough transportation projects to
8 couple with the housing projects, infill projects to
9 become competitive for those funds.

10 So obviously, the Green Means Go Program, at
11 least in part, could potentially fill some of the funding
12 gap that -- that is a result of our inability to get AHSC
13 funds, not only from an affordable housing developer's
14 perspective, but also a market rate developer's
15 perspective. And I've been in those shoes before as well.

16 I think the Green Means Go Program should also do
17 its best to encourage local jurisdictions to waive fees,
18 to replace -- or, excuse me, to reduce parking, as much as
19 possible, the required parking levels, increase allowed
20 density, as well as building heights. Sometimes you'll
21 see localities zoning will allow for a high -- relatively
22 high level of density, but the building heights will be
23 minimal, so you'll never be able to achieve those levels
24 of density.

25 Finally, if it all possible, to encourage

1 localities, and as well us through the Green Means Go
2 Program to provide financial support for alternative
3 transportation modes.

4 Thank you very much for your time.

5 CHAIR NICHOLS: Thank you.

6 Well, to be continued. But I think this
7 highlights a region, but also an approach to moving
8 forward on some of these complicated issues. And
9 Sacramento was a good place to start, because we know
10 they've been putting themselves forward in a number of
11 ways to try to create an atmosphere here where this is a
12 region that will be a place that experiments happen. And
13 I -- I think this was a good place to being. I suspect
14 we'll be hearing from some other regions in days to come.

15 Did you want to make some final remarks?

16 BOARD MEMBER SERNA: Yes. Thank you, Chair
17 Nichols.

18 I just wanted to again thank James and his
19 extraordinary capable staff on the work that they're
20 doing, that we were briefed on today. And I want to thank
21 Alberto with our local air district. I certainly want to
22 thank our CARB staff.

23 I think they have erred on the stronger side of
24 empathy when it comes to -- to really understanding the
25 challenge -- the magnitude of the challenge that we have

1 as that region that has the greatest lift on this.

2 And what wasn't said by James during his
3 presentation is the fact that with those six counties,
4 those 22 cities, and his membership, you can imagine the
5 kind of position that his city council people and members
6 of boards of supervisors have, when perhaps they don't
7 maybe share the same sense of wanting to respond to that
8 challenge quite frankly.

9 And I think James has done an extraordinary job
10 of tempering their concerns, at the same time being real
11 responsive to what we all agree needs to be done, which is
12 to be extremely innovative. So I just want to thank him
13 on that particular point.

14 So thank you.

15 VICE CHAIR BERG: And Madam -- Madam Chair,
16 before, I just also would like to throw in thank you very
17 much. This was a really great presentation. It also was
18 inspiring. So even though we don't have it all right yet,
19 thank you very much for being willing to come out, let us
20 know what you're doing. There's no question that the
21 greater Sacramento area is doing very dynamic things. Let
22 us know how we can help as well. And so I just wanted to
23 thank you very much.

24 CHAIR NICHOLS: Okay.

25 We -- this concludes this item.

1 And before we adjourn, we always take public
2 comment on matters that are not actually before the Board.
3 But I think there's some misunderstanding perhaps on the
4 part of people that deal with us about the purpose of the
5 public comment period here. It really is to put matters
6 on the agenda that haven't been -- on our agenda, that is
7 the Board's ability to know about something that they
8 might not otherwise know about. It's not really a place
9 to seek a solution or to get a resolution on something,
10 because we agenda'd it, and we haven't dealt with it. We
11 don't have a staff report. We don't have the ability to
12 work on it.

13 And it's also not a time where people can trade,
14 and come in, and make a longer presentation by piling up
15 the number of people, and then collaborating on one bigger
16 presentation. The first two items that were on our
17 agenda -- on our list for the public comment period are
18 people that we know have issues about the Truck Rules.

19 And Vice Chair Berg has volunteered to meet with
20 them outside the meeting. And you can see her as soon as
21 we adjourn and make arrangements for a time when you all
22 can get together and have a chat about this issue that
23 you're concerned about. And we will see if there's
24 anything that can be done, that can assist in this -- in
25 this problem.

1 The other two we will take a three-minute comment
2 from. But again, just to be clear, this is not a place
3 where we come up with solutions or direct anything, other
4 than if we need to ask the staff to prepare a response or
5 to look into the matter further.

6 So yes.

7 MS. FERRARI: May I say something? We've been
8 waiting all day to make three minutes of comments.

9 CHAIR NICHOLS: Well, I'm sorry, but you were
10 given poor information about what this project is from.

11 MS. FERRARI: We called ahead -- we had -- we had
12 called ahead to ask -- we had called ahead to ask about
13 making public comment that is related to CARB. We called
14 ahead of time --

15 CHAIR NICHOLS: Uh-huh.

16 MS. FERRARI: -- and they said we could speak for
17 five minutes. And, you know, we called -- we drove all
18 the way up to Sacramento, and we've been sitting here all
19 day. So what would be the harm in making a
20 three-minute -- reading of three-minute letter after, you
21 know, everything we've done the comply with CARB. And
22 after sitting here the entire day, and after we already --

23 CHAIR NICHOLS: I'm sorry. I just heard you say
24 five minutes. I'm not going to cross-examine you about
25 this --

1 MS. FERRARI: Well originally they told us --

2 CHAIR NICHOLS: -- but it's not true.

3 MS. FERRARI: Okay. No, when we call -- when we
4 called they said five minutes. I'm just letting you know
5 what they said when we called. We called and we were told
6 that there was a public forum that we could speak about
7 what was on our mind.

8 CHAIR NICHOLS: Yes.

9 MS. FERRARI: We asked ahead of time. And they
10 had said five. I know I've heard recently it was three.

11 CHAIR NICHOLS: Correct.

12 MS. FERRARI: But, you know, I don't see the harm
13 in us being able to make -- we came all the way up to
14 Sacramento. We've been sitting here all day just to make
15 some very -- comments that are very important to the
16 trucking industry, and I don't understand what the harm
17 would be.

18 CHAIR NICHOLS: I don't see the harm either. I also
19 don't see, frankly, that you're going to get the
20 resolution that you want.

21 MS. FERRARI: Okay. That's okay. But could I
22 have a quick three minutes?

23 CHAIR NICHOLS: We will let you speak for three
24 minutes, and we'll let everybody else speak for three
25 minutes too.

1 MS. FERRARI: Okay. So I'm on top, so should I
2 get started.

3 CHAIR NICHOLS: So start now.

4 Yes, thank you.

5 MS. FERRARI: Good afternoon. My name is Debbie
6 Ferrari. I've been in the trucking industry for 37 years.
7 I represent the California Coalition of DMV Motor Carrier
8 Permit Holders. I'm here today to let every member of the
9 CARB Board know that we have -- we must have your help
10 with an urgent situation.

11 I'm talking about the bill introduced by the
12 State Assembly bill AB 5. The author and supporters of
13 the bill have stated the bill could codify the Supreme
14 Court decision known as the Dynamex ABC Ruling verbatim.

15 Why are we asking CARB Board for help?

16 The vehicles ruled on the Dynamex decision were
17 cars. They weren't commercial vehicles. If it's codified
18 verbatim, it would literally put every owner/operator in
19 the state out of business. So this is critical.

20 Many hiring entities, such as the one that I work
21 for acted as enforcers on behalf of CARB for a long time,
22 because of the severely delayed enforcement mechanism.
23 We, who followed the law, told owner/operators that we
24 would not hire them, unless they would make a great
25 financial sacrifice so that they would meet the new law.

1 Recently, I heard a speech given by an Assembly
2 Member about CARB. He stated that CARB was acting as an
3 adversary to freight rather than as a partner to freight.
4 He said it must change. What's freight? Freight is
5 trucking. And a lot of trucking is performed by
6 legitimate owner/operators.

7 Supporters of AB 5 only refer to illegitimate
8 owner/operators when they justify the bill. Many
9 legitimate owner/operators are currently hauling out fire
10 debris, doing levee repair, paving, and hauling out for
11 basements. It's your chance to be a partner to freight,
12 if that freight is meeting California law.

13 Please do it because it's ethical. Do it because
14 owner/operators crushed their old trucks for you. And
15 please do it, because many of these small businesses have
16 received grants. And those grants require they stay in
17 business for a certain period. So if the State puts them
18 out of business, they will not be able to comply with the
19 terms of your grant. I'll let you go after that.

20 CHAIR NICHOLS: Thank you.

21 MR. DE LA TORRE: Can I -- just a clarification.

22 CHAIR NICHOLS: Appreciate your comment.

23 We have a -- wait. Excuse me, ma'am. You can
24 stay and have -- answer a question.

25 BOARD MEMBER DE LA TORRE: AB 5 is prospective

1 legislation. It's -- it hasn't been signed.

2 MS. FERRARI: It's on the Assembly -- it's on the
3 floor right now, but the final wording -- but they've said
4 that they're looking at codifying the ruling verbatim, but
5 we're trying to get them to amend it.

6 BOARD MEMBER DE LA TORRE: Who -- and whose bill
7 is it?

8 MS. FERRARI: It's Assembly Member Gonzalez, AB
9 5. And we're trying to get them to make an amendment, so
10 that if everyone follows the laws of the State of
11 California including the CARB law --

12 BOARD MEMBER DE LA TORRE: Okay. I just wanted
13 clarify. It wasn't law. It's just a bill.

14 MS. FERRARI: Well, they're saying that it's
15 technically the law. We're all out of business. But at
16 this point, we won't -- it won't really be potentially
17 acted upon until it gets codified. So we're trying to get
18 an amendment, so that we can legally stay in business --

19 BOARD MEMBER DE LA TORRE: I understand.

20 MS. FERRARI: -- so we can repay the CARB grants.

21 BOARD MEMBER DE LA TORRE: Having been a
22 legislator, I can tell you it's not going to happen
23 tomorrow. It's going to be something that's going to --

24 MS. FERRARI: I've been working on it --

25 BOARD MEMBER DE LA TORRE: -- take probably the

1 whole year.

2 MS. FERRARI: Okay.

3 BOARD MEMBER DE LA TORRE: And so it's just
4 something we'll be monitoring. We can't do anything about
5 what they do over there. Well, one of us can.

6 (Laughter.)

7 MS. FERRARI: We've been working on it. We'd
8 appreciate it if you'd put a word in for us, because, you
9 know, the expenditures and you know what we went through,
10 and you know the trucks that were crushed, and, you know,
11 the grants that were taken out.

12 BOARD MEMBER DE LA TORRE: All we can do --

13 MS. FERRARI: We need to get a word in.

14 CHAIR NICHOLS: We will react --

15 BOARD MEMBER DE LA TORRE: All we can do is react
16 to them asking for technical assistance. So obviously, we
17 will do that.

18 MS. FERRARI: I don't know if they're going to
19 ask you. There's -- might be a disconnect.

20 BOARD MEMBER DE LA TORRE: No, they're -- they
21 usually do.

22 MS. FERRARI: Okay. Well, I've been working on
23 it since April, and it's tiring.

24 (Laughter.)

25 BOARD MEMBER DE LA TORRE: Okay. Sorry.

1 CHAIR NICHOLS: All right. And I'm sorry you
2 spent the day waiting, so --

3 MS. FERRARI: Thank you.

4 CHAIR NICHOLS: But appreciate that you
5 communicated with us, anyway.

6 BOARD MEMBER DE LA TORRE: Yes. Thank you for
7 coming.

8 CHAIR NICHOLS: Really.

9 MS. FERRARI: Thank you.

10 BOARD MEMBER MITCHELL: But while CARB can't act
11 on it, some of us who are on the Board can.

12 CHAIR NICHOLS: All right. Denis Van Dera, is he
13 here -- is that you? You're done.

14 Okay. Thank you.

15 Paul Dyson from Rail Propulsion systems. Are you
16 here?

17 Another person who signed up for a three-minute
18 comment.

19 What about Phoebe Seaton on AB 617. You're here.
20 I see you.

21 Hi.

22 MS. SEATON: Phoebe Seaton again, Leadership
23 Counsel for Justice and Accountability.

24 CHAIR NICHOLS: You have been here all day, but
25 you've spoken twice already.

1 (Laughter.)

2 MS. SEATON: I know. I get my money's worth.

3 And I won't even take my three minutes. I just
4 wanted to -- totally message taken that 617 is very much
5 on conscience and on your agenda. And I believe it might
6 be agendized for next meeting. So we look forward to a
7 further conversation at that point.

8 Just wanted to highlight a couple points. Really
9 wanted to say a special thanks to several staff members
10 who have been working diligently and going way beyond the
11 call of duty to work with community members, and I know in
12 the Eastern Coachella Valley and Fresno where we work
13 listening to kind of concerns and doing their best to
14 broker better relationships locally.

15 On the concern side, our concern, we worked very,
16 very, very hard with the steering committee to come up
17 with a census -- consensus agreement around boundaries
18 that would incorporate some of the most polluting
19 industries in Fresno. And there's been some kind of
20 recent pushback from the District. I can't -- and I could
21 overstate maybe, but I can't think of how I can overstate
22 the importance of including within the boundary -- the 617
23 boundary in Fresno those -- the operations and land uses
24 that are most relevant to achieving the emissions goals.

25 And we, again, look forward to CARB, and staff,

1 and the Board and staff working with the community members
2 to make the steering committee's kind of really -- work a
3 reality.

4 CHAIR NICHOLS: Thank you. Thanks for staying
5 and thanks for the comment. And 617 is very important to
6 all of us. It really is a new way of doing business with
7 communities. And so it's gratifying to hear that our
8 staff is having some success in terms of building the
9 relationships. And we'll see where this all goes. But so
10 far, it's looking very promising.

11 So thank you.

12 BOARD MEMBER GIOIA: Madam Chair?

13 CHAIR NICHOLS: Yes.

14 BOARD MEMBER GIOIA: Can I just make a comment,
15 since I spent much of much Saturday --

16 CHAIR NICHOLS: You have been using a lot of your
17 time too.

18 BOARD MEMBER GIOIA: -- at a committee summit in
19 Richmond, the city I live in and represent. We had an AB
20 617 community summit. And in the Bay Area, just for those
21 who are interested in other regions of the state, we've
22 decided to approach the selection of the steering
23 committee a bit differently. Rather than the Air District
24 selecting the members of the steering committee, we
25 basically put together a community summit with co-leads

1 and a design team of community members. And so the
2 community summit is developing the process to select the
3 steering committee.

4 So the steering committee won't be picked by us
5 on the Air Board or Air District. It will be picked by
6 the community through a process developed by the
7 community. So it's unique. We're learning as we go
8 along. And so if you want to follow that process, you're
9 welcome to do that.

10 CHAIR NICHOLS: Okay. I think that actually does
11 conclude all of the business before us today. So thanks
12 to all for being here. And it -- good discussion, and
13 looking forward to our next meeting in March.

14 I won't be with you in March, but Sandy Berg will
15 be chairing the Board meeting. I will be in -- actually,
16 the on the day of the Board meeting I will be in Italy for
17 a meeting with EU implementers of their Cap-and-Trade
18 system. We have convened all the jurisdictions in the
19 world that have Cap-and-Trade Programs, including China,
20 to get together and talk about how we're doing, and ways
21 to make these programs work better. So that's exciting.

22 And then from there I'm heading to Cairo for an
23 actual vacation, which I scheduled before -- before I knew
24 I was going to be continuing on the Board.

25 (Laughter.)

1 CHAIR NICHOLS: So that's my update.

2 BOARD MEMBER RIORDAN: Good for you. All right.

3 CHAIR NICHOLS: But we'll -- I'll see you in
4 April.

5 Thanks, everybody.

6 We're adjourned.

7 (Thereupon the Air Resources Board meeting
8 adjourned at 4:02 p.m.)

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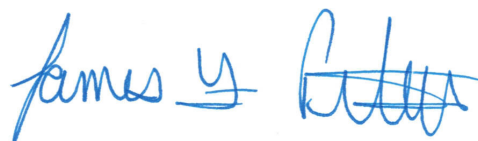
C E R T I F I C A T E O F R E P O R T E R

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 3rd day of March, 2019.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063