

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

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

THURSDAY, FEBRUARY 8, 2018

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

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Hector De La Torre

Mr. John Eisenhut

Senator Dean Florez

Assembly Member Eduardo Garcia

Senator Ricardo Lara

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Ron Roberts

Supervisor Phil Serna

Dr. Alex Sherriffs

Professor Dan Sperling

Ms. Diane Takvorian

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Ms. Edie Chang, Deputy Executive Officer

Mr. Steve Cliff, Deputy Executive Officer

Mr. Kurt Karperos, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Mr. Anthony Marin, Ombudsman

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

STAFF:

Ms. Emily Wimberger, Chief Economist

Ms. Veronica Eady, Assistant Executive Officer

Mr. Alvaro Alvarado, Manager, Health and Ecosystem Assessment Section, Research Division (RD)

Mr. Jeff Austin, Air Pollution Specialist, Health and Ecosystem Assessment Section, RD

Mr. Ben Carrier, Attorney, Legal Office

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

Mr. Ian Cecere, Attorney, Legal Office

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

Mr. Bart Croes, Division Chief, RD

Ms. Kim Heroy-Rogalski, Branch Chief, Mobile Source Regulatory Development Branch, MSCD

Mr. Jack Kitowski, Division Chief, MSCD

Ms. Mitzi Magtoto, Air Resources Engineer, Strategic Planning and Development Section, MSCD

Ms. Linda Smith, Branch Chief, Health and Exposure Assessment Branch, RD

Mr. Alex Wang, Senior Attorney, Legal Office

HAAGEN-SMIT LEGACY AWARD WINNERS:

Mr. David Hawkins

Ms. Gina McCarthy

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

HAAGEN-SMIT LEGACY AWARD WINNERS:

Dr. Mario Molina

Governor Arnold Schwarzenegger

Congressman Henry Waxman

ALSO PRESENT:

Mr. Tim Blubaugh, Truck & Engines Manufacturers
Association

Ms. Eileen Boken, Coalition for San Francisco Neighborhood

Mr. John Caldwell, California Electric Transportation
Coalition

Mr. Steven Douglas, Alliance of Automobile Manufacturers

Mr. Sean Edgar, CleanFleets.net

Mr. Michael Geller, Manufacturers of Emission Controls
Association

Ms. Alice Henderson, Environmental Defense Fund

Ms. Bonnie Holmes-Gen, American Lung Association in
California

Ms. Kate Kanabay, Autocar Truck

Mr. Brian Kolodji, California Engineering Services

Mr. Bill Magavern, Coalition for Clean Air

Mr. Paul Miller, Northeast States for Coordinated Air Use
Management

Ms. Urvi Nagrani, Motiv Power Systems

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:

Mr. William Simmons

Ms. Kristen Taddonio, Institute for Governance and Sustainable Development

Mr. Michael Tunnell, American Trucking Association

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

2 CHAIR NICHOLS: Good morning, ladies and
3 gentlemen. The February 8th, 2018 public meeting will
4 come to order.

5 The sound system is not working yet.

6 No, it's not.

7 I know we need some more sound. Sound.

8 There, sound.

9 (Laughter.)

10 CHAIR NICHOLS: Good morning, everybody. It's a
11 beautiful day. I'm going to be calling this meeting to
12 order. We normally begin our Board meeting after we get
13 everybody assembled by standing and saying the Pledge of
14 Allegiance. So if you would please join me in that.

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

17 CHAIR NICHOLS: Madam Clerk, would you please
18 call the roll.

19 BOARD CLERK McREYNOLDS: Dr. Balmes?

20 BOARD MEMBER BALMES: Here.

21 BOARD CLERK McREYNOLDS: Mr. De La Torre?
22 Mr. Eisenhut?

23 BOARD MEMBER EISENHUT: Here.

24 BOARD CLERK McREYNOLDS: Senator Florez?

25 BOARD MEMBER FLOREZ: Here.

1 BOARD CLERK McREYNOLDS: Assembly Member Garcia?

2 Supervisor Gioia?

3 Senator Lara?

4 Ms. Mitchell?

5 BOARD MEMBER MITCHELL: Here.

6 BOARD CLERK McREYNOLDS: Mrs. Riordan?

7 BOARD MEMBER RIORDAN: Here.

8 BOARD CLERK McREYNOLDS: Supervisor Roberts?

9 BOARD MEMBER ROBERTS: Here.

10 BOARD CLERK McREYNOLDS: Supervisor Serna?

11 BOARD MEMBER SERNA: Here.

12 BOARD CLERK McREYNOLDS: Dr. Sherriffs?

13 BOARD MEMBER SHERRIFFS: Here.

14 BOARD CLERK McREYNOLDS: Professor Sperling?

15 BOARD MEMBER SPERLING: Here.

16 BOARD CLERK McREYNOLDS: Ms. Takvorian?

17 BOARD MEMBER TAKVORIAN: Here.

18 BOARD CLERK McREYNOLDS: Vice Chair Berg?

19 VICE CHAIR BERG: Here.

20 BOARD CLERK McREYNOLDS: Chair Nichols?

21 CHAIR NICHOLS: Here.

22 BOARD CLERK McREYNOLDS: Madam Chair, we have a
23 quorum.

24 CHAIR NICHOLS: Thank you very much.

25 Just a couple of mandatory announcements before

1 we get started. For safety reasons, I would ask you to
2 note the emergency exits at the rear of the room. In the
3 event of a fire alarm, we're required to evacuate the room
4 immediately and go down the stairs and out of the building
5 until we hear the all-clear signal. We assemble in the
6 park across the street. We ask anybody who wants to
7 testify to fill out a request to speak form. The card,
8 they're available in the lobby or at the Clerk's desk
9 here. And we ask that you please return them to the Clerk
10 before the start of the item, so we can figure out how
11 much time we're going to need to accommodate all of the
12 witnesses. We will be imposing a three-minute time limit
13 on speakers in the normal course of events.

14 I want to though before we move directly into our
15 regular agenda for this morning, which is a great agenda
16 anyway, but I'd like to share a couple of observations
17 with you.

18 Today, is February 8th. February 8th 1968,
19 exactly 50 years ago, the Air Resources Board met for the
20 first time in the midst of many more newsworthy events.
21 The Tet Offensive was going on, there was rising
22 opposition to the war in Vietnam, student protests were
23 going on at Berkeley. I was actually there at the time.

24 (Laughter.)

25 CHAIR NICHOLS: There was a violent police

1 response. The Mullford-Carrel Act, which had been signed
2 by Governor Reagan on August 30th of 1967 was a pioneering
3 effort, three years before the federal Clean Air Act, to
4 regulate air pollution using technology-forcing standards.

5 Smog, in those days, hid the mountains that
6 framed the Los Angeles Basin most of the time. It was
7 also a health hazard. The air was a hazy acid yellow, and
8 it literally hurt to breathe. L.A.'s bad air made the
9 cover of Time magazine that year.

10 The new Board combined the former Motor Vehicle
11 Pollution Control Board, and the Department of Health's
12 Bureau of Air Sanitation. In 1968, there were 53
13 employees. Some of them worked in Berkeley where the
14 Health Department was headquartered that was -- others
15 were in Los Angeles, where the original vehicle laboratory
16 was located, and a handful of staff were here in
17 Sacramento where the new headquarters was -- as it was
18 established as it happened during that very first Board
19 meeting.

20 The office moved from one location to another
21 over the years. At one point, it was in a former
22 furniture showroom at K and 13th where the convention
23 center is now, and the Board never had a hearing room of
24 its own.

25 That first meeting was held in Assembly room 127

1 at the Department of Agriculture Building on N Street
2 across from the Capitol. It's still there. Records
3 indicated that about 40 people attended with 13 of the
4 original 14 Board members present.

5 A lot has happened over the ensuing five decades
6 since that first meeting. And as we'll be seeing in a few
7 moments, we have slashed smog-forming pollution and toxic
8 fine particle pollution. Cars are more than 99 percent
9 cleaner than cars were when we began in the 1970s, and
10 certainly cleaner than in the 1960s.

11 Modern diesel trucks are more than 90 percent
12 cleaner than the older dirtier models with no emissions
13 controls like they used to have. And yet, I find it
14 strange that we're still at a point where the issues that
15 we're grappling with today, con -- that resonate today are
16 the same issues that we were dealing with during that
17 first meeting 50 years ago.

18 The first issue before the new Board was setting
19 tough new vehicle standards that cars would have to meet.
20 Those early standards focused on hydrocarbons that is
21 unburned gasoline - we now call them VOCs - that escaped
22 out the tailpipe. And even though it was 50 years ago,
23 it's also interesting to note that the representatives of
24 General Motors who testified at that meeting said that the
25 automobile industry could not possibly meet those -- that

1 absolute tailpipe limit of 180 parts per million of
2 hydrocarbon for every vehicle that they produced. He
3 claimed that it was simply beyond the industry's
4 technological capability.

5 Of course, by the end of the next decade, thanks
6 to technological breakthroughs, and manufacturing
7 breakthroughs, but we particularly have to take note of
8 the three-way catalytic converter and other improvements,
9 cars were meeting and beating much tougher emissions
10 standards. Today, the limit of permitted hydrocarbons is
11 well under 1/100 of that earlier so-called impossible to
12 meet standard.

13 The next big struggle was over an issue that
14 sounds even more familiar, the need for a waiver of
15 federal preemption for the California standards. This
16 related to the National Air Quality Act that had just been
17 signed into law by President Johnson in November 1967.

18 There was a lot of discussion at that time about
19 California's role and whether California ought to be
20 allowed to set standards that were stricter than the
21 proposed federal standards.

22 In 1968, I'm happy to report that all factions in
23 California politics supported California's need to set its
24 own standards. More than 10 witnesses had testified about
25 that issue in January of 1968 before a hearing of the

1 federal Department of Health, Education and Welfare
2 meeting in San Francisco just three weeks before the
3 Board's first meeting, and the meeting that we celebrate
4 today, two years before EPA had even been created.

5 Those who spoke up for California included the
6 State's senior Senator George Murphy. Murphy, a
7 Republican, was a former actor, dancer, and President of
8 the Screen Actors Guild setting the stage for at least two
9 other actors to enter and play a significant role in
10 California politics.

11 He served a single term in the U.S. Senate. And
12 in that hearing in San Francisco, he declared that the
13 other 49 states would actually benefit by California's
14 ability to set its own standards, because, and I quote,
15 "California has passed the point in its history when it
16 can allow unrestrained fouling of its air. We cannot go
17 backwards", end of quote.

18 Also, president on this -- present on this
19 occasion was Spencer Williams, State Health and Welfare
20 Administrator representing Governor Ronald Reagan. He
21 noted that neither the current or the proposed federal
22 standards were adequate to meet the compelling and
23 extraordinary conditions of pollution in California.

24 He quote says, "California still requires a
25 regulatory program of its own to deal with the critical

1 conditions of the state". And this was and remained the
2 official position of the Reagan Administration. Governor
3 Reagan himself, one month before the Board's first
4 meeting, specifically called on the advances in science
5 and technology that he thought should be brought to bear
6 on pressing environmental problems.

7 He said, "Many of the techniques which have been
8 developed for living in space have immediate applications
9 for a better life on earth. We must apply that research
10 for the benefit of our people. I have already charged the
11 reconstituted Boards on Air Resources and Water Quality to
12 pursue this goal".

13 Well, Governor Reagan, we've come a long way.
14 But despite major advances in automotive technology and
15 the near vanishing of smog emergencies, we're still facing
16 those same two fundamental issues, California's ability to
17 set its own standards, and the need for even stricter
18 limits on pollution from motor vehicles.

19 Later today, the Board will consider how
20 California will deal with standards for trucks and
21 trailers, if, as seems likely, the federal government
22 withdraws or weakens those provisions.

23 The current administrator of the U.S. EPA told
24 Congress recently that he is still considering whether
25 California should have the ability to set its own

1 standards. But while some issues never seem to die, we
2 can take pride in a 50-year legacy of commitment to
3 protect public health through science, research, a deep
4 understanding of automobile technology, and an unwavering
5 commitment by dozens of Board members over the decades to
6 pass necessary, sensible, appropriate, and feasible
7 regulations.

8 So I just want to take this opportunity in
9 opening the meeting to extend our thanks to the many
10 alumni, some of whom are with us today, and who helped
11 bring us to the point where we are today, and to thank all
12 of you here present for being with us on this important
13 occasion.

14 And now, it's time to begin our business of the
15 day, and proceed with the agenda before us.

16 Mr. Corey.

17 EXECUTIVE OFFICER COREY: The first agenda item
18 is a consent.

19 CHAIR NICHOLS: Yes. The only item on the
20 consent calendar is item number 18-1-1, proposed
21 amendments to the area designations for State ambient air
22 quality standards.

23 I have to ask the clerk if anyone has signed to
24 up to testify on this item?

25 BOARD CLERK McREYNOLDS: No.

1 CHAIR NICHOLS: So we did receive some comments
2 during the public comment period, and those have been
3 considered, and they have been determined to be
4 non-substantive. And so we're going to proceed with this
5 item as a consent item.

6 Is there any Board members who wants to see this
7 removed from the consent calendar?

8 Seeing none.

9 Then I will close the record on this item, and
10 ask if the Board members have had a chance to review the
11 item?

12 BOARD MEMBER RIORDAN: I have, Madam Chairman,
13 and I would like to move Resolution 18-1.

14 CHAIR NICHOLS: Thank you.

15 Do I have a second?

16 VICE CHAIR BERG: Second.

17 BOARD MEMBER BALMES: Second

18 CHAIR NICHOLS: Great.

19 All right. I think we can just do this by a
20 voice vote then.

21 Would all in favor please say aye?

22 (Ayes.)

23 CHAIR NICHOLS: Opposed?

24 Any abstentions?

25 Okay. Great. Thank you.

1 CHAIR NICHOLS: Moving to item number 2, which is
2 an informational presentation on the improvements in air
3 quality and public health that have taken place over the
4 50 years since CARB was first established by the
5 legislature in 1968. So this is a little historical
6 review of what got us here.

7 So, Mr. Corey.

8 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.
9 And as you noted, since the Board first met in 1968,
10 California has made remarkable progress in improving air
11 quality. California was once notorious for having some of
12 the worst air quality in the world while much work remains
13 in front of us.

14 California enjoys better air quality than ever
15 before. Our programs stand as a model for the rest of the
16 world for improving air quality and protecting the health
17 of our citizens.

18 Our programs have achieved health benefits valued
19 at many times their costs, and have launched industries
20 that employ thousands of Californians today.

21 In today's presentation, staff will present an
22 overview of the progress in improving air quality and
23 public health over the last five decades.

24 And with that, I'll ask Jeff Austin of the
25 Research Division to give the staff presentation.

1 Jeff.

2 (Thereupon an overhead presentation was
3 Presented as follows.)

4 AIR POLLUTION SPECIALIST AUSTIN: Good morning,
5 Chairman Nichols, members of the Board.

6 CHAIR NICHOLS: Good morning.

7 --o0o--

8 AIR POLLUTION SPECIALIST AUSTIN: When the Board
9 first met on February 8th 1968, it faced a formidable
10 challenge. Residents of Los Angeles breathed some of the
11 dirtiest air anywhere in the world. California was
12 notorious for air pollution. In 1967, the polluted skies
13 above Los Angeles made the cover of Time Magazine.

14 Five decades later, Californians enjoy better air
15 quality than ever before, and consequently live longer and
16 enjoy better health throughout their lives. While better
17 air quality doesn't come for free, California's
18 demonstrated that we can achieve clean air at a modest
19 cost, far outweighed by the value of the benefits.

20 Air quality regulations have spurred new green
21 industries and created thousands of jobs. And in the
22 Board's five decades of existence, California's economy
23 has grown to become larger than all but five nations. Our
24 regulations have been widely adopted by other states and
25 countries, a testament to the success of California's

1 program.

2 --o0o--

3 AIR POLLUTION SPECIALIST AUSTIN: Today, it's
4 hard to imagine how bad air quality was in Los Angeles in
5 is 1960s. The word "smog", a combination of smoke and fog
6 was coined to describe the thick choking brew of chemicals
7 that blanketed the city for months of the year.

8 Powerful irritant substances, like ozone,
9 nitrogen dioxide, and peroxyacetyl nitrate made eyes water
10 and lungs burn, a serious threat to public health and
11 quality of life.

12 At times, the smog was so thick, that it created
13 hazardous driving conditions. Ozone levels in Los Angeles
14 in the 1960s were some of the highest ever recorded
15 anywhere in the world.

16 --o0o--

17 AIR POLLUTION SPECIALIST AUSTIN: Nothing
18 illustrates the improvements in air quality over the last
19 50 years better than this chart, which shows the trend in
20 ozone concentrations for Los Angeles in relation to the
21 current National Ambient Air Quality Standards, or NAAQS.
22 The standard has been revised several times and become
23 progressively more health protective based on better
24 science.

25 Progress in reducing ozone levels was gradual

1 until 1980, when fleet turnover began to replace older
2 dirtier vehicles with newer cleaner ones with three-way
3 catalytic converters. Other regulations, like cleaner
4 burning gasoline, focused on fuel formulation reducing the
5 smog-forming potential of exhaust while also reducing
6 levels of toxic substances like benzene.

7 Controls on power plants and boilers have reduced
8 smog-forming oxides of nitrogen emissions while rules on
9 consumer products, paints, and solvents have limited
10 volatile organic compounds. The Advanced Clean Car
11 regulation is the latest of a series of technology-forcing
12 standards aimed at limiting passenger vehicle emissions
13 and reducing smog.

14 Thanks to control measures, peak ozone levels in
15 Los Angeles today are roughly one-third of their levels in
16 1970. These reductions were achieved despite a three-fold
17 increase in the number of passenger cars on the road in
18 California.

19 --o0o--

20 AIR POLLUTION SPECIALIST AUSTIN: While Los
21 Angeles has always had the highest ozone levels in
22 California, and it's seemed the most dramatic improvement,
23 other regions of the state have also seen significant
24 progress towards healthy air.

25 Of the 10 areas designated nonattainment for the

1 national one-hour standard of 120 parts per billion in
2 1990, nine meet the standard today, a clear demonstration
3 of the effectiveness of the Clean Air Act and California's
4 air quality program.

5 Since then, the science has improved and the
6 standard has been tightened to 70 parts per billion for
7 the 81-hour average ozone concentration as shown here.

8 Local air pollution control districts have played
9 a major part in reducing ozone concentrations, especially
10 in reducing emissions from industrial facilities.

11 --o0o--

12 AIR POLLUTION SPECIALIST AUSTIN: Because of the
13 reduction in ozone levels, California experiences around
14 500 fewer deaths per year, but peak levels in Los Angeles
15 and other regions of the state still exceed the national
16 and California standards, and CARB and other agencies will
17 continue to work towards reducing ozone levels.

18 --o0o--

19 AIR POLLUTION SPECIALIST AUSTIN: The Board
20 established a three-stage alert system to warn residents
21 when smog levels were high enough to trigger harmful
22 symptoms. Thanks to the effectiveness of California's air
23 quality programs, ozone alerts are a thing of the past.
24 Los Angeles hasn't experienced an ozone alert since the
25 early 2000s.

1 --o0o--

2 AIR POLLUTION SPECIALIST AUSTIN: In the 1990s,
3 health studies identified fine particles as the biggest
4 contributor to illness and premature death from air
5 pollution exposure in the United States.

6 Fine particles come from many sources, including
7 industrial processes, waste burning, vehicle exhaust, and
8 chemical processes in the atmosphere. Entering the body
9 through the lungs they cause damage that accumulates over
10 time and leads to increased risk of heart and circulatory
11 problems, like heart attack and stroke.

12 Because of their high potential for causing a
13 life-threatening illness, fine particles are a serious
14 concern throughout California. And Los Angeles and the
15 San Joaquin Valley experience some of the highest levels
16 in the United States.

17 As a measure of fine particle concentrations,
18 here we show PM2.5, particles smaller than 2.5 microns in
19 diameter. After an initial decline in the 1960s from
20 waste burning bans and declining industrial pollution,
21 concentrations in Los Angeles remained steady until the
22 1990s. The Board and local districts passed many
23 regulations in the 1980s and 1990s, controlling emissions
24 from trucks, off-road equipment, industrial processes,
25 agricultural and residential burning and dust.

1 By the early 1990s, these regulations caused a
2 steady decline in concentrations. Cleaner diesel fuel and
3 tighter engine emission standards brought emissions down
4 further. In 2000, the Board adopted the diesel risk
5 reduction plan whose center piece was the Truck and Bus
6 Regulation bringing substantial reductions.

7 Today, fine particle concentrations in Los
8 Angeles are roughly one-third of where they stood in 1968,
9 hovering around the national standard.

10 Over the same period, the number of trucks on the
11 road in California climbed by over a factor of three.

12 --o0o--

13 AIR POLLUTION SPECIALIST AUSTIN: The drop in
14 PM2.5 concentrations seen in Los Angeles is mirrored in
15 other regions of the State. Because of declining PM2.5
16 concentrations, roughly 29,000 fewer premature deaths
17 occur in California each year.

18 --o0o--

19 AIR POLLUTION SPECIALIST AUSTIN: Declining lead
20 levels are one of the biggest success stories in air
21 pollution controls in the United States. Until the 1990s,
22 lead was added to gasoline to improve its combustion
23 properties in vehicle engines. But lead is a potent
24 neurotoxin. It harms people of all ages, but children are
25 particularly susceptible, because their brains are still

1 growing, and exposure to lead causes irreversible damage.

2 Recognizing the serious health risks posed by
3 lead exposure, in 1973, the U.S. EPA required gradual
4 phase-out of lead in gasoline. The Air Resources Board
5 followed suit in 1976 with a phase-out requirement
6 followed by a complete ban on lead in gasoline in 1992.

7 As a result of these measures, lead levels are a
8 tiny fraction of what they were in 1970, and hundreds of
9 thousands of children are no longer exposed to toxic lead
10 from car exhaust.

11 --o0o--

12 AIR POLLUTION SPECIALIST AUSTIN: Black carbon, a
13 constituent of soot from vehicle exhaust, wood burning,
14 and industrial processes is both a health concern and a
15 short-lived climate pollutant. Black carbon
16 concentrations have declined continuously since the late
17 1960s, initially because of bans on waste burning, a shift
18 to cleaner fuels for power generation, and other measures
19 intended to reduce the health risks from fine particles.

20 Recent efforts have targeted black carbon for
21 reduction because of its contribution to climate change.
22 According to a study lead by Dr. Veerabhadran of UC San
23 Diego, if California's efforts in reducing black carbon
24 can be replicated globally, we can slow down global
25 warming in the coming decades by about 15 percent, in

1 addition to protecting people's lives.

2 --o0o--

3 AIR POLLUTION SPECIALIST AUSTIN: Health risks
4 from toxic air contaminants have declined steeply because
5 of CARB regulations. Diesel particulate matter is the
6 single largest contributor to cancer risk from air
7 pollution. In 1998, the Board identified it as a toxic
8 air contaminant. And since then, many regulations have
9 focused specifically on reducing emissions from diesel
10 engines. The impact of these regulations and regulations
11 that took effect prior to that in the 1980s and 1990s has
12 been to reduce the statewide cancer risk from diesel
13 exhaust to roughly one-fourth of peak values around 1980.

14 CARB has tracked concentrations of other toxic
15 air contaminants since 1989. Thanks to control measures
16 on gasoline formulation, consumer products, solvents, and
17 other sources, the combined cancer risk from the six
18 largest contributors, besides diesel particulate, has
19 fallen to a small fraction of 1990 levels.

20 --o0o--

21 AIR POLLUTION SPECIALIST AUSTIN: Concentrations
22 of criteria pollutants, carbon monoxide, nitrogen dioxide,
23 and sulfur dioxide in Los Angeles have decreased by 80 to
24 90 percent between 1972 and 2015. All major air basins
25 have been in compliance with the national air quality

1 standards for more than a decade now.

2 Over the last 50 years, regulations like Advanced
3 Clean Cars have lead to improved engine design. Advanced
4 after treatment, such as the three-way catalyst have
5 reduced emissions still further. Regulations like cleaner
6 diesel fuel, and ocean-going vessel rules have led to
7 cleaner fuels.

8 Industrial source controls and switching from
9 fuel oil to natural gas for electrical generation and
10 industrial boilers have also contributed significantly to
11 reducing air pollution in California.

12 All this took place against a backdrop of rapid
13 population growth, even greater growth in the number of
14 vehicles and trip miles and dramatic expansion of
15 California's economy.

16 --o0o--

17 AIR POLLUTION SPECIALIST AUSTIN: Environmental
18 justice, or EJ, emerged as a key concern as community
19 groups and academic researchers brought to public
20 attention that the benefits of control programs were not
21 shared equally by all Californians. Oxides of nitrogen
22 are a marker for traffic pollution.

23 These two charts show the trends in oxides of
24 nitrogen concentrations for different groups of
25 Californians. The chart on the left shows the trend for

1 different races and ethnicities.

2 In 1970, prior to effective emission controls,
3 concentrations were similar for whites and people of
4 color. Over time, oxides of nitrogen concentrations fell
5 as newer cleaner cars replaced older dirtier ones, but
6 white Californians enjoyed those benefits sooner than
7 people of color as shown by the arrows.

8 By 2010, the gap had narrowed considerably, but
9 not disappeared. The chart on the right shows the trend
10 for people below poverty level versus people above poverty
11 level. Here, again more affluent citizens enjoyed the
12 benefits of air quality improvements sooner, but the gap
13 is narrowing. Note that the gap between racial and ethnic
14 groups is larger than the gap between rich and poor, which
15 suggests that differences in exposure between racial and
16 ethnic groups is not entirely explained by differences in
17 income.

18 Although disparities in air pollution exposure
19 are shrinking, a gap still remains for some pollutants,
20 and data for toxic air contaminants are sparse. We need
21 to continue to work with community groups, researchers,
22 air districts, and businesses to close gaps and ensure
23 that all Californians share the benefits of air pollution
24 controls equally.

25

--o0o--

1 AIR POLLUTION SPECIALIST AUSTIN: The economic
2 benefits of air pollution controls over the last five
3 decades have been substantial. Taking the economic
4 valuation of health benefits into account, each dollar
5 spent on air pollution control in California has resulted
6 in \$38 in benefits.

7 These benefits include fewer premature deaths,
8 fewer hospitalizations, greater worker and agricultural
9 productivity and improved visibility. The economic value
10 of the health benefits alone exceeds \$250 billion. Direct
11 air pollution control costs are less than one percent of
12 the gross State product, and may in the short run have
13 different impacts on jobs in different sectors.

14 However, air pollution controls created market
15 opportunities that led to the creation of an estimated
16 42,000 jobs and revenue of \$8 billion in the air pollution
17 control industry alone. The net effect of air quality
18 regulations has been to shift jobs to green industries.

19 --o0o--

20 AIR POLLUTION SPECIALIST AUSTIN: California's
21 regulations have had an impact around the world in
22 addition to the benefits at home, as other nations have
23 adopted California's standards. Lead-free gasoline,
24 three-way catalytic converters, diesel particulate
25 filters, stringent controls for NOx, ozone, and PM2.5, and

1 low sulfur fuels are now standard in many countries.

2 Michael Walsh has estimated that 98 percent of
3 vehicles driven in the world today incorporate new engine
4 standards first demonstrated in California.

5 --o0o--

6 AIR POLLUTION SPECIALIST AUSTIN: Comparing
7 California's air quality with other nations shows how
8 people around the world have benefited and can achieve
9 huge benefits in the future by adopting strategies and
10 control technologies pioneered in California.

11 Mexico City, which like Los Angeles, has a
12 serious ozone problem, has been successful in improving
13 air quality thanks in part to adopting control
14 technologies first used in California.

15 Beijing and New Delhi experience some of the
16 highest fine particle concentrations in the world.
17 Regulators in Beijing are working closely Air Resources
18 Board staff to develop strategies for reducing PM2.5
19 levels there.

20 And we're engaged in discussions with official
21 from New Delhi about how to address their severe PM2.5
22 problem.

23 --o0o--

24 AIR POLLUTION SPECIALIST AUSTIN: Here's one
25 example of how California's leadership has created

1 benefits that spread worldwide. This map shows a timeline
2 of nations introducing three-way catalytic converters,
3 which were first incorporated into vehicles by
4 manufactures in order to meet strict California emission
5 standards. To date, over 50 nations have adopted new
6 vehicle emission standards effectively requiring three-way
7 catalytic converters.

8 --o0o--

9 AIR POLLUTION SPECIALIST AUSTIN: Thanks to the
10 efforts of the California Air Resources Board, local air
11 pollution control districts, and the U.S. EPA over the
12 last 50 years, Californians enjoy much cleaner air than in
13 1968 than when the Board first met. Concentrations of
14 harmful pollutants have decreased 75 to 99 percent in
15 communities despite the population doubling and vehicle
16 use growing to three times 1960 levels -- 60s levels.

17 There are 29,500 premature deaths annually from
18 ozone and PM2.5 exposure than there would be without air
19 pollution controls. The economic value of the health
20 benefits of air pollution controls exceeds \$250 billion.
21 While environmental justice communities initially lagged
22 behind, the gap is narrowing. All this has been achieved
23 while keeping costs down to less than one percent of the
24 gross State product and creating 42,000 jobs and \$8
25 billion in revenue in the air pollution control industry

1 alone.

2 --o0o--

3 AIR POLLUTION SPECIALIST AUSTIN: While we can
4 take pride in our success, Much work remains to be done to
5 improve California's air quality and counter the threat of
6 climate change. Millions of Californians still live in
7 areas that exceed the national air quality standards.
8 Meeting the national ozone standard in the South Coast and
9 the national PM2.5 standard in the San Joaquin Valley pose
10 special challenges. And the State Implementation Plan
11 will be a major focus.

12 The scoping plan will continue to guide our
13 efforts to reduce greenhouse gases. Established by
14 Assembly Bill 617, the Community Air Protection Program
15 will focus on reducing exposure in communities most
16 affected by air pollution. As we look to the future. The
17 California Air Resources Board is committed to leading the
18 world in devising science-based strategies for reducing
19 air pollution, while making sure that all Californians
20 share the benefits equally.

21 This concludes our presentation. We'll be happy
22 to answer any questions you may have.

23 CHAIR NICHOLS: Thank you.

24 Board members, any questions or comments at this
25 particular juncture?

1 I think we can all take satisfaction in that, but
2 obviously as do others.

3 Yes, Supervisor Roberts.

4 BOARD MEMBER ROBERTS: Yeah, Madam Chairwoman,
5 Could I make a comment?

6 CHAIR NICHOLS: Please do.

7 BOARD MEMBER ROBERTS: First of all, the staff
8 did a great job on that analysis. And it really gives
9 some perspective. I mean, a lot has been accomplished in
10 50 years. This week we had a demonstration project that
11 we kicked off in San Diego called Rebate Now, where we're
12 going to be able to lineup potential EV buyers ahead of
13 time with whatever rebates they're entitled to, so when
14 they go into a dealership, they're not going to get turned
15 away because they went thinking they're going to get a
16 rebate and they're not going to get it. So it's going to
17 be a test program, and I think it's going to be very
18 successful.

19 When we were doing the press conference, I had to
20 smile, because we were doing it in front of the automotive
21 museum, which seemed entirely appropriate. But as I
22 looked and the cameras were lined up on the speakers'
23 podium, directly behind the speakers was a mural that was
24 done as part of the original World's Fair to build that
25 building in San Diego, and we've just reconstructed those.

1 And there are four panels on the mural. And the
2 one that lined up perfectly with the speakers was a panel
3 that showed the San Diego of that era with all of the
4 smoke -- all the smokestacks and all this black smoke
5 coming out. And we had had a discussion about whether we
6 should maybe doctor that up and not do it like the
7 original.

8 (Laughter.)

9 BOARD MEMBER ROBERTS: And I thought, well, let's
10 keep it, because it shows the progress. And I thought it
11 really -- that and the background, and what we were doing
12 there on that day was pretty fantastic.

13 I think we all have a lot of memories for me,
14 some of the special meetings that have occurred here and
15 the changes that we've made, and things like declaring
16 diesel a toxic and things like that; things where we had
17 to shift gears because maybe the program wasn't working
18 out as we had hoped. And I think we all remember Los
19 Angeles in the 60s and 70s.

20 For me, I had -- security Pacific was a client of
21 mine. And when I'd go for their meetings, I mean, you
22 couldn't -- you're there in this beautiful high rise that
23 should have had a beautiful view and you couldn't see
24 across the street, and it was really bad to say the least.

25 But I've also had a strong interest for a couple

1 of reasons, one of which I'd had asthma, and it's been an
2 important part of this -- the work of this board to see
3 how do we get at least the triggers that cause that in
4 many of our youngsters and oldsters, how do we make
5 improvement. And as you saw from the charts, incredible,
6 incredible improvement.

7 I have one slide if the staff can get it up that
8 shows you that in San Diego we've been doing our part.
9 And you can see here how did population has increased
10 somewhat, the vehicle miles traveled has increased
11 significantly, and the ozone dropped dramatically.

12 And I just -- I had them go back to 1994, because
13 in 1994, I was involved with an election. And I was told
14 we could never make this happen unless we virtually
15 stopped people from driving cars and stopped the growth of
16 San Diego. That was the only way we could cure this
17 problem. And I'm pleased to show you we did neither.

18 (Laughter.)

19 BOARD MEMBER ROBERTS: And it just so happens the
20 guy that was making those statements was engaged in a
21 little political election for the board of supervisors.
22 He was a professor at UC California. And --

23 (Laughter.)

24 BOARD MEMBER ROBERTS: I should exempt present
25 company from those comments.

1 (Laughter.)

2 BOARD MEMBER ROBERTS: But he's -- he's gone on,
3 and today he's an advisor to the President in financial
4 affairs, so he couldn't be wronger.

5 (Laughter.)

6 BOARD MEMBER ROBERTS: It shows you how things
7 turn out.

8 (Laughter.)

9 BOARD MEMBER ROBERTS: But the good news is
10 what's happened in our community. And it reflects
11 what's -- the charts that we've seen. We all should be
12 proud.

13 CHAIR NICHOLS: We should. I should comment that
14 although I had never heard that particular story before,
15 I'm well aware of the fact that you, Supervisor Roberts,
16 over a period of years, have endured quite a bit of public
17 comment on behalf of your local newspaper. And I think
18 all of the Board members who represent local government on
19 this Board have a particularly difficult and important
20 task, because you have to represent your community here
21 and the best interests of the community, while at the same
22 time also having to look over your shoulder at what's
23 going on back home.

24 And the ability to, you know, balance sometimes
25 the -- I'm not just going to call them special interests,

1 they're real interests that, you know, people are dealing
2 with, at the local level, and also operate on behalf of
3 the health of the people of the State of California as a
4 whole is a really -- I think it's a very important and
5 perhaps under appreciated task. So I want to thank you
6 bringing that to our attention.

7 MR. SIMMONS: And, Mary, I'd like to remind
8 everybody that vapor recovery at service stations started
9 where?

10 San Diego.

11 (Laughter.)

12 CHAIR NICHOLS: You know, this is a former
13 Executive Officer of the Air Resources Board, so I won't
14 gavel you out of order.

15 (Laughter.)

16 CHAIR NICHOLS: Thank you for the reminder.

17 BOARD MEMBER ROBERTS: Mary, I'd -- I'd also like
18 to just recognize. We have so many former members, Board
19 members, and Chairs and other things here today. And I
20 think we all have stood on their work in a very, very big
21 way.

22 CHAIR NICHOLS: Absolutely.

23 BOARD MEMBER ROBERTS: And I'd like to --

24 CHAIR NICHOLS: Thank you. Thank you.

25 BOARD MEMBER ROBERTS: You know and the

1 organizations. We couldn't have done this without the
2 many organizations.

3 CHAIR NICHOLS: Dr. Balmes.

4 BOARD MEMBER BALMES: Just briefly. So I moved
5 to Southern California to Los Angeles in 1982. And though
6 I don't remember the 60s and 70s, it was bad enough in the
7 early 80s. I'm a jogger, and I used to regularly get that
8 substernal burn that was described correctly by Jeff. It
9 actually motivated me to get involved in doing air
10 pollution research.

11 I'd been an occupational health guy up until that
12 point. And when I moved to San Francisco, UCSF is when I
13 started doing air pollution research. I moved up there
14 for that purpose. And it was also CARB funding that
15 allowed me to do this, to pursue that career pathway. So
16 I just want to acknowledge that CARB has been very
17 important in providing research money to many UC
18 investigators, Cal State investigators, and other folks
19 around the country. And, you know, Jeff sort of mentioned
20 that, but we should hold our head up high in terms of the
21 way we've contributed to the research on air pollution,
22 health effects, and other aspects of atmospheric chemistry
23 and air pollution control technology.

24 We've leveraged a relatively small pot of money
25 compared to what is available at the federal level for

1 very good research. So I just wanted to highlight that as
2 well.

3 CHAIR NICHOLS: Thank you. We'll be recognizing
4 some of that great research in a little bit, so thank you.

5 Anybody else want to share anything at this
6 particular moment?

7 Ms. Berg.

8 VICE CHAIR BERG: I would just like to also thank
9 staff. We have just an amazing set of professionals that
10 really do all the work that allows us here at the Board to
11 bring these policies and discuss them and to work with
12 various stakeholders. And so without our staff, it really
13 wouldn't be possible. I know several of you are in the
14 audience today, and I think it would be wonderful to just
15 have all staff stand up right now that's in the audience,
16 so we can say thank you, plus all of former

17 CHAIR NICHOLS: A good day for it, with the
18 alumni too.

19 VICE CHAIR BERG: Yes, all of our alumni as well.

20 (Applause.)

21 VICE CHAIR BERG: Bob Sawyer, you should have
22 stood as well. So we want to acknowledge you and Mr.
23 Boyd. Oh, and Alan Lloyd. Really without you, this would
24 not be possible.

25 And so please look at today as just a special

1 part that you have brought to this state and we thank you
2 very much for that.

3 CHAIR NICHOLS: Okay. Yes.

4 Dr. Sherriffs.

5 BOARD MEMBER SHERRIFFS: Sorry. Yeah, just a
6 reminder of the -- you know, how has this happened,
7 because it has -- it's been so many parts, and it's
8 really, I think, the collaboration, the transparency, the
9 involvement of science, of industry, of agriculture in the
10 process to achieve these things.

11 You know, so many really to recognize in this
12 achievement, because it's not just ARB, but it's the
13 legislature, it's the public support for this. It's the
14 districts and their contributions. And sometimes yes, as
15 has been mentioned, the reluctance of the auto industry as
16 one example, but that indeed, at the end of the day, folks
17 have stepped up and we've achieved so much.

18 I just want to, wearing my doctor hat, reminding
19 us all why are we doing this, because we're a public
20 health agency and health. And I appreciate the highlights
21 about health.

22 And I just want to put a little twist on a couple
23 of the statistics to I hope help people understand and
24 take pride, and realize the importance of getting lead out
25 of gasoline.

1 Okay. Who here has a child or grandchild that
2 they would not immediately enroll in an educational
3 program that would raise IQ by three to four points?

4 (Laughter.)

5 BOARD MEMBER SHERRIFFS: Dah. Well, that's what
6 happened when we got lead out of gasoline. A measurable
7 change in IQ. This is astonishing. This is really
8 astonishing.

9 You know, you mentioned the 29,000 lives per year
10 change by not having this. Well, for those of us living
11 in the Central Valley, and I'm sure South Coast, even Bay
12 Area, you know, what does that mean? Well, if you spent
13 your life with 1970s style air, you would shorten your
14 life expectancy by two years. Who here thinks that's a
15 good deal?

16 No, think of what we would pay, what we would do
17 to extend our lives by two years. An that's -- that's the
18 kind of accomplishment and what it should mean to every
19 citizen of California and the world what's possible.
20 Thank you.

21 CHAIR NICHOLS: Thank you. That's a terrific
22 reminder of the need to translate these statistics into
23 terms that affect real people. I'd like to now call on
24 the one member of the public who actually signed up for
25 this one. When I heard we had public comment, of course,

1 my immediate reaction was, oh, my gosh, somebody is going
2 to come in and say wait a minute it's all a fraud, it
3 didn't really happen.

4 (Laughter.)

5 CHAIR NICHOLS: I would wake up from this dream
6 of -- I'm happy to say that that's not true. I'd like to
7 call on Eileen Boken, who has submitted a letter also to
8 the Board. She's says she's neutral on this item.

9 MS. BOKEN: Not true.

10 Okay. Eileen Boken. I'm here representing the
11 Coalition for San Francisco Neighborhoods, CSFN. CSFN has
12 submitted a certificate of recognition for CARB's 50th
13 anniversary. The following thoughts however are my own.

14 I would like to begin by recognizing Chair
15 Nichols. She was recognized in 2013 by Time Magazine as
16 one of the 100 most influential people in the world.
17 Former U.S. EPA administrator Lisa Jackson wrote, and I
18 quote, these excerpts:

19 "If, as Supreme Court Justice Louis Brandeis
20 claims, 'States are the laboratories of democracy, then
21 Mary Nichols is the Thomas Edison of environmentalism".

22 (Laughter.)

23 MS. BOKEN: "Head of the California Air Resources
24 Board, CARB, she has been a fierce champion of
25 cutting-edge technology that is changing her State, a

1 nation, and the world. In her decades of service, she has
2 seen changes pushed in California and D.C. boosting fuel
3 economy, cutting acid rain, and greenhouse gases become
4 global standards. 'It is in the spirit of Californians',
5 she says, 'with their openness to new things and their
6 love of the planet that makes it all possible'".

7 Amen, sister. End quote.

8 (Laughter.)

9 MS. BOKEN: Besides Chair Nichols, I would like
10 to recognize the entire Board. The Board has not only the
11 vision but also the tenacity to implement that vision. It
12 has made the lives of 39 million people better. Thank you
13 for everything you've done, and continue to do.

14 Also, special thanks to the Bay Area Air Quality
15 Management District and John Gioia. You are on the front
16 line of some of the toughest environmental challenges in
17 the Bay Area -- in the San Francisco Bay Area.

18 In closing, about the Age of Aquarius, did we
19 ever get that one wrong.

20 (Laughter.)

21 CHAIR NICHOLS: Thank you.

22 (Applause.)

23 CHAIR NICHOLS: Thank you. Thank you so much.

24 On that wonderful note, I'm going to move us to
25 the next agenda item, which is the presentation of the

1 Haagen-Smit awards.

2 (Thereupon an overhead presentation was
3 presented as follows.)

4 CHAIR NICHOLS: Since 2001, the Board has
5 annually bestowed the distinguished Haagen-Smit Clean Air
6 Awards to extraordinary individuals in recognition of
7 significant career accomplishments in air quality and
8 climate change.

9 To commemorate five decades of progress towards
10 clean air, and in conjunction with the Board's 50th
11 anniversary, it's a privilege to present today these
12 Haagen-Smit 50th Anniversary Legacy Awards.

13 As we've all just heard, air quality in
14 California has come a long way. Over the last 50 years,
15 many major milestones have been realized ranging from the
16 Clean Air Act to groundbreaking California and federal
17 efforts, to tackle climate change, to the scientific
18 breakthroughs that support these policy efforts.

19 And each of this year's winner's career
20 accomplishments are emblematic of the progress we've
21 achieved. Although this year's awards focus on the
22 particular winners contributions in that -- in a
23 particular decade, their legacies actually span
24 career-long achievements.

25 It is somewhat of an artificial construct that we

1 came up with, I have to admit, but it seemed like a good
2 way to recognize five really critical people.

3 And certainly all of their achievements are much
4 greater than any one individual contribution of like
5 the -- as was the spirit of our namesake, Dr. Haagen-Smit.

6 The awards are named for Arie Haagen-Smit,
7 because of his important contributions to air pollution
8 science, and also the significance of his career as CARB's
9 first Chair.

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

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

24 Leaving his plant studies behind, he continued
25 working in the field of air pollution research and

1 control, and took on the smog problem in Los Angeles head
2 on. He became CARB's first Chairman in 1968. And in
3 1973, in recognition of his contributions, he received the
4 National Medal of Science, this country's highest
5 scientific honor.

6 He passed away in 1977, but his legacy lives on
7 as does his name in the naming of our laboratory in El
8 Monte. Over the last 17 years, 54 people have received
9 this award for their contributions to clean air. And I am
10 very pleased to be able to continue in that great
11 tradition.

12 So, Mr. Corey, do you want to get this started?

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

15 (Laughter.)

16 EXECUTIVE OFFICER COREY: Each of the winners
17 will be introduced by a Board member. After their
18 introduction, the winner will come to the podium to say a
19 few words. I'll hand them their award and take a quick
20 photo. We'll also take a group photo with the Board at
21 the end of the presentations.

22 The first recipient, is David Hawkins for his
23 leadership on national science-based clean air policies.
24 He'll be introduced by Board Member Barbara Riordan.

25 BOARD MEMBER RIORDAN: Our first decade of work

1 as the California Air Resources Board couldn't have been
2 as successful without the hard work of David Hawkins
3 advocating for a national program to protect American
4 citizens from air pollution.

5 Today, we recognize David Hawkins for his
6 leadership in the development, advocacy, and
7 implementation of sustainable and science based clean air
8 policies, notably, the Clean Air Act, which improved the
9 quality of life and has prevented more than one million
10 premature deaths over the past several decades.

11 Mr. Hawkins, was one of the Natural Resources
12 Defense Council's first staff members in 1971, and has
13 been with the organization ever since, minus four years
14 during the Carter administration where we served in the
15 U.S. Environmental Protection Agency.

16 At U.S. EPA, Mr. Hawkins was responsible for
17 initiating major new programs under the 1977 Clean Air Act
18 amendments. Upon his return to NRDC, he continued shaping
19 the Clean Air Act into the legislation that it is today,
20 one of the most effective laws in U.S. history for
21 protecting public health.

22 With expertise in advanced coal technologies and
23 carbon dioxide Capture and storage, Mr. Hawkins has worked
24 with Congress, the Executive Branch, and the business
25 community to design policies that will slow, stop, and

1 reduce the emissions of global warming pollution. When
2 the opponents argued that the environmental protection was
3 too expensive, and the obstacles insurmountable, Mr.
4 Hawkins worked with industry and the government to
5 identify steps we can take. And he argued that the
6 immensity of challenge is a reason to act now, not to
7 wait.

8 When opponents argued that action for clean air
9 was too extreme, Mr. Hawkins stood up against the
10 relaxation of air quality standards and inaction stating
11 that what was extreme is how long the public is being
12 asked to wait for clean air.

13 His legacy of advocating for health protective
14 air quality policy will have a positive effect on
15 Americans' health for years to come.

16 The California Air Resources Board is honored to
17 bestow David Hawkins with a Haagen-Smit Legacy Award. And
18 I would like to ask Mr. Hawkins now to step forward to say
19 a few words and receive his award from Richard Corey.

20 (Applause.)

21 MR. HAWKINS: Thank you so very much for this
22 event today. Fifty years ago in 1968, I was teaching math
23 in New York City. I had two years of law school under my
24 belt, and no idea what I wanted to do with the rest of my
25 life.

1 And then I heard about a brave man in California
2 who was working to clean up the air in Los Angeles. And I
3 read up on this brave man and I followed his work. And a
4 year later, I knew what I wanted to do with the rest of my
5 life.

6 In 1970, I filed my first anti-air pollution
7 lawsuit a few months after graduating from law school.
8 The next big event was that I was lucky enough to meet two
9 people who are here today, Mary Nichols and Mike Walsh.
10 And then a couple years later, I was lucky enough to meet
11 another mentor who is here today, Henry Waxman.

12 It's been one of the great joys of my life to
13 work with these good friends and fine people, and witness
14 all that they've accomplished in the last 50 years.

15 You know, history books are full of stories of
16 great military victories, but the battle against clean air
17 has delivered one of the great victories of our democracy.
18 Thanks to all of your work, we've prevented hundreds of
19 thousands of premature deaths, and we've given the gift of
20 a healthier life to millions of more people. This is a
21 wonderful thing that you've accomplished.

22 I'm grateful for the chance to have worked on
23 this cause, and I'm hard at work on the current chapter,
24 which is pressing for a serious program to address the
25 scourge of climate disruption.

1 It's an honor to have worked with so many
2 committed people on this effort, and to receive this award
3 today. And I'm thinking that all of this group needs
4 perhaps a punchier name to attract even more recruits to
5 this ongoing battle. So, in closing, let me say that I am
6 proud to be an active member of Dr. Arie's Healthy Hearts
7 Club Band.

8 (Laughter.)

9 MR. HAWKINS: Thank you.

10 (Applause.)

11 EXECUTIVE OFFICER COREY: The next recipient is
12 Congressman Henry Waxman for his leadership and many, many
13 legislative achievements on environmental issues. He'll
14 be introduced by Board Member Hector De La Torre.

15 BOARD MEMBER DE LA TORRE: Thank you, Richard.

16 The Honorable Henry Waxman is being recognized
17 for his environmental leadership while serving 20 terms in
18 the U.S. House of Representatives. Henry is a lifelong
19 pathfinder, going all the way back to Fremont High School
20 in South L.A., and has been interested in smoke just like
21 his fellow pathfinder Dr. Dre.

22 (Laughter.)

23 BOARD MEMBER DE LA TORRE: You can see the
24 details of his accomplishments in the program, but he was
25 and absolute master of what I call the righteous fight.

1 In fact, he wrote the book on it: *The Waxman Report: How*
2 *Congress Really Works.*

3 His routes in the California environment run
4 deep. His uncle served on the Los Angeles County Smoke
5 and Fumes Board in the 1940s. While in Congress, he was
6 one of the primary authors of the 1990 Clean Air Act
7 amendments, only the second ever reauthorization of that
8 landmark federal law.

9 Ten years in the making, he first had to beat
10 back a bill proposed by President Reagan, and supported by
11 many fellow Democrats in the early 1980s.

12 After that, he and like-minded colleagues, needed
13 to strengthen the proposal to address urban smog, toxic
14 air pollution, acid rain, and the depletion of
15 strategic -- stratospheric ozone layer, which paved the
16 way for regulation of greenhouse gas emissions. This
17 version passed in 1990 by an overwhelming bipartisan
18 margin -- that really happened.

19 (Laughter.)

20 BOARD MEMBER DE LA TORRE: -- which was signed by
21 a Republican President George H.W. Bush. That really
22 happened.

23 (Laughter.)

24 BOARD MEMBER DE LA TORRE: This is how stuff
25 happened a mere 28 years ago. I reached out to some of

1 Henry's former colleagues to get their perspective because
2 they worked with him day to day. And from Rick Lehman of
3 Fresno, a colleague in Congress in the 80s and 90s, quote,
4 "Henry was an unusual politician in that he always used
5 facts and not power as his principal weapon. And now one
6 knew the facts better than Henry. He tackled the most
7 powerful special interests in America: big pharma, big
8 tobacco, fossil fuel oligarchs, and unmasked the hypocrisy
9 in his adversaries by simply telling the truth. In
10 winning passage of the Clean Air Act, he not only tackled
11 a multitude of the most powerful industries in America,
12 but he had to overcome the opposition of powerful
13 individuals in his own party, including the chairman of
14 the policy committee on which he served as a subcommittee
15 chairman, old bull John Dingell from General Motors -- er
16 Michigan".

17 (Laughter.)

18 BOARD MEMBER DE LA TORRE: "He was fearless.
19 Every American can thank Henry Waxman every time they take
20 a breath", closed quote.

21 Subsequently, he introduced the first bill in
22 Congress to stabilize the climate in 1992. Later, he put
23 together the American Clean Energy and Security Act of
24 2009, also known as the Waxman-Markey Bill. The
25 Waxman-Markey Bill did not become law, but it served as a

1 catalyst for the Obama Administration to pursue greenhouse
2 gas reductions.

3 During this time, I was asked by a mid-western
4 Governor if I could help him connect with Henry, so that
5 he could lobby him on the Waxman-Markey Bill. The -- what
6 was fascinating about that whole process and conversation,
7 and Henry will remember their subsequent meetings - and I
8 don't want to characterize that - was the reverential way
9 in which this Governor asked to speak to Henry.

10 It was an understanding of what a powerful
11 legislator for Henry was. It was almost fear --

12 (Laughter.)

13 BOARD MEMBER DE LA TORRE: -- that this Governor
14 of a State had of Henry, of wanting to kind of take him
15 on. He was not in favor of the Waxman-Markey Bill, by the
16 way.

17 (Laughter.)

18 BOARD MEMBER DE LA TORRE: So I -- it was a
19 really telling moment to me about what Henry did in
20 Washington, and what it meant.

21 His pursuit of climate solutions led to the
22 creation in 2013 of the Safe Climate Caucus in the House,
23 and the Bicameral Task Force on Climate with the Senate.
24 Today, there are more than 50 Congressional members in the
25 bipartisan Climate Change Caucus.

1 From Alan Lowenthal of Long Beach, a colleague in
2 Congress in his last term, quote, "He was a force that
3 never stopped educating our caucus and Congress on climate
4 change. He was committed to breaking through the denial
5 that surrounded climate change at the time".

6 Well, not really at the time.

7 When he created the Safe Climate Caucus to get
8 Congress to act on climate change, Henry led the fight
9 with a strategy of having members speak out to multiply
10 our voices and build momentum. And Alan shared what one
11 liberal and one conservative said about Henry, Ralph Nader
12 said, "Henry Waxman is the only argument against term
13 limits". And Senator Alan Simpson said, "Henry Waxman is
14 tougher than a boiled owl".

15 (Laughter.)

16 BOARD MEMBER DE LA TORRE: Alan closed by saying
17 what an honor it has been to follow Henry in the fight for
18 climate as Chair of the bipartisan Safe Climate Caucus.

19 And we cannot forget that he impacted California
20 in myriad other ways throughout his tenure. For example,
21 as a legislator, I reached out to him regarding the
22 Schwarzenegger Administration short-changing California's
23 federal Medicaid waiver worth billions of dollars. And
24 Henry gave me insights on other states more robust
25 requests that I was able to use to call them out and

1 insist on a stronger request from Washington.

2 Later in wanting to create a first-ever oversight
3 committee in the State Assembly, I reached out to Henry
4 for his experience as Chair of the House Committee on
5 Oversight and Government Reform. In fact, the California
6 Assemblies Committee on Accountability and Administrative
7 Review fairly plagiarized the bylaws of Henry's committee.

8 The California Air Resources Board is honored to
9 bestow representative Henry Waxman with a Haagen-Smit
10 Legacy Award, and I am proud to invite Henry, an OG
11 pathfinder, up to share his thoughts with us on his day.

12 (Applause.)

13 CONGRESSMAN WAXMAN: Thank you very much, Hector
14 De La Torre for that very kind introduction. We've known
15 each other for many decades when you were in the State
16 Assembly. We worked together on health issues, and we've
17 also shared the passion among these -- about these
18 environmental issues as well.

19 Around this time of year, a lot of people get
20 very interested about awards.

21 (Laughter.)

22 CONGRESSMAN WAXMAN: Some think that the Academy
23 Awards are the things to watch. Now, I will never get an
24 Academy Award, but Arnold will probably get one in
25 addition to the award we're receiving today at some point

1 in his career, but I was interested in this award.

2 And I'm so pleased to receive the award, on
3 behalf of the California Air Resources Board, about
4 efforts to help people avoid all the illnesses, diseases,
5 and shortened life because of air pollution, and to save
6 our planet, the only atmosphere we share in the world from
7 the consequences of carbon emissions.

8 Now, CARB is an interesting acronym for this
9 California Air Resources Board. But did you know there
10 are a lot of people who are trying to get others to follow
11 a low carb diet.

12 (Laughter.)

13 CONGRESSMAN WAXMAN: I find that astonishing.

14 We live in a time when a lot of people throw up
15 their hands about government. They think government can't
16 do anything. They're so disappointed, for a lot of good
17 reasons. And right now, it seems worse than any of us
18 have ever known before.

19 But I would ask people to take a look at another
20 point of view. I think there are some things that
21 government can and must do to help the American people.
22 And the best example is protecting us from environmental
23 dangers.

24 When I went to the Congress, I started working on
25 the Clean Air Act immediately, mainly because it was a

1 health issue. I was chairman within a term or two of the
2 Health and Environment Subcommittee, Environmental Issues
3 Related to Health. It wasn't till many years after that
4 that I learned that my uncle had been involved in this
5 fight.

6 I was born in L.A., lived my whole life in L.A.
7 My uncle Al Waxman was nominated and served on the first
8 committee set up to fight air pollution. It was the L.A.
9 County Board of Supervisors, Commission Against Smoke and
10 Fumes. And he went on that commission and he said, you
11 know a lot of the problems is not just the incinerators,
12 which they closed down, but it's a lot of the industry
13 pollution from the automobile and some of the stationary
14 sources. Although, I don't think he new the word
15 "stationary sources".

16 (Laughter.)

17 CONGRESSMAN WAXMAN: And so as a consequence, he
18 was thrown off that committee.

19 (Laughter.)

20 CONGRESSMAN WAXMAN: Well, I found that out and
21 was very proud of that heritage in the family. But I'm
22 very proud of the fact that when I was in Congress arguing
23 for a stronger clean air law, for efforts to deal with the
24 acid rain problem, to do something about the upper ozone
25 layer and its deterioration and the consequence of that,

1 or to take on acid rain pollution through the first
2 Cap-and-Trade Program that we've ever had, which succeeded
3 so well, or the fight to reduce the carbon emissions that
4 are causing greenhouse gases and all of its consequences,
5 the full extent we don't yet know, but we're starting to
6 experience day after day, I had the opportunity to say to
7 my colleagues, I know the industry people say you can't do
8 this. It will cost jobs. It will hurt the economy. We
9 just can't possibly do. We can't achieve it. It's
10 impossible.

11 But then I was able to turn around to them and
12 say, you know what, in California they're already meeting
13 those standards. The auto industry has reduced its
14 pollution, because of California's advanced activities to
15 reduce green -- reduce the emissions from the mobile
16 source pollutions. And over and over again, I could cite
17 California. Hey, we didn't know the term, but "Yes We
18 Can" attitude toward reducing air pollution.

19 I'm pleased to have been in this fight with you.
20 No one stands out more in my mind than Mary Nichols. I
21 had the pleasure and honor of presenting her an award in
22 Washington. And I cited all the things that she had done
23 in her career here in California. And a lot of people
24 forgot she was involved in these issues at the federal
25 level.

1 So, Mary, any board that you chair that's
2 accomplished as much as this Board and you have done, I am
3 proud to know all of you, and to be honored by you. And I
4 proudly accept, until I get an academy award --

5 (Laughter.)

6 CONGRESSMAN WAXMAN: -- the Haagen-Smit Legacy
7 Award.

8 Thank you so much.

9 (Applause.)

10 EXECUTIVE OFFICER COREY: The next recipient is
11 Professor Mario Molina for his influential scientific
12 breakthroughs on climate pollutants. He'll be introduced
13 by Board Member Diane Takvorian.

14 BOARD MEMBER TAKVORIAN: Thank you, Richard.

15 Dr. Mario Molina is being recognized today for
16 his groundbreaking research on atmospheric science. In
17 1974, along with Dr. Sherwood Rowland, he predicted that
18 widely used industrial gases, known as
19 chlorofluorocarbons, or CFCs, could weaken the ozone layer
20 that protects us from deadly ultraviolet rays. Since CFCs
21 are non-toxic, non-flammable, and really stable, nobody
22 thought twice about using them, that is until Dr. Molina
23 dug into the long-term fate of CFCs as a way to learn
24 atmospheric chemistry.

25 Over time, his research team identified the

1 details of how CFCs led to the creation of the ozone hole.
2 For his work, he was co-awarded the Nobel Prize in
3 chemistry in 1995. He donated two-thirds of his share of
4 the prize money to set up fellowships to help scientists
5 from developing countries conduct research in
6 environmental sciences.

7 Thank you very much for that.

8 Dr. Molina's work has also focused on the science
9 and policy of climate change and air quality problems in
10 urban and regional areas. He has called attention to how
11 air pollution remains a serious health problem in the
12 rapidly growing cities of most of developing countries.

13 Through Centro Mario Molina in Mexico City, he
14 works to find practical, realistic, and in-depth solutions
15 to climate change, air quality, and sustainable
16 development. He aims for the Center to be a bridge
17 between the developed and developing nations. The world
18 of atmospheric chemistry and science policy have benefited
19 immensely from his research and insights, his unselfish
20 dedication to the greater public good, and his energy and
21 resolve to push the limits of our collective work to
22 ensure a more livable global environment.

23 Dr. Molina's scientific and outreach leadership
24 were instrumental for the first international treaty to
25 resolve a manmade global environmental problem

1 effectively. The California Air Resources Board is
2 honored to bestow Dr. Mario Molina with a Haagen-Smith
3 Legacy Award.

4 (Spoke in Spanish.)

5 BOARD MEMBER TAKVORIAN: And please, if you will,
6 come forward to say a few words and receive your award
7 from Richard Corey. Thank you so much.

8 (Applause.)

9 DR. MOLINA: Thank you very, very much. I'm
10 indeed deeply honored with this recognition. To me, the
11 name Arie Haagen-Smit means a lot. Let me sort of tell
12 you how this came about. It was 50 years ago -- and by
13 the way congratulations for this 50th anniversary.

14 But it was precisely 50 years ago that I came to
15 California after starting in Mexico. I spent a few years
16 in Europe. But I came to get my Ph.D. at UC Berkeley.
17 And that's a decision I've never regretted. It was
18 probably the best decision I ever took, because I -- it
19 was fascinating times.

20 First of all, I learned a lot of science. But
21 see, it was also the student movement time. I remember
22 the Blue Meanies, the police in V formation, with the
23 students -- anyhow, I did learn a lot, besides science
24 itself. But at that time, I was interested in very
25 fundamental science, how chemical reactions take place,

1 and so on, not particularly so in the environment.

2 But shortly thereafter, decided to -- I decided
3 to keep working with my colleague, Sherry Rowland, at the
4 University of California at Irvine. And there we both
5 decided -- he was also fundamental chemist. We both
6 decided we wanted to do something for society. We wanted
7 to learn something more practical, and we got into
8 atmospheric chemistry.

9 And so we just chose a problem, what would happen
10 to these compounds -- these chemical compounds, the CFCs
11 that were floating around that indeed replaced the
12 poisonous compounds like sulfur dioxide, that -- it was
13 using at home refrigerators.

14 And it was quite interesting. We had to learn
15 about the atmosphere, and that's when, of course, we
16 realize that there was a problem with the ozone layer.
17 And ozone, of course, nearby Los Angeles I became aware
18 that it was very important for air pollution as well. And
19 that's where, of course, Arie Haagen-Smit's name came
20 forward.

21 But I was very proud of being chemist.
22 Fortunately, the scientific community shares a value,
23 which is we want the benefit of mankind. Science itself
24 doesn't tell us what to do, whether it's good or bad. And
25 as an example, it was another well known scientist, his

1 was Thomas Midgley. He happened to be the one that
2 discovered the CFCs. And they were indeed miracle
3 chemicals. They did a lot of good for society for a
4 while.

5 He had another discovery. He actually didn't
6 discover the original chemicals, but we was very
7 instrumental with tetraethyllead. So he also pushed lead
8 as a very important chemical for society.

9 And interestingly, he passed away never realizing
10 that his two big findings, miracle chemicals were banned
11 later on by society.

12 (Laughter.)

13 DR. MOLINA: But anyhow, I pursued my interest
14 and with Sherry Rowland, of course, we decided to
15 communicate all these findings to society and we're very
16 successful. With the help, of course, of the scientific
17 community, and many other friends, we managed to get the
18 Montreal Protocol to work, which is the one international
19 agreement that is successful. It has succeeded. It
20 represents the idea that if we all work together, we can
21 all do it. It works. We can do it.

22 We have a very big challenge now with climate
23 change, but with air quality. I'll just mention briefly
24 that after working and spending many years, subsequently
25 after being in California, spend some years as a professor

1 at MIT and started to work besides -- also later on air
2 quality as well.

3 And so we had the opportunity to deal with air
4 quality Mexico City. I remember because it was supposed
5 to be the mostly disciplinary study and the number of
6 faculty we got together and decided to tackle. And we
7 learned from Los Angeles, of course, from Arie
8 Haagen-Smit. And so we were able to copy many of the
9 very interesting and very important success stories that
10 happened earlier in Los Angeles, about a decade or two
11 later.

12 Mexico City was, at some point, named the most
13 polluted city in the planet. Twenty million people in a
14 valley surrounded by mountains. So it's a very big
15 challenge. It was indeed very polluted, but in, again,
16 about a decade or so pollution came sharply down. So it's
17 much better now, but we are now working very hard.

18 We want to get the small particles also
19 controlled, also the tail[phonetic]has been largely
20 controlled. Although we still have a problem. So we have
21 a lot of work to do, and we're still learning from what
22 California has done. Okay. There are many more measures
23 that we need to take.

24 But let me just finish by making one more
25 statement about climate change. I worked a lot with

1 climate change, particularly I was very proud of the sort
2 of things we did in PCAST, the President's Council of
3 Advisors in Science and Technology with President Obama.
4 We essentially managed working with him to get the Paris
5 Accord to work after so many years of fighting.

6 And so it is -- it shows us that if we all work
7 together, things can work. We are, as you all know, in
8 particularly difficult times now. What's the image in
9 this planet that the United States has after being a
10 leader in all these issues. Well, that's where I bring
11 California up again.

12 California has shown us it can be done. Look,
13 it's the fifth or sixth largest economy in the planet.
14 The economy is still thriving, and the emissions are not
15 increasing. They're going down.

16 California is showing us it can be done. We just
17 have to work all together, and we can work for this
18 planet.

19 Thank for your attention.

20 (Applause.)

21 EXECUTIVE OFFICER COREY: Now, Governor Arnold
22 Schwarzenegger for his leadership on climate and
23 environmental policies. He'll introduced by Chair
24 Nichols.

25 CHAIR NICHOLS: Thank you, Mr. Corey.

1 And I'm sorry for my voice, which has partially
2 disappeared here today. But I am deeply honored and
3 pleased to recognize my former boss a man who actually
4 needs no introduction, but may not have been awarded in
5 this particular category before.

6 (Laughter.)

7 CHAIR NICHOLS: I think this might be his first
8 nomination at least for an air quality award. We are
9 honoring Governor Schwarzenegger for his environmental
10 legacy as Governor of California. He, of course, is also
11 known as a champion athlete, and a world famous actor,
12 successful politician, engaged activist. His career has
13 truly been multi-faceted, and defies categorization, as
14 well as expectations.

15 The same can be said of his environmental
16 accomplishments. In 2006, he signed Assembly Bill 32,
17 California's Global Warming Solutions Act, which was even
18 more groundbreaking than we realized at the time. It put
19 California at the forefront of climate change mitigation,
20 and gave CARB the responsibility to find causes and
21 solutions to one of the most important issues of our time.

22 Governor Schwarzenegger also shepherded
23 California's pioneering motor vehicle emissions standards
24 through the federal approval process in difficult
25 circumstances, paving the way for substantial reductions

1 of both climate changing emissions and the adverse health
2 impacts of vehicle emissions. And he was never afraid to
3 take on the opposition regardless of their party or their
4 size.

5 While Governor Schwarzenegger's policy
6 achievements are impressive, his approach to environmental
7 leadership is also, I think, equally worthy of
8 recognition, for the fact is that he brought a global
9 vision, as well as a respect for science, and openness to
10 innovation, talent for post-partisan collaborative
11 partnership in the service of enlightened policy making.
12 And these have been an inspiration to many.

13 The California Air Resources Board -- he's also a
14 car collector by the way, and that's also very in keeping,
15 I think, with California and our love of automobiles. So
16 we are honored, Governor Schwarzenegger to have you with
17 us today to receive the Haagen-Smith Legacy Award. And I
18 hope you'll come forward and say a few words about your
19 legacy for all of us.

20 (Applause.)

21 GOVERNOR SCHWARZENEGGER: Thank you very much,
22 Mary, for the wonderful introduction. It's exactly the
23 way I wrote it.

24 (Laughter.)

25 GOVERNOR SCHWARZENEGGER: Thank you.

1 This is really fantastic. And first, I want to
2 say congratulations to all of the recipients that are here
3 today, that have received this great award. So
4 congratulations to all of you. Give them a big hand for
5 their great work that they have done.

6 (Applause.)

7 GOVERNOR SCHWARZENEGGER: I love this award,
8 because -- obviously, I've gotten many awards, but this
9 one is very meaningful, and I think you've pointed it out,
10 because it comes, first of all, from you, it comes from
11 the Air Resources Board, it has the name Haagen-Smit.

12 (Laughter.)

13 GOVERNOR SCHWARZENEGGER: I mean, that's like
14 what a genius he was. I mean, to be one of the first, if
15 not the first, to really talk about smog, and what is smog
16 all about and how deadly it can be.

17 And he was one of the greatest scientists -
18 really breakthrough stuff. And so he's one of those great
19 immigrants that has contributed a lot to this country and
20 to the world. And on top of it, I just thank the world of
21 it that Ronald Reagan was smart enough to appoint him, not
22 to look at party -- we don't even know what party
23 affiliation he had, but to just appoint the top person in
24 the world to the position of leading the Air Resources
25 Board. So, to me, that is also a great part of the story.

1 If you think about it, it was 50 years ago --
2 now, this year we are celebrating the 50th anniversary of
3 the Air Resources Board. So 50 years ago, Governor Ronald
4 Reagan appointed him to be the Chair of the Air Resources
5 Board. I mean, Haagen-Smit was the man.

6 Now, 50 years later, you have Trump appointing
7 Pruitt to the EPA.

8 What happened?

9 (Laughter.)

10 GOVERNOR SCHWARZENEGGER: What happened?

11 This is so sad. But this is why I'm so proud of
12 this award, because this man was a brilliant, brilliant
13 man. And I just want to say also that the Air Resources
14 Board has done such an extraordinary job in this last 50
15 years is really unbelievable.

16 And, of course, I want to say thank you very much
17 to you, Mary, for doing such an extraordinary job.
18 Because we have done really great work when I was
19 Governor. And with the help, of course, of Senator
20 Pavley, who is here today with us, my partner, who was
21 really the genius behind all of this, and wrote the bills,
22 knew all the details. What a great partner she was. We
23 traveled to Washington. We lobbied together, and all
24 this. It was really great, where Democrats and
25 Republicans truly worked together to solve those problems.

1 And it was really great to work with her and to
2 come up with great ideas. For instance, the hydrogen
3 highway, or to make a commitment to have 50 percent of
4 renewables rather than just 15 percent, or to go and
5 reduce greenhouse gases by 25 percent by the year 2020,
6 and 85 percent by the year 2050, and the Green Building
7 Initiative, and the list goes on and on and on.

8 But I have to say that the smartest and the best
9 decision that I've made when it comes to the environment
10 was to appoint you, and Sandra Berg to be Chairing this
11 Committee.

12 (Applause.)

13 GOVERNOR SCHWARZENEGGER: Because when this
14 position became available, I had to look for the best
15 person in the world. And I looked, and I looked, and
16 there it was right in front of me, the person that was
17 really an expert in cap and trade. You did actually when
18 they made the agreement under the Bush Administration
19 about acid rain, you were the one on the -- during the
20 Clinton Administration that came in and actually did it,
21 successfully did it.

22 And this is why I said that is the person that we
23 need here to Chair this committee. And so -- and you came
24 out here. You accepted the job. So thank you very much,
25 because without you, none of this would have happened

1 because we, governors and legislators, we come and go, and
2 we come and go, and we come and go.

3 (Laughter.)

4 GOVERNOR SCHWARZENEGGER: But you are dug in here
5 like Alabama tick.

6 (Laughter.)

7 GOVERNOR SCHWARZENEGGER: And you do the
8 follow-through, because it's one thing to talk about, and
9 to pass laws, but it's a whole different thing to then
10 actually make the action happen and to turn it into
11 reality. And this is what you and the entire Board does.
12 So I want to congratulate all of you for the great work
13 that you have done. So big hands to all of them for the
14 great work that you have Accomplished.

15 (Applause.)

16 GOVERNOR SCHWARZENEGGER: And we all know that it
17 was not easy. We all have gone through the battles. I
18 mean, we have seen the moments when the naysayers came out
19 and said this -- when you pass those environmental laws,
20 it will send California right down with the economy. Jobs
21 would be lost, and the whole State would go in the ocean.

22 And how wrong they were. We even had the federal
23 government fighting us on every step of the way, but we
24 recognize that never, ever to say no, and to back off. We
25 pushed, and we pushed. It even went to the Supreme Court

1 and we won in the Supreme Court, that the Supreme Court
2 decided that, yes, greenhouse gases is a pollutant, and
3 yes, we can regulate our own air.

4 So this we fought and fought. I remember the
5 days, and you remember when all the car manufacturers came
6 to my office and they said we are going to bury you.
7 We're going to spend millions and millions of dollars
8 against you and try to scare me.

9 (Laughter.)

10 GOVERNOR SCHWARZENEGGER: So told them, I said
11 we're going to terminate you.

12 (Laughter.)

13 GOVERNOR SCHWARZENEGGER: And they backed off,
14 and now we have nationally the emissions standard, which
15 was really fantastic. So this the kind of work we have
16 done here. So I just want to say that I'm proud of the
17 work that we've done. We didn't do it just for ourself,
18 but we did it also as inspiration to the -- for the rest
19 of the world, because now other states are inspired here
20 in the United States, and the whole world is inspired by
21 the great work that has been done. So thank you very much
22 for the great work that you've done, and thank you for
23 this great award.

24 Thank you.

25 (Applause.)

1 CHAIR NICHOLS: Those of you in the front should
2 turn around and look to the back, because we've been
3 joined by quite a few of our staff here who wanted to be
4 here for this part of the program. So there's some vacant
5 seats, but thank you all for coming.

6 And finally, Gina McCarthy for her dedication to
7 a suite of national and international environmental
8 policies. She'll be introduced by Board Member Dan
9 Sperling.

10 BOARD MEMBER SPERLING: Until recently, our work
11 here in California has received strong support from our
12 federal counterparts at the U.S. EPA. Major progress was
13 made on a number -- of range of environmental issues, most
14 importantly climate change. It was made possible by Gina
15 McCarthy.

16 Today, we recognize Ms. McCarthy for her
17 leadership on a broad range of climate policies, while
18 serving as administrator of the U.S. Environmental
19 Protection Agency from 2013 to 2017. Her tenure as U.S.
20 EPA administrator heralded a paradigm shift in national
21 environmental policy.

22 Expressly linking climate change with global
23 public health, she leaves a long-standing legacy for the
24 nation and the world. Gina McCarthy worked with the
25 United Nations, with the World Health Organization, and a

1 variety of other international groups on pollution and
2 climate efforts, and represented the U.S. on global
3 initiatives to reduce high risk sources of pollution.

4 Her experience prepared her well to become a
5 Professor of Practice of Public Health at Harvard
6 University and Director of Harvard's Center for Health and
7 the Global Environment. In these roles, she will lead
8 initiatives in climate -- climate science, health and
9 sustainability.

10 Many of us were honored to hear Gina's insights
11 at the recent celebration of CARB's 50th anniversary at UC
12 Davis, where she displayed her wit, her wisdom, and I
13 searched for a good word, but her spunk.

14 (Laughter.)

15 BOARD MEMBER SPERLING: Mary, who knows her
16 better than me, said that's exactly the right word.

17 The California Air Resources Board is honored to
18 bestow Gina McCarthy with a Haagen-Smit Legacy Award.

19 Gina couldn't be here today, but she recorded a
20 video for us to share.

21 Please play the video.

22 MS. McCARTHY(via video): Hi. Listen, I'm sorry
23 that I couldn't be with you. I really want to thank the
24 Board for this tremendous honor. I know that Haagen-Smit
25 was just a role model for all of us who understand how

1 important it is to understand the science. He taught us
2 connections that existed, and we found ways to solve
3 those, so that we'd protect public health and our precious
4 natural resources. So this honor really has left me
5 speechless, except as all you know, I'm never speechless.

6 So it's wonderful to share this honor with such
7 tremendous leaders, my colleagues that I have known for
8 years that are really my role models and my heroes. So I
9 want to congratulate them. But I also want to recognize
10 that in today when we're challenged at the federal level
11 without the kind of leadership that we need, it's
12 important for us to do two things.

13 One is to recommit to the science, to make sure
14 that we follow Haagen-Smit's excellent model on how we
15 tackle our problems, we face them, we recognize the
16 science, we make those technical corrections, and we solve
17 our problems as we always do in the United States.

18 So let's celebrate our successes. Let's
19 recommit. Let's challenge our ourselves, not just to
20 solve the problems of the 20th century, but to make sure
21 we set a future for our children that is going to be as
22 healthy and clean and bright and safe as we all want it to
23 be.

24 So again, thank you for this tremendous honor.
25 Congratulations to my hero honorees. I wish I could be

1 there, but I will be with you in spirit.

2 Thanks so much.

3 (Applause.)

4 CHAIR NICHOLS: Okay. Thanks to all. We now
5 have -- let's see -- well, there's many pictures, but what
6 are we doing a picture of -- yes, yes, yes, I know, but I
7 have some other things to do first.

8 Sorry.

9 (Laughter.)

10 CHAIR NICHOLS: Before we move on to having a
11 picture, we have a couple of additional statements here.
12 We have -- one of the things that's changed about the
13 Board over the course of 50 years, it contracted, and then
14 it expanded again. And it expanded in large part because
15 our mandate expanded with AB 32, and then SB 32, and the
16 scope of responsibility. I think the legislature realized
17 that they couldn't just delegate it to an agency and walk
18 away, that they really wanted to have a stronger role in
19 seeing that implementation was happening the way that they
20 hoped it would.

21 And so, in very recent years, we have actually
22 acquired not only additional appointees, who serve as
23 regular Board members, but we also have two additional ex
24 officio Board members representing the Senate and the
25 Assembly. And we are very pleased that they have been

1 active Board members. They have contributed to our
2 deliberations over the years, as well as serving a liaison
3 function between the Board and the legislature.

4 And today, both of them have asked to be with us
5 specifically in order to present resolutions from their
6 respective Houses.

7 So I will start, I think this is the right way to
8 do it, with Senator Lara.

9 SENATOR LARA: Thank you. Good morning. It's
10 great to be here with you all today as we celebrate true
11 visionaries and vanguards in our movement for not only the
12 environment, but environmental justice issues. I think
13 it's not only inspiring for us, as members of the
14 legislature, to see the tremendous work that not only can
15 be done, we can decouple our economy from carbon and still
16 succeed, and be able to now democratize our environmental
17 policies, so that everyone benefits from the work that
18 we're doing in this great building and in our State
19 Capitol.

20 And moving now towards an era where we utilize
21 the resources to create incentives for business to be our
22 partners continues to make us the leaders worldwide, as we
23 continue to democratize the policies.

24 And so to see so many folks that have been here
25 before us, and it just reminded me again that we stand on

1 the shoulders of so many people that have lead the way,
2 especially in times that, you know, people didn't seem
3 that it was going to be feasible or even possible to
4 achieve where we are at today as Californians and as a
5 State.

6 And to be part of this august body as we
7 recognize these tremendous leaders is something that's
8 very important. I can't help but reflect on the fact that
9 Assembly Member Hector De La Torre and I come from the
10 same area, and to see that, you know, we continue to fight
11 for some of our most environmentally impacted communities
12 at this level is inspiring to see.

13 And as we move forward now, and continue to
14 demonstrate in the legislature that we're going to double
15 down now more than ever on our efforts to not only
16 continue to fight for clean air, but that we recognize our
17 role globally, and the responsibility that globally as
18 Californians to lead.

19 And this continued partnership that we have with
20 the ARB now continues to only strengthen our position
21 internationally as we continue to fight the good fight.
22 But I want to personally thank on behalf of the California
23 State Senate all our honorees today, and particularly our
24 Vanguard former Governor who continues to lead the way and
25 demonstrate that immigrants get the job done.

1 (Laughter.)

2 SENATOR LARA: And we do it very well, and that
3 we continue to emphasize the importance of fighting for
4 everyone, and ensuring that everyone has an opportunity to
5 succeed, and they succeed if they have clean air,
6 regardless of the zip code where they live. You all have
7 done that great work.

8 We continue in your spirit. We continue to fight
9 the good fight in the legislature, and on this Board to
10 continue to move the work that you all have done forward.
11 So thank you and congratulations.

12 (Spoke in Spanish.)

13 CHAIR NICHOLS: Thank you.

14 (Applause.)

15 CHAIR NICHOLS: And now I would also like to
16 introduce our Assembly Member Eduardo Garcia. And he will
17 also make a presentation.

18 ASSEMBLY MEMBER GARCIA: Thank you, Madam Chair.
19 I will be brief and thank Senator Lara for taking the lead
20 on preparing what will be resolutions in recognition of
21 all of the individuals being recognized today.

22 Thank you for your role in leading -- in the
23 world, as it relates to the issue of climate change, and
24 today, as we now talk about environmental justice issues
25 in the same communities that Senator Lara mentions that I

1 too represent. The collective intellect and achievements
2 of the group that is being recognized today shall be and
3 will be credited for extending the life expectancy of
4 millions of people around the world via your leadership on
5 this issue, and we thank you for that.

6 At the same time, as was mentioned by our
7 Governor Arnold Schwarzenegger, the economics that have
8 always been talked down when it comes to environmental
9 policies, we've proven that to be not true. We've
10 debunked those theories that pushing environmental
11 policies could also mean economic vibrancy for our state,
12 for our country, and certainly throughout the world.

13 I oftentimes get asked in the Coachella Valley,
14 part of my district, why are you involved on all these
15 issues related to climate change? Why is it that these
16 issues have become a priority for you?

17 And I have to respond with just pointing to the
18 Salton Sea in my backyard. And a body of water that's
19 drying up due to many reasons, and the public health
20 implications, and the economic implications to that
21 region. And although people in my region may not see that
22 as a climate change issue, when you put it into that
23 perspective, it begins to resonate why it is important for
24 the legislator from the Coachella Imperial valley who
25 represents the border regions be involved on this very

1 important issue of climate change and environmental
2 justice policies here in the State.

3 So on behalf of my 79 colleagues in the Assembly,
4 and I include our Republican colleagues, our 79 colleagues
5 and our leader of the House, Speaker Rendon, we want to
6 congratulate you and thank you for your visionary
7 leadership on this issue. And, of course, to the staff of
8 ARB, thank you for your work. And onward with another 50
9 years of great work here in California, and throughout the
10 country.

11 Thank you.

12 (Applause.)

13 CHAIR NICHOLS: It wouldn't be a birthday without
14 two more things, photos and cake.

15 (Laughter.)

16 CHAIR NICHOLS: So we're going to do both. We're
17 going to break now, and the Board will ask our honorees to
18 stay for a few minutes to take some photos. And we invite
19 everyone to go on a break to the Sierra Room, where we
20 have a cake and some other refreshments also. So thank
21 you, and we will be adjourned until 12:30 when we'll come
22 back and resume.

23 Thank you.

24 (Off record: 10:46 a.m.)

25 (Thereupon a lunch break was taken.)

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

2 (On record: 12:29 p.m.)

3 VICE CHAIR BERG: Good afternoon. And welcome
4 back. We're going to reconvene.

5 I'm going to take over the duties for our Chair
6 Nichols. As we could tell this morning, her voice was a
7 little bit challenged, but her enthusiasm certainly was
8 strong throughout the morning. So it's my pleasure to
9 take over for her this afternoon.

10 We are going to reverse our order, and going to
11 ask Mr. Corey to make a presentation, based on this
12 morning and how it exciting it was to real relive the
13 first 50 years and really get that energy. We're really
14 looking forward to Richard Corey's report, and his
15 priorities for 2018.

16 The Board made significant progress in 2017, and
17 once again will be advancing a wide range of initiatives
18 for 2018. He will provide an overview of the major
19 efforts that will occur in 2018, as well as actions that
20 will become before the Board.

21 Mr. Corey, will you make your presentation.

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

24 EXECUTIVE OFFICER COREY: Yes. Thanks, Vice
25 Chair Berg. Last year, I referred to '17, when I was

1 talking about 2017, the plans for 2017, as what I really
2 viewed as, at least since I've been at the agency 33
3 years, our most ambitious year on record.

4 Strike that now.

5 (Laughter.)

6 EXECUTIVE OFFICER COREY: Strike that, because
7 we're going to be talking about 2018, and how significant
8 it is and the great, great opportunities it's going to
9 present.

10 So with that, to close out the 50th anniversary,
11 CARB's first Board meeting, I'm going to briefly describe
12 the work we'll be doing over the coming year and highlight
13 some of the significant actions this Board will be
14 considering.

15 --o0o--

16 EXECUTIVE OFFICER COREY: So let me start with
17 some of our accomplishments over this last year.

18 --o0o--

19 EXECUTIVE OFFICER COREY: Earlier today, you saw
20 a presentation that looked back at the air quality
21 improvements over the last 50 years. The Board's five
22 decades of stewardship has led to exceptional air quality
23 progress, continuing technological innovation, and
24 environmental leadership both nationally and
25 internationally, and 2017 was no exception.

1 --o0o--

2 EXECUTIVE OFFICER COREY: In 2017, you adopted
3 three plans. These plans set the roadmap for efforts over
4 the coming years. Each of these plans drew from a common
5 core of new strategies, proof of the interconnected nature
6 of our public health and climate goals.

7 In March, the Board adopted the State
8 Implementation Plan strategy, which describes CARB's
9 commitment to achieve the mobile source and consumer
10 products emission reductions needed to meet federal air
11 quality standards over the next 15 years. Also, in March,
12 the Board adopted a plan to reduce short-lived climate
13 pollutants, defining the actions we need to immediately
14 slow global warming by cutting the emissions of these
15 super pollutants.

16 In December, you adopted the Climate Change
17 Scoping Plan, which lays out a roadmap for California to
18 achieve the 2030 GHG reduction target of 40 percent, 40
19 percent, below 1990 emission levels.

20 --o0o--

21 EXECUTIVE OFFICER COREY: In 2017, the
22 legislature passed two key pieces of legislation that will
23 define our work for the coming decades. AB 398 extends
24 the Cap-and-Trade Program to 2030, and designates it as an
25 important and necessary part of California's post-2020 GHG

1 reduction efforts.

2 Also, passed last year was AB 617, one of the
3 most significant air quality bills in the last several
4 decades. It recognizes that while California has seen
5 tremendous improvement in air quality, not all communities
6 have benefited equally from these efforts. CARB's
7 technical, planning, and policy expertise play an
8 important role in the administrations and legislator's
9 drafting of these two bills.

10 --o0o--

11 EXECUTIVE OFFICER COREY: We made further
12 progress to meet health-based air quality standards by
13 adopting 11 ozone and PM2.5 SIPs. The map on the right
14 shows where these SIPs were adopted. The SIPs included
15 strengthened controls for NOx and VOCs, SOx and PM, and a
16 diverse range of stationary and area sources, plus large
17 reductions from upcoming rules for cars, trucks, and
18 freight equipment.

19 --o0o--

20 EXECUTIVE OFFICER COREY: The scoping plan that
21 you approved at the end of the year provided comprehensive
22 strategies to achieve California's 2030 target, and frames
23 the path for a long-term reductions -- long-term
24 reductions to meet the state's 2050 goal.

25 The Short-Lived Climate Pollutant Plan

1 outlines -- outlines ways to reduce emissions of methane,
2 black carbon, and fluorinated gases. To begin
3 implementing the plan, CARB convened a dairy and livestock
4 working group to address technical, market, and regulatory
5 issues needed to reduce methane emissions from dairies.

6 CARB has also been working with CalRecycle to
7 support their regulatory development to achieve organic
8 waste reduction targets. You also adopted the nation's
9 most stringent oil and gas methane regulation that's
10 expected to achieve more than a 40 percent emission
11 reduction, and result in significant co-benefit reductions
12 in both VOCs and toxics, including benzene.

13 The State continued to enjoy the benefits of
14 California climate investments in 2017. Since it's
15 inception, the legislature has appropriated more than 6.1
16 billion for the programs. This year that included 250
17 million to secure early reductions of air pollutants in
18 the state's most burned communities.

19 --o0o--

20 EXECUTIVE OFFICER COREY: To implement AB 617, we
21 created the Office of Community Air Protection and
22 appointed Karen Magliano as the director of the new
23 office. Karen is working closely with Veronica Eady, our
24 newest Assistant Executive Officer to lead the Community
25 Air Protection Program. Staff has expanded outreach and

1 engagement activities targeting disadvantaged and
2 low-income communities across all programs as well.

3 CARB staff and local air districts hosted four
4 informational meetings in different parts of the State in
5 fall 2017 providing an opportunity to the public to engage
6 in discussions related to the development and
7 implementation of the Community Air Protection Program.

8 Staff worked with other State agencies and
9 stakeholders to develop guidance for targeting California
10 climate investments in disadvantaged and low-income
11 communities, and we continue to prioritize clean
12 transportation funds to disadvantaged communities, and
13 low-income communities and households to ensure the
14 cleanest technologies are deployed in the most impacted
15 parts of the State, and to improve access to clean
16 transportation in these communities.

17 Finally, staff prepared the refinery emergency
18 air monitoring assessment report that provides
19 recommendations for improving emergency and routine air
20 monitoring at California's major refineries.

21 --o0o--

22 EXECUTIVE OFFICER COREY: In December, the Board
23 approved the 660 million funding plan for clean
24 transportation to increase the use of zero and near-zero
25 emission cars, trucks, buses, and freight equipment. The

1 plan includes a substantial increase in funding for
2 freight projects.

3 In administering incentive funds, we increased
4 outreach in disadvantaged communities in partnership with
5 community groups, and other State agencies. We launched a
6 new moving California website to highlight funding
7 opportunities for individual, businesses, local government
8 and nonprofit organizations.

9 2017 was the first full year of implementation of
10 our new Supplemental Environmental Projects Policy
11 designed to better benefit disadvantaged communities. In
12 2017, we funded more than 15 projects totaling more than
13 \$2 million.

14 --o0o--

15 EXECUTIVE OFFICER COREY: Between 2008 and 2017,
16 CARB programs have replaced or upgraded 38,000 trucks,
17 10,000 transportation refrigeration or transport
18 refrigeration units, 300 marine vessels, 160 locomotives,
19 128 pieces of cargo handling equipment, and installed
20 shore power for ocean-going vessels at 37 berths.

21 In 2017, CARB continued extensive enforcement of
22 its diesel programs. Highlights include resolving drayage
23 truck violations at railyards across California, assessing
24 substantial penalties for historical cargo handling
25 equipment violations at ports across the State, and

1 continue to streamline enforcement of the Truck and Bus
2 Rule.

3 In response to Governor Brown's July 2015
4 executive order, on sustainable freight, staff continued
5 to work with government agencies, and interested
6 stakeholders in developing and implementing the
7 Sustainable Freight Action Plan.

8 --o0o--

9 EXECUTIVE OFFICER COREY: And, of course, one of
10 our highlights for the year was a groundbreaking for the
11 new Southern California laboratory. In addition, we
12 selected a design/build contractor and are proceeding with
13 the final design and construction phase of the project.
14 We anticipate move in in early 2021.

15 And we're proud that the new facility will
16 achieve the highest possible LEED rating, Platinum, and
17 perform as a zero net energy facility. To give you an
18 idea of what the new facility will look like, we have a
19 short video of a 3D fly-through of the new lab.

20 (Thereupon a video was played.)

21 EXECUTIVE OFFICER COREY: I can't think of a more
22 fitting year than the 50th anniversary of this
23 organization to have broken ground on this complex that
24 will really serve us and really serve the public of
25 California and beyond with respect to public health

1 protection and GHG reductions for many decades to come as
2 a tool for our staff, and many others. We're very, very
3 excited about this.

4 So back to my core presentation.

5 --o0o--

6 EXECUTIVE OFFICER COREY: We've also moved to
7 ensure our policies can properly -- be properly
8 implemented and defended in response to actions taken by
9 the federal administration. Working with the California
10 Attorney General's office, and allies in other states, we
11 filed suit to compel the federal government to implement
12 and enforce existing law, and to resist federal roll
13 backs.

14 Our efforts are also helping to ensure that our
15 vehicle emission reduction efforts go forward, key ozone
16 standards are implemented, federal methane rules go into
17 force, and that the Clean Power Plan goes forward.

18 We'll continue to collaborate with our technical
19 partners at U.S. EPA and elsewhere on low NOx heavy-duty
20 technologies. And untimely, we need to -- as we move
21 forward with a federal standard.

22 We're also laying the technical groundwork now
23 and are moving ahead with a cleaner standard that can be
24 used as a model for action, not just across the country,
25 but outside of that to focus on one of our largest

1 sources, which is the heavy-duty sector for NOx.

2 On a separate front, we've also been applying the
3 lessons learned in the Volkswagen case and other
4 investigations to vigorously enforce our regulations, and
5 work with our federal partners to ensure emission
6 reductions in the SIP are met.

7 --o0o--

8 EXECUTIVE OFFICER COREY: The accomplishments I
9 just highlighted are the foundation for our future
10 efforts. Before I walk through the specific Board action
11 items, I'll briefly describe the overacting -- or rather
12 overarching priorities for CARB's work in 2018.

13 --o0o--

14 EXECUTIVE OFFICER COREY: So as I noted when I
15 opened 2018 is going to be a big year as we expand our
16 community focused air protection. AB 617 sets out a very
17 ambitious implementation schedule. CARB must set the
18 overall direction of the program by October 1 of this
19 year. The statewide strategy will establish a strong
20 framework and outline criteria for the development and
21 CARB review of community emission reduction programs.

22 The air monitoring plan will evaluate the
23 availability and effectiveness of air monitoring
24 methodologies and existing community monitoring networks.
25 Staff released a draft concept paper yesterday for the

1 statewide strategy and the community selection criteria.
2 We're aiming to release a complete draft in May, and a
3 final draft in late summer for your consideration at the
4 September Board hearing.

5 We're also coordinating closely with the air
6 districts on the program. They play a key role
7 throughout, but especially in the development of the local
8 community emission reduction programs. We plan to update
9 you on the implementation efforts on AB 617 at next
10 month's Board hearing.

11 Public engagement is the most important part of
12 the community air quality program. We've just had a
13 kick-off meeting with the public consultation group last
14 week, and we'll be hosting three regional summits later
15 this month. We're also targeting next week for the
16 solicitation of community capacity grants for the five
17 million the legislature appropriated for local community
18 groups to participate in the AB 617 implementation.

19 We'll also continue to work with the air
20 districts to administer the 250 million the legislature
21 appropriated to support early reductions in impacted
22 communities.

23 --o0o--

24 EXECUTIVE OFFICER COREY: And we're moving
25 quickly on the implementation of the adopted scoping plan.

1 In 2018, we'll be updating the Cap-and-Trade Program to
2 conform to AB 398, making Low Carbon Fuel Standard the
3 more stringent, working on SB 350 integrated resource
4 plans for the electricity sector, and developing a natural
5 and working lands implementation plan.

6 In 2017, we linked our Cap-and-Trade Program with
7 Ontario. We're on track to hold our first three-way
8 auction with Ontario and Quebec on February 21st. Low
9 Carbon Fuel Standard remains a key strategy in our
10 portfolio to address GHG emissions and reduce dependency
11 on fossil fuels.

12 The scoping plan also placed a renewed focus on
13 the critical role natural and working lands play in
14 meeting our long-term climate goals. We'll continue
15 coordinating with the Natural Resources Agency, and the
16 Department of Food and Agriculture on this effort.

17 We'll also be developing a natural and working
18 lands implementation plan, and will publish a
19 comprehensive inventory by the end of the year.

20 For the short-lived climate pollutant
21 implementation effort, CARB will continue to work with the
22 Dairy and Livestock Working Group. Staff will also
23 conduct two rulemakings to reduce emissions of HFCs that
24 are also short-lived climate pollutants.

25 Finally, as we briefed you in December on SB 375,

1 staff will put forward a new approach that places a
2 greater emphasis on evaluating the specific land use,
3 transportation strategies, and investments, as well as
4 enhanced tracking of implementation measures -- actions by
5 the MPOs.

6 --o0o--

7 EXECUTIVE OFFICER COREY: In October, we plan to
8 present to the Board regulatory concepts for light-duty
9 vehicles and an update on national vehicle regulatory
10 action by U.S. EPA and the National Highway Traffic Safety
11 Administration, or NHTSA.

12 We're ensuring that EV charging infrastructure is
13 moving forward and have several initiatives planned.
14 These include implementation of the Volkswagen Zero
15 Emission Vehicle Investment Plan, a 2018 regulatory item
16 on EV infrastructure open access requirements, and
17 partnering with CEC and the PUC to evaluate utility-funded
18 infrastructure investments.

19 We're also expanding the outreach and education
20 for ZEV buyers. We're redesigning our DriveClean consumer
21 website and supporting the statewide ZEV campaign.
22 Additionally, we'll continue to ensure real world emission
23 reductions by pursuing key defeat device cases, including
24 Fiat Chrysler.

25 On the low carbon fuel front, we plan to

1 strengthen the Low Carbon Fuel Standard as I mentioned by
2 adding a more ambitious program target through 2030, and
3 adding third-party verification, as well as participation
4 of renewable jet fuels in the program.

5 --o0o--

6 EXECUTIVE OFFICER COREY: We'll continue our
7 comprehensive efforts to reduce emissions from the
8 heavy-duty sector as well. To further reduce the health
9 impacts from the freight sector, staff will begin
10 developing regulatory proposals focused on transitioning
11 freight equipment to zero and near-zero emission
12 technologies.

13 Staff is also working to develop a freight
14 handbook to encourage the use of the cleanest available
15 engine and equipment technologies at freight facilities.
16 The handbook will also provide recommendations for the
17 siting, design, and operation of freight facilities to
18 minimize or avoid community health impacts.

19 In coordination with CAPCOA, staff is revising
20 the risk assessment guidelines document for gasoline
21 service stations. And in coordination with South Coast --
22 the South Coast Air District, staff is assessing
23 opportunities to reduce toxic metals, including the
24 evaluation of potential amendments to the chrome plating
25 control measure.

1 --o0o--

2 EXECUTIVE OFFICER COREY: Those are the broad
3 themes for the year. Let me now briefly walk through the
4 major regulatory actions that will be coming to the Board
5 later this year.

6 --o0o--

7 EXECUTIVE OFFICER COREY: In spring and summer,
8 the Board will consider a number of mobile source
9 regulations. The Replica Car Regulation will allow
10 classic cars to be available for sale, and be as clean as
11 other new cars.

12 The Clean Cars 4 All Program extends the success
13 of the Scrap and Replace Program to continue to reduce air
14 pollution and helping low-income consumers access clean
15 transportation.

16 There will be six regulations -- six regulations
17 assessing -- or rather addressing heavy-duty vehicles from
18 inspection program, to clean transit, to zero-emission
19 airport buses. The program will also hear regulations --
20 or rather the Board will hear regulations on refrigerant
21 and foam HFCs, consumer products, and enhanced vapor
22 recovery for gas stations. The LoA Carbon Fuel Standard
23 amendment and a fuel cell GHG standard are also in store.

24 --o0o--

25 EXECUTIVE OFFICER COREY: In the fall and winter,

1 the Board will consider regulations on EV charging, fuel
2 tank specifications, off-road recreational vehicle Red
3 Sticker Program, and zero-emission airport ground support
4 equipment.

5 We're also planning heavy-duty regulations,
6 including on-board diagnostics, and advanced clean trucks.
7 Staff will propose amendments to gas station overpressure,
8 mandatory GHG reporting, and cap -- under cap and trade as
9 well as electrical SF6, sulfur hexafluoride in air cleaner
10 regulations.

11 --o0o--

12 EXECUTIVE OFFICER COREY: In addition to the
13 regulatory items, in September, staff will bring the
14 community air quality program to the Board for your
15 consideration. The package will include a list of
16 recommended communities, a statewide strategy that
17 outlines criteria for local emission reduction programs,
18 and a statewide plan establishing criteria for air
19 monitoring.

20 Next month, staff will present proposed updates
21 to the SB 375 GHG reduction targets. And mid-year staff
22 will bring a comprehensive PM2.5 SIP for the San Joaquin
23 Valley. This plan will address multiple PM2.5 standards
24 and identify reduction opportunities from stationary and
25 mobile sources.

1 In 2018, the Board will consider over \$1 billion
2 in incentive investments to deploy clean technologies,
3 reduce emissions in disadvantaged and low-income
4 communities, and increase access to clean transportation
5 for low-income Californians.

6 The Board will also consider the plan for
7 investing California's share of the national Volkswagen
8 Environmental Mitigation Trust. We'll bring our
9 low-carbon transportation and AQIP funding plan to the
10 Board later this year as well.

11 Lastly, we'll be taking a longer range approach
12 for our research planning, shifting from an annual plan to
13 a three-year cycle. That will come to you mid-year.

14 --o0o--

15 EXECUTIVE OFFICER COREY: As I wrap-up, CARB has
16 been clearing California skies for 50 years, as was
17 evident in the presentations earlier today. California's
18 long-standing air quality programs and cutting-edge
19 climate change programs have set examples for other
20 states, the federal government, and other nations to
21 follow.

22 CARB's leadership is even more important now when
23 progress stalls at the federal level. We cannot do this
24 alone. I need to emphasize the important partnerships at
25 all levels of government, local, State, international, the

1 private sector, and NGO community, and EJ community to
2 help us achieve our goals. These partnerships have been a
3 cornerstone -- a cornerstone to our success.

4 Here are just a few. We're working with
5 coalitions of partners on climate change as part of the
6 Governor's Under2MOU effort, the Climate and Forests Task
7 Force, as well as the Pacific Coast Collaborative, U.S.
8 Climate Alliance, and Western Climate Initiative. And I'm
9 please to say that we're working even more closely with
10 air districts than ever before on meeting air quality
11 standards and the development of the Community Air
12 Protection Program.

13 And we're providing technical and coordination
14 support for the global climate action summit that Governor
15 Brown is hosting in San Francisco in September. This
16 conference, formed at the request of the United Nations,
17 will bring together subnational government participants
18 and businesses across the globe to establish greenhouse
19 gas reductions commitments. Our collaboration is just not
20 on policy issues, but basic and applied research as well
21 as the examples show.

22 We'll also continue to work with our partners to
23 do even more, to build on the success successes to date as
24 we move forward over the next 50 years. We'll continue to
25 demonstrate that clean air, progress climate go hand in

1 hand with the economic growth.

2 --o0o--

3 EXECUTIVE OFFICER COREY: And on a personal note,
4 on behalf of all CARB staff, I want to thank you for your
5 leadership. Your guidance, direction, and engagement in
6 the hearing room and throughout the implementation of our
7 programs is fundamental - fundamental to CARB's success in
8 protecting public health.

9 A recent example is the role Dr. Balmes is
10 playing by chairing the AB 617 Consultation Group. We're
11 grateful to Dr. Balmes for his insights into the health
12 burdens these communities face, and the impacts of air
13 pollution, and of the development of reduction plans.

14 The engagement and leadership of this Board
15 covers the full spectrum of issues from freight, trucks,
16 agriculture, environmental justice, incentives, and many
17 more.

18 In the coming year, I expect our actions will
19 increase and your guidance and direction will continue to
20 be needed as we move forward with our mission.

21 So thank you. And as always, I and the executive
22 team and CARB's amazing staff, which I'm understating this
23 by saying -- referring to them as an amazing staff, look
24 forward to working with you on the coming year, where
25 we're energized and up to the challenge.

1 So thank you.

2 VICE CHAIR BERG: Well, thank you, Richard.
3 There's no question year after year when we hear this
4 update and especially the things we've done the previous
5 year, and then see what we have on our plate going
6 forward, it's both an exciting time and a time of
7 anxiousness figuring out how we're going to get all of
8 these priorities done.

9 But at the end of the year, this group never
10 fails, and it is really remarkable everything that has
11 been accomplished for 2017. And I'm sure on behalf of the
12 Board, congratulations. Please thank your staff, because
13 we know there's an army behind you that works very hard
14 and tirelessly and we really do appreciate their passion
15 and commitment.

16 I'd like to turn to my fellow Board members and
17 see if we have any comments? Any other questions?

18 Well, I have 30 seconds in which to -- I'd like
19 to just take a moment to thank CAPCOA. CAPCOA sponsored
20 our reception this morning, and that's a wonderful example
21 of not only partnership in the trenches, but when it comes
22 time to celebrate, they're always so very generous. And
23 so we would really like to thank them for that.

24 And I think with that, Madam Chair, I think we're
25 straight up 1:00 o'clock.

1 (Laughter.)

2 VICE CHAIR BERG: And so we can -- thank you
3 again, Richard. Great, great report.

4 So we're going to go ahead and tackle our last
5 agenda item, and that is the proposed phase 2 California
6 greenhouse gas emissions standards for medium- and
7 heavy-duty engines and vehicles, and proposed amendments
8 to the Tractor-Trailer Greenhouse Gas Regulation.

9 As we celebrated with great prior this morning,
10 California has been the leader in reducing greenhouse gas
11 emissions since the passage of Assembly Bill 32, the
12 California Global Warnings Act of 2006.

13 Madam Chair, it seems like that was almost
14 yesterday.

15 (Laughter.)

16 VICE CHAIR BERG: And so -- but great work that's
17 been accomplished since then.

18 CARB adapt -- actually adopted the
19 Tractor-Trailer Greenhouse Gas Regulation in 2008 as an
20 early action item measure. This rule was the first
21 regulation in the nation to reduce greenhouse gas
22 emissions from heavy-duty vehicles, by improving the
23 aerodynamics performance and reducing the rolling
24 resistance of the tractor-trailers.

25 Over the last decade, both Governor

1 Schwarzenegger and Governor Brown reaffirmed California's
2 commitment to reducing greenhouse gases via Executive
3 Orders.

4 In 2016, the California legislature did the same
5 passing Senate Bill 32, which aims to cut California's
6 greenhouse gas emissions to 40 percent below 1990 levels
7 by 2030.

8 Since heavy-duty trucks are a significant and
9 fast-growing part of the total greenhouse gas emissions,
10 CARB staff made development of a greenhouse gas standard
11 for these sources a high priority. From 2013 to 2016,
12 CARB staff worked closely with U.S. EPA and the National
13 Highway Traffic Safety Administration, or NHTSA, to
14 develop phase 2 greenhouse gas standards.

15 Recognizing the benefits of a unified national
16 program, we were pleased to partner with them in those
17 efforts.

18 CARB submitted extensive formal comments on the
19 federal agency's Notice or Proposed Rulemaking and for the
20 federal phase 2 standards in October of 2015, asking for
21 numerous improvements. In August 2015, Chair Nichols
22 attended a U.S. EPA hearing in Long Beach on the proposed
23 phase 2 standards, and testified on California's need for
24 stronger standards.

25 The U.S.A. -- U.S. EPA made numerous improvements

1 to the proposed standards as a result of CARB's comments,
2 and in October 2016, finalized the phase 2 program
3 California could support.

4 As we look ahead, it's very important that we
5 ensure that the standards continue to be implemented and
6 enforced successfully.

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

8 (Thereupon an overhead presentation was
9 presented as follows.)

10 EXECUTIVE OFFICER COREY: Yes. Thanks, Vice
11 Chair Berg.

12 The federal phase 2 standards are technology
13 forcing, more ambitious, and longer term than those of
14 phase 1. Staff's proposal substantially harmonizes with
15 the federal phase 2 standards with minor California
16 differences that are necessary to ease enforcement aligned
17 with existing California programs, and provide incentives
18 to bring advanced technologies to market.

19 We're also addressing U.S. EPA's proposed glider
20 repeal and threats to the trailer portion of the phase 2
21 standards. This phase 2 proposal includes restrictions on
22 the production of high emitting glider vehicles, which
23 staff believe are crucial for protecting public health and
24 preventing the circumvention of emissions standards.

25 If the federal glider requirements are repealed,

1 it will allow unlimited numbers of old, remanufactured
2 engines, with little or no emission controls to be placed
3 in new truck bodies and sold as new trucks. Such
4 uncontrolled glider vehicles can emit up to 40 times the
5 NOx, and up to 450 times - 450 - the particulate matter
6 compared to compliant new trucks. The staff presentation
7 will go into greater detail on the glider issue, and how
8 we intend to address it.

9 If the federal trailer standards are revoked,
10 CARB staff plan to propose amendments to our existing
11 tractor-trailer GHG regulation to make up for the lost
12 emission reductions. I'll now ask Mitzi Magtoto of the
13 Mobile Source Control Division to begin the staff
14 presentation.

15 Mitzi.

16 MSCD AIR RESOURCES ENGINEER MAGTOTO: Thank you,
17 Mr. Corey. Good afternoon, Vice Chair Berg, Chair Nichols
18 and members of the Board.

19 Today's presentation is about our proposed
20 California phase 2 standards designed to reduce greenhouse
21 gas emissions from heavy-duty on-road vehicles. I will
22 also discuss the proposed amendments to Tractor-Trailer
23 Greenhouse Gas Regulation.

24 --o0o--

25 MSCD AIR RESOURCES ENGINEER MAGTOTO: Let's start

1 with the outline of my presentation. First, I will
2 provide background information on medium- and heavy-duty
3 trucks and the current greenhouse gas standards.

4 Second, I will give an overview of the federal
5 phase 2 standards as adopted in October 2016. And since
6 this is a day of celebration, staff would like to take a
7 moment to celebrate that achievement.

8 Staff worked closely with U.S. EPA and industry
9 in the development of the federal phase 2 standards for
10 several years. It was a massive rulemaking, and will
11 substantially improve the fuel economy and reduce
12 greenhouse gas emission from a wide spectrum of heavy-duty
13 vehicles, putting in place the strictest and most
14 comprehensive heavy-duty greenhouse gas standards in the
15 world.

16 Next, I will present staff's California phase 2
17 proposal. This proposal would largely align with U.S.
18 EPA's phase 2 rulemaking, and would ensure a single
19 national program for heavy-duty greenhouse gas vehicles
20 and engines. But there are some proposed differences,
21 which include additional reporting and credit generation,
22 which I will also discuss later.

23 Then, I will talk about recent efforts at the
24 federal level to potentially overturn their already
25 adopted phase 2 trailers and glider requirements, and how

1 we might respond.

2 Finally, I will discuss our recommendation.

3 --o0o--

4 MSCD AIR RESOURCES ENGINEER MAGTOTO: So let me
5 start with some background. Addressing medium- and
6 heavy-duty truck emission is essential. Such trucks
7 account for 1/5th of the greenhouse gas emissions from
8 transportation sector nationally, and are the fastest
9 growing segment of the transportation sector in both the
10 U.S. and worldwide.

11 Similar to their contribution on a national
12 basis, medium- and heavy-duty trucks over 8,500 pounds in
13 California emit about a fifth of the total transportation
14 greenhouse gas emissions. That's why these phase 2
15 standards are so critical; without controlling this
16 significant source adequately, it will not be possible to
17 meet our ambitious greenhouse gas reduction targets.

18 --o0o--

19 MSCD AIR RESOURCES ENGINEER MAGTOTO: As a
20 background, in 2011, U.S. EPA and National Highway Traffic
21 Safety Administration, or NHTSA, adopted the first
22 national greenhouse gas and fuel economy standards for
23 heavy-duty trucks, the phase 1 standards.

24 The phase 1 medium- and heavy-duty standards
25 cover three categories: tractors; vocational vehicles,

1 including utility trucks, box trucks, and garbage trucks;
2 and large pick-ups and vans. In 2013, CARB harmonized
3 with the federal phase 1 greenhouse gas standards for
4 heavy-duty vehicles. This harmonization included making
5 our existing tractor-trailer greenhouse gas regulation
6 consistent with the federal program.

7 CARB's adoption of the phase 1 gave manufacturers
8 the ability to certify in California and gave CARB the
9 authority to enforce the regulatory requirements.

10 The phase 1 rule was designed to get
11 off-the-shelf greenhouse gas emission reduction
12 technologies onto 2014 model year and newer trucks. This
13 rule will reduce heavy-duty carbon dioxide emissions in
14 California by about 12 percent in 2030.

15 --o0o--

16 MSCD AIR RESOURCES ENGINEER MAGTOTO: I will now
17 move on to discuss the phase 2 greenhouse gas standards.

18 --o0o--

19 MSCD AIR RESOURCES ENGINEER MAGTOTO: Staff
20 worked closely with U.S. EPA and NHTSA over the past
21 several years on the development of the phase 2 greenhouse
22 gas rule. In fact, we met weekly with the federal agency
23 teams for nearly two years. We submitted extensive
24 comments on U.S. EPA's Notice or Proposed Rulemaking, or
25 NPRM, for phase 2.

1 In response to our input, U.S. EPA strengthened
2 their proposal. The outcome is a phase 2 program that
3 California can support and that will allow manufacturers
4 to continue to build a single fleet of vehicles and
5 engines for the U.S. market.

6 --o0o--

7 MSCD AIR RESOURCES ENGINEER MAGTOTO: In October
8 2016, the U.S. EPA and NHTSA published a phase 2
9 rulemaking, and we provided at the time an update to the
10 Board describing the rulemaking.

11 The phase 2 regulations are technology forcing,
12 while being affordable and flexible, and were supported by
13 engine and vehicle manufacturers, as well as environmental
14 groups.

15 Nationally, phase 2 will save over 82 billion
16 gallons of fuel, cut carbon dioxide by over one billion
17 metric tons, and save vehicle owners \$170 billion in fuel
18 costs. Thus, phase 2 will help stabilize our climate, and
19 reduce our reliance on foreign oil.

20 The expected payback to truck owners is two years
21 for tractors and trailers, three years for pick-up trucks
22 and vans, and four years for vocational vehicles.

23 Phase 2 will dramatically improve fuel economy
24 for heavy-duty trucks. As an example, for long-haul
25 tractor-trailers, fuel economy is expected to improve from

1 about six to about nine miles per gallon. Also, as I'll
2 discuss at great length later in the presentation, as part
3 of the phase 2 standard, U.S. EPA closed a loophole that
4 allowed glider vehicles to circumvent the emission
5 standards.

6 --o0o--

7 MSCD AIR RESOURCES ENGINEER MAGTOTO: The federal
8 phase 2 regulations established carbon dioxide standards
9 building on the phase 1 structure - regulating tractors,
10 vocational vehicles, and large vans and pickups. Phase 2
11 also introduces trailer requirements for the first time.

12 The phase 2 standards are more ambitious than
13 those of phase 1, requiring more than just off-the-shelf
14 technologies to comply. The requirements begin with model
15 year 2018 for trailers, and model year 2021 for engines
16 and vehicles, and are phased in through the 2027 model
17 year.

18 --o0o--

19 MSCD AIR RESOURCES ENGINEER MAGTOTO: In 2017,
20 the U.S. EPA announced plans to revisit two aspects of its
21 phase 2 regulation to respond to concerns of the trailer
22 and glider industries. Staff is very concerned with both
23 of these issues and believe their reasons for revisiting
24 the requirements are unfounded and arguably illegal.

25 First, in response to a lawsuit filed by the

1 Truck Trailer Manufacturers Association, U.S. Court of
2 Appeals has stayed the requirements for trailers.

3 Second, U.S. EPA has proposed to repeal the
4 glider restrictions contained in the phase 2 rulemaking.
5 As a background, a glider is a new truck chassis with new
6 body parts such as the entire chassis frame and cab with
7 an older refurbished diesel engine. Gliders typically are
8 built with engines with no diesel particulate filter and
9 no NOx after-treatment, and hence have much higher
10 emissions than modern compliant trucks.

11 U.S. EPA's final phase 2 regulation included
12 limits on the number of high-emitting gliders that could
13 be produced. Those limits took effect beginning on
14 January 1, 2018. But in response to a petition from the
15 largest glider manufacturer, U.S. EPA has now proposed
16 rolling back these Limits.

17 I will discuss these issues in greater detail
18 later in the presentation.

19 --o0o--

20 MSCD AIR RESOURCES ENGINEER MAGTOTO: The
21 proposed California phase 2 regulation largely harmonizes
22 with the federal phase 2 program in structure, timing and
23 stringency. It also provides CARB with the ability to
24 certify engines and vehicles to the phase 2 standards and
25 to enforce the requirements in California.

1 There will be some minor differences between
2 California phase 2 and the federal phase 2 rules. These
3 differences are necessary to facilitate enforcement,
4 aligned with existing California programs, and provide
5 additional incentive for manufacturers to bring advanced
6 technologies to the market.

7 At the same time, we also propose to amend our
8 existing tractor-trailer greenhouse gas rule to provide
9 another pathway for compliance for fleet owners.

10 --o0o--

11 MSCD AIR RESOURCES ENGINEER MAGTOTO: Overall,
12 the federal phase 2 program in California plus the
13 California distinctions are expected to result in a
14 reduction of over 200 million metric tons of carbon
15 dioxide equivalent emissions in California from 2019 to
16 2050.

17 This is equivalent to saving over 20 billion
18 gallons of diesel fuel in the same time period. The table
19 shown here provides emission benefits in California from
20 the California phase 2 program.

21 In 2030, the phase 2 program is expected to lower
22 carbon dioxide emissions beyond phase 1 levels by an
23 additional 13 percent. By 2050, those reductions will
24 grow to 24 percent. These percent reduction go a long way
25 towards achieving our greenhouse gas goals set by Assembly

1 Bill 32 and multiple Governor's Executive Orders.

2 --o0o--

3 MSCD AIR RESOURCES ENGINEER MAGTOTO: I will now
4 move on to discuss California phase 2 differences.

5 --o0o--

6 MSCD AIR RESOURCES ENGINEER MAGTOTO: Although
7 staff's proposal is largely aligned with the federal phase
8 2 regulation, we are proposing a handful of California
9 differences as shown in this slide. I will go into
10 further detail on the more important differences in the
11 next few slides.

12 --o0o--

13 MSCD AIR RESOURCES ENGINEER MAGTOTO: First, I
14 should note that California proposes to verify
15 certification information independent of U.S. EPA, just as
16 what we do for nearly all vehicle emission standards. In
17 order to certify to California's phase 2 regulations,
18 manufacturers would be required to submit certification
19 documents directly to CARB. Staff would independently
20 review these documents before issuing an executive order.

21 CARB certification would be required for trucks
22 sold new in California. Staff's proposal would forego the
23 "deemed to comply" approach used in phase 1 for certifying
24 engine in vehicles to greenhouse gas emission standards.

25 Industry has raised concerns that this will

1 require additional review time on the part of CARB, and
2 therefore cause delays in the decertification review and
3 approval process. To address industry concerns, staff is
4 looking for ways to further streamline upfront
5 certification.

6 --o0o--

7 MSCD AIR RESOURCES ENGINEER MAGTOTO: In the
8 federal phase 2 program, manufacturers of motor homes,
9 coach buses, transit buses, school buses, refuse trucks,
10 cement mixers, and emergency vehicles have an option to
11 certify those vehicles with a less stringent process
12 called "custom chassis". Custom chassis standards are
13 significantly less stringent than the primary vocational
14 standards and include a simplified certification process.

15 Staff is proposing to align with this provision
16 for all the vehicle types I just mentioned, except for
17 transit buses. Less stringent custom chassis standards
18 are not necessary for transit buses, because both battery
19 and fuel-electric buses are commercially available for
20 transit applications. In California, there are already
21 nearly 450 fuel cell and battery-electric buses in
22 operation or on order.

23 Due to the advanced technology credits in the
24 phase 2 program, a transit bus manufacturer can meet the
25 primary vocational standards by manufacturing relatively

1 few zero-emission buses, no more than two percent of their
2 total production.

3 Staff's proposal would require the manufacturers
4 of California certified transit buses that certify to the
5 custom chassis standards to retire extra credits. This
6 requirement would discourage transit bus manufacturers for
7 certifying to the less stringent custom chassis standards
8 and would incentivize the introduction of advanced
9 zero-emission technology in the transit bus sector.

10 Staff is proposing one 15-day change to transit
11 bus custom chassis requirements as suggested by a
12 California manufacturer of transit buses. The change
13 would allow transit bus manufacturers to comply with our
14 phase 2 requirements by producing a certain percentage of
15 zero-emission buses.

16 --o0o--

17 MSCD AIR RESOURCES ENGINEER MAGTOTO: At
18 California's urging, U.S. EPA included advance technology
19 credits in the federal phase 2 program. Federal phase 2
20 offers credit multipliers for three types of advanced
21 technologies: plug-in hybrid electric vehicles,
22 all-electric vehicles, and fuel cell vehicles as shown in
23 the table.

24 In addition to these multipliers, we are
25 proposing to include credits for low global warming

1 potential refrigerants with a multiplier of 1.8. In our
2 initial proposal, we specified that advanced technology
3 credits could only be granted for actions that go beyond
4 any requirements for manufacturers to produce such
5 vehicles. Staff now believes it is preferable to
6 incorporate this restriction in the context of any future
7 regulatory actions that establish requirements for such
8 vehicles, as part of future advanced clean local truck
9 rulemaking, for example. Hence, we are proposing a 15-day
10 change to that effect.

11 --o0o--

12 MSCD AIR RESOURCES ENGINEER MAGTOTO: In addition
13 to tailpipe carbon dioxide limits, the federal phase 2
14 standards include limits on refrigerant leakage. These
15 are important, because current refrigerants have extremely
16 high global warming potential, over a thousand times that
17 of carbon dioxide.

18 Staff's proposal would establish California
19 reporting requirements to make the federal leak limits
20 more enforceable.

21 Manufacturers would need to submit schematics and
22 spreadsheets with leakage calculation. Staff has worked
23 with affected manufacturers to limit the proposed
24 air-conditioning reporting requirements so that they
25 provide adequate information to CARB, while not presenting

1 an undue administrative burden on manufacturers.

2 Without the proposed air-conditioning reporting
3 requirements, the possibility of air-conditioning leakage
4 going unchecked would be greater, and the potential impact
5 of refrigerant leakage on global warming would be
6 increased.

7 --o0o--

8 MSCD AIR RESOURCES ENGINEER MAGTOTO: Staff's
9 proposal would require new pickup trucks and vans, class
10 2B and 3, to have a consumer window label similar to that
11 required for light-duty vehicles that would have to be
12 displayed at the time of sale.

13 The information on the label may influence
14 consumers to buy more fuel-efficient, lower-emitting
15 vehicles as they would be able to compare vehicle choices
16 based on greenhouse gas and smog ratings.

17 Staff is proposing a 15-day change to revise the
18 rating from letter ratings, A to J, to letter grade rating
19 A+ to D, and make some other minor clarifications.

20 --o0o--

21 MSCD AIR RESOURCES ENGINEER MAGTOTO: I will now
22 discuss gliders and trailers, the parts of the phase 2
23 program the new federal administration has proposed
24 changing and our proposed response.

25 --o0o--

1 MSCD AIR RESOURCES ENGINEER MAGTOTO: Staff's
2 proposal would require trailer manufacturers to comply
3 with the same requirements as outlined in the federal
4 phase 2 program, except the implementation in California
5 would begin to two years later with the 2020 model year.

6 The proposed amendments would also take into
7 action, the trailer provisions in phase 2, and give
8 trailer fleet owners the option of complying with
9 tractor-trailer greenhouse gas regulation by using a phase
10 2 certified trailer or a trailer retrofitted with phase 2
11 compliant aerodynamic technologies and tires.

12 --o0o--

13 MSCD AIR RESOURCES ENGINEER MAGTOTO: After U.S.
14 EPA finalized their phase 2 rule, the Truck Trailer
15 Manufacturers Association filed a petition with the U.S.
16 Court of Appeals requesting the rescission of the federal
17 phase 2 trailer standards. As I previously mentioned,
18 this has resulted in a stay of those standards.

19 What this means is that trailer manufacturers are
20 currently not required to comply with the federal phase 2
21 trailer requirements. And the U.S. EPA no longer
22 processing trailer certification applications. However,
23 the federal phase 2 trailer standards have not been
24 rescinded. They remain on the books while U.S. EPA
25 reconsiders them.

1 If U.S. EPA were to take action to rescind the
2 trailer requirements, they are required to do so in an
3 open and public process, and would issue a Notice of
4 Proposed Rulemaking indicating their intent.

5 All that being said, the stay of the trailer
6 requirements does not affect California's authority to
7 establish standards for trailers. Staff is recommending
8 the Board adopt the federal phase 2 trailer standards as
9 they existed in October 2016 with minor modification that
10 they will take effecting starting with 2020 model year
11 trailers.

12 However, in the light of the stay, we are
13 proposing a 15-day change, because California's phase 2
14 trailer requirements would not become effective until the
15 2020 model year, staff proposes to establish interim
16 procedures to satisfy our existing tractor-trailer
17 greenhouse gas rule until then.

18 These procedures would allow CARB to review and
19 approve phase 2 aerodynamic performance and low rolling
20 resistance tire test data not currently being processed by
21 U.S. EPA.

22 --o0o--

23 MSCD AIR RESOURCES ENGINEER MAGTOTO: Whether the
24 U.S. EPA rescinds the phase 2 trailer requirements or not,
25 CARB plans on implementing the California phase 2 trailer

1 certification requirements and the modified
2 Tractor-Trailer Greenhouse Gas Rule that is provided for
3 your approval today.

4 If U.S. EPA ends up rescinding the trailer
5 requirements, there will be a loss of benefit in
6 California from uncertified trailers that were sold
7 outside of California and travel within the State. To
8 offset this potential loss in benefits, staff would
9 propose further modifications to our Tractor-Trailer
10 Greenhouse Gas Rule in the 2019 timeframe. This
11 modification would expand the applicability and increase
12 the stringency of the rule.

13 Owners of trailer fleets that travel in
14 California, regardless of their State or country of origin
15 would be subject to the new requirements.

16 --o0o--

17 MSCD AIR RESOURCES ENGINEER MAGTOTO: Moving on
18 to the glider issue. A glider kit is a chassis and cab
19 assembly that is produced by a vehicle manufacturer
20 without a new engine transmission or rear axle. A third
21 party then typically install a used engine, transmission,
22 and/or rear axle to complete assembly of the vehicle.

23 Glider kits are legitimately used when compliant
24 trucks are damaged, leaving chassis unusable but the
25 engine in tact.

1 Recently, a sharp increase in the glider sales
2 has occurred from a mere 1,000 vehicles sold nationwide
3 per year in 2010 to more than 10,000 in 2015.

4 It is surely by no means a coincidence that
5 during this same time period glider manufacturers have
6 advertised their glider kits as a way to avoid the use of
7 diesel particulate fillers and NOx control technologies.

8 Some advertisements have even called for dialing
9 back the emissions clock. Thus, it is clear that gliders
10 are increasingly being used as a loophole to avoid
11 purchasing engines that meet current emission standards.

12 --o0o--

13 MSCD AIR RESOURCES ENGINEER MAGTOTO: Citing
14 concerns that the increase in glider vehicles production
15 would uncontrolled emissions if left unchecked and could
16 soon double total NOx and diesel PM emissions from
17 heavy-duty trucks, U.S. EPA closed the glider loophole as
18 part of the phase 2 rulemaking.

19 Except for an exemption of up to 300 gliders per
20 year for small businesses that have already been producing
21 gliders, the federal phase 2 rulemaking would require
22 glider engines to be certified to the criteria and
23 greenhouse gas emissions standards corresponding to the
24 model year in which the glider vehicle is assembled.

25 --o0o--

1 MSCD AIR RESOURCES ENGINEER MAGTOTO: To put
2 things in perspective, here is why staff is so concerned
3 about a potential repeal of the glider requirements.

4 Currently glider vehicles are typically equipped
5 with uncontrolled engines that were produced in the 1990s
6 before after-treatment was required. U.S. EPA recently
7 tested two typical glider vehicles and two common
8 emission-controlled heavy-duty vehicles under the same
9 conditions. Glider NOx levels were four to 40 times
10 higher, and PM levels were 50 to 450 times higher than the
11 emission-controlled vehicles.

12 CARB's own testing confirms U.S. EPA's results.
13 For glider vehicles measured during our field studies, NOx
14 was four to 10 times higher, and PM was eight to 75 times
15 higher compared to modern heavy-duty vehicles.

16 The photo shown here depicts a glider we found
17 during one of our road-side campaigns spewing black smoke.

18 --o0o--

19 MSCD AIR RESOURCES ENGINEER MAGTOTO: If glider
20 production continues unabated, U.S. EPA projects that
21 there will likely be more than 128,000 glider vehicles
22 in 2025 representing about five percent of the nationwide
23 on-road heavy-duty fleet.

24 U.S. EPA further projects that these gliders
25 would result in 9,000 to 21,000 premature deaths and 40 to

1 140 billion dollars in economic harm nationwide.

2 Needless to say, the increasing population of
3 glider vehicles with old, high-emitting engines is of
4 great concern. We know gliders are present in California,
5 because we've seen them in our field campaigns and because
6 at least 1,000 of them are registered in California.

7 On December 4, 2017, U.S. EPA held a public
8 hearing on the proposed repeal of glider requirements.
9 Representing CARB, Deputy Executive Officer Steve Cliff
10 testified at the hearing urging U.S. EPA to uphold their
11 existing glider restriction requirements. State agencies,
12 truck and engine manufacturers, trade association
13 including Truck and Engine Manufacturers Association,
14 environmental organization, truck dealers, and private
15 citizens testified, all opposing U.S. EPA's proposed
16 action to repeal the requirements.

17 As a follow-up, last month, CARB partnered with
18 stated environmental agencies from Pennsylvania, Vermont,
19 and Washington and submitted detailed comments strongly
20 urging U.S. EPA not to repeal glider requirements.

21 --o0o--

22 MSCD AIR RESOURCES ENGINEER MAGTOTO: Staff
23 recommends that the Board adopt the phase 2 glider kit
24 requirements as they existed in U.S. EPA's final rule,
25 with one additional change that only 2010 and newer model

1 year engines would be allowed to be used in glider
2 vehicles.

3 If U.S. EPA proceeds with a proposed repeal of
4 glider requirements, CARB could legally challenge U.S.
5 EPA's action. This legal action could be pursued in
6 partnership with other interested parties, such as other
7 State agencies.

8 We would also likely increase our enforcement
9 activity to catch non-compliant gliders, and potentially
10 encourage other states to opt in to our in-use programs.

11 --o0o--

12 MSCD AIR RESOURCES ENGINEER MAGTOTO: To wrap up
13 today's presentation, I will discuss staff's
14 recommendation.

15 --o0o--

16 MSCD AIR RESOURCES ENGINEER MAGTOTO: In
17 conclusion, staff recommends that the Board approve the
18 proposed regulatory action along with the proposed 15-day
19 changes provided in the handout. If the Board approves,
20 staff will finalize the rulemaking. After that, to the
21 extent required by the Clean Air Act, CARB will submit
22 waiver requests for the appropriate portions of the
23 rulemaking.

24 As I've described, the proposed regulations and
25 amendments would reduce greenhouse gas emissions from

1 medium-duty and heavy-duty trucks as well as trailers,
2 harmonize California requirements with federal
3 requirements, enhance enforcement and implementation of
4 existing regulation set the stage for future actions
5 needed to meet our greenhouse gas reduction goals, begin
6 to address the problem of dirty gliders, and seamlessly
7 allow a tie-in with our existing programs, such as the
8 Tractor-Trailer Greenhouse Gas Rule.

9 As I conclude my presentation, it is fitting that
10 the Board would consider action on the phase 2 standards
11 as part of the today's 50th anniversary celebration. If
12 adopted, the California phase 2 standards will be an
13 important part of improving heavy-duty truck emissions for
14 decades to come.

15 VICE CHAIR BERG: Thank you very much for that
16 very inclusive report.

17 If it's okay with the fellow Board members, we
18 have 15 people signed up to testify. We'll go ahead and
19 hear the testimony and then resume discussion.

20 Okay. For our audience, those testifying you
21 will see your name right up here to my left. And if you
22 would just come down to the podium, we'll start with Brian
23 from California Engine Services.

24 MR. KOLODJI: Chair Nichols, Board members, this
25 is -- I really thank God for being here today. It's an

1 amazing event. And for your -- and also for your
2 leadership in these -- in this regard.

3 Regarding this technology, and on the medium- and
4 heavy-engines, there's got to be a way to -- I'm for
5 the -- you know, we need to remove the 10 million -- 10
6 million tons of greenhouse gas that that's producing. And
7 the way -- if you just leave it in mobile source, as I
8 think is being concern, and except for there's some leeway
9 there talking about advanced technology. What we need to
10 do is make, I'm convinced, electric vehicles out of these
11 rather than using these greenhouse gas producing engines.
12 That's the ultimate direction we ought to be going.

13 And there's a main reason for that is that you
14 can't really capture that and make it zero percent
15 emission -- zero percent emission vehicles, okay -- is the
16 target here. You can't make -- you can't gain total
17 credit for those 10 million tons that are getting out in
18 the atmosphere unless you go electric vehicles with these
19 medium and heavy engines.

20 What -- why tech -- I have a technology that
21 requires stationary source removal, and stationary source
22 removal is not possible unless you go electric vehicles
23 with these size engines.

24 So there's -- and there's very little mention in
25 my opinion in the current rules. You're in the right

1 direction. It needs to be -- we need to gain access to
2 these 10 million and remove them, but you're not going to
3 get 100 percent removal unless you go electric vehicle.
4 So I did give some handouts to the board members, and --

5 VICE CHAIR BERG: Yes, we did receive those.

6 MR. KOLODJI: -- those handouts show an actual
7 pilot plant where we actually make a profit off of
8 greenhouse gas removal now. This is the only technology
9 out there today that actually has negative impact, and
10 removes the greenhouse gas, and you actually make a profit
11 with the removal using -- by making -- by rerouting the
12 greenhouse gas to agricultural sources, it removes -- it
13 reduces the amount of water requirement, and it reduces
14 the amount of greenhouse gas that gets emitted in the
15 atmosphere.

16 So you can't -- this -- this technology is only
17 good for stationary sources. So if you have these mobile
18 sources, you don't go electric vehicles, then you're going
19 to -- you're going to lose. You can't do that.

20 So again, I'm a big proponent of the direction of
21 Governor Brown and the CARB and going 100 percent electric
22 vehicles in the state, if we can get them, including for
23 heavy- and medium-sized engines. So that the stationary
24 sources can remove, as a -- you know, power plants can
25 be -- this can be removed a hundred percent.

1 Thank you very much.

2 VICE CHAIR BERG: Thank you.

3 MS. KANABAY: Distinguished, Board members. My
4 name is Kate Kanabay. I'm here today on behalf of Autocar
5 Truck, a small manufacturer of heavy-duty vocational
6 vehicles located in Hagerstown, Indiana, and recently
7 expanded to Birmingham, Alabama. Autocar supports GHG
8 phase 2, and the underlying policy. We appreciate the
9 opportunity to work with CARB staff and to talk with the
10 Board today.

11 Autocar has been a leader in introducing
12 lower-emission heavy-duty trucks. Today Autocar's natural
13 gas trucks are collecting garbage and recycling on
14 California streets, while running on Cummins near-zero
15 engines, the cleanest gas engine available.

16 We are requesting two changes to the CARB
17 regulations. EPA is prepared to implement these two
18 changes through technical amendments to their proposed
19 regulations -- to their phase 2 regulations.
20 Unfortunately, as we've discussed with the new
21 administration, we don't know when this will happen. But
22 we've discussed our concerns with your staff, and
23 understand that they'll work with Autocar and with EPA to
24 adopt the changes.

25 The reason for the changes are two-fold. First,

1 Autocar is a small business. Small businesses are exempt
2 in phase 1. So as of today, we have zero credits.

3 Second, phase 2 standards are particularly
4 challenging when your truck rarely goes over 25 miles an
5 hour, and stops hundreds of times in any given shift.
6 Aerodynamics is not a word you can associate with garbage
7 trucks, street sweepers, terminal tractors.

8 It will be particularly challenging for these
9 types of vehicles to meet the phase 2 standards. And
10 these technical challenges mean that we'll need to use
11 credits in phase 2, while the technologies are coming to
12 market.

13 EPA and CARB established the credit program for
14 just that reason. Autocar's competitors, large companies
15 with multiple products lines, selling hundreds of
16 thousands of trucks per year, they're well positioned to
17 generate credits with tractors, and use those credits to
18 bring their vocational vehicles into compliance.

19 But Autocar can't rely on other product lines to
20 generate the needed credits. We sold just over 2,500
21 trucks last year, and it was a good year.

22 We discussed this predicament with EPA, and
23 together with EPA, identified two small changes that will
24 fill in the gaps of the credit provisions for small
25 businesses. One, extend our credit life, and two, allow

1 one more year for small businesses before phase 2 kicks
2 in.

3 Our written comments provide additional detail.
4 We'd like to thank the Board and staff for their work on
5 behalf of the environment and the people of California,
6 and on United States small business.

7 Thank you.

8 VICE CHAIR BERG: Thank you. Kristen.

9 MS. TADDONIO: Thank you for the opportunity to
10 comment.

11 Thank you. The Institute for Governance and
12 Sustainable Development and the Natural Resources Defense
13 Council welcome the proposed phase 2 greenhouse gas
14 emissions standard as written by staff.

15 Medium and heavy-duty trucks already account for
16 nearly a fifth of California's on-road fuel use, as
17 observed multiple times in today's presentation, and
18 associated emissions. And as these trucks and vehicles
19 are the fastest growing segment of the transportation
20 sector, both in the United States and worldwide, we feel
21 that it's important to take steps now to reduce that
22 future emissions growth, and align American markets with
23 global efforts to reduce the cost of these vehicles, both
24 to owners and to the environments.

25 We find that CARB's rigorous and transparent

1 analysis is based on reasonable assumptions, and has
2 clearly shown that these steps are necessary to meet the
3 mandates of California's rigorous laws.

4 IGSD and NRDC applaud the inclusion of incentives
5 for manufacturers to use refrigerants with low global
6 warming potentials for heavy-duty vehicles. We find that
7 staff rightly observes that low GWP refrigerants have been
8 widely used in the light-duty sector, and that
9 opportunities exist to adopt these refrigerants in medium-
10 and heavy-duty vehicles as well.

11 And CARB, we suggest, will want to work with
12 industry in the transition of these next generation
13 refrigerants to simultaneously reduce the mobile air
14 conditioning, greenhouse gas emissions, and associated
15 fuel use.

16 We support the 11 grams per year 1.5 percent leak
17 rate for all refrigerants regardless of GWP starting after
18 '21 -- 2021. And we agree with CARB that a low leak rate
19 for any refrigerant is important for maintaining proper
20 refrigerant size, which in turn is important to maintain
21 efficient operation, which benefits both consumers and the
22 environment.

23 We also applaud the use of industry standards,
24 such as SAE J2727 to assure compliance with these leak
25 rate standards. We think that that's commendable as are

1 the documentation requirements that are necessary to
2 assure compliance.

3 Finally, we fully support cooperation of
4 governments and industry in evaluating emerging technology
5 that has a potential to reduce greenhouse gas emissions,
6 in particularly the SL Mag system.

7 Thank you very much.

8 VICE CHAIR BERG: Thank you.

9 MR. GELLER: Good afternoon, Chair Nichols and
10 members of the Board. My name is Michael Geller. I'm the
11 deputy director for the Manufacturers of Emission Controls
12 Association, MECA. MECA represents manufacturers of a
13 variety of technologies that reduce both criteria and
14 greenhouse gas emissions from all mobile sources,
15 including the heavy-duty engines regulated under the
16 proposed phase 2 standards.

17 We provided detailed written comments, so I'm
18 just going to highlight a few thoughts today. We support
19 this proposal which largely aligns with the federal
20 standards set by EPA and NHTSA, and we thank staff for its
21 diligent work in this area.

22 We believe an important opportunity exists to
23 continue to reduce GHG emissions from medium- and
24 heavy-duty engines and vehicles by applying the
25 fundamental regulatory structure that has been effective

1 under phase 1.

2 The near-term reductions are technically feasible
3 through deployment of readily available technologies. And
4 the outyear requirements will be met with types of
5 technologies demonstrated by the Department of Energy's
6 SuperTruck Program.

7 MECA members are engaged in commercializing a
8 large portfolio of technologies that will directly or
9 indirectly reduce CO2 emissions. These technologies
10 include, and we've discussed these in length with some of
11 you and members of your staff, the advanced selective
12 catalytic reduction catalyst, passive NOx absorbers and
13 substrates, waste heat recovery, advanced turbochargers
14 and turbo compounding, EGR system components, and other
15 air management technologies, thermal management
16 strategies, including insulated dual wall manifolds and
17 exhaust systems, advanced fuel injection, ignition
18 systems, and increasing amounts of electrified components.

19 Turbo compounding technologies and advance air
20 management strategies are just beginning to be
21 commercialized in heavy-duty applications. Others, such
22 as rankine cycle systems for waste heat recovery and
23 advances higher pressure injection are in the
24 demonstration stage right now.

25 In addition, MECA members are transitioning

1 48-volt hybrid technology from the light-duty sector to
2 heavy-duty vehicles. These technologies which are just
3 beginning to be commercialized on passenger cars can be
4 applied to the heavy-duty market and be particularly
5 beneficial to light- and medium-, heavy-duty trucks in
6 stop and go applications.

7 Some of these innovative electrified propulsion
8 technologies didn't exist for the phase 1 standard program
9 and are often dependent on credits or incentives to
10 accelerate initial market penetration.

11 So MECA encourages ARB to extend the current
12 advanced technology credits for the hybrid electric
13 vehicles, which may not have plug-in capabilities, but can
14 achieve significant CO2 reductions, such as 48-volt
15 systems in the future past the model year 2020, which is
16 now in the rule.

17 To conclude, we'd like to thank ARB staff for
18 bringing you this proposal. And MECA congratulates ARB on
19 a great day and 50 years of protecting the health and air
20 quality of Californians, and making and demonstrating for
21 the rest of the country and world. And we look forward to
22 working together at additional opportunities to reduce GHG
23 and NOx emissions from heavy-duty vehicles and engines to
24 continue to help California attain its air quality goals.
25 Thank you.

1 VICE CHAIR BERG: Thank you very much, Michael.
2 Good afternoon.

3 MR. SCHUCHARD: Good afternoon, Chair Nichols and
4 members of the Board. Ryan Schuchard with CalStart.
5 Really appreciate this agency's work to fiercely defend
6 Californians against the ills of medium- and heavy-duty
7 pollution, and to do so while making the State the hotbed
8 of innovation for technology.

9 And we also really appreciate the hard work the
10 agency has done to work with the federal government to
11 align the standards with phase 2, something that we've
12 worked very hard with. I had come to offer our qualified
13 support, but in hearing the presentation I can remove the
14 qualification. We were concerned about the advanced
15 technology multiplier issue. I've got several bullets to
16 share on why we think that's important, but I think that's
17 been duly resolved from what I can tell.

18 So happy to take that up if we need to, but in
19 the meantime I applaud staff for taking that forward and
20 thank you again for your support.

21 VICE CHAIR BERG: Thank you very much, Ryan.

22 So while Tim is coming down, if you're the next
23 person, if you could kind of make your way down and be
24 ready to speak next, we'd really appreciate.

25 MR. BLUBAUGH: Good afternoon. My name is Tim

1 Blubaugh. I'm with the Truck and Engine Manufacturers
2 Association, or EMA.

3 I would first like to wish ARB a happy
4 anniversary. I thought I might also point out that EMA is
5 celebrating its 50th anniversary this year.

6 (Laughter.)

7 VICE CHAIR BERG: Well, happy anniversary to you
8 too.

9 MR. BLUBAUGH: Thank you. And I don't know if
10 being born in 1968 makes us -- makes us your twin brother
11 from another mother or your twin sister from another
12 mister.

13 (Laughter.)

14 MR. BLUBAUGH: But what I do know is that we
15 have, over the last 50 years, EMA and ARB have
16 successfully reduced emissions from heavy-duty vehicles
17 and engines.

18 ARB is proposing today to adopt rules that align
19 with the second phase of EPA's -- of EPA's historic
20 heavy-duty greenhouse gas emission -- Greenhouse Gas
21 Vehicle Emission Program. As with ARB's adoption of the
22 EPA's initial rules in 2013, we are in strong support.

23 As the primary manufacturers of medium- and
24 heavy-duty engines and vehicles in the United States, EMA
25 members provided tremendous technical input to EPA in

1 developing the phase 2 rules, based on our experience
2 implementing the successful phase 1 rules.

3 EPA members strongly support a uniform nationwide
4 heavy-duty greenhouse gas program. It is important to
5 note that we not only supported the EPA's phase 2
6 greenhouse gas rule, but we also opposed reopening it.

7 Aligning standards across the United States is
8 the only practical and effective way for manufacturers to
9 reduce greenhouse gas emissions and to meet the needs of
10 the nation's trucking industry. ARB committed to building
11 on the successful foundation of the first phase of the
12 greenhouse gas program by maintaining a nationwide
13 standard with phase 2. We appreciate ARB's efforts to
14 follow through on that commitment.

15 We have noted to your staff and in our written
16 comments a few instances where ARB proposed greenhouse gas
17 requirements deviate from the national program. Over the
18 past year, we have worked constructively with your staff,
19 and the staff has worked very hard to minimize those
20 differences.

21 In some cases, the proposed rules still deviate
22 from the federal rules in ways that, while not optimal, we
23 are nonetheless willing to accept. However, there remain
24 a few aspects of ARB's proposed rules that unnecessarily
25 diverge from the federal rule and thus are inconsistent

1 with our mutually agreed principal of a uniform nationwide
2 program.

3 We are hopeful that those remaining issues can be
4 addressed with the 15-day notice. Unlike the existing
5 first phase of the greenhouse gas program, ARB proposes to
6 independently verify all phase 2 certification
7 information. While under phase 1, ARB certification staff
8 can interrogate any aspect of a manufacturer's
9 certification submission to EPA, California's proposed
10 phase 2 rule would require manufacturers to separately
11 submit all certification documentation up front.

12 We have strongly recommended that ARB staff
13 maintain the phase 1 approach and pick and -- where they
14 can pick and choose, which aspects to interrogate.

15 Nevertheless, in light of the proposed separate
16 certification, we stand ready to work with ARB staff to
17 streamline the certification process in a manner that
18 reflects our mutual commitment to a practical and
19 implementable nationwide program.

20 VICE CHAIR BERG: Thank you very much.

21 MR. BLUBAUGH: Thank you.

22 VICE CHAIR BERG: And happy anniversary to you as
23 well.

24 MR. BLUBAUGH: Thank you.

25 MR. MILLER: Good afternoon. My name is Paul

1 Miller. I'm deputy director of the Northeast States for
2 Coordinated Air Use Management. We're the regional
3 association of State Air Agencies in Connecticut, Maine,
4 Massachusetts, New Hampshire, New Jersey, New York, Rhode
5 Island, and Vermont.

6 I'm speaking today in strong support of staff's
7 proposal, but also more broadly in support of California's
8 long-standing statutory authority and in commendation of
9 ARB's long-standing environmental leadership. Our states,
10 and indeed the entire nation, have long benefited from
11 California's unstinting commitment to cleaner air and
12 lower greenhouse gas emissions.

13 The citizen in our states continue to be exposed
14 to unacceptably high levels of air pollution, much of it
15 caused by highway vehicles. In addition, many of our
16 states face binding requirements to reduce greenhouse gas
17 emissions dramatically by mid-century, requirements that
18 cannot be met without deep greenhouse gas reductions from
19 the transportation sector.

20 However, because our states are preempted under
21 the Clean Air Act from writing our own emissions standards
22 for new cars and trucks, we rely on California to develop
23 regulations that maximize environmental benefits while
24 ensuring continued economic growth.

25 As California's long-term growing economy

1 demonstrates, smart environmental regulation that
2 prioritizes public health can absolutely go hand in hand
3 with a healthy and expanding economy.

4 California's leadership has not only led to
5 improved air quality and public health outcomes in the
6 states that have adopted California's rules, it has
7 repeatedly over decades established the basis for
8 increasingly effective federal regulations by
9 demonstrating and technical feasibility, and by creating,
10 in combination with the other states adopting California's
11 program, enough of a market pool to establish economies of
12 scale for developers of advanced vehicle technologies.

13 We also commend ARB for its common sense approach
14 to closing the so-called glider loophole for rebuilt
15 diesel trucks. Like ARB, we have strongly opposed the
16 effort to reopen this loophole and the federal rule, given
17 the substantial increase in NOx and particulate matter
18 emissions to occur under EPA's abdication of its mission
19 to protect public health and the environment. It is
20 simply unavoidable that states will look to other
21 available means to limit or mitigate the resulting damage.

22 As you know, seven of our eight states for years
23 have been partners with ARB in regulating light-duty
24 vehicles with great success. Several of our states were
25 sued by the automakers after first adopting California's

1 light-duty vehicle program, and successfully fought for
2 their adopted programs in court.

3 Many of our states and others have also seen fit
4 to adopt California's rules for heavy-duty engines in the
5 past, when it appeared the federal government might shirk
6 it's responsibility at that time.

7 In fact, at no time have the federal vehicle
8 requirements be strengthened without California first
9 paving the way. If history is to repeat itself now, it is
10 our intent that we will once again work with our states,
11 other section 177 states, and California to continue our
12 shared strong tradition in promoting, adopting, and
13 defending clean vehicle programs.

14 I will close just quickly congratulating you for
15 50. NESCAUM is actually 51 years old.

16 (Laughter.)

17 MR. MILLER: I think we both predate the
18 existence of the U.S. EPA, and I think that's a strong
19 indicator of State leadership in addressing our shared air
20 quality problems. And I think we're going to need that
21 leadership in the future.

22 Thank you.

23 VICE CHAIR BERG: Well, on behalf of the Board,
24 we'd really like to thank you for your partnership and
25 standing with us. And it is a very valued partnership,

1 and thank you very much for coming and testifying.

2 MS. HOLMES-GEN: Good afternoon, Chairman Nichols
3 and Board members. Bonnie Holmes-Gen with the American
4 Lung Association in California. And happy anniversary. I
5 want to also congratulate you on behalf of the American
6 Lung Association and our network of health advocates in
7 California and across the country. We depend on your
8 leadership. We depend on the work you do to reduce lung
9 disease, to prevent lung illness and to reduce all the
10 hospitalizations and premature deaths, and the health
11 costs that are a huge burden in California and across the
12 country.

13 We are proud of our state's history and really
14 proud to be a part of it. We support the adoption, of
15 course, today of this phase 2 greenhouse gas rule as
16 another step forward for clean air, and climate, and
17 public health. And we specifically want to mention that
18 glider loophole that was mentioned, that we support ARB's
19 proposal to align this phase 2 rule with U.S. EPA's
20 previously adopted 2016 regulation of glider kits. And
21 this closing of the glider kit loophole is an important
22 public health benefit, because these vehicles can produce
23 as much as 450 times the particle pollution of certified
24 advanced modern engines.

25 And I wanted to note that in January this year, a

1 dozen leading public health organizations across the
2 country submitted comments -- including the American Lung
3 Association, submitted comments urging the U.S. EPA to
4 retain this existing federal glider truck rule on the
5 basis of the lethal public health outcomes of allowing
6 these dangerous older engines to operate.

7 So thank you for closing that loophole in this
8 proposed regulation. Finally, of course, we continue to
9 support as much action as possible to step up
10 electrification in the medium- and heavy-duty sector and
11 transition to battery electric and fuel cell. So we
12 support the incentives and regulatory requirements that
13 are going to move us further along the road to zero
14 emission.

15 Thank you for your hard work and we support
16 adoption of the rule.

17 Thank you.

18 VICE CHAIR BERG: Thank you, Bonnie.

19 Good afternoon.

20 MS. HENDERSON: Good afternoon, Chair Nichols and
21 members of the board. My name is Alice Henderson. I
22 speak on behalf of the Environmental Defense Fund.

23 EDF fully supports ARB's proposal to adopt the
24 phase 2 standards. Through its protective automotive
25 standards, California has provided a half century of clean

1 air leadership as we've been noting throughout the
2 afternoon. This leadership has provided far-reaching
3 benefits across the state and the nation and it's critical
4 that California continue that leadership.

5 We wanted to express our particular support on
6 three particular areas. First, we support ARB's proposal
7 to independently verify certification information
8 submitted by manufacturers opting not to include a
9 deem-to-comply provision. Omitting these provisions will
10 preserve ARB's ability to implement the standards which is
11 crucial given current questions about the U.S. EPA's
12 willingness and ability to do so at the federal level, for
13 example, given potential budget constraints that the
14 agency faces.

15 Second, we support ARB's proposal to adopt the
16 emission requirements for glider vehicles. As has been
17 mentioned by numerous parties today, glider vehicles are
18 significantly more polluting than modern heavy-duty
19 trucks, because they use old engines that lack modern
20 pollution controls.

21 Regardless of whether the U.S. EPA moves forward
22 with its proposal to repeal these provisions from the
23 federal standards, ARB can and should exercise its
24 authority to protect its citizens from the dangerous
25 pollution from these vehicles.

1 Lastly, we strongly support ARB's proposal to
2 adopt the federal phase 2 trailer standards. Low-cost
3 measures applicable to trailers can provide up to
4 one-third of the overall GHG emissions reductions from
5 tractor-trailers, garnering much needed reductions in fuel
6 consumption and emissions from the fleet.

7 These standards will help to ensure a continued
8 decline in greenhouse gas emissions from Heavy-duty
9 trucks. As the federal trailer standards are currently
10 stayed, and under reconsideration by EPA and NHTSA, we
11 strongly support ARB's proposal to adopt and implement
12 them here in California.

13 A robust final phase 2 program that puts
14 heavy-duty trucks and buses on the trajectory toward
15 reductions in net emissions and fuel consumption is
16 imperative for safeguarding public health against
17 dangerous air pollution and climate change.

18 We support strong standards that will improve our
19 climate security, deliver cleaner air to communities,
20 provide fuel cost savings to fleets and truckers, and save
21 consumers money. And we respectfully urge the Board to
22 adopt these standards which will deliver these benefits.
23 Thank you.

24 VICE CHAIR BERG: Thank you.

25 MR. TUNNELL: Good afternoon. Vice Chair Berg,

1 Chair Nichols, and members of the Board. Congratulations
2 on your milestone today. It reflects a tremendous amount
3 of time and commitment spent achieving remarkable results,
4 so congratulations

5 VICE CHAIR BERG: Thank you.

6 MR. TUNNELL: My name is Mike Tunnell. I am with
7 the American Trucking Association. The largest national
8 trade association representing the trucking industry.

9 We submitted joint comments with the California
10 Trucking Association, so hopefully you have them in front
11 of you.

12 ATA supports today's proposed adoption of the
13 greenhouse gas emission standards and amendments to the
14 Tractor-Trailer Greenhouse Gas Regulation. The ability to
15 purchase new tractors and trailers that meet uniform
16 standards throughout the nation and can operate across all
17 50 states, including California, is essential to the
18 efficiency of the industry.

19 We believe the proposed adoption and amendments
20 largely result in a harmonized national approach, which we
21 support. We would ask the Board to incorporate
22 California's share of the NOx reductions, which result
23 from burning less fuel and were quantified in the U.S. EPA
24 rulemaking into the state's air quality plans. This was
25 not reflected in the staff report.

1 Finally, we have concerns about the impacts of
2 California-only provisions on fleet modernization. The
3 ability to purchase and operate new equipment is a key
4 component in lowering emissions. We are concerned the
5 added cost, not only from this proposal, but from upcoming
6 proposals will serve to discourage new equipment
7 purchases.

8 We ask the Board to consider how its policies are
9 affecting purchasing patterns in the state. We want to
10 make sure the actions of this Board serve to incentivize
11 fleet modernization rather than inadvertently promoting
12 the purchase and use of older equipment?

13 Thank you. We appreciate your willingness and
14 your staff's willingness to engage us on these issues.

15 VICE CHAIR BERG: Thank you, Michael.

16 BOARD MEMBER SPERLING: Can I ask something?

17 VICE CHAIR BERG: Oh, yes. Oh, we have a quick
18 question here for you.

19 BOARD MEMBER SPERLING: What exactly are you
20 talking about? What is it -- right here. What are you
21 concerned about? What rules that are going to slow down
22 fleet modernization relative to the national standards?
23 What is California proposing differently?

24 MR. TUNNELL: So the greenhouse gas regulations
25 you're adopting today will add about \$12,000 to the cost

1 of a tractor-trailer, and \$1,000 to a fit -- 12,000 to a
2 tractor, 1,000 to a 53-foot trailer nationally.

3 You have provisions in there that have additional
4 costs that will further increase that cost. You have
5 warrantee requirements you'll hear later this year.
6 You'll have onboard diagnostic requirements, which are
7 State only. So your state will have some additional costs
8 on top of the costs that are being added on nationally.

9 And our concern, there's data out of the Diesel
10 Technology Forum that shows California is 48 -- or 46th
11 ranking in the number of 2011 newer trucks in the fleet.
12 So we're -- our concern is that a lot of these additional
13 costs are in effect deterring the modernization of fleets.

14 BOARD MEMBER SPERLING: So no -- but you're not
15 referring to anything that is before the Board in this
16 particular action?

17 MR. TUNNELL: In this particular action, just be
18 aware there are added costs -- California-only costs in
19 this action, in combination with future action, but we do
20 support your adoption today.

21 BOARD MEMBER SPERLING: Okay. Thank you.

22 VICE CHAIR BERG: Good afternoon, Steve.

23 MR. DOUGLAS: Good afternoon, Vice Chair Berg,
24 Chair Nichols. I'm Steve Douglas with the Alliance of
25 Automobile Manufacturers. And the Alliance represents 12

1 car companies, but today I'm speaking on behalf of four
2 members: FCA, Ford, General Motors, and Mercedes-Benz
3 that produce heavy-duty vehicles.

4 First, I wanted to congratulate you on the 50
5 year anniversary. Fifty years seems like such a long
6 period of time. And then I realized as I was walking
7 over, I've been working with ARB and the staff for almost
8 half of that history.

9 So either maybe 50 years is not really that long,
10 or maybe it's just so much fun, it goes by fast.

11 (Laughter.)

12 MR. DOUGLAS: On this specific issue, I first
13 wanted to thank the ARB staff for their hard work on it
14 throughout this effort. And actually for the full 23
15 years I've been working ARB staff, they are always
16 transparent, they're open, they're available for meetings
17 to discuss, debate any issues in their regulation. And we
18 sincerely appreciate that. They don't always agree. We
19 don't always agree, but they always gives us a fair
20 hearing and that's what we ask for.

21 On the issues today, first, on the glider issue,
22 we fully support the ARB's staff position on that. We've
23 registered our opposition to EPA's proposed reg changes on
24 that, and we'll work with ARB staff on the future.

25 And then for the other regulations, while we

1 recommend including a deem-to-provide -- a deem-to-comply
2 provision, and some other minor technical changes, we
3 fully support the ARB staff proposed changes to this
4 regulation, and we'd recommend that the Board approve
5 those.

6 And thank you for your time.

7 VICE CHAIR BERG: Thank you.

8 MR. CALDWELL: Madam Chair, members, I'm John
9 Caldwell. I represent the California Electric
10 Transportation Coalition. CalETC supports CARB's efforts
11 to ensure strong California phase 2 GHG emission
12 standards, and tractor-trailer GHG regulations, and to
13 harmonize the standards with the federal phase 2
14 standards.

15 These standards will be important to reach our
16 air quality and climate goals, and to ensure zero-emission
17 vehicles succeed in every segment of the transportation
18 sector.

19 Related to zero-emission vehicle success, we have
20 submitted a letter recommending a few changes to the staff
21 proposal. Specifically, we recommend the standards retain
22 the existing credit multiplier for plug-in electric and
23 fuel cell vehicles, regardless of whether a zero-emission
24 technology is mandated for another car regulation.

25 We also have concerns with the certification

1 language that currently applies to zero-emission electric
2 vehicles. And in our letter, we recommend two clarifying
3 additions to this section.

4 Given how challenging transitioning the
5 heavy-duty vehicle market to zero-emission technologies
6 will be, and the inherent costs associated with the
7 transition, it is imperative that CARB encourage and
8 incentivize advanced technology vehicles. We believe
9 these changes will ensure California continues to lead the
10 transition to zero-emission technologies in all
11 transportation segments.

12 VICE CHAIR BERG: Thank you.

13 MR. EDGAR: Good afternoon, Chair Nichols Vice
14 Chair Berg, Board members. Sean Edgar. I'm the Director
15 of CleanFleets.net here in Sacramento and happy
16 anniversary. I consider myself a new kid on the block.
17 This is only my 18th year in dealing with the --
18 implementing the diesel risk reduction and your staff.
19 And it's been a wild ride the past 18 years.

20 I've seen a lot activity. Primarily, my activity
21 has been in implementation of the fleet rules, specific to
22 vocational trucks, which I want to spend a minute talking
23 about.

24 So our group is proud to represent the folks that
25 operate the majority of trash trucks, dump of trucks, and

1 concrete pumps here in the State of California. So just
2 to zero in on the issue you heard from Kate Kanabay
3 relative to small volume severe service vocational truck
4 manufacturers. There's some accommodation that I think is
5 needed for those, because this is a team sport.

6 Ultimately, the fleet owner, who's impacted by
7 your fleet rules and who's also being provided some
8 incentives to modernize has got to make decisions. And
9 having a fair playing field for OEMs to participate in,
10 where the truck manufacturers are able to continue to
11 offer products that comply with the phase 2. So the small
12 volume manufacturers, you heard from them, that some
13 accommodation would be needed.

14 And so we'd appreciate you considering those as
15 you work toward finalizing the package before you,
16 specifically that Autocar Truck comments that are before
17 you. Just to zero in on one reason close to home why
18 that's important. Zero Waste L.A.

19 So the Zero Waste L.A. recent franchising of
20 commercial waste in Los Angeles, put out over 400
21 natural -- new natural trucks, many of those with clean
22 near zero emission engines in them. And about half of
23 those trucks happen to be Autocar, half of the trucks were
24 other folks. But the point is there that the cleanest
25 technology just to tie it in, Mr. Corey was talking about

1 your Sustainable Freight Strategy and how important it is
2 that the cleanest available technology for the near future
3 and maybe Tesla other manufacturers two, three, four, five
4 years out may have a severe service truck available, but
5 for the refuse collection companies that still operate
6 about 7,000 diesel vehicles in the State, for over 20,000
7 diesel dump trucks in the state, for over 400 diesel
8 concrete pumps in the state, if you're going to allow
9 cleanest technology to be built in, in terms of the engine
10 technology, the manufacturing of the base vehicle itself,
11 we know that they're not that amenable to the aerodynamics
12 and other things that are required of the phase 2
13 regulations.

14 So once again making accommodation for them will
15 be really important to allow the users of those vehicles
16 who can roll-out some of the cleanest engines to be able
17 to have a vibrant competitive marketplace available to
18 them, regardless of the size of the manufacturer.

19 So thank you for allowing me to testify today.
20 Available for any questions you may have, and thank you
21 for continuing your good work.

22 VICE CHAIR BERG: Thank you.

23 MR. MAGAVERN: Good afternoon. Bill Magavern
24 with the Coalition for Clean Air. Congratulations on a
25 half century of cleaning up the air and saving lives.

1 We've been with you for almost all that time. The
2 Coalition for Clean Air was founded in 1971 in response to
3 that same Southern California smog crisis that was
4 described so vividly this morning.

5 We support the proposal in front of you now. In
6 fact, I think that for air quality policy, 2018 is going
7 to be the year of the truck, because this is the first one
8 of many measures, both regulatory and incentive measures,
9 that you're going to be facing as the year goes on.
10 There's also a couple bills in the legislature that could
11 help to reduce emissions from trucks. So this is one of
12 the pieces.

13 I think in terms of the glider loophole, the
14 federal administration's move to reopen the glider
15 loophole is another particularly shameful example of their
16 willingness to put polluter profits ahead of public
17 health. They're essentially wanting to allow taking a
18 dirty old engine and dressing it up on the outside, and
19 then letting it spew particulate matter into the air.

20 So we very much support your move to prevent that
21 happening at least here in California. We also agree with
22 the trailer provisions to further reduce greenhouse gas
23 emissions from trucks. And finally, we appreciate the
24 incentivizing of zero-emission buses, because there are
25 now so many excellent options in both battery electric and

1 fuel cell electric buses with zero tailpipe emissions, as
2 Senator Florez recently pointed out in an excellent
3 article that he wrote.

4 Thank you.

5 VICE CHAIR BERG: Thank you. And our last
6 speaker.

7 MS. NAGRANI: Yes, that would be me.

8 VICE CHAIR BERG: Oh, hi. How are you?

9 MS. NAGRANI: Is this on?

10 My name is Urvi Nagrani. And I'm coming Motiv
11 Power Systems. And firstly, congratulations on 50 years
12 of good work. I hope we have another century or more to
13 follow. The proposal in front of you today, I widely
14 agree on, but there are specific provisions that would be
15 problematic as a provider of zero-emission technology.
16 And the key things are that if you look at the phase 2
17 regulations, it's very unclear what is the process if you
18 want to sell a commercial chassis with a zero-emission
19 powertrain as a brand new vehicle.

20 And this is something that I've now spent the
21 last six months talking to CARB staff, EPA staff, and
22 being able to get pretty much as many answers as there are
23 people in the room.

24 This is something that if you want to see a
25 proliferation of zero-emission technologies, needs to be

1 streamlined, because it is very hard for a small business
2 to not be able to sell because they don't yet have the
3 necessary approvals from the State of California.

4 At the EPA level, we've been told that the
5 memorandum 1A from 1974, because we are putting a
6 zero-emission powertrain onto an already certified chassis
7 is completely legal, but we're told that might change.

8 At the same time in the regulations themselves, I
9 am told check out CFR 86, 87, 130 -- 1036, 1037. And
10 there's a lot of circulatory language that doesn't really
11 apply to the emissions needed -- the emission regulations
12 needed for traditional fossil fuel.

13 So, for example, a zero emission shuttle bus,
14 versus a zero emission school bus, versus a zero-emission
15 drayage truck are all going to be zero emissions. They'll
16 all have the same family emission level of zero. Yet, you
17 have to file for every single one of those subcategories
18 if you were to apply phase 2 equally to these vehicles as
19 to their fossil fuel counterparts.

20 So while a drayage truck that is powered by
21 diesel will have more emissions than a school bus powered
22 biodiesel, they will all still have zero emissions, if you
23 put the same powertrain in.

24 Right now, there's no clear regulatory pathway.
25 And you're seeing technologies emerge out of the Energy

1 Commission which are technically viable and have no
2 regulatory framework in which to operation. So I would
3 strongly urge the Board to consider the language that
4 CalETC proposed, because I do think that would create a
5 pathway at least and would enable staff to have a clear
6 guidance to give to the industry.

7 Furthermore, I think, if they're going to be
8 regulations specifically in the zero-emission powertrain
9 space, there was a back-end change to your email
10 notification system, and the Zero-Emission Powertrain Work
11 Group alerts now go to the diesel group. And so the last
12 work group I found out about it after it had already
13 happened, and was asked why I wasn't there by somebody
14 from the diesel space.

15 I also found out Proterra wasn't there, BYD
16 wasn't there, the California Electrification
17 Transportation Coalition wasn't there, Sierra Club wasn't
18 there. Lots of people who care a lot about environmental
19 justice and zero-emission solutions didn't show up because
20 of a technical glitch on the back-end of CARB's alert
21 system.

22 So I think, one, we need to be cognizant of that,
23 and two, we need to ensure that if we are proposing
24 regulations, we are doing so in a timeline that allows
25 everybody to be in the room without any sort of these

1 back-end problems interrupting the necessary dialogue,
2 because it's very important that we do this right.

3 VICE CHAIR BERG: Thank you very much.

4 So first, I would, given that we have concluded
5 the public testimony, I would now like to close the record
6 on this agenda item. However, the record will be reopened
7 with -- when a 15-day notice of public availability is
8 issued.

9 Written or oral comments received after this
10 hearing date, but before the 15-day notice issue will not
11 be accepted as part of the official record on this agenda
12 item.

13 When the record is reopened for the 15-day
14 comment period, the public may submit written comments on
15 the proposed changes, which will be considered and
16 responded to in the Final Statement of Reasons for the
17 regulation.

18 So with that, I'd like to turn to my fellow Board
19 members to see if we have any additional questions of
20 staff?

21 Professor Sperling, you want to kick us off?

22 BOARD MEMBER SPERLING: I've got lots of
23 questions --

24 (Laughter.)

25 BOARD MEMBER SPERLING: -- and comments.

1 All right. Do you want me first or last?

2 VICE CHAIR BERG: No, why don't you go first. I
3 saw you feverishly writing over there, so...

4 (Laughter.)

5 BOARD MEMBER SPERLING: You know, a first comment
6 is that these are incredibly important rules. And the
7 truck regulations have lagged both for, you know, criteria
8 pollutants, as well as greenhouse gases, and fuel
9 consumption behind light-duty by decades, but we are
10 catching up.

11 And there's been reasons for that to happen, but
12 I think it's really -- you know, it's really good to see
13 this progress. Now, having said that, so I have followed
14 this heavy-duty rule. And, you know, I was kind of
15 surprised it came up, because I thought we already
16 approved it a year and a half ago. And I was told, well,
17 that was just an informational briefing.

18 (Laughter.)

19 BOARD MEMBER SPERLING: But the first -- you
20 know, so I've followed it, and there's been a lot of
21 studies. There was a reference to a SuperTruck Program.
22 There is reason to think it could be even more aggressive.
23 Now, I'm not advocating that, because this is a big
24 process. But I want to say that there is a lot of
25 potential still for even more improvements in the

1 efficiency of heavy-duty trucks. And there's a lot of
2 technologies that have been demonstrated.

3 And as we get -- if we're really concerned about
4 climate change, then we should think that down the road
5 we've got -- you know, we'll be doing even more, and
6 should be doing even more and thinking about that.

7 Having said that, the glider rule I think that's
8 a no-brainer. It's, you know, embarrassing what's
9 happening in Washington in terms of the -- you know,
10 what's happening there with the glider rule. It was part
11 of the program, so I'm glad we're doing that.

12 I did have a question. Why are there only three
13 other states that have joined us on the proceeding? I
14 thought there were lots and lots of states that agreed
15 with us on this. So that's my first question to staff.

16 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF
17 CARTER: I can perhaps answer that. Yes, there were many
18 states that supported what we were doing, but the three
19 states that we mentioned, those are just signatories to
20 the actual letter that we wrote.

21 BOARD MEMBER SPERLING: So when -- if we pass --
22 so this is all part of the Section 177 process, or could
23 be, right. So other states could be adopting what we
24 adopted here, is that right?

25 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

1 CARTER: Well, each of the states could do their own
2 thing, yeah, but as long as it applied -- the only -- the
3 177 states can only do what we do in terms of new
4 vehicles. So they could set the same kinds of
5 restrictions that we have, yes, for new vehicles.

6 BOARD MEMBER SPERLING: Oh, but not the glider
7 issue and not the trailer issue, is that what you're
8 saying?

9 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

10 CARTER: Well, by default, they could. I mean, by default
11 they would if they adopted out a program that gliders
12 would be part of that, because we don't allow that in
13 gliders, or certification for gliders.

14 BOARD MEMBER SPERLING: I think that was a yes,
15 but...

16 MOBILE SOURCE CONTROL DIVISION ASSISTANT CHIEF

17 CARTER: Well, yes, sorry.

18 (Laughter.)

19 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

20 HEROY-ROGALSKI: Could I just add a little bit? So what
21 we're adopting today would essentially make it illegal to
22 produce gliders in California. But that's more symbolic
23 than anything else, because nobody is making them in
24 California now. And the states that have signed on,
25 that's not where they're being built either.

1 We weren't able to get Tennessee's support for
2 our letter, and that's where most of the -- most of this
3 is -- is happening. But some choices that states, other
4 than California, have to address this problem, if the
5 federal agencies do go forward with the glider repeal, and
6 there's a lot of gliders being built, other states could
7 consider adopting something like our Truck and Bus Rule
8 that would put restrictions on these vehicles in use.

9 BOARD MEMBER SPERLING: Okay. Good.

10 Credit trading -- is credit trading allowed in
11 this program between manufacturers?

12 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

13 HEROY-ROGALSKI: Yes, it is.

14 BOARD MEMBER SPERLING: So that would address
15 some of the concerns that were laid out, like hybrid
16 trucks, you know, that are not plug-in but just hybrid.
17 There would be incentives for companies to do that, so
18 that by just selling the credits to the other companies,
19 just like Tesla with the ZEV rule, you know, has -- you
20 know, makes thousands of dollars per vehicle, is that
21 right?

22 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

23 HEROY-ROGALSKI: It's true, but there -- so we are putting
24 some restrictions on like the 3.5 multiplier for hybrids.
25 And so manufacturers that chose to make hybrids that don't

1 comply with that wouldn't get those extra credits. So I'm
2 not sure if it would be helpful to tell them well you
3 could buy the credits from another manufacturer.

4 So I think there's some desire that we not put
5 those additional restrictions on, but we feel they're
6 important.

7 BOARD MEMBER SPERLING: It's just the opposite,
8 isn't it? If you -- if someone does a very efficient
9 truck, and then they get whatever multipliers might be
10 available for it, and they get those credits that they can
11 sell to other companies, isn't that right?

12 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

13 HEROY-ROGALSKI: No, that's true too.

14 BOARD MEMBER SPERLING: Okay.

15 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

16 HEROY-ROGALSKI: So you can generate more credits that you
17 need yourself and sell them to your friends.

18 BOARD MEMBER SPERLING: And so what about
19 truck -- what about bus -- electric bus -- like Proterra
20 and BYD, for instance, they can sell -- they can now --
21 just like Tesla does actually -- you know, the analogy is
22 with the light-duty rules greenhouse gas. So Proterra and
23 BYD could sell credits for their electric buses to any of
24 these other manufacturers, is that right?

25 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

1 HEROY-ROGALSKI: Yes, it is.

2 BOARD MEMBER SPERLING: Okay. I'm -- these are
3 good answers. I like this.

4 (Laughter.)

5 BOARD MEMBER SPERLING: I do want to endorse
6 the -- so I want to make sure there was a provision put in
7 attachment G about if we adopt some kind of electric truck
8 type rule that the credits that the companies can still
9 accrue credits for those electric trucks in this
10 regulation. Because the way the rule was originally
11 written, they would disappear, but the new change, as I
12 understand the attachment G is that if we adopt some kind
13 of ZEV rule for trucks, then those -- those companies
14 making those trucks -- electric trucks can still get those
15 multiplier credits, is that right?

16 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

17 HEROY-ROGALSKI: What you said is correct. What we've
18 done is essentially put off the decision on how to treat
19 these credits to when those future requirements would be
20 adopted.

21 So, for example, if the advanced clean local
22 truck rulemaking goes forward, they'll need to work out
23 what they want to do for adjusting phase 2 credits, if
24 anything. Staff's opinion is still that those credits
25 should be adjusted, because if you offer these multipliers

1 up to 4.5, 5.5, and then manufacturers are required to
2 make a lot of zero-emission heavy-duty vehicles, that's a
3 great thing, but that would essentially mean that they
4 don't have to do anything else to comply with phase 2.

5 So a lot of improvements that we're counting on
6 for things like aero improvements, light-weighting, that
7 kind of stuff wouldn't need to happen, because they would
8 meet the entire program just by making the electric
9 vehicles that we're requiring them to make.

10 BOARD MEMBER SPERLING: Well, I agree we should
11 look at those multiplier numbers again, if we do it, but I
12 don't -- but I disagree in the sense that they should be
13 taken away. I understand it's a double counting
14 phenomena, but I think that we've learned that we've got
15 to do -- if we're really serious about electric trucks,
16 we've got to really go full bore to make that happen. And
17 double crediting, I think, is perfectly fine, and even
18 desirable in this case. We don't want it to be abused.
19 And so I agree we should look at those numbers, but I
20 think the concept is sound the way it is now being
21 revised.

22 And the last point is just the last speaker
23 there, I don't know exactly what she was talking about,
24 but it sounded important.

25 (Laughter.)

1 BOARD MEMBER SPERLING: And I was wondering -- so
2 it's something about -- as I understood, it was something
3 about certification for smaller suppliers of zero-emission
4 trucks, and that there's -- it's challenging to get them
5 certified, is that right?

6 VICE CHAIR BERG: Well, it sounded like -- it
7 actually sounded like there was not a pathway for them --

8 BOARD MEMBER SPERLING: Or not a pathway.

9 VICE CHAIR BERG: -- to be able to take existing
10 chassis or approve chassis and put zero emission. So
11 could we address that.

12 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

13 Yes, I'll cover that. So just for a little
14 background on that, the phase 2 regulation requires all
15 vehicles be certified, including electric vehicles. That
16 wasn't the case before, so that is new for this year. Up
17 until now, we had a path -- a pathway in process for
18 California that we used that was integrated with our
19 incentive programs. And so we had a method to deal with
20 this.

21 Once the phase 2 regulation comes in effect, of
22 course, we talked about how we've been dealing with EPA.
23 This is an EPA regulation, as well as an ARB regulation,
24 so we have been working with them. And she's right, it's
25 a little frustrating for all of us. We've been working

1 for a number of months trying to figure out how to work a
2 pathway for them.

3 They're a rather unique business case, because
4 they're not -- they are a component of supplier, a key
5 part supplier, but they're not a final vehicle
6 manufacturer. So if they -- if they were, there is a
7 pathway. There's a pathway for 98 percent of the people
8 or 99 percent of the people, but they're unique there, and
9 we're trying to be supportive.

10 I will say we do believe we have a pathway now to
11 help in the interim. But come later this year, we will be
12 bringing back to the -- we will be bringing to the Board a
13 Heavy-duty ZEV certification package that is really trying
14 to tie up all these loose ends, and not trying to figure
15 out these one at a time, but really address it more
16 holistically.

17 BOARD MEMBER SPERLING: So I'll just close by
18 saying I think this is a great regulation. It's an
19 important one, and it's important partly because of the
20 wavering in Washington on this. And it's seen -- there's
21 been lots of analysis. This has a long history. The
22 industry supports it, so this is great. It's important
23 and exciting to see it, and on our 50th anniversary,
24 better yet.

25 VICE CHAIR BERG: Thank you. Any other comments

1 on this side?

2 Yes. Please Dr. Sherriffs.

3 BOARD MEMBER SHERRIFFS: I love how interesting
4 garbage has become since I started serving on this Board.

5 The comment from the second testimony in terms of
6 some of the challenges for small businesses and potential
7 aerodynamic requirements for vehicles that never achieve
8 an aerodynamic speed. Help.

9 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

10 HEROY-ROGALSKI: Okay. Yeah. No, so a good question.
11 And we've had a number of very fruitful and cooperative
12 discussions with Autocar. That's the manufacturer that
13 you heard from. There already are some special provisions
14 in the federal program that we're aligning with that do
15 give additional time to small fleets, and do give them
16 additional abilities to use credits more flexibly than
17 large fleets can.

18 There's also, as Mitzi described in her
19 presentation, there's also the custom chassis provisions,
20 which are just a much less stringent and simpler
21 certification path that's intended for people like refuse
22 truck manufacturers, that make kind of vehicles that don't
23 fit the sort of long haul kind of big rig that you might
24 be thinking of that are kind of odd vehicles. And maybe
25 smaller manufacturers that don't want to learn all the

1 intricacies of the GEM model.

2 So there's a lot of provisions in there that are
3 intended to help folks in their situation. However, we
4 are sensitive to the concerns that they're expressing.
5 And there's definitely some validity that there's some
6 technologies that may be appropriate for a long-haul truck
7 that make no sense at all for a trash truck.

8 And we do know that what they said about their
9 having reached out to EPA technical staff on these topics
10 is true. That that dialogue is ongoing. We were hesitant
11 to propose provisions here that would be less stringent in
12 the California program than in the federal program. We're
13 trying to align as much as possible and not be less
14 stringent.

15 And so what we've told them is that we're happy
16 to keep working with them, and working with EPA staff.
17 And if EPA does decide to make some amendments in response
18 to this, that we'll consider aligning at that time.

19 Does that help a little bit?

20 BOARD MEMBER SHERRIFFS: Yes. And I also heard a
21 request to give an extra year potentially, is that
22 something that fits in with this or...

23 MSCD MOBILE SOURCE REGULATORY BRANCH CHIEF

24 HEROY-ROGALSKI: They did make that request to EPA.

25 We're -- we don't recommend that the Board adopt that at

1 this time, particularly before EPA acts on it. We think
2 that the custom chassis requirements and the additional
3 small fleets get one extra year compared to large fleets
4 is sufficient. We think -- we've looked -- we've talked
5 to Autocar and looked in detail at their situation, and
6 they're doing a great job producing CNG refuse trucks,
7 many of which are being used in California, and that's
8 awesome. And they're getting credits for that.

9 And I think their request is because they
10 realize, wow, it would be really great if we could have
11 some extra time to accumulate some more credits, and that
12 would make compliance easier for them.

13 So we think this is more of a situation where
14 they would like us to offer some additional flexibility,
15 so they can get more credits, rather than a situation
16 where they -- you know, they can't comply if we don't make
17 a change. So we think the best course of action would be
18 to wait and see what U.S. EPA does and then consider what
19 we want to do after that happens.

20 BOARD MEMBER SHERRIFFS: Thank you.

21 CHAIR NICHOLS: Ms. Takvorian.

22 BOARD MEMBER TAKVORIAN: Thank you. I just
23 wanted to add my congratulations and support for the bill.
24 -- no for the bill. Where am I for the rule -- sorry --
25 and say that I agree particularly with Professor Sperling.

1 I think this is an important measure and important step
2 that we're taking.

3 I want to hold my opinion on the credits, and
4 just hope that we are cautious about how those are
5 applied, and hope that they turn out to be A positive
6 thing. So hopefully, we'll hear more about that as we go
7 forward.

8 And I also wanted to say -- appreciated the
9 section in the Initial Statement of reasons on
10 environmental justice. And I thought that it was good
11 that that was pointed out, and that you made, I think,
12 obvious points in regards to how environmental justice
13 communities are more impacted.

14 I think you may not have made enough of a point
15 of how the transit buses and their push-forward through
16 this rule will -- and towards electrification will also
17 benefit environmental justice communities more as there's
18 more transit in environmental justice communities than in
19 others.

20 So not to change anything, but just to say that I
21 think it's another step towards what I hope we're moving
22 towards, which is electrification across the Board for
23 transit and zero-emission buses. But it will have a
24 particularly positive benefit, I think, in those
25 communities that are more impacted. So I just wanted to

1 thank you for that.

2 CHAIR NICHOLS: Thank you for your comments.

3 Any other comments here?

4 Professor Sperling will wrap it up for us.

5 (Laughter.)

6 BOARD MEMBER SPERLING: I'm on it.

7 No, I just have one -- there was one thought --
8 one other thing I wanted to ask, and that's the trailer
9 rule. When that trailer rule was first adopted, I have to
10 say I was a little skeptical that we were doing such
11 prescriptive rules, but from what I can tell is it has
12 been quite successful in the sense that other parties that
13 are not regulated seem to be embracing it.

14 Whenever I'm on the east coast, I do surveys of
15 all the trucks, and it looked to me -- it seems to me my
16 kind of unscientific study is about 30 percent of the
17 eligible or, you know, relevant trailers are using --
18 trailers are using skirts.

19 But I think given that we're taking another dive
20 into this, another step, I've never seen anyone analyze is
21 it really working the way I think it is? If it's such a
22 good idea, a lot of these companies should be doing it. I
23 mean, if they're -- you know, we claimed that they were
24 going to save -- get a return within a year and a half.
25 And if that's true, you know, any smart company would be

1 investing.

2 Could we get some kind of -- okay. Not
3 necessarily an analysis. I'm not calling for a research
4 project, but just a survey kind of contact the trailer
5 manufacturers and get a sense of are they really putting
6 trailers -- putting skirts on there. Because if we're
7 real going to go down this path, I think we need to have a
8 little more data, and a little more information to make
9 sure it is as good an idea as it seems to us.

10 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

11 Yes, of course, we can -- we can bring together
12 some of that information.

13 BOARD MEMBER SPERLING: Thank you.

14 BOARD MEMBER RIORDAN: It also might be
15 interesting just to look at who's actually using them.
16 From my perspective, in driving the 5 to Sacramento, it's
17 your long-haul truckers that have got those on, not your
18 short hauls.

19 And I don't know if there's a difference, you
20 know, just by virtue of the ability to buy them for short
21 haulers, but certainly the long haulers in the big
22 companies are using them. That's for sure.

23 VICE CHAIR: Okay. Thank you very much for those
24 comments.

25 I think we've come to a point where we can

1 address Resolution number 18.2.

2 Without any further questions, can I call for a
3 motion?

4 BOARD MEMBER EISENHUT: So moved.

5 VICE CHAIR BERG: I have a first.

6 BOARD MEMBER SPERLING: I'll move.

7 VICE CHAIR BERG: Thank you. I have a second.

8 BOARD MEMBER BALMES: Second.

9 VICE CHAIR BERG: Thank you. I think we can do
10 this by voice vote.

11 All in favor?

12 (Ayes.)

13 VICE CHAIR BERG: Any opposed?

14 Any abstain?

15 Motion passes.

16 VICE CHAIR BERG: So we do have one open comment.

17 And I'm so glad they're back. Christopher Brown, if you
18 wouldn't mind coming forward.

19 We had heard you had left, and I think he has.

20 Okay. Well, we missed you, Mr. Brown, and we
21 do -- he is the Air Pollution Control Officer for Feather
22 River. We wanted to thank again for CAPCOA's very
23 gracious support of our reception.

24 So what a fabulous day. I think we are wrapped
25 up for our first Board meeting of the year, and also for

1 our 50th anniversary. Thank you very, very much for being
2 here, being part of this celebration. Wonderful kick-off
3 to the next 50 years.

4 Thank you, staff, fellow Board members, and we
5 are adjourned.

6 (Thereupon the Air Resources Board meeting
7 adjourned at 2:35 p.m.)

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1 C E R T I F I C A T E O F R E P O R T E R

2 I, JAMES F. PETERS, a Certified Shorthand
3 Reporter of the State of California, do hereby certify:

4 That I am a disinterested person herein; that the
5 foregoing California Air Resources Board meeting was
6 reported in shorthand by me, James F. Peters, a Certified
7 Shorthand Reporter of the State of California, and was
8 thereafter transcribed, under my direction, by
9 computer-assisted transcription;

10 I further certify that I am not of counsel or
11 attorney for any of the parties to said meeting nor in any
12 way interested in the outcome of said meeting.

13 IN WITNESS WHEREOF, I have hereunto set my hand
14 this 26th day of February, 2018.

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JAMES F. PETERS, CSR
Certified Shorthand Reporter
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