

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

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

THURSDAY, DECEMBER 12, 2019

9:01 A.M.

JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 10063

A P P E A R A N C E S

BOARD MEMBERS:

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Sandra Berg, Vice Chair
Dr. John Balmes
Mr. Hector De La Torre
Mr. John Eisenhut
Supervisor Nathan Fletcher
Senator Dean Florez
Supervisor John Gioia
Ms. Judy Mitchell
Senator Bill Monning
Mrs. Barbara Riordan
Supervisor Phil Serna
Dr. Alexander Sherriffs
Professor Daniel Sperling
Ms. Diane Takvorian

STAFF:

Mr. Richard Corey, Executive Officer
Ms. Edie Chang, Deputy Executive Officer
Mr. Steve Cliff, Deputy Executive Officer
Mr. Kurt Karperos, Deputy Executive Officer
Ms. Ellen Peter, Chief Counsel
Ms. Veronica Eady, Assistant Executive Officer

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

STAFF:

Ms. Annette Hebert, Assistant Executive Officer

Mr. Paul Arneja, Air Resources Engineer, In-Use Control Measures Section, Mobile Source Control Division(MSCD)

Mr. Michael Benjamin, Division Chief, Air Quality Planning and Science Division(AQPSD)

Mr. Tony Brasil, Branch Chief, Transportation and Clean Technology Branch, MSCD

Mr. Pippin Brehler, Senior Attorney, Legal Office

Ms. Cary Bylin, Manager, Energy Section, Industrial Strategies Division(ISD)

Mr. Michael Carter, Assistant Division Chief, MSCD

Mr. Ian Cecere, Attorney, Legal Office

Ms. Mary Jane Coombs, Branch Chief, Project Assessment Branch, ISD

Mr. Craig Duehring, Manager, In-Use Control Measures, Section, MSCD

Mr. David Edwards, Assistant Division Chief, AQPSD

Mr. Chris Franceschi, Air Pollution Specialist, In-Use Control Measures Section, MSCD

Ms. Jessica Gordon, Senior Attorney, Legal Office

Ms. Julia Gress, Air Pollution Specialist, Indoor Exposure Assessment Section, Health and Exposure Assessment Branch, Research Division(RD)

Mr. Scott King, Air Pollution Specialist, South Coast Air Quality Planning Section, AQPSD

Mr. Jack Kitowski, Division Chief, MSCD

Ms. Claudia Nagy, Senior Attorney, Legal Office

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

STAFF:

Mr. Keith Roderick, Air Resources Engineer, Project Assessment Branch, ISD

Mr. Rajinder Sahota, Division Chief, ISD

Ms. Elizabeth Scheehle, Division Chief, RD

Ms. Carol Sutkus, Manager, South Coast Air Quality Planning Section, AQPSD

Ms. Sylvia Vanderspek, Branch Chief, Air Quality Planning Branch, AQPSD

Ms. Sydney Vergis, Assistant Division Chief, MSCD

Mr. Jeffrey Williams, Air Pollution Specialist, Indoor Exposure Assessment Section, Health and Exposure Assessment Branch, RD

Mr. Pat Wong, Manager, Indoor Exposure Assessment Section, Health and Exposure Assessment Branch, RD

ALSO PRESENT:

Ms. Leslie Aguayo, Greenlining Institute

Ms. Meredith Alexander, CALSTART

Ms. Brenda Angulo

Mr. Sam Appel, Blue Green Alliance

Mr. Ruben Aronin, Better World Group Advisors

Mr. David Asti, Southern California Edison

Ms. Shayda Azamian, Leadership Counsel for Justice and Accountability

Mr. Daniel Barad, Sierra Club California

Mr. Will Barrett, American Lung Association

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

ALSO PRESENT:

Ms. Roxana Bekemohammadi, Ballard Power Systems

Ms. Brittany Blanco, Comite Civico del Valle

Mr. Nico Bouwkamp, California Fuel Cell Partnership

Dr. Jack Brouwer, University of California, Irvine

Ms. Clair Brown, 350 Bay Area Action

Mr. Todd Campbell, Clean Energy

Mr. Tim Carmichael, SoCalGas

Ms. Edith Cebreros, Communities for a New California

Ms. Kimberly Chavez

Mr. Alex Cherin, California Trucking Association
Intermodal Conference

Mr. Gary Conover, California Automotive Wholesalers
Association

Mr. Paul Cort Earthjustice

Mr. Jon Costantino, Tradesman Advisors

Ms. Noelle Cremers, California Farm Bureau Federation

Mr. Carlo De La Cruz, Sierra Club

Mr. Adam Diaz, Warehouse Workers Resource Center

Mr. Ken Dunham, West Coast Lumber

Mr. Evan Edgar, California Compost Coalition

Mr. Sean Edgar, Clean Fleets

Ms. Dawn Fenton, Volvo Group North America

Dr. Philip Fine, South Coast Air Quality Management
District

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

ALSO PRESENT:

Mr. Antonio Flores

Ms. Olga Flores

Dr. Andrew Frank, University of California, Davis

Ms. Katherine Garcia, Sierra Club

Ms. Kimberly Garcia, CAUSE

Mr. Michael Geller, Manufacturers of Emission Controls Association

Ms. Cristel Gonzalez, CAUSE

Ms. Yesenia Gonzalez, CAUSE

Mr. Robert Graham, EDV Commercialization

Mr. Ben Granholm, Western Propane Gas Association

Ms. Sara Greenwald, 350 Bay Area Action

Ms. Erin Grizard, Bloom Energy

Ms. Erin Guerrero, California Attractions and Parks Association

Mr. Adam Harpers, California Construction and Industrial Materials Association

Mr. Frank Harris, California Municipal Utilities Association

Ms. Jennifer Helfrich, Ceres

Mr. Allen Hernandez, Center for Community Action and Environmental Justice

Ms. Consuelo Hernandez, City of Sacramento

Mr. Miguel Hernandez, Comite Civico del Valle

Ms. Ocil Herrejon, CAUSE

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

ALSO PRESENT:

Ms. Kathy Hoang, Partnership for Working Families

Dr. Mark Horton, Health Organizations

Ms. Regina Hsu, Earthjustice

Mr. Alex Jackson, Natural Resources Defense Council

Ms. Courtney Jensen, TechNet

Ms. Julia Jordan, On Behalf of Katie Taylor

Ms. Kate Kanabay, Autocar Truck

Mr. Richard Katz, No Coal in Richmond

Mr. Ryan Kenny, Clean Energy

Ms. Candice Kim, Moving Forward Network

Ms. Kirstin Kolpitzke, Calforests

Mr. Bernie Kotlier, International Brotherhood of
Electrical Workers, National Electrical Contractors
Association

Ms. Jennifer Kropke, International Brotherhood of
Electrical Workers, National Electrical Contractors
Association

Mr. Thomas Lawson, California Natural Gas Vehicle
Coalition

Mr. Michael Lewis, Construction Industry

Mr. Gilberto Macias

Mr. Bill Magavern, Coalition for Clean Air

Mr. Christopher Mair, Assembly Member Evan Low

Mr. Kevin Maggay, SoCalGas

Mr. Jed Mandel, Truck and Engine Manufacturers Association

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

ALSO PRESENT:

Ms. Gabriela Mendez, Center for Community Action and Environmental Justice

Mr. Kevin Messner, Association of Home Appliance Manufacturers

Mr. Steve McCarthy, California Retailers Association

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

Ms. Micah Mitrosky, International Brotherhood of Electrical Workers, Local 569

Mr. Matt Miyasato, South Coast Air Quality Management District

Ms. Lauren Navarro, Environmental Defense Fund

Mr. Evan Ochoa, CAUSE

Mr. Jimmy O'Dea, Union of Concerned Scientists

Mr. Luis Olmedo, Comite Civico del Valle

Ms. Citlalli Pacheco, CAUSE

Ms. Elodia Perez

Dr. Arnol Phadke, Lawrence Berkeley National Laboratory

Mr. Ray Pingle, Sierra Club California

Ms. Cynthia Pinto-Cabrera, Central Valley Air Quality Coalition

Ms. Yesenia Ponce, CAUSE

Mr. Patricio Portillo, Natural Resources Defense Council

Mr. Prima Quesada, Ramar Foods

Ms. Priscilla Quiroz, Advanced Energy Economy, Solid Waste Association of North America

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

ALSO PRESENT:

Ms. Sarah Rees, Couth Coast Air Quality Management District

Mr. Miguel Rivera

Ms. Lorena Rodarte

Ms. Veronica Roman

Ms. Sasan Saadat, Earthjustice

Mr. Dan Sakaguchi, Communities for a Better Environment

Ms. Isumay Sandoval, Comite Civico del Valle

Mr. Chris Shimoda, California Trucking Association Intermodal Conference

Ms. Leah Silverthorn, California Chamber of Commerce

Mr. Mark Tang, Bay Area Air Quality Management District

Ms. Jessica Tovar, Moving Forward Network

Ms. Adu Trujillo

Mr. Mike Tunnell, American Trucking Association

Ms. Eileen Tutt, California Electric Transportation Coalition

Ms. Lilia Ulloa

Mr. Sergio Valenzuela, Comite Civico del Valle

Mr. Anthony Vallecillo, Warehouse Workers Resource Center

Ms. Anna Vargas, Communities for a New California

Ms. Iris Verduzco, Move Forward Network

Ms. Andrea Vidaurre, Center for Community Action and Environmental Justice

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

ALSO PRESENT:

Mr. Charles White, Western Independent Refiners
Association

Mr. John White, Center for Energy Efficiency and Renewable
Technologies

Ms. Janet Whittick, California Council for Environmental
and Economic Balance

Ms. Joy Williams, Environmental Health Coalition

Mr. Vincent Wiraatmadja, California Hydrogen Business
Council

Ms. Joyce Xi, Union of Concerned Scientists

Mr. Josiah Young, Bioenergy Association of California

Mr. David Yow, Port of San Diego

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P R O C E E D I N G S

1
2 VICE CHAIR BERG: Good morning. If I can
3 encourage everyone to take their seats, please.

4 Well good morning, everyone and Happy December.
5 Happy Holidays. It's so hard to believe that in a very
6 short period of time, we are gong to be welcoming in 2020.
7 So -- and I started on the Board in 2004 and we were
8 talking about all of these implementation dates and I was
9 thinking, wow, that sounds so far away and here we are.

10 So welcome, we have a very busy two-day Board
11 meeting. We're excited for today. In a lot of ways it's
12 a landmark. And so we're very pleased that you're going
13 to be here with us.

14 So with that, I'd like to open the December 12th,
15 2019 public meeting of the California Air Resource Board
16 and we'll start out with our Pledge of Allegiance.

17 (Thereupon the Pledge of Allegiance was
18 recited in unison.)

19 VICE CHAIR BERG: And if we can have the Clerk of
20 the Board call the roll, please.

21 BOARD CLERK CARLOS: Dr. Balmes?

22 BOARD MEMBER BALMES: Here.

23 BOARD CLERK CARLOS: Mr. De La Torre?

24 BOARD MEMBER DE LA TORRE: Here.

25 BOARD CLERK CARLOS: Mr. Eisenhut?

1 BOARD MEMBER EISENHUT: Here.

2 BOARD CLERK CARLOS: Supervisor Fletcher?

3 Senator Florez?

4 Assembly Member Garcia?

5 Supervisor Gioia?

6 BOARD MEMBER GIOIA: Here.

7 BOARD CLERK CARLOS: Ms. Mitchell?

8 BOARD MEMBER MITCHELL: Here.

9 BOARD CLERK CARLOS: Senator Monning?

10 BOARD MEMBER MONNING: Here.

11 BOARD CLERK CARLOS: Mrs. Riordan?

12 BOARD MEMBER RIORDAN: Here.

13 BOARD CLERK CARLOS: Supervisor Serna?

14 Dr. Sherriffs?

15 BOARD MEMBER SHERRIFFS: Here.

16 BOARD CLERK CARLOS: Professor Sperling?

17 BOARD MEMBER SPERLING: Here.

18 BOARD CLERK CARLOS: Ms. Takvorian?

19 Vice Chair Berg?

20 VICE CHAIR BERG: Here.

21 BOARD CLERK CARLOS: Chair Nichols?

22 Madam Vice Chair, we have a quorum.

23 VICE CHAIR BERG: Thank you very much.

24 Chair Nichols is on her way. She has landed and
25 in the car. And she will be joining us very momentarily.

1 But I didn't want our participants to get concerned that
2 she would -- that something came up and she wouldn't be
3 here. She will definitely be here.

4 And until that, I will be filling in to get us
5 kicked off today, because we do have a full agenda.

6 So starting with our few announcements before we
7 get started. For safety reasons, please note the
8 emergency exits in the rear of the room and through the
9 lobby. In the event of a fire alarm, we are required to
10 evacuate this room and immediately go down the stairs to
11 the left of the elevator and out the building. When the
12 all-clear signal is given, we will return and resume our
13 hearing.

14 We'd like to let you know that anyone who wishes
15 to testify should fill out a request-to-speak card
16 available in the lobby outside the Board room.

17 Please return it to the Board assistant or the
18 Board Clerk prior to the commencement of the item.

19 Also, speakers be aware that the Board will
20 impose a three-minute time limit. And depending on the
21 item, we have the ability to look at how many people will
22 be speaking. And if we need to adjust that, we will do so
23 before an item starts.

24 Please state your first and last name when you
25 come up to the podium. We will be using both podiums here

1 to my right and to my left. And just for those of us,
2 this is still a little bit new to us, there's actually
3 buttons on those speaker -- on the podiums that rise and
4 has it adjust to your height. So you might want to try
5 that cool little feature.

6 Please put your testimony into your own words.
7 It's easier for the Board to follow if you go straight to
8 your point, and remember that we do have your written
9 testimony as well.

10 So with that, I might mention -- we'll mention
11 this again, but there is a display outside of all sorts of
12 electric trucks of all classes. And it's right out in
13 front on 10 Street and a few on "I". And they're going to
14 be there all through lunch. We really encourage you to
15 stop and see these new technologies and chat with people
16 It's -- I've already been down there. And it's -- they've
17 got some really interesting trucks of all categories.

18 So with that, I think we'll go ahead and move to
19 our first item. Our first item is the only item on our
20 consent calendar. And it is Agenda Item 19-12-1 Proposed
21 2019 Amendments to the Area Designations for State Ambient
22 Air Quality Standards.

23 Were there any comments received on this item
24 during public comment period?

25 BOARD CLERK CARLOS: No.

1 VICE CHAIR BERG: We have considered the comments
2 and that were received prior and have determined that they
3 are non-substantive and thus proceeding with this item on
4 consent calendar.

5 I'd like to ask my fellow Board members if
6 anybody would like to take this off of consent?

7 BOARD MEMBER RIORDAN: Madam Chairman, I'd just
8 like to move the item, which is Resolution 19-30.

9 VICE CHAIR BERG: That's great. I'll close the
10 record and then entertain a second.

11 BOARD MEMBER BALMES: Second.

12 VICE CHAIR BERG: All in favor?

13 (Unanimous aye vote.)

14 (Chair Nichols, Board Members Fletcher, Florez,
15 Serna, Takvorian not present.)

16 VICE CHAIR BERG: Any opposed?

17 Any abstentions?

18 Motion passes.

19 So we'll go ahead and get started with our first
20 public item. The next item for our consideration is
21 proposal that would establish greenhouse gas standards for
22 the California Public Utilities Commission's Fuel Cells
23 Net Energy Metering Program, also known as the Fuel Cell
24 NEM Program.

25 The Fuel Cell NEM Program was the -- was first

1 established by the Legislature in 2003 and is overseen by
2 the CPUC. And it is implemented by three investor-owned
3 electric utilities. Assembly Bill 1214 established the
4 Fuel Cell NEM Program to, among other goals, encourage
5 substantive private investment in these energy resources
6 and reduce costs for these electricity suppliers.

7 The proposed regulation before us today was
8 prepared in response to Assembly Bill 1637, which extended
9 the Fuel Cell NEM Program through 2021. It requires CARB
10 to set greenhouse gas emission standards for the Fuel Cell
11 NEM Program and those standards must ensure that fuel
12 cells that receive the benefit under the CPUC Fuel Cell
13 NEM Program reduces greenhouse gas emissions relative to
14 the electrical grid resource that it displaces by the fuel
15 cell.

16 That's a mouthful.

17 (Laughter.)

18 VICE CHAIR BERG: In addition, Assembly Bill 1637
19 requires the standard to be updated every three years with
20 applicable standards for each intermediate year. This is
21 an -- it is important to note that the fuel cells do play
22 and important role supplying energy and have the benefit
23 of no combustion processes that it would result in local
24 air impacts.

25 Finally, in context of the fire danger that the

1 state has been facing and the associated public safety
2 power shutoffs that are impacting hundreds of thousands of
3 household, businesses, hospitals, and schools, I would
4 note that fuel cells can generate power when the
5 electricity grid is shut down, and do so without
6 associated criteria and toxic pollutants emitted by diesel
7 generators.

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

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

11 The proposed regulation before you, as you noted,
12 addresses the requirements specified in Assembly Bill 1637
13 that CARB develop greenhouse gas emission standards for
14 the California Public Utilities Commission's Fuel Cell Net
15 Energy Metering Program, or NEM Program.

16 Staff has been working with the California Energy
17 Commission, California Public Utilities Commission, and
18 stakeholders to evaluate options for calculating the fuel
19 cell NEM GHG emission standards. The proposed regulation
20 conforms with statutory requirements. And staff believes
21 the proposal presented today uses the best methodology to
22 achieve the goals of the bill.

23 Adoption of the proposed regulation would set
24 Fuel Cell NEM GHG emissions standards through 2022 and
25 establish a process for updating the emission standards

1 every three years beginning in 2022. The standards are
2 based on data that reflect operation of the grid and
3 decrease over time to reflect California's expected GHG
4 emission reductions in the electricity sector.

5 Now, I'd like to have Carey Bylin of our
6 Industrial Strategies Division to begin the staff
7 presentation.

8 Carey.

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

11 ISD ENERGY SECTION MANAGER BYLIN: Thank you, Mr.
12 Corey, and good morning. Today, I'll provide background
13 on fuel cells and the Fuel Cell Net Energy Metering, or
14 NEM, Program, discuss the mandates set by AB 1637 and our
15 process to develop greenhouse gas emission standards to
16 comply with that mandate, and close with a summary and
17 recommendations to the Board.

18 --o0o--

19 ISD ENERGY SECTION MANAGER BYLIN: The Fuel Cell
20 NEM Program was created through AB 1214 in 2003 to
21 encourage substantial private investment in fuel cells.
22 Per AB 1214, customer generators that installed qualifying
23 fuel cells by January 1st, 2006 could receive program
24 benefits that included generation rate credits and avoided
25 non-bypassable utility charges for onsite electricity

1 generation. The program was and still is overseen by the
2 California Public Utilities Commission, CPUC, and is
3 administered by the major investor-owned electric
4 utilities, Pacific Gas and Electric, Southern California
5 Edison, and San Diego Gas and Electric.

6 Since AB 1214 was signed into law, various
7 legislative bills have extended and expanded the program.
8 AB 67 was passed in 2005 and extended the Fuel Cell NEM
9 Program to fuel cells installed by January 1st of 2010.

10 In 2009, AB 1551 extended the program an
11 additional four years to cover fuel cells installed by
12 January 1st, 2014. In 2012, AB 2165 extended the program
13 for another year and expanded the eligible generating
14 capacity from about 122 megawatts to 500 megawatts.

15 In addition, for the first time, qualifying fuel
16 cells were required to meet a greenhouse gas emissions
17 standard.

18 And finally, AB 1637 became law in 2016 extending
19 the CPUC's Fuel Cell NEM Program tariff to fuel cells in
20 operation before the end of 2021 and expanding the size of
21 the fuel cell installation that could qualify. It also
22 directed CARB to develop Fuel Cell NEM GHG emission
23 standards.

24 We are here today with a proposal for those Fuel
25 Cell NEM GHG emission standards. The CPUC will continue

1 to implement the standards.

2 --o0o--

3 ISD ENERGY SECTION MANAGER BYLIN: Before going
4 into further details on the Fuel Cell NEM Program, I will
5 give some brief background about the fuel cell technology.

6 Fuel cells use an electrochemical process to
7 convert fuel into electricity. Because the process occurs
8 at temperatures that are lower than combustion
9 temperatures, there are significantly lower criteria
10 pollutants, such as nitrogen oxides, or NOx. Fuel cells
11 can also have higher efficiencies than combustion
12 technology, meaning more electricity is produced from an
13 equivalent amount of fuel, resulting in lower fuel
14 requirements.

15 It has been found that fuel cells emit about 75
16 to 90 percent less NOx and about 75 to 80 percent less
17 particulate matter than other technologies. In other
18 words, fuel cells provide a significant benefit for air
19 quality relative to even the cleanest natural gas
20 generator.

21 Finally, when renewable hydrogen is used as a
22 fuel source, only water is emitted from the conversion
23 process.

24 --o0o--

25 ISD ENERGY SECTION MANAGER BYLIN: To be eligible

1 for CPUC's Fuel Cell NEM Program, an individual fuel cell
2 resource can be up to five megawatts. There is a minimum
3 efficiency requirement of 60 percent. And eligible fuel
4 cells must meet the applicable criteria pollutant emission
5 standards set by CARB's Distributed Generation
6 Certification Program.

7 The benefits authorized by AB 1637 can be applied
8 to up to 500 megawatts of fuel cell resources statewide.
9 The pie chart shows the nearly 81,000 megawatts of
10 in-state generation capacity in 2018, which includes
11 biomass, geothermal, hydroelectric, natural gas-fired,
12 nuclear, and renewable power plants.

13 The additional 500 megawatts of fuel cell
14 generation allowed by AB 1637 is added to show its effect
15 on the system overall. Five hundred megawatts is equal to
16 less than one percent of the total 2018 in-state
17 generation capacity.

18 Per the air quality benefits mentioned on the
19 previous slide, generating electricity from 500 megawatts
20 of fuel cells can result in up to 200,000 pounds of
21 avoided NOx emissions per year, when compared to the
22 cleanest natural gas powered generator. Air quality
23 benefits would increase even further, if the fuel cell
24 were to replace dirtier electricity generation.

25 As mentioned, AB 2165 required that all

1 qualifying fuel cells meet GHG emission standards for the
2 first time, and mandated the use of the GHG emission
3 standards developed for the CPUC's Self Generation
4 Incentive Program, or SGIP.

5 Then, in 2016, AB 1637 directed CARB to develop
6 new GHG standards for CPUC's Fuel Cell NEM Program.

7 --o0o--

8 ISD ENERGY SECTION MANAGER BYLIN: AB 1637
9 directs CARB to establish annual GHG emission standards
10 that reduce greenhouse gas emissions compared to the
11 electrical grid resources, including renewable resources,
12 that the fuel cell electrical generation resource
13 displaces, accounting for both procurement and operation
14 of the electrical grid.

15 CARB is to establish the schedule of GHG emission
16 standards and update the standards every three years with
17 applicable standards for each intervening year.

18 --o0o--

19 ISD ENERGY SECTION MANAGER BYLIN: I have
20 mentioned that prior to AB 1637, the Fuel Cell NEM Program
21 relied on SGIP GHG emission standards. Because of this,
22 CARB staff has received feedback that compares the
23 proposed Fuel Cell NEM GHG emission standards to SGIP
24 standards. The language in AB 1637 itself does not state
25 or imply any connection between Fuel Cell NEM GHG emission

1 standards and those set by SGIP and they are different
2 programs with different mandates, scope, and approach.

3 In terms of the statutory mandate for setting the
4 applicable GHG emission standards, the SGIP statutory
5 requirement is very general, linked to the reductions in
6 the California Global Warming Solutions Act of 2006, or AB
7 32 - specifically that California reduce GHG emissions to
8 1990 levels by 2020.

9 In comparison, AB 1637 gives CARB very specific
10 direction to set the Fuel Cell NEM GHG standards relative
11 to the electrical grid resource that is displaced by the
12 participating fuel cell.

13 In terms of the technologies eligible to receive
14 benefits under the programs, SGIP covers numerous
15 distributed generation technologies, such as wind
16 turbines, internal combustion engines, microturbines,
17 energy storage, and fuel cells. The Fuel Cell NEM Program
18 only applies to fuel cells.

19 Application of the GHG standards is also
20 different. Compliance with SGIP standards is based on a
21 single determination of eligibility based on first-year
22 and ten-year average GHG emission standards. And the
23 ten-year standard is larger than the first-year standard
24 because of an expected and normal decline in efficiency
25 that some technologies experience over time.

1 This is quite different from the Fuel Cell NEM
2 Program and the standards, which, according to our
3 proposal, will decline by at least two and a half percent
4 every year and for which eligibility must be reverified
5 annually.

6 This year-over-year two and a half percent
7 decline aligns with the 2030 integrated resources planning
8 GHG targets for the electricity sector overall. These
9 planning targets were established -- were required by SB
10 350 and take into account the 2030 RPS target set by SB
11 100.

12 Importantly, while SGIP allows increases in GHG
13 emissions from the eligible technology over time, the
14 proposed Fuel Sell NEM GHG emission standard requires
15 lower GHG emissions year on year. Finally, SGIP has a
16 renewable fuel requirement of 50 percent in 2019, which
17 goes to 100 percent in 2020. Because of the renewable
18 fuel requirement, the SGIP program essentially moves from
19 having a GHG requirement to a biofuel requirement.

20 This means that beginning in 2020, no
21 technologies that operate on natural gas will be eligible
22 for SGIP. There is no renewable fuel requirement in the
23 Fuel Cell NEM Program, and by implication fuel cells
24 operating on natural gas can qualify for the program.

25 However, the declining standard means that over

1 time fuel cells must switch renewable fuel or otherwise
2 make significant efficiency improvements to continue to be
3 eligible for the Fuel Cell NEM Program.

4 --o0o--

5 ISD ENERGY SECTION MANAGER BYLIN: Now, I'd like
6 to give an overview of the process leading up to the
7 proposed regulation. Between 2017 and 2019, CARB staff
8 held three workshops and one working group meeting to
9 discuss the Fuel Cell NEM standards. These informal
10 pre-rulemaking discussions provided staff with useful
11 information that was considered during the development of
12 the proposed regulation.

13 Throughout the process, CARB staff proposed and
14 considered five different options for determining the Fuel
15 Cell NEM GHG emission standards. One conclusion that came
16 from the workshops and the discussions with State agencies
17 and to which stakeholders generally agreed is that the
18 electrical grid resources most likely to be displaced by
19 fuel cells is the marginal generator.

20 Data on the operation of California's electrical
21 grid indicate that, for 2017, natural gas power plants are
22 the marginal generator more than 98 percent of the time,
23 and renewable power plants are the marginal generator the
24 rest of the time.

25 --o0o--

1 ISD ENERGY SECTION MANAGER BYLIN: Though AB 1637
2 does not provide any statutory requirements related to
3 average grid emissions from all of the generating
4 resources used in the state, some stakeholders have
5 suggested the average grid GHG emissions are a relevant
6 benchmark. Therefore, with this slide, we will explain
7 average grid GHG emissions and how they are different from
8 the marginal generator GHG emissions.

9 The average GHG emission rate for California
10 electricity generation accounts for emissions from all
11 power plants that operated during the year. The pie chart
12 shows the mix of power generation capacity that is
13 included in calculating California's average GHG emission
14 rate. And it includes fossil fuel, nuclear,
15 hydroelectric, and renewable generation.

16 Marginal generators are a subset of all
17 electricity generation in California. And whether they
18 run or not depends on electricity demand. They are the
19 last power plant that is activated to meet an incremental
20 change in electricity demand.

21 Electricity grid operations in California are
22 structured such that the cleanest and lowest-cost power is
23 usually dispatched first. The marginal power plants are
24 always the most expensive available power plant and also
25 tend to be the most GHG intensive.

1 Only the GHG emissions from the marginal plants
2 are used to calculate the marginal GHG emission rate.
3 This graphic illustrates the concept of the marginal
4 generator. The electricity demand is at this level, and
5 as mentioned, the cheapest and usually cleanest power
6 plants will be dispatched first. As the electricity
7 demand increases, the more costly and usually more
8 polluting plants come online until the electricity demand
9 is met.

10 The last power plant, which is dispatched to meet
11 electricity demand is the marginal generator and it is
12 represented here by the black rectangle. When a one
13 megawatt fuel cell is installed, that marginal generator
14 doesn't need to be dispatched.

15 Natural gas power plants are almost always the
16 last plants dispatched to serve electricity loads, because
17 they have the greatest ability to increase and decrease
18 output in response to the needs of the electrical grid.

19 We want to note that the idea of a marginal
20 generator is not a new one. It has been used for about a
21 decade in the Mandatory Greenhouse Gas Reporting
22 Regulation, the Greenhouse Gas Inventory for California,
23 and the Cap-and-Trade Program. It is presented in the
24 form of the unspecified electricity import emission
25 factor, which has a calculated value of 428 kilograms of

1 greenhouse gases per megawatt hour. This number
2 represents the average GHG efficiency of a natural
3 combined cycle plant -- combined cycle plant operating
4 within the broader western electrical grid.

5 --o0o--

6 ISD ENERGY SECTION MANAGER BYLIN: This slide
7 will show another way to consider the difference between
8 the average and marginal GHG emission rates. All emission
9 rates are noted in kilograms of carbon dioxide equivalent
10 per megawatt hour.

11 One of the least efficient natural gas power
12 plants, the so-called peaker plant, has an average 2017
13 emission rate of 560 kilograms. In the bucket shown on
14 the right, this plant is represented by the black
15 rectangle at the top.

16 For 2017, the average marginal GHG emission rate
17 for all natural gas plants in California was 414
18 kilograms. This represents emission rates of both peaker
19 plant and the more efficient natural gas combined cycle
20 power plants weighted by the number of hours that each
21 operates.

22 Here, we visually represent this by showing the
23 relatively small bucket with peaker plants on the margin
24 and the much larger buck with the cleaner natural gas
25 combined cycle plants, which are represented in gray also

1 on the margin.

2 The proposed 2017 Fuel Cell NEM standards take
3 into account the amount of time that natural gas
4 generators and renewable generators were on the margin in
5 2017, and the calculated standard is 409 kilograms.

6 This calculation is represented with the buckets
7 that show when peaker plants are on the margin, natural
8 gas combined cycle plants are on the margin, plus a
9 smaller bucket that represents the 110 hours that
10 renewables were on the margin in 2017.

11 We presented for comparison the 2017 average GHG
12 emission rate for all power plants operating in
13 California, and this value is 228 kilograms. Once again,
14 this pie chart shows the power generation capacity mix
15 that is used to calculate the average GHG emission rate.
16 The mix includes biomass, geothermal, hydroelectric,
17 natural gas-fired, nuclear, and renewable power plants.

18 --o0o--

19 ISD ENERGY SECTION MANAGER BYLIN: This slide
20 shows the proposed and potential GHG emission standards
21 for the Fuel Cell NEM Program over a ten-year period. The
22 proposal sets the 2017 standard at 409 -- 409 kilograms
23 and cleans at a minimum rate of two and a half percent per
24 year, reducing to 360 kilograms. And again, that's per
25 megawatt hour in 2022.

1 The two and a half percent reduction aligns with
2 the 2030 GHG emissions planning target for the electricity
3 sector, that was calculated by CARB in response to SB 350
4 and that reflects the more recent 2030 Renewables
5 Portfolio Standard requirements set by SB 100.

6 This decline ensures that fuel cells are reducing
7 GHG emissions in line with the GHG emission planning
8 targets that CARB has set for the electricity sector.

9 For 2023, and every three years through -- every
10 three years after, through 2047, the standard will be
11 recalculated using the latest available data. The method
12 for calculating the standard takes into account the
13 average marginal natural gas generator GHG emission rate
14 for California using public data collected by the CEC,
15 then adjust that emission rate by the number of hours that
16 renewables are the marginal generator, based on public
17 data from the California Independent System Operator.
18 Finally, the standard will be reduced by two and a half
19 percent each year.

20 If any calculated standard is higher than the
21 prior year's standard, the standard will instead be set by
22 reducing the prior year's standard by two and a half
23 percent. This methodology ensures that Fuel Cell NEM GHG
24 emission standards continue to decrease over time.

25 --o0o--

1 ISD ENERGY SECTION MANAGER BYLIN: The proposal
2 before the Board today starts with actual data, which
3 therefore reflects actual emissions based on the operation
4 of the electricity grid. The method incorporates
5 renewables in two ways. Renewables procurement is
6 accounted for by considering the amount of time that
7 renewables are on the margin. Also, reducing the GHG
8 emission standards annually by two and a half percent
9 aligns with the 2030 GHG emission planning targets for the
10 electricity sector, which corresponds to the 2030
11 renewables portfolio standard requirements set by the
12 Legislature. And operations of the grid continue to be
13 reflected in future updates of the standard, which will
14 rely on the most recently available public data that
15 reflect actual grid operations.

16 --o0o--

17 ISD ENERGY SECTION MANAGER BYLIN: In summary,
18 the proposed Fuel Cell NEM -- NEM standards meets -- meet
19 the mandate specified in AB 1637. They encourage
20 near-term availability and deployment of fuel cells, and
21 promote greenhouse gas emission reductions and local air
22 quality benefits.

23 The near-term availability of fuel cells is an
24 important feature of this proposed regulation, as only
25 fuel cells installed by the end of 2021 are eligible for

1 the Fuel Cell NEM Program benefits.

2 These fuel cells could help with the immediate
3 need to -- could help with the immediate need to address
4 the electricity disruptions that occur during the Public
5 Safety Power Shutoff events. Further, they could be used
6 in place of diesel generators, thereby avoiding the public
7 health risk caused by diesel particulate matter.

8 The standard also declines consistently,
9 promoting replacement of fossil fuels with renewable gas
10 over time in line with the 2017 Scoping Plan Update, which
11 stated the need to move away from natural gas toward
12 cleaner fuels. According to our estimates, some fuel
13 cells will have to begin using biogas in 2025 to be able
14 to meet the proposed standards.

15 Finally, the proposal aligns with other State
16 policies to achieve legislatively mandated climate goals
17 and a cleaner electrical grid.

18 --o0o--

19 ISD ENERGY SECTION MANAGER BYLIN: For these
20 reasons, staff recommends that the Board approve the
21 proposed regulation.

22 CHAIR NICHOLS: Thank you. Sorry. I walked in
23 after the beginning of your presentation, but I did have
24 an opportunity to review this material, as well as some of
25 the papers that were submitted on this issue last night.

1 And I've had a couple of calls over the last few weeks
2 about this issue. Who would have thought that something
3 called Fuel Cell Net Energy Metering would engender as
4 much excitement as this has.

5 (Laughter.)

6 CHAIR NICHOLS: But I do want to underscore that
7 this is really very important and I'd like to sort of give
8 you an opportunity, either you or one of your colleagues,
9 to explain why this matters, why are we here, and why is
10 this so important. I know the Legislature told us to do
11 it, but beyond that.

12 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

13 Good morning, Chair Nichols, Board members. I
14 can take an attempt to under -- to describe why we think
15 this is important.

16 So we have two -- two things that we're planning
17 for. The immediate need is the power shutoffs, and the
18 immediate need is to make sure that there's reliable
19 energy available when we have a grid that's in flux and
20 looking to become more resilient. But we also have
21 long-term planning for climate targets and air quality
22 targets.

23 And in both of these, fuel cells have an
24 important role that they can play. So as we think about a
25 horizon for funding, which 2021, and we think about

1 funding to get some of this long-term technology deployed
2 today, fuel cells meet that requirement. And so setting a
3 standard that not only makes it possible to deploy fuel
4 cells, in the near term, but also makes sure that they're
5 available for the long term for our long-term goals.

6 And the standard itself reflects the best
7 science, the best data. It represents almost two or three
8 years of technical work and technical discussions that
9 have happened. We understand that there are concerns that
10 this somehow locks in natural gas assets into the system.
11 We don't believe it does.

12 The declining standard incentivizes renewable
13 biogas use or greater efficiency in fuel cells themselves,
14 or it requires us to think about getting renewable
15 hydrogen into the natural gas infrastructure and
16 decarbonizing the natural gas system, which is a long-term
17 goal for the State of California.

18 And for all those reasons, we do think that this
19 is a good technology to try and get deployed to meet
20 multiple objectives.

21 CHAIR NICHOLS: And not to telegraph my thinking
22 too far in advance, but is there anything sacred about the
23 slope of the reduction that you have put out there, the
24 two and a half? I know you said it's consistent with the
25 2017 Scoping Plan, but 2017 isn't the last scoping plan

1 that we're going to be doing either.

2 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: The
3 two and a half percent also represents the linear decline
4 in SB 100, which set the RPS at 100 -- or 60 percent in
5 2030, and that was passed In 2018.

6 And so we do have a decline that represents
7 recently legislation on how the grid should become more
8 cleaner over time. Certainly, that's one factor that we
9 looked at. There are other slopes that could be looked at
10 when we think about other variables, but we wanted to
11 align with existing statutory mandates for the overall
12 grid.

13 CHAIR NICHOLS: Yeah, and that's very reasonable
14 principle. But let's say this Board decided that they
15 wanted to push faster, farther, that would not be -- would
16 not undermine the successful implementation of the
17 program. It would just get us more renewable hydrogen
18 faster presumably.

19 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:
20 That's correct. The way that we looked at the
21 analysis, what we see is either the technology has to
22 significantly become more efficient year over year, or
23 we're integrating renewables whether it's hydrogen or
24 renewable gas towards the middle of the next decade. An
25 increase in slope would make sure that -- that renewable

1 integration happens sooner than what the schedule has
2 right now.

3 CHAIR NICHOLS: Okay. Thank you.

4 With that, without further ado, we do have a list
5 of people who have signed up to testify. So let's begin.

6 BOARD MEMBER SPERLING: Chair Nichols?

7 CHAIR NICHOLS: Yes.

8 BOARD MEMBER SPERLING. Can I just ask one
9 clarifying question?

10 CHAIR NICHOLS: Yes, you may.

11 BOARD MEMBER SPERLING: I don't think you said
12 anything about replacing diesel generators until the very
13 end. My understanding, following this industry over
14 decades, is that they are more expensive and you only use
15 them if there's some unusual reason. And that unusual
16 reason usually is because you need a reliable backup, like
17 at a hospital, or, for instance, in some of these places
18 that are vulnerable to cutoffs.

19 So the marginal generator it seems to me is more
20 likely to be a diesel generator than a natural gas power
21 plant, is that not right?

22 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: So
23 in looking at the way the legislation is written and the
24 words that were looked at by our attorney several times to
25 make sure we got this absolutely right, the legislation is

1 relative to the overall grid and what is on the margin of
2 the overall grid.

3 In terms of the application, yes, they could
4 replace diesel generators, which means that you'll get --
5 which means you're actually getting a much higher benefit
6 for PM when you put in a fuel cell versus some of other
7 kind of technology. But the mandate was to think about
8 the overall grid. So we tried to stick to that piece of
9 it.

10 BOARD MEMBER SPERLING: Well, not just -- just to
11 not telegraph too much what I think --

12 (Laughter.)

13 BOARD MEMBER SPERLING: -- is that these are
14 providing a huge benefit and they're not -- they're never
15 going to play a major role, because they're always going
16 to be more expensive. So let's think about how to
17 accomplish the goal of motivating investment and
18 innovation.

19 CHAIR NICHOLS: Okay. Without further ado, let's
20 begin the witness list.

21 Mr. Mair.

22 MR. MAIR: Good morning, Chair, Vice Chair, and
23 Board members. My name is Christopher Mair and I work for
24 Assembly Member Evan Low. He wishes he could be here
25 today, but had a prior commitment and asked me to read the

1 following statement on the item currently before the
2 Board.

3 In 2016, I authored Assembly Bill 1637, which
4 extended, expanded, and modified the Fuel Cell Net Energy
5 Metering Program, which is implemented by the CPUC and is
6 intended to encourage substantial private investment in
7 these energy resources in California, in recognition of
8 the multiple benefits associated with this technology.

9 Not only can fuel cells reduce greenhouse gas
10 emissions, fuel cells are a non-combustion technology, so
11 they emit significantly less particulate matter and oxides
12 of nitrogen. As this Board knows well, these criteria
13 pollutants are public health threats that California is
14 obligated to reduce under both federal and State law.

15 AB 1637 requires the Board to adopt an annually
16 declining standard for Fuel Cell Net Energy Metering to
17 ensure that fuel cells reduce greenhouse gas emissions
18 compared to the electrical grid resources, including
19 renewable resources that the fuel cell electrical
20 generation resources -- resource displaces, accounting for
21 both procurement and operation of the electrical grid.

22 My legislation was intended to ensure that fuel
23 cells are cleaner than the energy that they displace. And
24 that is what the staff proposal accomplishes. Moreover,
25 given their air quality benefits, fuel cells provide a

1 benefit to communities and ratepayers beyond the
2 greenhouse gas reductions.

3 For these reasons, I am in strong support of the
4 proposed standard before you today.

5 I would also like to address claims that have
6 been made that the Legislature intended that this standard
7 to be set so strictly that fuel cells would essentially
8 have to operate in a carbon neutral fashion, a hundred
9 percent renewable gas, in order to qualify for the cell --
10 for the Fuel Cell Net Energy Metering benefits.

11 I think all of us would like to see fuel cells be
12 carbon neutral eventually, but that is not achievable by
13 the industry as a whole today, which is why such a
14 requirement was not included in my legislation.

15 The reason the bill called for an increasingly
16 stringent standard was to provide for fuel cells to
17 transition to renewable gas as its fuel and eventually
18 renewable hydrogen.

19 I am pleased to see that the Board has faithfully
20 proposed a standard consistent with both the unambiguous
21 language my bill put into statute and the obvious intent
22 of the Legislature. The proposed standard will help
23 ensure that the air quality and climate change benefits
24 that fuel cells offer can be realized by displacing more
25 polluting resources through the encouragement of growth

1 and innovation within the California fuel cell industry.

2 In the new normal of Public Safety Power Shutoffs
3 and wildfires, this standard will give California
4 additional clean options that to keep their lights on.
5 For these reasons, I respectfully encourage the Board to
6 approve the proposed standard without modification.

7 Thank you.

8 CHAIR NICHOLS: Thank you.

9 DR. FINE: Good morning, Chair Nichols, members
10 of the Board. My name is Philip Fine. I'm a Deputy
11 Executive Officer -- oh, sorry. I'll start again.

12 Good morning, Chair Nichols, member -- members of
13 the Board. I'm Philip Fine. I'm a Deputy Executive
14 Officer at the South Coast Air Quality Management
15 District.

16 Thank you for the opportunity to testify in
17 support of the proposed fuel cell GHG regulation. My
18 comments are on behalf of both the South Coast AQMD, as
19 well as the California Air Pollution Control Officers
20 Association, or CAPCOA.

21 As you know, our region, along with many other
22 areas of the state face a daunting challenge in meeting
23 upcoming federal air quality standards, requiring
24 aggressive reductions in NOx emissions. Fuel cells can
25 help by displacing diesel generators used for emergency or

1 portable power applications, engines that are a
2 significant source of NOx, PM, and toxic emissions.

3 Concern around public health impacts from diesel
4 generator emissions has been brought to the fore in the
5 wake of the numerous Public Safety Power Shutoffs, also
6 known as PSPS events, that have occurred in this state
7 since the start of the fire seasons.

8 This Fuel Cell NEM will encourage the use of
9 cleaner technologies in lieu of diesel fire engines in our
10 response to those emergencies. As they are deployed, we
11 agree with CARB staff that reductions in GHG criteria and
12 toxic emissions will be realized. In addition to helping
13 us move towards improving regional air quality, fuel cells
14 align well with other strategies that districts and
15 community groups have identified in progressing towards
16 the community health goals of AB 617.

17 Eventually, as fuel cells are able to transition
18 to renewable natural gas and hydrogen, they will provide
19 significant GHG emission benefits. Because fuel cells are
20 much more efficient and cleaner than gas turbines or
21 internal combustion engines at producing electricity, we
22 believe they could also play a key role in the State's
23 need to address renewable integration challenges.

24 We believe that the Fuel Cell NEM is a step in
25 the right direction in ensuring cleaner technologies are

1 deployed to address the state's overall electricity
2 climate and air quality needs.

3 Finally, speaking solely on behalf of South Coast
4 AQMD, where we have the worst ground level ozone pollution
5 in the country, we cannot afford to leave a technology
6 with significantly lower criteria pollutant emissions out
7 of our overall attainment strategy. An overly stringent
8 standard that restricts the use of fuel cells could
9 further perpetuate the use of diesel engines for backup
10 and portable power applications, counter to both air
11 quality and GHG emission goals.

12 In summary, both CAPCOA and South Coast AQMD
13 staff support this proposed regulation that will encourage
14 additional deployment of fuel cells and ask that you adopt
15 it.

16 Thank you.

17 CHAIR NICHOLS: Thank you.

18 MR. TANG: Hi. Good morning, Chair Nichols and
19 members of the Board. My name is Mark Tang, and I'm a
20 manager at the Bay Area Air Quality Management District.
21 And I'm here to express the Air District's support of the
22 proposed Fuel Cell Net Energy Metering Greenhouse Gas
23 Emissions Standards Regulation.

24 Fuel cells are critical to displacing diesel
25 generators and meeting California's air quality carbon

1 reduction and resilient energy objectives. With
2 increasing extreme wildfire events and grid outages,
3 diesel generator use is rising in the Bay Area.

4 The increasing prolonged use of combustion based
5 generators in the Bay Area is threatening our air clean
6 and greenhouse gas reduction goals. Non-combustion based
7 fuel cells can provide uninterruptible clean power during
8 outages producing virtually no criteria air pollutants.

9 Further, co-locating fuel cell systems with
10 battery storage and local renewable energy generation,
11 also known as microgrids, displaces fossil fuel based
12 energy generation, improving air quality in our rural,
13 vulnerable, and disadvantaged communities, and supports
14 the goals of AB 617.

15 Finally, the Air District believes non-combustion
16 fuel cells are an important component to meeting
17 California's zero-emission objectives and we encourage you
18 to adopt this rule today.

19 Thank you.

20 MS. JENSEN: Good morning, Chair Nichols, Vice
21 Chair, and members of the Board. My name is Courtney
22 Jensen and I'm with TechNet who represents the leading
23 technology and innovation companies.

24 We support ARB's proposed Greenhouse Gas Standard
25 for Fuel Cell Net Energy Metering projects. It is a

1 rigorous data-driven standard that will give our members
2 the policies certain to continue investing in fuel cell
3 projects that reduce GHG's, improve air quality, and
4 provide unparalleled resiliency.

5 In recent years, California has taken major
6 policy steps toward achieving its air quality goals. But
7 all of this progress could be threatened by California's
8 new normal of Public Safety Power Shutoffs, wildfires, and
9 extreme heat.

10 Many of our members and their customers were
11 negatively impacted by the unprecedented PSPS events that
12 occurred this October. Non-combustion fuel cells provide
13 a unique way to solve these challenges. This innovative
14 technology is a key option for our members, who want to
15 move beyond traditional diesel generators, while reducing
16 GHGs and improve air quality.

17 We commend ARB for developing an accurate,
18 continually improving GHG standard that will give our
19 members the confidence to invest in fuel cell projects to
20 power their operations moving forward. And we ask that
21 the Board approve this rule.

22 Thank you.

23 MS. QUIROZ: Good morning, Chair and members.
24 Thank you for the opportunity to provide comment to you
25 today. My name is Priscilla Quiroz. And I'm here today

1 representing the Advanced Energy Economy, AEE.

2 AEE is a national association of business leaders
3 who are making the energy system more secure, clean, and
4 affordable. AEE supported AB 1637, which extend the Fuel
5 Cell Net Energy Metering Program and specified CARB's
6 pivotal role in helping foster this technology by creating
7 an accurate greenhouse gas emissions standard.

8 AEE is similarly supportive of the data-driven
9 technology sound methodology that CARB has developed in
10 the proposed regulations. It will reduce GHGs, improve
11 air quality, and provide clear guidance to California
12 customers who wish to choose fuel cells instead of diesel
13 generators for their clean energy, resiliency, and
14 sustainable needs.

15 As the State confronts the reliability and
16 resiliency challenges of heightened wildfire and climate
17 risk, AEE believes this GHG methodology is another key to
18 enabling technology solutions that will help -- that will
19 lead to clean resilient, and secure, and affordable energy
20 future. This proposed regulation is well crafted and will
21 result in overall benefits to the State's emission
22 reduction, economic prosperity, and innovation goals.

23 Thank you.

24 MR. CORT: Good morning. Paul Cort with
25 Earthjustice. Earthjustice today recommends that the

1 proposed standards be rejected or at least revised to
2 include a steeper rate of decline. And this is not fuels
3 cells versus no fuel cells. This is about what kind of
4 fuel cells we want to subsidize.

5 The proposed standard is significantly weaker
6 than an analogous standard -- fuel cell standard adopted
7 by the Public Utilities Commission over two years ago.
8 And while CARB's standard declines over time, the decline
9 rate is so slow that the CARB standard would not catch up
10 to the PUC standard until 2026.

11 Because CARB's standard is so lax, it will allow
12 the most inefficient and polluting fuel cells to operate
13 off fossil fuels and still qualify for public subsidies.
14 The pollution from these technologies and their
15 inconsistent with -- inconsistency with greenhouse gas
16 reduction goals are why places like the City of Santa
17 Clara has banned the use of some of these fuel cells.

18 CARB's standards should not support these
19 inefficient technologies. And I haven't heard anything in
20 the staff justification that says setting a higher
21 standard would somehow preclude the use of these fuel
22 cells that are more efficient.

23 Thank you.

24 MR. MCCARTHY: Good morning, Chair Nichols and
25 Board members. My name is Steve McCarthy. I'm with the

1 California Retailers Association.

2 And I just wanted to briefly state on behalf of
3 our retail members our support for the proposed standard
4 for Fuel Cell Net Energy Metering standards. These
5 standards will help our retail members -- provide our
6 retail members with much needed options. And I wanted to
7 echo the comments particularly earlier with regard to
8 Public Safety Power Shutoffs. This is a challenge for our
9 members and the standards will help us move forward in
10 that area.

11 Thank you.

12 MR. BARAD: Good morning, Chair and members.
13 Daniel Barad on behalf of Sierra Club California. We'd
14 like to align our comments with those made by
15 Earthjustice. The proposed Fuel Cell Net Energy Metering
16 Standard is not strong enough. We would like for the
17 Board to reject the measure as proposed. But at minimum,
18 the Board should direct staff to create a standard decline
19 rate that is faster and therefore more in line with the
20 State's climate goals.

21 Thank you.

22 MR. WIRAATMADJA: Good morning, Madam Chair and
23 members. Vincent Wiraatmadja with the Weideman Group,
24 here on behalf of the California Hydrogen Business
25 Council. CHBC is an organization that represents over a

1 hundred companies involved in the hydrogen industry,
2 ranging from producers to end users and is in strong
3 support of the staff proposal. We appreciate staff's very
4 deliberate and data-driven process and thank them for all
5 their work.

6 As staff noted, the declining standard will cause
7 fuel cells to become cleaner over time. And through the
8 use of -- through the use of cleaner fuels, including
9 hydrogen.

10 As fuel cells see greater deployment, hydrogen
11 can be used to decarbonize the gas system and support
12 making fuel cells cleaner, as staff noted in their
13 comments. This will be especially critical as the state
14 grapples with Public Safety Power Shutoffs and seeks to
15 find ways to mitigate the use of diesel generators, while
16 still providing safe and reliable power for the state's
17 residents impacted by PSPS.

18 Fuel cell NEM will ensure that these advanced
19 clean energy generation technologies will continue to
20 provide air quality benefits and GHG reductions. The
21 hydrogen industry stands ready to help in this effort and
22 strongly supports the standards.

23 Thank you.

24 MR. YOUNG: Thank you, Chair and members for the
25 opportunity to be heard. My name is Josiah Young. I

1 represent the Bioenergy Association of California, known
2 as BAC, B-A-C. BAC represents more than 70 public
3 agencies, local governments, utilities, and private
4 companies working to convert organic waste to energy to
5 help the state meet its climate, clean energy, and air
6 quality goals.

7 BAC does support this proposed Fuel Cell Net
8 Energy Metering Regulations. The reason behind that, that
9 we want to point out is that California has a lot of
10 in-state biogas potential from diverted organic waste
11 sources, dairy waste, wastewater, biogas, landfill gas,
12 agricultural, and forest waste. So using in-state biogas
13 in fuel cells will help reduce the short-lived climate
14 pollutants emissions and air pollution, while providing
15 important benefits for the grid that solar, wind, and
16 batteries can not along provide.

17 Thank you.

18 MR. QUESADA: Good morning, Chair Nichols, ARB
19 Board, and staff. Thank you very much for hearing me out
20 today.

21 I'm going to be a little bit different than a lot
22 of the other people you've heard today, because, for one,
23 I actually have a fuel cell installed at my business.
24 Two, at age five, I was diagnosed with asthma, severe
25 asthma. And anybody that has ever experienced a severe

1 asthma attack knows the trauma of not being able to take
2 your breath for granted.

3 My name is PJ Quesada. I'm the Vice President of
4 Ramar Foods, and third-generation family business based in
5 Pittsburg, California. We have offices also in Huntington
6 Park, California. We're known throughout the Filipino
7 community as the makers of the delicious purple ice cream.
8 Some people know it as Ube. We're also --

9 (Laughter.)

10 MR. QUESADA: Okay. Selfless plug.

11 We also make the most Lumpia out of anyone on
12 this side of the planet.

13 (Laughter.)

14 MR. QUESADA: I'm quite proud of that. Now, all
15 this food is frozen. And the whole industry is trying to
16 move away from preservatives. So naturally temperature is
17 what we use to keep our products safe and delicious
18 throughout the supply chain. And powering refrigeration
19 is probably the most capital intensive type of industry
20 you can hope -- can you hope to even get into. I think
21 the oil and gas industry is the only one that's more
22 capital intensive than frozen food.

23 That being said, in 2013, we made the decision to
24 install a 200 kilowatt fuel cell onsite that was actually
25 itself made here in the Bay Area -- well, here in

1 California.

2 And since it's installation, we've avoided over a
3 million pounds -- or almost a million pounds of CO2 from
4 being released in the atmosphere. At the same time, we're
5 sending a clear message to our employees, our City of
6 Pittsburg, and our community, and our competitors that we
7 take this type of thing seriously.

8 Important also, in addition to the clean air
9 standards that this helps enforce, there's actually a very
10 compelling economic reason for businesses like mine.
11 We're a small business, about 200 employees in California.
12 We need more reasons for businesses like mine to get on
13 board with the clean energy future and enable us to do it
14 without making us uncompetitive, because California is not
15 a cheap state to run a business and every little bit
16 helps. These standards will help the cost of renewable
17 fuels come down, because the -- when we re-upgraded our
18 fuel cell system earlier this year - basically, we're now
19 in round two we like it so much - we found that the cost
20 of the equipment is now approaching a competitive cost
21 against other onsite generation like cogen.

22 So I believe that this standard will help support
23 the installation of more of this technology and will help
24 drive down the cost of biofuels moving forward.

25 Thank you very much for your time.

1 MS. GRIZARD: Good morning, Chair and Board
2 Members. Erin Grizard with Bloom Energy. Thank you so
3 much for your time on this agenda item.

4 First, thank you to the staff. We appreciate the
5 staff's three-year commitment of time hard work and
6 subject matter expertise that has led to a thorough,
7 complete, and robust record. We must also acknowledge the
8 considerable contributions of the CEC and CAISO expertise
9 developing the methodology that is before you today.

10 Given the in-depth analysis taken in developing
11 this standard, we support the staff proposal for four key
12 reasons. First, ARB meticulously evaluated multiple
13 methodologies. The standard declines over time and will
14 be reevaluated in 2023. The declining standard will drive
15 the adoption of renewable fuel from biogas.

16 The various comments and positions raised by
17 parties have been exhaustively analyzed over a three-year
18 process. The ARB and CEC staffs' expertise and detailed
19 public processes should give the Board confidence in
20 adopting this regulation today. The fact that the rules
21 must be revisited in 2023 will provide ample opportunity
22 to account for the evolving nature of California's
23 complicated energy system.

24 Adoption of the GHG standard today will further
25 enumerate State policies, including many mentioned today,

1 SB 100, SB 350, AB 617, SB 1383, and others. Fuel cells
2 are an alternative to combustion and diesel for customers
3 during PSPS and other climate change events.

4 The fact of the matter is that we need real
5 pragmatic solutions to both the cause and consequences of
6 climate change. Without fuel cells, California hospitals,
7 business, and manufacturers are forced to choose between
8 losing power for days and using a polluting diesel
9 generator. This is a terrible decision.

10 Thanks to the staff's work, this standard gives
11 them another critical option to both keep their operation
12 running and reduce GHGs. This standard will also support
13 the development of real -- resilient microgrids. So far
14 in 2019, Bloom systems have avoided 645 outages for our
15 customers, the longest of which was over five days.

16 In California, we have 89 customer microgrids in
17 operation and 26 of those microgrids are in the service
18 areas subject to PSPS. Finally, fuel cells provide a
19 pathway to 2045 carbon and criteria air pollution
20 reduction goals with renewable fuels including biogas and
21 hydrogen. Earlier this year, Bloom announced a
22 partnership with CalBio that would result in our
23 non-combustion fuel cells generating power from dairy
24 methane that will charge zero-emission electric vehicles.
25 This standard is a key ingredient to facilitating more of

1 these projects.

2 In the face of increasing disruptions to
3 California's aging electricity grid, this standard
4 provides a data-driven, continually updated performance
5 standard that incentivizes innovation for a technology
6 that is foundational to meeting California's ambitious
7 methane reduction, air quality, clean energy, and
8 environmental goals.

9 For these reasons, we ask for you to support the
10 staff proposal.

11 Thank you.

12 DR. BROUWER: I was asked to try this button on
13 the side here.

14 (Laughter.)

15 DR. BROUWER: So I'm going to try it.

16 Wow. Pretty cool. It goes up and it goes down.

17 We had a gentleman earlier that needed it to go
18 up quite a bit. He was tall.

19 Hey, there we go.

20 Good morning, Chair Nichols and the rest of the
21 Board members. My name is Jack Brouwer. I'm a professor
22 of mechanical and aerospace engineering at the University
23 of California, Irvine.

24 And I have been fortunate to work with a very
25 talented group of graduate students over the last 22

1 years, essentially to study the methods by which we can
2 get to zero emissions in our society. And as a result, we
3 have used various methodologies for determining how can we
4 actually reduce emissions, both greenhouse gas emissions
5 and criteria pollutant emissions so that we can get to
6 totally zero by our -- by 2050 or sooner than 2050.

7 Because of that, we have looked at this analysis
8 that the CARB staff has come up with and have compared it
9 to our own analysis methodologies and understand it to be
10 the technically accurate methodology for determining
11 whether or not any technology would reduce emissions
12 compared to the grid. And this marginal emissions
13 analysis is the appropriate technically accurate way to do
14 it.

15 So we know by looking at these numbers then, if
16 fuel cells are installed and meet these standards, they
17 will reduce greenhouse gas emissions.

18 In addition, I'm speaking in support of the
19 declining schedule of emissions reductions. These
20 emission reductions are consistent with California policy
21 and will enable us to get to our policy goals of zero
22 emissions by the 2045 goal that is established in law
23 today, so -- and finally, the air quality benefits that
24 these stationary fuel cells will also provide us in the
25 end are very important to consider. It's not only air

1 quality benefits that are in comparison to the grid, which
2 they will do as well, but they are also in comparison to
3 diesel gen sets.

4 So Professor Sperling is exactly correct in
5 noting that displacing dirty combustion-based back-up
6 power is one of the most important contributions that
7 these fuel cells systems will make.

8 So thank you for the opportunity to speak.

9 CHAIR NICHOLS: We have a question.

10 BOARD MEMBER BALMES: Yes. Thank you for the
11 presentation Professor Brouwer.

12 DR. BROUWER: Yes.

13 BOARD MEMBER BALMES: The question I have is
14 related to what you just brought up in terms of Dr.
15 Sperling's comment earlier.

16 DR. BROUWER: Yeah.

17 BOARD MEMBER BALMES: Can you give me an idea
18 about how many diesel gen sets there are out now that
19 would be replaced by fuel cells, you know, just roughly
20 speaking?

21 DR. BROUWER: So if -- the law calls for, I
22 think, 500 megawatts of installations. Typical
23 installations are order of magnitude 200 kilowatts or so.
24 If you -- I can't do the math very well in my head here,
25 but that sounds to me like about a thousand diesel

1 generators or so that could be displaced by this law.

2 BOARD MEMBER BALMES: Okay. And do you know
3 roughly how many of those diesel generators are out there
4 now providing this marginal power, roughly speaking?

5 DR. BROUWER: I don't the number that -- of
6 diesel generators that are out there now.

7 BOARD MEMBER BALMES: Okay. Thank you.

8 CHAIR NICHOLS: Ms. Mitchell.

9 BOARD MEMBER MITCHELL: Yes. Thank you,
10 Professor Brouwer for coming today.

11 My question is kind of broader than diesel
12 generators. Although, we recognize these are a big source
13 of emissions in our area. But we have looked at fuel
14 cells as being -- having a future in microgrids --

15 DR. BROUWER: Yes.

16 BOARD MEMBER MITCHELL: -- to provide power to
17 neighborhoods and to smaller areas. I wonder if you could
18 just talk about that a little bit. It's a matter of
19 education I think.

20 DR. BROUWER: Thank you for that question. Yes.
21 Today fuel cells are being installed in other
22 jurisdictions, for example, in the east coast, in Japan,
23 in Korea in microgrids that are enabling them to serve
24 multiple customers, so to actually serve senior centers,
25 public health facilities like hospitals, together with

1 police departments and fire stations. And they're enabled
2 in these microgrids to not only provide lower emissions
3 and higher efficiency power, but also to ride through grid
4 outages.

5 And they've proven this in many different
6 circumstances. The presentation that we submitted
7 together with our comments shows these examples of
8 resilience that has been introduced by stationary fuel
9 cell systems in these applications.

10 And these zero-emissions goals that we have as a
11 state, I have not found another technology, other than
12 hydrogen and fuel cells, that can complement solar energy
13 storage, wind, okay, and give us zero emissions throughout
14 society.

15 So we not only need them in the immediate
16 short-term for PSPS events and things like this, but we
17 also need them for those zero-emissions long-term goals,
18 because they're the only zero-emissions technology that
19 can, for example, operate for weeks on end, right, when
20 the grid goes down.

21 And there are examples of weeks of outages that
22 microgrids containing fuel cells, but also containing
23 solar and batteries, okay, have been able to ride through.

24 BOARD MEMBER MITCHELL: And so one of the
25 advantages that I've seen in microgrids is that as you put

1 that power source closer to the users of that power, you
2 can eliminate a lot of distribution wires. And that --

3 DR. BROUWER: Yes.

4 BOARD MEMBER MITCHELL: -- that is one of the
5 problems we're not having with our electrical grid system.

6 DR. BROUWER: Yes.

7 BOARD MEMBER MITCHELL: The distribution wires
8 being sources of the wildfires that we're seeing.

9 DR. BROUWER: Yes. Very interesting point. In
10 New York, for example, the Brooklyn/Queens Demand Response
11 Demand Management Program is a utility program that
12 enabled utilities to invest in local generation, including
13 solar, and batteries, and fuel cell technology to avert
14 their need to invest otherwise in grid infrastructure to
15 meet that same growing demand. So they did exactly that
16 in this demand response program in Brooklyn. They are
17 doing it in other places too, in Connecticut, for example.

18 So instead of investing in utility
19 infrastructure, like upgrading power lines, upgrading
20 transformers, and substations, and things like this, you
21 can install solar, install storage, and install stationary
22 fuel cells to otherwise -- to meet that demand in a
23 different way. And in a way that ends up being more
24 resilient and can avert then also the stress on the system
25 associated with wildfires in the state.

1 BOARD MEMBER MITCHELL: Great. Thank you for
2 that explanation and for the work that you're doing in
3 that area. We appreciate our academics and all that they
4 do to help us move forward.

5 Thank you.

6 DR. BROUWER: Thank you.

7 CHAIR NICHOLS: Before you leave, I also want
8 to -- excuse me -- extend your time a little bit here
9 using you as maybe a foil, but hopefully as a relatively
10 independent analyst. So my feelings get hurt on behalf of
11 the ARB when people say that our standards are weaker than
12 somebody else's. And that has been alleged about our
13 standard here for Net Energy Metering versus the standard
14 adopted by the Public Utilities Commission, which was
15 admittedly under a different statute. But still, I'd like
16 to get you to take a look at this. You said that you
17 thought our methodology was good, maybe even the best.
18 But I want a better understanding of why you think that
19 the marginal approach that the staff is proposing here is
20 the right way to go.

21 DR. BROUWER: Yes. So the difference between the
22 Fuel Cell Net Energy Metering Program and the Self
23 Generation Incentive Program of the PUC, there are many
24 differences. And I thought that the staff presentation
25 slide - I think it was slide number four. Not sure --

1 staff presentation slide, which had four major points of
2 difference elucidated that quite well.

3 And just -- so let me just make a couple of
4 points of difference. The SGIP is a -- an incentive
5 program, not a tariff program. And it included many
6 different technologies, not just fuel cells. And it
7 established a one-time number of GHG emissions rate, for
8 which the technologies -- technologies must meet to
9 qualify and then allowed those systems to be used
10 throughout their entire life. So it was a one-time number
11 to cover the entire lifetime of operation. So the number
12 had to be lower than current emissions. It had to be
13 something that accounted for the lifetime of the
14 operation.

15 The current standard that CARB is setting is
16 actually, I think, more strict than the SGIP standard,
17 because it has this declining schedule and the need to
18 every three years check it against the data. So you can
19 always go back and say now we need to make it even more
20 strict, and always assure that GHG emissions are being
21 reduced, so...

22 CHAIR NICHOLS: Okay.

23 DR. BROUWER: Does that help or is it -- a little
24 bit more?

25 CHAIR NICHOLS: Well, no, I mean, as I looked at

1 it, it just seemed to me that we were comparing apples and
2 oranges, to some extent, but also that by using the
3 average grid as sort of a baseline, that the PUC approach
4 artificially frankly made their rule look better. I can't
5 think of a better way to say it.

6 DR. BROUWER: Yeah, because the number is lower,
7 it looked better --

8 CHAIR NICHOLS: Yes, right.

9 DR. BROUWER: -- but it's a lifetime number.

10 CHAIR NICHOLS: Yeah.

11 DR. BROUWER: And as a result, I think it doesn't
12 reduce GHG as much in reality.

13 CHAIR NICHOLS: Okay. Thank you for that.
14 Hopefully, that's helpful.

15 Mr. White, who I think has a different
16 perspective here.

17 MR. JOHN WHITE: Thank you, Madam Chair. I'm
18 John White with the Center for Energy Efficiency and
19 Renewable Technologies.

20 And I wanted to provide a little historical
21 context for how we got here. The Self Generation
22 Incentive Program began in the aftermath of 2000/2001
23 energy crisis, when we were trying to promote generation.

24 One of the things over time that ARB and we have
25 worked on is to gradually strengthen and stiffen the

1 requirements governing self-generation, so that we cannot
2 have high emissions. We don't have diesel generators and
3 we want to push the standards forward.

4 I think what's important about this rule,
5 however, and it's especially important, given the behavior
6 and actions of the Public Utilities Commission, is that
7 I'm here to tell you I have some -- with some background
8 and analysis that the grid is not as clean as some folks
9 think it is. And in fact, there's some evidence it's
10 going the other direction.

11 The Public Utilities Commission failed to
12 anticipate for some reason the retirement of the
13 once-through cooling plants. And so now, we're seeing an
14 application to extend the deadline. And those coastal
15 boilers are not natural gas combined cycles. They're not
16 clean peakers. They're very, very dirty.

17 And so I think what's on the margin, given where
18 we're headed, we're likely to see the margin be getting
19 dirtier in the next few years.

20 Secondly, there's other things that are
21 counterintuitive going on with some of these incentive
22 programs. The PUC had a study done of the SGIP program
23 and found that the battery storage systems that were being
24 installed under the incentive, and over time SGIP has
25 migrated away from fuel cells to battery storage as

1 getting most of the money.

2 But it turns out the way these batteries were
3 being deployed had more to do with saving the customers
4 money than saving greenhouse gases emissions. And, in
5 fact, some of these projects are increasing greenhouse gas
6 emissions. So what we know about fuel cells is that
7 they're steady state, that they run all the time, and they
8 have zero criteria emissions. And the danger that this
9 delay has caused -- first of all, we really miss Mike
10 Tollstrup, okay, who I worked with over the years to guide
11 and strengthen this program.

12 So we've had three years of uncertainty
13 overlaying this program and it's been very difficult for
14 people to sell units not knowing what these standards were
15 going to be. So we're glad to get this done. I think
16 there's still some things you might want to look at,
17 including counting the heat that's displaced and not just
18 the electricity, which is an issue for some of the
19 technologies.

20 But I would urge you to use this experience and
21 the conversation we've had today, to stay on top of what's
22 actually happening on the grid. You know, we want to see
23 what the actual emissions are, not what the model says,
24 okay? Because in the case of the integrated resource plan
25 reference plan at the PUC, the actual emissions were

1 higher than the assumed emissions in the model, because
2 the power plants are running differently.

3 The other thing, in 2030, we actually have an
4 increase in criteria pollutants. So I would urge the
5 staff to stay on this issue, keep working it, and
6 understand how clean is the grid and how do we make it
7 cleaner.

8 Thank you.

9 CHAIR NICHOLS: Thank you.

10 MR. CARMICHAEL: Good morning, Chair Nichols,
11 members of the Board. Tim Carmichael with Southern
12 California Gas Company. We support the staff proposal. I
13 want to echo the comments of Professor Brouwer, and the
14 Hydrogen Business Council and won't repeat their points,
15 which we agree with.

16 Supporting the adoption of the proposal before
17 you will facilitate the adoption of microgrids that can
18 provide resilience and reliability to utility customers in
19 general, not just during power safety shutoffs. I think
20 many of you know that our company several years ago
21 established a renewable gas team and then just last we
22 established a hydrogen team.

23 We are bullish on renewable gas, and hydrogen,
24 and have made public commitments to investing and
25 expanding our use to decarbonize our system over time. We

1 really believe in that potential. And fuel cells fit
2 right into that longer term vision.

3 There's opportunities today, as several people,
4 and including your staff, have highlighted, but we see
5 more opportunity in the future.

6 We have -- consistent with that, we have
7 announced I believe the strongest commitment to renewable
8 gas usage of any utility in the country. We support the
9 strengthening of these -- the proposal before you over
10 time. But I want to caution you as you deliberate on
11 this, we have a challenge in pushing so hard in California
12 sometimes that we don't fully appreciate how much work is
13 being done in this very moment to deploy successful
14 low-emission reduction technologies.

15 And sometimes, if we set our immediate standard
16 so stringently, it actually works against us getting the
17 best available deployed today. And I just -- we are
18 committed to reductions over time, as I think everyone
19 that's testified today is. But I caution you on when
20 we -- there's examples. When we go too far too soon, we
21 work against the investments and the deployment that we
22 all want to see happen right away.

23 And there's great promise for this program and
24 for this technology. And we're very supportive and very
25 much appreciate all the staff time on this program.

1 Thank you.

2 CHAIR NICHOLS: Thank you.

3 MR. JACKSON: Good morning, Chair Nichols,
4 Members of the Board. Alex Jackson on behalf of NRDC.
5 And we are here regretfully in opposition today to the
6 proposed standard for the simple reason that it would
7 enable the substantial public subsidy of electricity
8 generation from a fossil fuel for years to come.

9 And I think I -- you know, I take issue with some
10 of some the framing here today that this is, you know, not
11 a referendum on fuel cells and their application, their
12 potential benefits for air quality or wildfire resilience.
13 This is about what degree of emissions performance we're
14 going to ask of our fuel cell projects to meet to enjoy a
15 public subsidy that will be paid for by other ratepayers.
16 And we think we should ask our incentive programs to set a
17 higher bar and speed that transition to lower carbon
18 fuels.

19 And I feel like -- I was reflecting on how we got
20 here today, because so much of the discussion seems like
21 we're being boxed on a methodological approach. And just
22 to clarify, per our comments, we agree it's a marginal
23 test. No one is suggesting it should be an average test.
24 We disagree on how staff has applied that marginal test.
25 But naturally -- or not naturally, but I should say I was

1 thinking back to my high school physics teacher, Mr.
2 Saxby, that -- that was naturally.

3 (Laughter.)

4 MR. JACKSON: He taught us that, you know, we
5 should be applying these detailed formulas that try to
6 solve these complex problems. But also before we submit
7 and answer, step back and assess how reasonable it looks
8 in context.

9 And the context here is greenhouse gas emissions
10 performance. And we came to call that lesson from Mr.
11 Saxby, the Saxby step. And I think in my view, staff has
12 lost sight of that step here, because it is not reasonable
13 to end with a standard in 2019 that is 20 percent higher
14 than what the PUC employed for SGIP, when the Legislature
15 gave ARB this job precisely to set a more stringent one.

16 It is not reasonable when cities like Santa Clara
17 are banning the interconnection of gas powered fuel cells,
18 because their increased usage runs counter to our clean
19 energy goals. And this proposal would subsidize them.
20 And it is not reasonable when recent gas power plants
21 permitted by the CEC, which we treat as major carbon
22 polluters, under Cap-and-Trade emit greenhouse gases at a
23 lower rate than what's being proposed here for a subsidy.

24 And finally, it is not reasonable when, at
25 multiple points, in developing this methodology, staff

1 chose not to use other data-driven approaches that could
2 have set a higher bar by more accurately accounting for
3 the impact on reduced renewable procurement, assessing
4 when renewables are on the margin, and accounting for
5 methane leakage in the distribution system.

6 But here we are, and I'm mindful this Board has
7 other bigger fish to fry. So at a minimum, I'd like to
8 endorse the suggestion from Chair Nichols that staff at
9 least set a more steeper decline rate than the proposed
10 two and a half percent. I'd offer that our greenhouse gas
11 emissions statute should be the appropriate benchmark.
12 This is an emission reduction performance standard after
13 all. So looking at our SB 32 goals would perhaps get us
14 to that shared vision we have of running our fuel cells
15 off lower carbon fuels and off of natural gas.

16 Thank you.

17 CHAIR NICHOLS: Thank you.

18 BOARD MEMBER TAKVORIAN: May I ask a question of
19 this witness?

20 CHAIR NICHOLS: Oh, sorry. Mr -- yes, Mr.
21 Jackson.

22 BOARD MEMBER TAKVORIAN: Thank you. There seems
23 to be -- one of the core questions is is this rule
24 suggesting a standard that is less stringent than the PUC
25 standard? And the prior witness spoke to that. So it

1 seems to me from your letter and from your testimony that
2 you all have looked at that fairly extensively. So could
3 you respond to that same question?

4 MR. JACKSON: Yes. And I think it is a different
5 program. And the legislation was clearly moving, you
6 know, this task to ARB from the PUC. I mean, our view of
7 the legislative history, and it is in the Committee
8 analysis, one of them, is that the intent was to set a
9 standard that was more stringent than SGIP. Now, this is
10 an annual standard. You have to meet it annually to
11 qualify for the tariff.

12 But in our view, that means it's more important
13 to get a good standard, because there's real questions
14 about verification. You know, how are you going to
15 enforce that annual requirement? It has to be more than
16 just customer attestation.

17 So it is different programs, but we think the
18 comparison is germane. It's apt. That was definitely
19 part of the legislative discussion. We agree it is a
20 marginal test. That's what we should be evaluating here.
21 You know, what is the emissions performance of the
22 resource on the margin that this is displacing?

23 But we know that as we add more renewables to the
24 grid, our grid is getting cleaner. That marginal equation
25 is going to change, and we should be assessing the other

1 impacts per our comment letter on reduce renewables
2 procurement, to the extent these are behind the meter
3 resources. That means it's fewer retail sales utilities
4 are providing. And there's also methane leakage for the
5 distribution system. Given the fact that these are behind
6 the meter again, they don't connect at the higher
7 transmission level like gas plants.

8 So we just -- we were a little mystified that at
9 multiple points along the way, the statute afforded staff
10 discretion to set a higher standard, still using a
11 data-driven approach. But we ended up with standard that
12 we felt starts too high and declines too slowly, and is
13 not going to move us to that lower carbon fuel future that
14 we want fast enough.

15 Thank you.

16 BOARD MEMBER TAKVORIAN: Thank you.

17 VICE CHAIR BERG: Could I just ask one follow-up
18 question? First of all, I really enjoyed my meeting with
19 you. So thank you for that.

20 MR. JACKSON: Thank you. Likewise.

21 VICE CHAIR BERG: But I just want to make sure
22 that I understand that the PUC started out with the
23 average generation, is that correct?

24 MR. JACKSON: I believe so, but I'm not -- I was
25 not part of the SGIP proceeding, so I'm not fluid entirely

1 on how they set their standard.

2 VICE CHAIR BERG: I don't know quite how to
3 reconcile if the average generation is 228 and we're
4 starting out at 409. You know, if we started at 228, how
5 would we be looking on this? I don't -- I believe that
6 the marginal generation is the right place to start.

7 MR. JACKSON: Right.

8 BOARD MEMBER TAKVORIAN: But I'm just trying to
9 reconcile this -- this argument between what the PUC has
10 done and what we have done. Can you give me an insight on
11 that basis?

12 MR. JACKSON: Yeah, I think -- to be clear, I
13 mean, we agree with staff. We should be looking at the
14 marginal emissions test. So I think SGIP is kind of
15 context and it's relevant for the legislative history in
16 our view, because that was very much part of the
17 discussion and why this task was given to RAB and not the
18 PUC.

19 But in our view, assessing the marginal emissions
20 rate the way staff did the test, they only looked at
21 renewables on the margin - this is going to get, you know,
22 very technical - when CAISO day ahead prices are negative,
23 which is, you know, only 110 hours a year. And I think as
24 other commenters have explained, our understanding of that
25 is going to get much more refined in the years ahead. But

1 we're concerned this essentially locks in that
2 methodology. It's just picking a two and a half percent
3 reduction rate from a fairly high number.

4 And it's just a question I think for this Board
5 of -- from a policy standpoint, what sort of -- it's
6 about, you know, speed. It's about how quickly do we want
7 this standard to move us towards renewable feedstocks,
8 knowing again that this isn't about whether people are
9 going to fall -- install fuel cells. It's about to enjoy
10 a subsidy in the form of a NEM tariff what emissions
11 performance should we demand of those projects?

12 VICE CHAIR BERG: Thank you very much.

13 CHAIR NICHOLS: Okay. That does conclude our
14 list of witnesses. So I think we can close the record at
15 this point and proceed to Board discussion and vote.

16 So, I guess though I should offer the staff at
17 least an opportunity to respond to any of the points that
18 you think need to be responded to at this stage.

19 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

20 Thank you, Chair Nichols. I think what we're
21 hearing is that the marginal test is the correct test.
22 That there is a distinct difference between what the SGIP
23 program required and what the new legislation required.
24 And we heard testimony from a representative from the
25 author of the bill's office talk about what they intended

1 with the language and what they intended as the outcome.

2 The staff methodology is data driven. And it
3 allows for reevaluation based on real-world data every
4 three years. And there is a minimum -- at least a minimum
5 decline of 2.5 percent for the efficiency gain for
6 greenhouse gases year over year.

7 So it's very distinctly different than SGIP.
8 It's looking at very different factors. And so we do
9 believe that the methodology and the way that we've set
10 the values is in compliance. I think the question here
11 is, you know, looking at the data, and where we ended up
12 with the standard, and the rate of decline, there was some
13 discretion, for example, on the rate of decline.

14 But in terms of where we started, we do believe
15 that that is the appropriate place, given where the data
16 led us to.

17 CHAIR NICHOLS: Okay. Well, do I have a motion
18 and a second on the resolution?

19 BOARD MEMBER RIORDAN: I would move approval
20 Madam Chairman of the resolution.

21 BOARD MEMBER SPERLING: Second.

22 CHAIR NICHOLS: And we have a second.

23 Is there further discussion here?

24 Yes, starting with Dr. Sperling, I guess, and
25 then with Mr. De La Torre. And welcome back, Mr. Serna.

1 It's good to see you.

2 BOARD MEMBER SERNA: Good to be seen.

3 (Laughter.)

4 BOARD MEMBER SPERLING: I support the proposal,
5 because, you know, to use any other number is arbitrary.
6 You know, they did a good -- a good analysis. If
7 anything, it's very conservative in terms of, you know,
8 using the legally required marginal analysis.

9 But the real-world analysis, it would look much
10 more -- even much more beneficial. Fuel cells are a tiny
11 part of the electricity supply. It's hugely important for
12 places that need back-up -- reliable back-up for places
13 where there's been wildfires. I see no reason to tamper
14 with it anymore. I think it's solid and I support it as
15 is.

16 CHAIR NICHOLS: Okay. Thank you.

17 Mr. De La Torre.

18 BOARD MEMBER DE LA TORRE: Yeah. I have two
19 comments. One I'm really troubled by this constant
20 reference to diesel generation and the comparison between
21 fuel cells, what we're talking about here, distributed
22 generation, as John mentioned steady state, meaning it's
23 on all the time. That is not PSPS, an emergency, there's
24 a power shutoff, and your plug in a diesel generator to
25 have electricity.

1 It's two completely different things. And so
2 we -- in a lot of the analysis and a lot of the comments
3 that we've had, there's this fluidity between the two.
4 And they're two different things. And so it troubles me
5 that we keep mixing the two. Let's talk about the merits
6 of fuel cells, which I'm a big believer in and the
7 marginal -- staff and I had a whole discussion about the
8 marginal thing. I get it that the marginal is the right
9 approach.

10 I did want to ask on -- in our briefing -- in my
11 briefing, I was told that this formula using marginal and
12 then some version of this formula is what we use for
13 Cap-and-Trade, LCFS, et cetera, can you clarify that --
14 that what you -- what you did here for this purpose is
15 similar or exactly the same as what we've done in other
16 areas here at CARB?

17 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

18 Yes, of course. So, you're correct, when we
19 talked in the briefing, I did mention that the concept of
20 marginal generation has been used for almost a decade in
21 existing ARB programs. The way that the methodology was
22 first developed was it was developed in a public process
23 with CEC, with CPUC. And it was part of a discussion in
24 the Western Climate Initiative with the states in the west
25 and some of the provinces.

1 So the methodology and the approach to how
2 calculate marginal was very thoroughly vetted. And it's
3 been used in ARB programs for our greenhouse gas
4 inventory, which we use to track progress or AB 32
5 targets. And it's part of our mandatory reporting
6 regulation and it helps to assign a compliance obligation
7 in the Cap-and-Trade Program.

8 BOARD MEMBER DE LA TORRE: So the formula that
9 some people were in favor of and some were against in
10 today's commentary, the formula we're using in this
11 program is the same as the formula we've used in those
12 others settings?

13 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

14 That's right. I think what some of the speakers
15 here were asking for is that we consider additional
16 factors on top of that formula to try and bring the
17 numbers down, but the core formula are the same.

18 BOARD MEMBER DE LA TORRE: Yeah. And so -- so,
19 to me, that's -- that's the point. And maybe it's what
20 the Chair was getting at earlier, is that this agency has
21 been using this formula for a decade at least, right? I
22 mean, if we're going back to WCI. And so if we're using
23 it in all those other settings, it only makes sense to
24 carry it over, measure for these purposes using the same
25 formula, and then using that number, whatever the number

1 is.

2 It turns out that in this case, we are having to
3 compare it to SGIP and a number that is, I don't know, 70
4 points less than ours to start. So that's -- you know,
5 it's important.

6 CHAIR NICHOLS: It's a factoid.

7 BOARD MEMBER DE LA TORRE: It's important to
8 consider it, but I think it would be horribly inconsistent
9 of our entity to change it just because there's some other
10 number floating around out there. I'm more comfortable,
11 whether I like it or not, whatever the result is, I'm more
12 comfortable sticking to the consistency of what we've done
13 here over time in other areas than I am re-jiggering the
14 formula to get a better outcome.

15 That being said, I completely agree that we need
16 to have a steeper downward slope. I think we do need to
17 push toward renewable and get that going. But in the
18 meantime I'll double back to where I started. I really
19 want to stop talking about this as a substitute for
20 one-time generation, because -- I know this, because I
21 asked -- a few months ago someone asked me about using
22 fuel cell generators for portable purposes and they were
23 told it didn't exist.

24 And so unless you can carry around a huge
25 hydrogen tank with you, you can't do it. And so, you

1 know -- anyway, that's where all of my frustration comes
2 from is I just had this conversation a few months ago, and
3 I was told it didn't exist and then now we're being told,
4 oh, they're completely -- you can swap one for the other.
5 No, you can't.

6 BOARD MEMBER BALMES: Chair --

7 CHAIR NICHOLS: Well, I think there's -- excuse
8 me, actually, I was going to call on myself.

9 BOARD MEMBER DE LA TORRE: Yes, so that was my
10 comment. Thank you.

11 (Laughter.)

12 CHAIR NICHOLS: If I may. Thank you. So two
13 things. I mean, I think there's a couple of elephants in
14 the room here, which are sort of being not quite addressed
15 fully. So one is the reality that our current system is
16 not as resilient as it should be and that we've suffered
17 major periods of outages as a result of fires primarily,
18 and that there appears to be -- although, I don't have any
19 numbers, but just looking at advertisements that people
20 have sent, sort of two different responses going on.

21 One is, you know, an effort to sell diesel
22 generators. And we have been asked on occasion and have,
23 in fact, responded by making it easier for people to use
24 diesel generators, because they're going to be out not
25 just for an hour or two and not just people who, you know,

1 rely on them for home oxygen, but, you know, in much
2 larger scale. So the microgrid point that Ms. Mitchell
3 brought up was a very -- very germane to this discussion.

4 And the other is the fact that we now -- it's
5 quite obvious that we have to be pushing for further
6 faster to get off of combustion of -- including of natural
7 gas, because it is, while cleaner than coal and fuel oil,
8 not as good as we need it to be, either for air or for
9 greenhouse gas purposes.

10 And so anytime anything comes before this Board,
11 that's all going to be kind of in the background of are we
12 doing everything we could do be doing? Are we pushing as
13 far and as fast as we -- as we need to be?

14 I think that the staff has done a good job of
15 getting us to this point. Don't forget these rules take a
16 long time to develop. You know, so it feels like
17 technology and events are pushing faster sometimes than
18 our regulatory activities are. But at the same time, we
19 have this need to adopt something and move on, because, in
20 fact, what we're doing now is actually making it harder
21 for people who want to decide to use fuel cells to make
22 that decision. I mean, that's -- we're stall -- the
23 market is relatively stalled, because of our failure to
24 act up until now.

25 So kind of balancing those things back and forth

1 is why I end up deciding to support the proposal as it is
2 taking some comfort in the fact that there's a commitment
3 here to review it, and it will necessarily have to be
4 reviewed within a three-year period, which is, you know,
5 pretty short by government standards, I guess.

6 Now, Dr. Balmes.

7 BOARD MEMBER BALMES: Well, you actually made
8 comments that were similar to mine. I just wanted to ask
9 staff to clarify what I've just learned from Mr. De La
10 Torre, is that true that these are running all the time as
11 opposed to back-up? Because we have been or some of us
12 have been misled in that regard.

13 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: In
14 some instances, the application is running all the time.
15 So when there is a power outage, the fuel cell output can
16 be increased so you don't have to look for other auxiliary
17 power.

18 BOARD MEMBER BALMES: Okay. So I also applaud
19 the staff for, I think, using an appropriate methodology.
20 And actually even those people who want a stricter
21 standard are agreeing that the methodology is appropriate
22 today, so that's good.

23 And I agree with Mr. De La Torre that we should
24 try to be consistent when possible. But I also agree with
25 him that I would like to see a steeper decline. I'm

1 comforted, as Chair Nichols mentioned, that we are going
2 to be reviewing. But I would -- I'd rather set the bar
3 higher to start with, in terms of the annual decline.

4 CHAIR NICHOLS: Well, any change in the rule
5 would require a delay for sure, and that would be a
6 problem.

7 BOARD MEMBER BALMES: I know we've already had a
8 lot of delay.

9 CHAIR NICHOLS: We've already had a lot of
10 delays. That's really what's weighing on me.

11 Yes, Dr. Sherriffs.

12 BOARD MEMBER SHERRIFFS: Thank you and thanks to
13 the staff, and stakeholders, and the advocates for the
14 time they've put into this and for the testimony today.
15 As I hear this discussion and I'm always reminded about
16 the terrible, I guess I'll call it, irony of smelling and
17 seeing emissions from diesel back-up on a health campus of
18 all places. And that really informs my thinking as we're
19 doing this.

20 So again, I really appreciate -- you know, this
21 is only a small piece of the emissions pie, the greenhouse
22 gas emissions, but every bit counts. And also many of
23 these emissions are in highly impacted neighborhoods,
24 businesses, hospitals. So it is very important and has
25 been expressed we need to be thinking about more ways that

1 we can support moving forward. But it's clear this --
2 this work that we're doing here today doesn't just support
3 fuel cell technology, but really drives technology, and
4 drives renewable fuels, lower polluting fuels. So overall
5 is very, very worthwhile.

6 Thank you.

7 CHAIR NICHOLS: Okay. Yes. More. Yes, Ms. Berg
8 and then Ms. Takvorian.

9 VICE CHAIR BERG: Could I just ask for a
10 clarification on timing, which might help us all. So when
11 we're looking at this rule, my understanding is that these
12 are for units that are put in by 2021.

13 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:
14 That is correct.

15 VICE CHAIR BERG: And that in 2022 this
16 legislation will need to be reauthorized?

17 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: To
18 be eligible for additional funding for other fuel cells
19 after 2021, that's correct.

20 VICE CHAIR BERG: And then when would we actually
21 do a three-year review?

22 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: So
23 in the methodology, in the regulation itself, it has the
24 formula to do that three-year update automatically with
25 the data that's available.

1 VICE CHAIR BERG: But when would be the first --
2 it would be three years from now or -- I'm confused on the
3 fact --

4 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:
5 2022.

6 VICE CHAIR BERG: -- that we're backdated.

7 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:
8 Right. So the methodology sets the schedule for
9 two -- for the first year and the next three years. In
10 2022, we would use the existing formula in the regulation
11 with updated data to figure out what the next three years
12 should look like. But fuel cells, to be eligible for
13 funding, have to get into the program by 2022, even though
14 the methodology will continue to be updated and those fuel
15 cells that get in before 2012 have to continue to meet the
16 ongoing stringent requirements, no new full cells would be
17 able to come into the program after 2022.

18 VICE CHAIR BERG: So if we were to, in that
19 review, make a -- reduce the emissions by increasing the
20 amount per year, it would apply to the units that are
21 already on the ground.

22 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:
23 That's exactly right. And if those existing
24 units that are on the ground that get funding in the next
25 few years in the near term can't meet that more stringent

1 requirement, they would no longer be eligible for funding.

2 VICE CHAIR BERG: Okay.

3 BOARD MEMBER TAKVORIAN: This could still be on
4 the ground.

5 VICE CHAIR BERG: But they can -- they can get
6 built anyway. Nothing prevents them from being built.

7 BOARD MEMBER TAKVORIAN: Right. But they've been
8 subsidized to begin with. And so they're still operating,
9 is that correct? So they -- the assumption is they would
10 still be operating.

11 CHIEF COUNSEL PETER: Diane, you need to use your
12 microphone.

13 BOARD MEMBER TAKVORIAN: I have it on.

14 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: Can
15 you repeat the question.

16 BOARD MEMBER TAKVORIAN: Oh, I'm sorry. So the
17 question is they would still be operating. They might
18 have received the subsidy under the initial rule. And
19 then if they didn't comply any more, they wouldn't be
20 receiving the subsidy, but they would be still operating.

21 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

22 That's correct. And that's --

23 BOARD MEMBER TAKVORIAN: So the pollution would
24 continue. The money might stop, but the pollution would
25 continue, is that right?

1 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: So
2 there's no criteria pollutants or insignificantly reduced
3 criteria pollutants from fuel cells. So the air quality
4 benefits would continue for any fuel cells that are out
5 there. And if there are fuel cells that don't want to
6 have the funding or that already exist today, those also
7 will continue to exist. What we're talking about is
8 addressing a market barrier, so that there can be further
9 deployment of a technology that benefits air quality and
10 actually fits in a long-term greenhouse gas landscape for
11 the state.

12 I think the concern is -- I spoke to this early,
13 which was about locking in natural gas. Because the rate
14 of decline is guaranteed to be at least 2.5 percent each
15 year, these fuel cells that get that funding up front
16 would have to continue to become much more efficient or
17 switch fuels to renewable hydrogen or biogas.

18 BOARD MEMBER TAKVORIAN: Okay. Thank you.
19 That's helpful.

20 CHAIR NICHOLS: Further comments, yes?

21 BOARD MEMBER TAKVORIAN: Yeah. I just wanted
22 to -- appreciate the Chair's expression of the elephants
23 or other large animals in the room --

24 (Laughter.)

25 BOARD MEMBER TAKVORIAN: -- and say that the

1 problem I have is that I -- I guess my question is given
2 the chorus of opposition that seems to be really related
3 to the steepness of the decline, what was the -- what was
4 the barrier to putting in a steeper decline in this rule?
5 Because that seems like that would have solved a lot of
6 the concerns that people have expressed?

7 CHAIR NICHOLS: We could go to Mr. Jackson's
8 suggestion, since he was the last speaker, and
9 specifically after opposing everything said but he'd be
10 happier if we were to just go from two and a half to three
11 presumably or three and a half.

12 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: In
13 conversations that we've had in stakeholder groups,
14 including with NRDC, there was some discretion in how we
15 set the decline. We had the decline of 2.5 percent to SB
16 100, which has an overall average grid decline in terms of
17 becoming cleaner of 2.5 percent by 2030 -- year over year,
18 2.5 percent by 2030. There are certainly other statutes
19 that we could tie the decline to, and so there was some
20 discretion there.

21 BOARD MEMBER TAKVORIAN: So if I'm understanding
22 you, there's not a barrier to creating a steeper decline
23 now or sooner than three years from now when the review
24 would occur?

25 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA:

1 That's correct.

2 VICE CHAIR BERG: And that includes an
3 investment? You don't -- you didn't hear from the
4 stakeholders that that might deter, you know, in a -- in a
5 meaningful way? I'm not talking about a small way,
6 because I do agree that we do need to be protective, but I
7 would appreciate if you had any comments on the investment
8 side.

9 INDUSTRIAL STRATEGIES DIVISION CHIEF SAHOTA: And
10 that's -- that's a great question, because the way the
11 standard is set right now with the 2.5 percent, we believe
12 that multiple manufacturers can qualify and continue to
13 become more efficient over time. If we start to set a
14 much steeper decline -- and that will be subjective
15 depending on which stakeholder you talk to. If we set too
16 steep of a decline, you're only going to be able to have
17 some limited amount of manufacturers be able to keep up
18 with the efficiency gains that will be mandated by
19 the stat -- by the standard -- year-over-year standard.

20 And so it's a balancing act of not setting a
21 standard that was so tight that only one manufacturer
22 could meet it, but also trying to make sure that we set a
23 standard that was tied to the overall grid.

24 CHAIR NICHOLS: But in any event, we really
25 haven't had a chance to examine what the number ought to

1 be. And therefore, we couldn't do it today no matter
2 what, I think. It would be inappropriate to just throw
3 out a number. So we would have to direct the staff to
4 start working on something and bring it back sooner than
5 you originally had intended. And I do think that's a good
6 idea. I think we're all feeling the need to move further
7 faster.

8 So I think the question for you, Ms. Sahota or
9 Mr. Corey would be how -- how quickly could we actually
10 ask you to bring that back.

11 EXECUTIVE OFFICER COREY: We could, as part of 15
12 day changes, receive direction from this Board to work on,
13 through a public process, a more stringent decline curve.
14 And because of the not environmental conse -- basically,
15 the Board could vote on the measure today, direct us, by
16 virtue of the 15-day process, to focus on a steeper
17 decline curve and delegate that action to the Executive
18 Officer.

19 CHAIR NICHOLS: I'm seeing enough head nodding
20 around here to think that that would be a good -- I see --
21 I see one shaking head, but I see quite a few heads
22 nodding.

23 BOARD MEMBER SPERLING: I would add -- so if that
24 were going to be done, I would say -- I mean, the
25 improvement is really tiny that we're talking about by

1 having a little steeper curve. And so the comparison
2 should be, okay, you gain a little bit of improvement, but
3 at what cost, in the sense of, is this -- as kind of
4 Regina was starting to say -- Rajinder was starting to
5 say, you know, is this going to reduce the investment in
6 new fuel cells. And these fuel cells are much better than
7 what they're replacing, so...

8 CHAIR NICHOLS: I agree with you, but I think
9 that consistency here also includes consistency with the
10 kind of deadlines that we're pushing for everywhere else
11 in our program, which is it is at a cost for sure. But at
12 the same time, there's also the sense of urgency about
13 trying to get to the -- get to the goals.

14 Did you have a hand up? Yes, Mr. Monning.

15 BOARD MEMBER MONNING: Yes. Thank you, Madam
16 Chair. I also just want to thank the staff for the
17 briefing I was provided in the preparation. And I think
18 this level of conversation now is exactly how the Board is
19 established to think down the road.

20 I do want to just, as a Senate representative
21 here, underscore the letter dated December 9th signed by
22 the author of SB 1637 Evan Low, and as presented today by
23 his representative Mr. Mair, also signed by senators Beall
24 and Leyva, and Assembly Members Irwin, Talamantes, and
25 Mullin supporting the proposed standard before us today

1 and finding it consistent with the goals and objectives of
2 AB 1637. I just want that to be before the Board as you
3 prepare to vote today.

4 I'd also just underscore, I appreciate the
5 comments of my good friend Mr. De La Torre on the somewhat
6 apple and oranges comparison of diesel and standards on
7 fuel cell technology. I do think it's important though to
8 underscore, as the good doctor indicated, some of the
9 back-up energy that does rely on diesel that can be
10 supplemented by fuel cell from a public health point of
11 view is a safer alternative.

12 And to the extent that these standards allow for
13 the adaptation that continues to rely upon fuel cell as an
14 alternative to diesel, there's a public health benefit
15 there. And I think we should keep that in mind.

16 And appreciate the opportunity to share those
17 thoughts. Thank you.

18 CHAIR NICHOLS: Thank you.

19 Well, so where we are now is we have the motion
20 on the table and we're considering the possibility of
21 adding some language in the 15-day notice that would bring
22 it back faster for a -- it would bring it back for a
23 faster review of the rate of decline and what's feasible.

24 I appreciate Professor Sperling's comment. And I
25 don't want to dictate what the answer so that question is,

1 but I do want to examine the question, because I think
2 it's important, not only for the -- for the witnesses who
3 spoke on that matter, but also in my own head, I just -- I
4 don't find consistency with the 2017 Scoping Plan in and
5 of itself an adequate answer to how quickly we should be
6 moving towards renewable fuels here.

7 So I'm going to propose then that we add that
8 language for the 15 days, but otherwise bring it back for
9 a vote. Yeah. I don't know if we need anything formal to
10 indicate that or if we just give you direction?

11 BOARD MEMBER BALMES: To totally agree and I'd be
12 willing to --

13 CHAIR NICHOLS: Okay. So do you feel --

14 BOARD MEMBE4R BALMES: -- support that motion.

15 CHAIR NICHOLS: Do you feel we need to put a
16 formal motion in on that or is staff able to proceed?

17 CHIEF COUNSEL PETER: I think the staff can
18 proceed with the direction from the Board.

19 CHAIR NICHOLS: Okay. So we're all set.

20 All right then, without further do, I'm going to
21 call for a vote.

22 All in favor of the resolution with the direction
23 to staff please say aye?

24 (Unanimous aye vote.)

25 (Supervisor Fletcher not present.)

1 CHAIR NICHOLS: Opposed?

2 Any abstentions?

3 Thank you. Thanks very much. This was a really
4 good discussion and appreciate it.

5 We will move on to the next item then, which is
6 the South Coast 8-hour ozone SIP update.

7 And congratulations.

8 All right. Staff, are we ready to move on to the
9 next item?

10 This is an update. And it's based on the fact
11 that in March of 2017, the Board adopted the South Coast
12 2016 Air Quality Management Plan that included an
13 attainment demonstration for the 80 parts per billion
14 8-hour ozone standard. The attainment demonstration
15 relied on emissions reductions from future advanced
16 technology measures as allowed by section 182(e)(5) of the
17 Federal Clean Air Act.

18 The South Coast 8-hour ozone SIP update before
19 the Board today includes a Contingency Measure Plan that
20 lays out an aggressive approach to achieving the final
21 increment of reductions needed to attain the ozone
22 standard.

23 Mr. Corey, will you please introduce the item.

24 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair
25 Nichols.

1 Invoking section 182(e)(5) of the Act as part of
2 the 2016 Air Quality Management Plan brought with it a
3 commitment to submit a report to U.S. EPA three years
4 ahead of the attainment date or by January 1, 2020. The
5 report must demonstrate the emission reductions assumed
6 from the advanced technology measures in the plan will be
7 met in 2023 or the State has adopted contingency measures
8 capable of delivering the remaining emissions that the
9 advanced technology measures have not yet achieved.

10 Earlier this month, the South Coast Air Quality
11 Management District adopted the contingency measure plan,
12 planning for attainment of the 1997 8-hour ozone standard.
13 The District's Clean Air Act section 182(e)(5) Contingency
14 Measure Plan documents California's progress toward
15 implementation of the 2016 Air Quality Management Plan.
16 In addition, the Contingency Measure Plan lays out a
17 strategy to achieve the remaining emission reductions
18 through newly identified emission reduction strategies,
19 CARB innovative new measures, additional incentive funding
20 to transition to the cleanest available technologies,
21 and/or funding to achieve the required reductions from
22 sources under federal jurisdiction.

23 Scott Sking -- rather Scott King in the Air
24 Quality Planning and Science Division will give the staff
25 presentation.

1 Scott.

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

4 AIR POLLUTION SPECIALIST KING: Yes. Thank you,
5 Mr. Corey. Chair Nichols and members of the Board, today
6 staff is presenting an update to the South Coast State
7 Implementation Plan for the 80 parts per billion 8-hour
8 ozone standard.

9 --o0o--

10 AIR POLLUTION SPECIALIST KING: As you may
11 remember in 2017, the Board adopted -- oh, sorry.

12 All right Hear me better now?

13 As you may remember in 2017, the Board adopted
14 the South Coast 2016 Air Quality Management Plan, or AQMP,
15 which included CARB's mobile source reduction commitment
16 contained in the 2016 State SIP Strategy. The AQMP also
17 included an update to the 80 parts per billion ozone
18 attainment demonstration for 2023.

19 This attainment demonstration primarily relied on
20 NOx reductions from State mobile and District stationery
21 measures, but also required advanced technology measures
22 that are allowed for extreme ozone nonattainment areas
23 under the federal Clean Air Act.

24 When utilizing advanced technology measures to
25 demonstrated attainment, the State must submit contingency

1 measures three years prior to the attainment year that are
2 sufficient to provide for any of the remaining reductions
3 needed. Today's item addresses this requirement.

4 But before going into the details, let's look at
5 the ozone air quality in the South Coast.

6 --o0o--

7 AIR POLLUTION SPECIALIST KING: Ozone levels in
8 the South Coast have decreased since the 80 parts per
9 billion ozone standard was established in 1997. But,
10 there still remains a significant challenge to meet this
11 standard. These bars shows ozone levels in 1997 and today
12 relative to the standard that must be attained by 2023.
13 As you can see, ozone levels have decreased in the South
14 Coast by almost 30 percent since 1997.

15 This improvement in ozone air quality has been
16 achieved through State and District rules targeting oxides
17 of nitrogen, or NOx, and reactive organic gases, or ROG.
18 Air quality modeling now shows that NOx reductions in
19 particular are key to meeting the ozone standard,
20 therefore our control strategy focuses primarily on
21 reducing NOx emissions.

22 --o0o--

23 AIR POLLUTION SPECIALIST KING: This chart shows
24 that due to CARB rules, NOx emissions in the South Coast
25 since 2000 have been reduced by - there we go - 90 percent

1 from light-duty vehicles, 80 percent from heavy-duty
2 trucks, 70 percent from off-road equipment, and similar
3 reductions have been achieved from sources under District
4 authority, such as factories.

5 --o0o--

6 AIR POLLUTION SPECIALIST KING: However, NOx from
7 sources solely under federal responsibility, that is
8 planes, trains, and ships, have been reduced by less than
9 16 percent. In fact, NOx emissions from many federal --
10 federally regulated categories have been growing steadily
11 higher in the last ten years. I will talk more about
12 these sources later in the presentation.

13 Let's now talk about the magnitude of the
14 emission reductions needed to meet the 80 parts per
15 billion ozone standard.

16 --o0o--

17 AIR POLLUTION SPECIALIST KING: This bar graph
18 depicts the NOx emission -- NOx reductions that have been
19 achieved since 1997 when the NOx levels in the South Coast
20 were well over 1,100 tons per day. Since that time, the
21 State and District have developed and implemented several
22 ozone SIPs that have provided significant NOx and ROG
23 emission reductions in the South Coast. The 2016 AQMP
24 determined that NOx emissions needed to be lowered from
25 522 tons per day of NOx in 2012, the top of the yellow

1 box, to 141 tons per day in 2023, or the top of the green
2 box.

3 CARB and District actions -- CARB and District
4 actions have collectively reduced NOx emissions in 2023 by
5 76 percent as shown in the gray and yellow boxes, which
6 aren't there any more.

7 (Laughter.)

8 AIR POLLUTION SPECIALIST KING: Programs included
9 in the 2007 AQMP will remove about 620 tons per day of NOx
10 by 2023, while programs included in the 2016 AQMP will
11 reduce an additional 280 tons per day of NOx.

12 The blue area - which is still there. Good -
13 represents the reductions to be provided by advanced
14 technology measures under section 182(e)(5) of the Act.
15 The 100 tons -- the 108 tons per day of reductions from
16 these measures represent less than 15 percent of the total
17 reductions from 1997 and the final increment of NOx
18 reductions needed to achieve the ozone standard.

19 --o0o--

20 AIR POLLUTION SPECIALIST KING: While today's
21 submittal addresses emission reductions needed from those
22 measures we could not define in the 2016 AQMP, that is the
23 advanced technology measures, first I'd like to quickly
24 walk through the progress we have made on the defined
25 measures in the 2016 AQMP.

1 Since the 2016 AQMP was adopted, CARB has been
2 working to implement the defined measures from the State
3 SIP Strategy aggregate commitment. Rules, such as the
4 Ocean-Going Vessel at Berth Regulation that you heard last
5 week, the On-Road Heavy-Duty Incentive measure, and the
6 Zero-Emission Airport Shuttle Regulation will provide NOx
7 reductions in 2023.

8 Other rules adopted since 2017 set the stage for
9 additional reductions, such as the Zero-Emission
10 Powertrain Certification Regulation and the Electric
11 Vehicle Supply Equipment Standard. These rules passed in
12 June of this year, are instrumental in preparing the
13 infrastructure, consumer protections, and consumer
14 confidence that will be needed to provide widespread
15 conversion to low-emission vehicles. Later today, you
16 will also hear about the Advanced Clean Trucks Regulation,
17 another element in our overall emission reductions
18 strategy.

19 --o0o--

20 AIR POLLUTION SPECIALIST KING: I will now shift
21 my focus to the contingency very strategy. To provide the
22 reductions that utilized -- that utilized the advanced
23 technology provision, the District and CARB have jointly
24 developed this SIP update, adopted by the District last
25 week. It lays out an aggressive strategy of regulations

1 that go beyond what was in the 2016 AQMP, potential areas
2 for new regulations and incentives, and the need for
3 reasonably available federal actions to achieve the
4 emission reductions to meet the 80 parts per billion ozone
5 standard in the South Coast.

6 I will now walk through the elements of the
7 proposed contingency strategy.

8 --o0o--

9 AIR POLLUTION SPECIALIST KING: This table breaks
10 down the different elements in the South Coast Contingency
11 Measure Plan that are needed to achieve the 108 tons per
12 day of NOx reductions. These include:

13 New CARB and District emission reduction
14 strategies that have been developed since the 2016 AQMP;

15 Additional incentive funding to transition to the
16 cleanest technologies;

17 And, addressing the reductions needed from the
18 federal government.

19 Let's now discuss each of these elements.

20 --o0o--

21 AIR POLLUTION SPECIALIST KING: Consistent with
22 California's practice of continuing to look for new
23 emission reduction opportunities, CARB and District staff
24 have identified the strategies shown here that go beyond
25 the 2016 AQMP.

1 On the right, you can see several new District
2 measures that have already been adopted and provide NOx
3 reductions. These include new District rules needed to
4 speed the sunset of the RECLAIM program, a memorandum of
5 understanding with several airports, the deployment of
6 Metrolink Tier 4 locomotives, as well as an upcoming Ports
7 MOU.

8 CARB has also adopted new rules providing
9 additional NOx reductions in -- by 2023. Our actions
10 achieving these include recent amendments to the Low
11 Carbon Fuel Standard and the Portable Engines Registration
12 Program. In addition, CARB will be considering a
13 Heavy-Duty Truck Inspection and Maintenance Program and
14 also CARB is developing new innovative measures that
15 represent a new commitment in 2023 of three tons per day
16 of NOx reductions.

17 In total, these measures are expected to provide
18 25 tons per day of NOx reductions in 2023. And CARB and
19 District staff are continuing to identify additional
20 opportunities for emission reductions.

21 The next slide provides a little more detail on
22 the proposed new CARB measures.

23 --o0o--

24 AIR POLLUTION SPECIALIST KING: In developing the
25 proposed new measures listed here, staff have -- staff

1 have looked at all sectors of the economy. Some of the
2 measures shown will be transformative, providing not only
3 criteria pollution reductions, but also climate change
4 benefits.

5 The proposed new measures include:

6 A new statewide locomotive regulation that will
7 provide criteria, toxics, and greenhouse gas reductions.
8 We had our second workshop on concepts to reduce emissions
9 from locomotives and railyards yesterday in San
10 Bernardino;

11 Establishing more stringent off-road diesel
12 engine standards. CARB staff see that tech -- the
13 technology is currently available to lower emissions from
14 these sources;

15 Also requiring state contractors to use the
16 cleanest equipment available and State agencies to only
17 purchase clean vehicles and equipment. A first step was
18 made by the Governor's landmark Executive Order requiring
19 State agencies and departments to review and update
20 overall operations, transportation investments, and the
21 use of the State's purchasing power to advance climate
22 goals;

23 We can also get reductions from the Scoping Plan
24 measures that switch California to 100 percent clean
25 energy for residential and commercial water heating, space

1 sheeting, and air conditioning appliances;

2 Also, from lowering VMT with reductions in
3 single-occupancy vehicle travel, and by integrating
4 transportation with land conservation strategies;

5 Finally, where we put transportation and housing
6 also imposes and often reinforces long-standing racial and
7 economic injustices by placing a disproportionate burden
8 on low-income residents, who end up paying the highest
9 proportion of their wages for housing and commuting. CARB
10 believes opportunities exist in cooperation with local
11 governments to improve mobility options within the
12 transportation sector, while also reducing emissions to
13 help with attaining the ozone standard in the South Coast.

14 Collectively, these new measures are expected to
15 provide three tons per day NOx reductions in the South
16 Coast in 2023.

17 --o0o--

18 AIR POLLUTION SPECIALIST KING: These innovative
19 measures are transformational and take time to implement,
20 but reductions are also needed now. The proposed
21 contingency strategy seeks to expand incentive funding.
22 Incentive programs are extremely effective in accelerating
23 the introduction of clean vehicles into California's on-
24 and off-road fleets in the near term, and represent the
25 best opportunity to get emission reductions by 2023.

1 Recent legislation that provided continued
2 incentive funding include AB 1274, annual smog abatement
3 fees that increase funding to the Carl Moyer Program.
4 This bill is anticipated to increase funding by about 25
5 to 30 million annually for the South Coast.

6 Moving forward, the District plans to advocate
7 for additional funding, including pursuing the ability to
8 place a sales tax ballot measure for investment in clean
9 air. This will allow the people of the South Coast region
10 to decide for themselves whether they want to invest in
11 clean air and address climate change. The District is
12 also looking into more Greenhouse Gas Reduction Funds and
13 a statewide bond to fund clean vehicles.

14 In total, this money could achieve 15 tons per
15 day of NOx reductions in 2023.

16 --o0o--

17 AIR POLLUTION SPECIALIST KING: I'm going to go
18 into a little more detail on the next strategy, as
19 California and the District adopt the most stringent rules
20 in the nation and seek to transform California's vehicle
21 fleet, federal sources are expected to become the dominant
22 source of NOx emissions from mobile sources in the South
23 Coast. This graph shows that the federal government is
24 not -- has not come close to lowering the level of
25 emissions from the sources they oversee, when compared to

1 reductions.

2 --o0o--

3 AIR POLLUTION SPECIALIST KING: Asking for
4 federal help is not new. For more than ten years,
5 California has requested the federal government do their
6 job in reducing emissions from federally regulated
7 sources. For example, on April 13th, 2017, CARB
8 petitioned EPA to exercise its authority to adopt more
9 stringent emission standard for locomotives.

10 On June 2nd, 2016, the District and ten other
11 State and local environmental agencies petitioned EPA to
12 undertake rulemaking to lower the on-road heavy-duty
13 engine emission standard for NOx.

14 On June 3rd 2016, the San Joaquin Valley Air
15 Pollution Control District submitted a request that EPA
16 undertake rulemaking to establish new national standards
17 for heavy-duty trucks and locomotives.

18 And on November 28th, 2007, CARB submitted the
19 2007 State Strategy that included measures to provide
20 reductions from federally regulated ship main engines and
21 boilers, line-haul locomotives, and commercial harbor
22 craft. Had EPA acted on the 2007 SIP measure for federal
23 sources in a timely manner, these measures would have
24 lowered NOx emissions in the South Coast by over 60 tons
25 per day in 2023.

1 --o0o--

2 AIR POLLUTION SPECIALIST KING: To meet the 80
3 parts per billion ozone standard in the South Coast, all
4 levels of government must do their part. The ozone SIP
5 Update serves as a call to action. But for this to
6 happen, we need cooperation from EPA and we need the
7 federal government to act quickly.

8 By approving this plan, we will send a clear
9 message that federal action is needed for us to meet the
10 ozone standard in the South Coast. This update is
11 approvable, but EPA could object to assumptions for
12 federal actions to reduce emissions.

13 In any event, we are committed to working with
14 the District to pursue all feasible measures for achieving
15 attainment of the ozone standard in the South Coast, and
16 reducing the reliance on federal action.

17 --o0o--

18 AIR POLLUTION SPECIALIST KING: Going forward,
19 staff -- CARB staff will begin the development of
20 identified new measures. We will continue our public
21 process to identify additional emit -- additional emission
22 reduction strategies. And CARB staff will work with EPA
23 and partner with other states to realize federal actions
24 needed to get the necessary reductions from these sources.

25 --o0o--

1 AIR POLLUTION SPECIALIST KING: CARB staff
2 recommends that the Board adopt the ozone SIP Update with
3 a commitment for reducing -- for reductions from the new
4 measure -- sorry, measures and submitted to EPA as a
5 revision to the California SIP.

6 Staff also recommends the Board direct staff to
7 bring additional emission reductions to the Board for
8 consideration by mid-2020.

9 Thank you for your patience and we would be happy
10 to answer any questions.

11 CHAIR NICHOLS: Thank you. I think we can
12 proceed to the testimony starting with the South Coast
13 AQMD representative.

14 You could lower that. We now know you can also
15 lower the whole thing, if you want to.

16 MS. REES: Very fancy.

17 CHAIR NICHOLS: For those of us who are somewhat
18 vertically challenged.

19 There we go. Great.

20 MS. REES: In some cases, very vertically
21 challenged.

22 Good morning, Chair Nichols and members of the
23 Board. My name is Sarah Rees, Assistant Deputy Executive
24 Officer for the South Coast Air Quality Management
25 District.

1 Thank you for the opportunity to comment on South
2 Coast's 8-Hour Ozone State Implementation Plan Update.
3 This update has been developed by South Coast AQMD and
4 California Air Resources Board staff through our public
5 processes and is a joint strategy by both agencies to
6 address the Clean Air Act contingency measure requirements
7 for the 1997 8-hour ozone standard.

8 South Coast AQMD appreciates the efforts by CARB
9 staff in working with us and we fully support the adoption
10 of the proposed SIP update. As described by staff, South
11 Coast AQMD and CARB staff have identified additional
12 measures and incentive funds to achieve emission
13 reductions as part of the contingency measure plan.

14 However, a substantial portion of the needed
15 emission reductions from sources are subject to federal
16 regulatory authority. While we will continue to work with
17 CARB to ensure that sources subject to State and local
18 regulatory authority are addressed to the maximum extent
19 feasible, federal action is absolutely critical for
20 meeting the standard. It's important to reiterate that
21 federal air quality regulations for sources such as
22 ocean-going vessels, aircraft, locomotives have not kept
23 pace with other sources subject to CARB and/or South Coast
24 AQMD authority, resulting in a substantial contribution of
25 these sources to our attainment challenge.

1 Without significant reductions from sources under
2 federal authority, it will not be possible to attain the
3 8-hour ozone standard by 2023. To the extent that EPA
4 fails to act on federal sources that are beyond
5 California's regulatory control, the funding needed to
6 achieve the necessary reductions dramatically exceeds
7 current and projected resources.

8 In summary, all levels of government need to take
9 aggressive action for reducing emissions under their
10 respective authorities to achieve the standard by 2023
11 through both regulatory and incentive measures. The South
12 Coast AQMD governing board approved this contingency
13 measure plan last Friday and we are fully committed to do
14 our part to work collaboratively with CARB and EPA on
15 implementation of this plan.

16 We strongly support the proposed 8-hour ozone SIP
17 updates and urge you to adopt it without delay for
18 submission to EPA.

19 Thank you.

20 CHAIR NICHOLS: Thank you.

21 MS. HSU: Chair Nichols and members of the Board,
22 my name is Regina Hsu and I'm an attorney with
23 Earthjustice.

24 We appreciate the inclusion of additional
25 measures in the draft final contingency measure plan. But

1 unfortunately, this plan still does too little to assure
2 the public that we will actually meet the federal clean
3 air standards.

4 As the Board is well aware, the South Coast air
5 basin has some of the dirtiest air in the nation and has
6 failed to meet a single ozone standard since the standards
7 were first issued in 1979.

8 To meet the 2023 deadline, CARB and the South
9 Coast AQMD need to include more commitments to additional
10 reduction. We ask that CARB -- we ask that CARB, one,
11 commit to more reductions, two, identify actual
12 enforceable measures for these commitments - excuse me -
13 three, quantify the reductions from these measures, and
14 finally, push the South Coast AQMD to include more
15 commitments to reductions in all sectors.

16 ARB, as the agency with authority over 46 percent
17 of NOx emissions, needs to do more. We recommend that ARB
18 identify enforceable measures to achieve reductions from
19 mobile sources. There are more opportunities in this
20 respect.

21 We also recommend that ARB specify how these
22 measures will achieve reductions. Some of the commitments
23 in the plan are unclear, specifically the Innovative New
24 Measures Commitment, which seems like another black box
25 strategy.

1 ARB should set -- should set out regulatory
2 measures with sufficient detail about how they will
3 achieve quantifiable reductions. We also suggest that ARB
4 strengthen regulations with emission reduction
5 commitments, such as the Advanced Clean Trucks Rule.

6 For example, the San Pedro Bay ports would need
7 17,000 zero-emission drayage trucks to meet their emission
8 reduction commitments in the Clean Air Action Plan. The
9 Advanced Clean Truck Rule, as it stands, would require
10 manufacturers to sell no more than 9,000 trucks by 2030.

11 Finally, ARB should push South Coast AQMD to
12 include more commitments to reductions in all sectors.
13 And this includes strengthening their regulations,
14 targeting compliances in the commercial and residential
15 sector, and implementing zero-emission requirements in the
16 industrial sector with the Best Available Retrofit Control
17 Rules.

18 We're running out of time and paying for the
19 failed black box strategy every day with our health. We
20 need a stronger plan and we're relying on ARB and the
21 South Coast AQMD to finally get us to meet the federal
22 clean air standards.

23 Thank you.

24 MR. MAGAVERN: Good morning.

25 Is this microphone on?

1 VICE CHAIR BERG: It will be.

2 You had it.

3 CHAIR NICHOLS: It looked like it had a green
4 light at moment there.

5 VICE CHAIR BERG: There you do.

6 MR. MAGAVERN: Okay. It's on now. All right.

7 CHAIR NICHOLS: Yes.

8 MR. MAGAVERN: Good morning, Madam Chair and
9 Board members. Bill Magavern with the Coalition for Clean
10 Air.

11 This is an urgent matter, because the South Coast
12 Air Basin still has the worst smog in the entire nation.
13 And, in fact, the South Coast is where Professor Arie
14 Haagen-Smit first identified what causes smog and led
15 actually to the creation of this Board and to Congress
16 given California our unique Clean Air Act authority to set
17 stricter mobile standards than the federal.

18 It was the smog in the Los Angeles area that also
19 led to the creation of the Coalition for Clean Air. That
20 was in 1971. And over that time, this Board and the South
21 Coast Air Quality Management District have taken many
22 major steps to clean up the air, often breaking new ground
23 with the measures they've adopted.

24 The federal government has sometimes helped.
25 Although, at this point, the federal government is

1 actually trying to make our air dirtier.

2 Unfortunately, after all the work that's been
3 done, we're still here in 2019. We are not on track to
4 having healthy air in the South Coast Air Basin. It's
5 been three years since the SIP was approved and we
6 unfortunately have got more obstruction from U.S. EPA
7 headquarters. And we also do not have the incentive
8 dollars that were projected in that SIP materializing, not
9 from the federal government. There's a fair amount that
10 has been contributed by the State government, but not
11 nearly as much as was anticipated by that plan.

12 So we now call on both this Board and the Air
13 District to do more. There are a variety measures. Just
14 to name a few, the District needs to swiftly wrap-up the
15 failed RECLAIM Program and follow the AB 617 requirements
16 for Best Available Retrofit Control Technology for
17 stationary sources. It needs to have strong facility
18 based measures. And this Board, among other measures,
19 needs to adopt a strong Advanced Clean Truck Standard with
20 instructions later today.

21 We support the innovative measures proposed, but
22 they are vague right now. We'd like to see more
23 definition. And even those will not be enough. So ten
24 groups sent a letter to Mr. Corey. He has responded. We
25 appreciate that. We have a meeting scheduled for early

1 next year. And what we ask the Board to do actually is
2 what the staff have asked you to do, which is to direct
3 the staff to conduct a public process early next year and
4 return to the Board with SIP amendments that will provide
5 significant additional reductions in NOx.

6 And I would add if anybody from the Governor's
7 office is listening, or CalEPA, the Governor could really
8 help by appointing someone with strong public health
9 credentials to be on the governing board of the South
10 Coast Air Quality Management District. His appointment
11 has been vacant now for most of this year.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

14 MR. BARRETT: Good morning. I'm Will Barrett
15 with the American Lung Association California. Thank you
16 for the discussion today and the presentation on the
17 update.

18 Despite decades of really strong progress in
19 cleaning up the air in the South Coast, our annual State
20 of the Air Report continues to show the South Coast region
21 as the most polluted by ozone in the United States. For
22 19 to 20 years, the South Coast has been number one on our
23 list of most ozone polluted. Bakersfield nudge them out
24 one year. But unfortunately, for the 20-year history of
25 our report, we've been able to document the challenges as

1 you all are fully aware of.

2 We know that attainment of the standards means
3 real relief to children, seniors, people living with
4 asthma, COPD, and other chronic health issues, respiratory
5 issues, cardiovascular issues. And we know that too many
6 people on too many days are breathing unhealthy air and
7 impacting their health.

8 Clearly, all parties, the District, the CARB
9 Board, U.S. EPA all have more work to do and must step up
10 their efforts with additional measures, additional
11 strategies, and clear commitments to really ensuring that
12 our attainment does get on track, on schedule.

13 We echo our colleagues who just spoke for
14 Coalition for Clean Air and Earthjustice in urging greater
15 attention to ensuring enforceable emission reductions and
16 carefully tracking incentive dollars and commitments
17 expected through those incentive dollars, knowing that we
18 have an ongoing challenge in meeting those incentive goals
19 through the State budget and other resources.

20 And especially, we'd like to see on going
21 tracking and development of new measures to make sure that
22 as those incentive dollars may not show up, that we're
23 backfilling and making sure that we're getting firm
24 commitments and enforceable measures going forward.

25 So we do appreciate as others have mentioned the

1 ongoing commitment to coming back soon with new measures
2 in the next year. We look forward to participating with
3 that process with you, and with the District, and other
4 stakeholders. And again, really urge the Board to take as
5 strong an action as possible to get us on track to
6 attainment with our Air District and U.S. EPA partners
7 needing to do their parts as well.

8 Thank you very much.

9 CHAIR NICHOLS: Thank you. I believe that
10 concludes the list of witnesses who've signed up to speak
11 on this item.

12 Again, this is a timely action here, because we
13 are required to submit this report to EPA. And I think
14 that the staff presentation did a good job of laying out
15 the really dramatic actions that have been taking place in
16 the South Coast and at CARB. I don't think we have any
17 criticism at this point, which is somewhat unusual.

18 But given the back-and-forth history over so many
19 years, I don't think we are here to say that we think that
20 South Coast has left any stone unturned in their efforts
21 to try to meet these standards. And I think ourselves are
22 feeling like we're, you know, pushing wherever we can.
23 There are some things that clearly have not accomplished
24 all that we would like to.

25 We would like to be able to turnover the whole

1 vehicle fleet faster than we have or at the moment at
2 least see as being possible. But on the other hand, we've
3 got some items coming up which will help in that regard.
4 And I do think that we can feel proud about the fact that
5 despite the lack of action on the federal -- so-called
6 federal sources, all those categories that we don't --
7 we're not able to directly control, that we've achieved
8 results even in those categories through other measures
9 that we've -- that we have taken, including spending of
10 very large amounts of money to try to make the
11 improvements happen.

12 But we also are not there yet and we certainly
13 can't say that, you know, we shouldn't keep looking hard
14 for additional measures that can be implemented locally.
15 I'd also like to suggest that both AQMD and ARB staff have
16 a history of having worked at the technical level with ARB
17 on emissions control measures in the past. And that in
18 addition to saying, federal government you should do this,
19 we should be in a position to also say we'll assist. We
20 actually could help to provide some of the analysis, some
21 of the testing, some of the -- some of the hard work that
22 goes into adopting new standard.

23 But this report will go forward assuming we -- we
24 vote to do that. And we have no idea what the response
25 will be, but we can guess that it will not be -- will not

1 be favorable immediately. So in a sense, I suppose we can
2 anticipate a continued -- a continued impasse with our
3 federal partners here. But I think we should -- we have
4 to do it anyway, so we might as well just get on with it.

5 Yes, Dr. Balmes.

6 BOARD MEMBER BALMES: Well, I just want to sort
7 of echo your comments. I appreciate all that the South
8 Coast Air Quality Management District has done over the
9 years. I've been studying ozone my almost entire academic
10 professional career and I know very directly about the
11 health effects. I used to experience the substernal chest
12 discomfort when I used to job on smoggy days down in L.A.

13 So -- and I also appreciate the staff's
14 presentation. And I really appreciate the recommendation
15 to direct us to -- direct you --

16 (Laughter.)

17 BOARD MEMBER BALMES: -- to consider additional
18 emissions reduction measures, which I know we're pushing
19 the envelope on, as suggested by Chair Nichols. But I do
20 think it's important, because we have kind of leveled off
21 with regard to ozone concentrations in the South Coast.
22 And again, that's no criticism of the South Coast.

23 I go around the nation saying how proud I am of
24 how ozone has been reduced in the South Coast, because you
25 know when I lived there in the eighties, it was, you know,

1 bad then. And that was way better than it had been, you
2 know, two decades earlier.

3 So I just want to say that this is very important
4 work. As hard as it is to squeeze out more ways to reduce
5 ozone, it is a pollutant that, as Mr. Magavern said, it's
6 the pollutant that really got this Board started. So I
7 just want to say that this is an important public health
8 effort.

9 CHAIR NICHOLS: Thank you. Other -- yes, Ms.
10 Berg.

11 VICE CHAIR BERG: And just piggybacking on, maybe
12 we really could also focus on the 617 communities, because
13 maybe that's an area where we could just have them come --
14 close the gap of the pollution. So that would be my
15 recommendation as well.

16 BOARD MEMBER BALMES: May I just?

17 CHAIR NICHOLS: Yes.

18 BOARD MEMBER BALMES: One caveat to that is, as I
19 think most everybody knows, ozone is a regional pollutant.
20 And so while I'm very supportive of anything to reduce
21 pollutant concentrations in AB 617 communities, the
22 efforts to affect ozone concentrations are really -- have
23 to be regional.

24 VICE CHAIR BERG: They have to be regional, even
25 with the NOx, huh?

1 BOARD MEMBER BALMES: Yeah.

2 VICE CHAIR BERG: Okay. Thank you for that.

3 CHAIR NICHOLS: All right. If there are no
4 additional questions then --

5 BOARD MEMBER MITCHELL: Madam Chair, I would like
6 to comment --

7 CHAIR NICHOLS: There are. Yes.

8 BOARD MEMBER MITCHELL: -- since it's my
9 district, if I may.

10 I want to thank staff for all the work you do,
11 and for such good collaboration with the South Coast
12 District. Obviously, there's, you know, work to be done.
13 And we are working very diligently trying to find
14 incentive monies to help accelerate the turnover of the
15 fleet. And that's -- that's one very key thing for South
16 Coast District.

17 The other thing is to accelerate, to the extent
18 we can, the stringency of our regulations in mobile
19 sources, so that we get those -- those cleaner trucks and
20 cleaner mobile sources as soon as we can, and also to look
21 for what additional measures we might be able to
22 implement, as was suggested here, over the next, you know,
23 few months and years.

24 I think we need to do a deep dive on what is
25 going to be actually needed for the South Coast, and this

1 will go for San Joaquin as well, to meet the ozone
2 requirements by the deadline? What are those specific
3 parts of the scenario that we can target, so that we can
4 concentrate on those and perhaps reach the target? It's
5 really precarious now I think that -- whether we will be
6 able to reach the target by 2023.

7 NOx reductions are critical. We know that.
8 We've been talking about that for a long time. And so we
9 do need to be looking at that as well, what other measures
10 going to do to reduce the NOx emissions?

11 But I think what is really -- should be commended
12 here is the strong relationship between CARB staff and
13 AQMD staff, and how well they've been working together to
14 reach our common goals, because it is a combination of
15 mobile sources and stationary sources. And we've done a
16 good job, I think, in the recent past of working together
17 to bring those two elements together to get the reductions
18 that we need.

19 So thank you for all the work you've done.
20 There's more to do. Let's have hope and pray for this.

21 Thank you.

22 CHAIR NICHOLS: Yes. Dr. Sherriffs.

23 BOARD MEMBER SHERRIFFS: Maybe -- can you hear
24 me?

25 Good.

1 Maybe it's no coincidence I'm next to you, San
2 Joaquin Valley here, because indeed we're absolutely in
3 the same boat or is it the same bathtub, or the same
4 beaker, same -- same trouble, same challenges. And
5 incentive money is obviously very important. And I think
6 we need to keep in mind to keep that it's not a zero sum
7 game. I get a dollar. You don't get a dollar. We're
8 really in this together, have to be working together for
9 this.

10 It's -- in terms of collaboration, yeah, I think
11 looking to other air districts, particularly San Joaquin
12 working together on these, looking to CAPCOA for. And a
13 reminder in terms of collaboration. If we are not able to
14 get the federal government to step up and make
15 improvements for what they have responsibility for, it
16 will be falling on the businesses in our communities
17 first, which will be a much more expensive place to find
18 those reductions.

19 So collaboration very important. Thank you.

20 CHAIR NICHOLS: Additional thought here on the
21 NOx issue. I've interrupted what was about to be a
22 motion, but I did want to just add in response to Ms.
23 Berg's earlier comment about focusing on 617 communities,
24 that while it's true that ozone is the pollutant that
25 we're talking about here, and it is a regional pollutant,

1 the limiting factor as we understand it is NOx. And the
2 NOx has other impacts in the immediate area around it,
3 so -- and sources of NOx tend to also be sources of other
4 pollutants including toxics as well.

5 So I don't want to just dismiss the notion that
6 there should be a -- kind of a focused look at where we
7 could get more bang for the buck by looking at those
8 places where we have the hot spots and seeing whether
9 there's additional measures beyond what we've been talking
10 about before.

11 I do think that that's a useful direction when we
12 come back to looking at more actions that are needed.

13 And with that, I will entertain a motion.

14 VICE CHAIR BERG: I do move Resolution 19-31.

15 BOARD MEMBER BALMES: Second.

16 CHAIR NICHOLS: The motion has been moved and
17 seconded.

18 All in favor please say aye?

19 (Unanimous aye vote.)

20 (Supervisor Fletcher not present.)

21 CHAIR NICHOLS: Opposed?

22 None.

23 No abstentions, I believe.

24 All right. So thank you all and we'll be back on
25 this next year for sure.

1 We have a very, very challenging schedule today,
2 and a lot of things to pack in. But I think we need a
3 break both for the reporter and for everybody else. And
4 it just needs to be a shortened one. I want to also
5 remind people, as I think was announced at the outset of
6 this meeting, that there's a display of clean trucks that
7 have been brought in for us to look at in conjunction with
8 the Advanced Clean Truck rule that we're going to be
9 working on.

10 So I am going to ask that we take a half hour
11 break at this point, before we take up the ACT rule, and
12 let anybody who's thinking of coming over know that we
13 won't be starting until -- until that point.

14 And for those of us who are going to try to grab
15 lunch, we can either do it during the break or without
16 having to, you know, break up the hearing, people can
17 adjourn for a few minutes and go grab some lunch later, if
18 they want to. But I do think we should just be in recess
19 between now and 12:05. And we'll see everybody back here
20 then.

21 Thank you.

22 (Off record: 11:35 a.m.)

23 (Thereupon a lunch break was taken.)
24
25

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

2 (On record: 12:06 p.m.)

3 CHAIR NICHOLS: Good afternoon, ladies and
4 gentlemen. It is afternoon and we're going to resume the
5 hearing. The Board members who are not sitting up here on
6 the dais are in the back room where they can hear and
7 actually see the presentation. A couple of people are
8 downstairs still I think looking at the cool trucks that
9 were brought in. But if they miss some of the staff
10 presentation, I know that they have had an opportunity to
11 review it.

12 So I'm going to get us started here.

13 The next item on the agenda is the Proposed
14 Advanced Clean Truck Regulation. And before I describe
15 what it is, I want to say that this is, as far as I can
16 tell, the first ever in the world effort to mandate the
17 construction and deployment of zero-emission vehicles in
18 the heavy-duty sector.

19 This is emerging as one of, if not, the largest
20 targets of opportunity, also largest areas of concern for
21 us as we strive to meet our health-based standards, as we
22 try to improve, in particular, the health outcomes in some
23 of the poorest communities in the state that also happen
24 to be adjacent to ports and railyards. And it's a -- and
25 it is also an area where clearly not just California, but

1 the world is in need of a major technology upgrade.

2 So this proposed regulation will do two things.
3 First of all, manufacturers will required to sell medium-
4 and heavy-duty zero-emission vehicles, or ZEVs, as a
5 percent of sales. And second, large entities, including
6 major retailers, restaurants[SIC] chains, and government
7 agencies would have a one-time reporting requirement to
8 inform us about how their facilities actually use these
9 kinds of vehicles, so that we're in a better position to
10 develop the next phase of this regulation and to
11 understand the impacts of the regulations

12 This is obviously a complex and highly important
13 industry that we're talking about. So we're going -- this
14 is only the beginning of our efforts here. It's part of a
15 comprehensive strategy to address emissions from motor
16 vehicles and is focused on accelerating a market. And
17 there is a market element that will be important in this
18 as well.

19 Exhaust from mobile sources and the fossil fuels
20 that power them are the largest contributors to the
21 formation of ozone, and greenhouse gases, and toxic diesel
22 particulate matter. We've made significant progress in
23 addressing these issues, but more still needs to be done
24 to address California's particular circumstances. And by
25 you unique circumstances, I think that largely refers to

1 our role in the logistics world nationally and
2 internationally, and the important role that movement of
3 goods plays in our economy, as well as the impact on our
4 communities.

5 California has been supporting transportation
6 electrification already in a number of ways. Our
7 Governor -- several governors have issued specific
8 executive orders directing State agencies to enact
9 policies to reduce emissions, including direction to
10 accelerate zero emission vehicle adoption and achieve
11 carbon neutrality by 2045.

12 This proposal will send a clear market signal for
13 wide-scale electrification of trucks and buses, and build
14 upon Board decisions to adopt the Innovative Clean Transit
15 Regulation, and the Zero-Emission Airport Shuttle
16 Regulation, both of which this Board has previously
17 enacted, which already are planning or will projected[SIC]
18 to achieve a zero-emission complete fleet by 2040 for the
19 buses and for 2035 actually by the airport shuttle.

20 So we've already put down a pretty important
21 marker here in this space. We also have engaged a
22 tremendous amount of activity on the part of local
23 governments, utilities, fleet owners, and others who are
24 looking at ways that they themselves can be more actively
25 involved in the transition to electrification.

1 So a lot is underway already. This is very
2 important, and as far as we know, absolutely
3 groundbreaking piece, because it focuses on the production
4 of the vehicles to make sure that they will be there.

5 So without further ado, Mr. Corey, would you
6 please introduce this item?

7 BOARD MEMBER SPERLING: Chair Nichols, could I --
8 Chair Nichols, could I just add -- this is Dan down here.

9 CHAIR NICHOLS: I'm sorry. Yes.

10 BOARD MEMBER SPERLING: Woo.

11 CHAIR NICHOLS: I see you.

12 BOARD MEMBER SPERLING: I just wanted to
13 reinforce what you just said. You know, I've just been in
14 Europe for a few months. And I've been spending time
15 talking to the European Union, European Commission, some
16 of the NGOs there, and they are looking very carefully at
17 this. You know, Chair Nichols, what you were saying, this
18 is one of the most important things, you know, --
19 innovative and important things we've done. And there's a
20 lot of people watching what we do on this, because we
21 are -- this is global leadership right here.

22 CHAIR NICHOLS: Thank you.

23 BOARD MEMBER SPERLING: And they're very -- and
24 they're very enthusiastic about figuring out how to follow
25 us.

1 CHAIR NICHOLS: Great. I think we're all
2 probably feeling like the end of the year is driving, to
3 some extent, our activities here, just in the sense that
4 we see -- feel time speeding up and we know that action is
5 needed. But, of course, it has to be done in a considered
6 and careful way. And we want to make sure that the suite
7 of different rules that we're working on work together and
8 reinforce each other.

9 So we will be asking questions, I'm sure, as we
10 hear from the witnesses on all sides of this. We
11 understand that, you know, members of the community,
12 environmental organizations want us to do more faster.
13 Members of industry are concerned that we might be going
14 too fast and we might be demanding things that are not
15 feasible or potentially. And we have seen this happen in
16 the past forcing the introduction of technologies that
17 aren't ready for prime time, and that aren't successful
18 with their intended purchasers.

19 So this is not -- this not a no-brainer by any
20 manner of means. In fact, it's a big brainer. It
21 requires us to really use our intellectual abilities and
22 our technical knowledge to make a wise set of regulations
23 here.

24 This is the first of what will inevitably be two
25 hearings. We have a requirement to listen, and to take

1 testimony, and to reflect upon it, but we will not be
2 actually adopting anything here today, until we've had a
3 chance to look at the potential for -- for amendments. So
4 without any further preamble on my part, let's turn to the
5 staff.

6 Mr. Corey.

7 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.
8 And as you noted, maximizing the use of zero-emission
9 technologies is necessary component -- a necessary
10 component to effectively address California's air quality
11 and climate protection goals. As part of our State
12 Implementation Plan, Sustainable Freight Strategy, and
13 Scoping Plan, we concluded that zero-emission medium- and
14 heavy-duty vehicles were needed everywhere feasible to
15 meet air quality standards and meet our sustainability
16 targets.

17 The current zero-emission truck market is mostly
18 served by small manufacturers and up-fitters. It's
19 necessary to accelerate the market to meet our goals by
20 bringing all manufacturers into the zero-emission vehicle
21 market and to instill confidence that early adopters of
22 zero-emission technology will be backed with long-term
23 market support.

24 Zero-emission trucks provide immediate health
25 benefits to local communities, are more energy efficient

1 than conventional trucks, and significantly reduce
2 petroleum and other fossil fuel use. Accelerating the
3 zero-emission trucks everywhere feasible is a key strategy
4 in the State's efforts to reduce emissions from the
5 transportation sector.

6 The proposed manufacturer ZEV sales requirement
7 is structured to be consistent with product planning
8 schedules with the goal of making successful and orderly
9 transition to a self-sustaining market.

10 Large entities and the fleets they work with will
11 be required to complete a report, which would provide
12 information needed to craft future fleet rules with
13 appropriate flexibilities, while ensuring a level playing
14 field. But ultimately, the combined strategy of the
15 proposed manufacturer requirement and future fleet rules
16 will be a key part of making substantial progress towards
17 achieving a zero-emission future.

18 I'll now ask Paul Arneja of the Mobile Source
19 Control Division to begin the staff presentation.

20 Paul.

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

23 AIR RESOURCES ENGINEER ARNEJA: Thank you, Mr.
24 Corey. And good morning, Chair Nichols and members of the
25 Board.

1 Today, I will be going over the proposed Advanced
2 Clean Trucks Regulation. This is the first of two Board
3 hearings on this item. The staff will be returning next
4 year with a final proposal that the Board will be voting
5 on.

6 --o0o--

7 AIR RESOURCES ENGINEER ARNEJA: In today's
8 presentation, I will give an introduction to the
9 heavy-duty zero-emission market, provide an overview of
10 the proposed manufacturer zero-emission vehicle sales
11 requirement, and the large entity reporting, and highlight
12 the next steps in this regulatory process.

13 --o0o--

14 AIR RESOURCES ENGINEER ARNEJA: California has
15 set aggressive climate and public health goals.
16 Widespread electrification in all sectors is a core
17 component to meeting these ambitious targets.

18 The proposed rule will foster and accelerate the
19 first wave of zero-emission trucks in California. The
20 proposed rule will support our stated goal of
21 transitioning the pickup and delivery sector to 100
22 percent zero-emission by 2040. It will also support the
23 efforts by the Port of Los Angeles and the Port of Long
24 Beach in their goal of 100 percent zero-emission drayage
25 trucks by 2035, as well as ensure that zero-emission

1 trucks will be available for state fleets to meet the
2 purchase requirements as required by state law.

3 Finally, the proposed rule will meet and exceed
4 the SIP obligation for a Last Mile Delivery Rule and will
5 result in both criteria pollutant and greenhouse gas
6 benefits.

7 --o0o--

8 AIR RESOURCES ENGINEER ARNEJA: The Advanced
9 Clean Trucks Rule is part of a suite of regulations
10 designed to spur adoption of zero-emission technologies in
11 medium-duty, heavy-duty, and the off-road sectors. The
12 proposed rule builds on other zero-emission regulations
13 approved over this past year, including those that apply
14 to transit buses and airport shuttles.

15 Today's proposal will be followed by future
16 zero-emission fleet rules that we're planning to bring for
17 your consideration in 2022. This new set of zero-emission
18 fleet rules is expected to provide -- to set approximate
19 targets for a wide range of trucks types and fleets,
20 including last mile delivery applications and drayage
21 truck fleets.

22 --o0o--

23 AIR RESOURCES ENGINEER ARNEJA: The medium- and
24 heavy-duty truck sector is a diverse set of vehicles in a
25 wide variety of applications. The zero-emission truck and

1 bus market in particular has seen significant growth and
2 development over the past few years. This image shows the
3 types of zero-emission vehicles that are commercially
4 available today.

5 These zero-emission vehicles are offered
6 primarily by a variety of smaller companies, many of them
7 being start-ups without an established dealership network
8 and limited manufacturing capability. While the number of
9 models and configurations continues to grow, they do not
10 yet cover the breadth of the medium- and heavy-duty
11 market.

12 Major manufacturers are generally not offering
13 commercially available vehicles yet. Most traditional
14 manufacturers have zero-emission truck demonstrations
15 underway and nearly all of them have announced plans to
16 have commercially available zero-emission vehicles in the
17 next few years if demonstrations are successful.

18 --o0o--

19 AIR RESOURCES ENGINEER ARNEJA: In addition to
20 manufacturers, major part suppliers are entering the
21 zero-emission truck market. These companies are creating
22 integrated solutions for electrified powertrains, e-axles,
23 and other components in a zero-emission supply chain.

24 Many of these companies are building on their
25 established relationships with truck manufacturers to

1 develop the next generation of solutions for these
2 vehicles. Demonstrations are underway with plans for full
3 commercialization shortly.

4 Vehicle service providers and rental fleets are
5 also entering the zero-emission vehicle market to provide
6 service, distribution, technician training, and leasing
7 solutions for zero-emission products. These companies and
8 others perform a key role in establishing a maintenance
9 and support network that will instill confidence in these
10 early adopter fleets.

11 --o0o--

12 AIR RESOURCES ENGINEER ARNEJA: There are a
13 number of elements that need to come together to enable a
14 large-scale transformation to zero-emission technology for
15 trucks. In particular, infrastructure to support vehicle
16 deployments will be a critical issue moving forward. We
17 are committed to work to address these areas, but it will
18 take partnerships among various groups to accelerate
19 progress.

20 To accomplish this, we are working with our
21 sister agencies, including the California Energy
22 Commission and Public Utilities Commission, alongside
23 municipalities, utilities, industry and other states, as
24 will be discussed following this presentation.

25 The proposed rule is one piece of this broader

1 overall strategy.

2 --o0o--

3 AIR RESOURCES ENGINEER ARNEJA: Next, I will be
4 walking through staff's proposal for the Advanced Clean
5 Trucks Regulation.

6 --o0o--

7 AIR RESOURCES ENGINEER ARNEJA: The proposal has
8 two main components: a manufacturer zero-emission vehicle
9 sales requirement and a reporting requirement for large
10 entities. The first part is a requirement for
11 manufacturers to sell zero-emission vehicles as a portion
12 of their annual sales. The second is a requirement for
13 businesses and other large entities to complete a one-time
14 reporting to help support future fleet requirements. The
15 information collected will be critical in developing
16 future fleet rules.

17 --o0o--

18 AIR RESOURCES ENGINEER ARNEJA: This slide
19 describes the proposed manufacturer zero-emission vehicle
20 sales requirement. Manufacturers who sell greater than
21 500 medium- or heavy-duty vehicles into California would
22 be required to sell zero-emission vehicles according to
23 the percentages displayed in the table.

24 The middle category, Class 4 through 8, has the
25 highest requirements, going as high as 50 percent of

1 electric sales by 2030, as our assessment shows that a
2 portion of these vehicles have characteristics that are
3 suited for electrification. This class includes delivery
4 vans, refuse trucks, school buses, and utility trucks.
5 Many of these vehicles are expected to operate locally and
6 return to a central location where infrastructure can be
7 installed.

8 For the Class 2b to 3 category, a higher
9 proportion of these vehicles are owned by small fleets
10 which have less operational flexibility. In addition,
11 fewer of these vehicles are expected to return to a
12 central location where infrastructure can be installed.

13 Pickup truck sales in this category would not be
14 counted until the 2027 model year. These vehicles are
15 primarily purchased for their towing and payload
16 capabilities, which are more challenging to electrify than
17 other vehicles in this category. Half of these pickups
18 are purchased by individuals for personal use for towing
19 trailers, RVs, boats, and horse trailers that cannot be
20 done by light-duty pickups.

21 For the Class 7 to 8 tractor category, early
22 applications are likely to be in drayage and shorter haul
23 applications -- shorter haul and not in long-haul applications that
24 require a public fueling or recharging network to be
25 developed.

1 In addition, these vehicles are often loaded to
2 their weight limit, meaning the weight considerations in
3 these vehicles are more important.

4 The regulation would also require Zero-Emission
5 Powertrain Certification procedures, where applicable in
6 order to earn zero-emission vehicle credits. It also
7 includes a number of flexibility provisions that I will
8 describe on the next two slides.

9 --o0o--

10 AIR RESOURCES ENGINEER ARNEJA: The proposed
11 regulation uses a credit and deficit system to provide
12 flexibility to manufacturers. Vehicles sold into
13 California generate credits -- deficits, and zero-emission
14 vehicle sales generate credits. Credits have a finite
15 lifetime of five years.

16 As shown, heavier vehicles have higher emissions
17 and generate more deficits, but also earn more cred -- ZEV
18 credits than lighter vehicles. This approach maintains
19 overall emission benefits, but also -- but allows
20 manufacturers to produce more zero-emission vehicles in
21 one category than another.

22 However, there is one exception to ensure that
23 over-the-road tractors are produced. Tractors have higher
24 miles and emissions, but have additional challenges to
25 electrify than other truck types. Manufacturers may only

1 use credits from zero-emission tractor sales to offset the
2 tractor deficits to ensure that zero-emission tractors are
3 produced. Manufacturers may bank and trade their credits.

4 These provisions as a whole are designed to give
5 manufacturers flexibility while maintaining emission
6 benefits.

7 --o0o--

8 AIR RESOURCES ENGINEER ARNEJA: Now, I will
9 describe the credits for hybrid electric vehicles with
10 all-electric range. These near-zero-emission vehicle
11 sales can earn credit based on their all-electric range.
12 The credit reach is the maximum of 75 percent of an
13 equivalent zero-emission vehicle at 75 miles of
14 all-electric range. The minimum all-electric range
15 requirement is consistent with existing California Phase 2
16 Greenhouse Gas Regulation.

17 Manufacturers can use these credits to meet up to
18 half of their annual deficit. This allows flexibility
19 while ensuring zero-emission vehicle production.

20 --o0o--

21 AIR RESOURCES ENGINEER ARNEJA: This slide covers
22 a few details on how the proposed rule interacts with
23 other existing regulations. The light-duty Advanced Clean
24 Cars Rule contains a provision allowing Class 2b and 3
25 zero-emission vehicles to earn credits. Therefore,

1 manufacturers would need to identify whether zero-emission
2 vehicle sales in this category would be counted towards
3 the Advanced Clean Cars Rule or the proposed Advanced
4 Clean Trucks Rule to avoid double counting.

5 We are proposing to allow zero-emission vehicle
6 sales to count towards the Phase 2 Greenhouse Gas
7 Regulation and this regulation at the same time.

8 The manufacturer's annual sales numbers,
9 zero-emission vehicle sales numbers and credit balances
10 will be published annually similar to what is done in the
11 light-duty Advanced Clean Cars Rule. Transit buses are
12 not included in this regulation.

13 And lastly, staff is coordinating on the
14 development of today's proposed rule and the forthcoming
15 low-NOx omnibus rulemaking effort expected early next
16 year. Both of these regulations will affect heavy-duty
17 manufacturers and staff is evaluating the cross section of
18 these separate but related regulations.

19 --o0o--

20 AIR RESOURCES ENGINEER ARNEJA: Now, I will
21 summarize the expected benefits to Californians associated
22 with the zero-emission vehicle sales requirement.

23 These include:

24 Health benefits from reduce exposure to criteria
25 pollutants, especially in disadvantaged communities where

1 these heavier vehicles often operate within; climate
2 benefits from reduced greenhouse gas emissions; the
3 creation of green high-quality jobs from zero-emission
4 truck manufacturers, suppliers, as well as infrastructure
5 installation and support; a reduction in energy usage and
6 petroleum dependence; establishing a solid foundation to
7 foster heavy-duty zero-emission truck development; and
8 other societal benefits, such as or including reduced
9 exposure to hazardous fumes and materials.

10 --o0o--

11 AIR RESOURCES ENGINEER ARNEJA: Related to what
12 was discussed earlier at today's Board hearing, the
13 proposed rule is anticipated to achieve criteria emission
14 reductions for both oxides of nitrogen and particulate
15 matter. The proposed rule is anticipated to achieve five
16 tons per day of NOx reductions by 2031. This is five
17 times the SIP goal and a critical component of meeting
18 South Coast's 2031 ozone attainment standard.

19 These criteria emission benefits are projected to
20 result in reduced asthma rates, reduced hospitalizations,
21 reduced emergency room visits, and a reduction in
22 premature mortality.

23 --o0o--

24 AIR RESOURCES ENGINEER ARNEJA: Supporting the
25 2017 Climate Change Scoping Plan, the proposed rule will

1 also achieve reductions in greenhouse gases beyond what
2 would be achieved by the Phase 2 Greenhouse Gas
3 Regulation. The proposed rule is expected to result in a
4 reduction of 11.2 million metric -- million metric tons of
5 effective carbon dioxide by 2040.

6 This comes from a combination of upstream and
7 downstream emission reductions. Zero-emission vehicles
8 generate zero tailpipe emissions. And in addition, the
9 production and distribution of electricity and hydrogen
10 produces lower greenhouse gas emissions than the
11 production and distribution of gasoline and diesel.

12 --o0o--

13 AIR RESOURCES ENGINEER ARNEJA: Staff is
14 recommending the following 15-day changes to the
15 manufacturer sales requirement. These include the
16 following:

17 Matching how credit life is defined in the Phase
18 2 Greenhouse Gas Regulation, where the life is measured
19 from the end of the model year and not the beginning;
20 creating a provision to allow flexibility aimed at
21 manufacturers who produce a small number of tractors to
22 use non-tractor credits to meet their requirements;
23 clarifying that the deficit make-up period is one year;
24 updating language to close a potential loophole to prevent
25 double counting of plug-in hybrid vehicles; and adjusting

1 the credit retirement order to avoid unintended
2 consequences; and other minor clarifying updates.

3 --o0o--

4 AIR RESOURCES ENGINEER ARNEJA: I will now move
5 on to the proposed large entity reporting requirement.

6 --o0o--

7 AIR RESOURCES ENGINEER ARNEJA: This is a
8 one-time reporting requirement designed to gather
9 information from a cross-section of large entities to
10 answer questions that will support future zero-emission
11 fleet rules.

12 The regulated entities include:

13 Any business that made more than 50 million in
14 annual revenue and operates a facility in California,
15 whether or not they own vehicles; any fleet that owns 100
16 or more vehicles and operates a facility in California;
17 any broker that directs 100 or more vehicles in
18 California; and government agencies, including State
19 agencies, federal agencies, and local municipalities.

20 Staff estimates roughly 12,000 entities will be
21 subject to the reporting requirement.

22 --o0o--

23 AIR RESOURCES ENGINEER ARNEJA: These tables
24 highlight the information that the regulated entities
25 would be required to report. Information can be broken up

1 into four categories.

2 First, entities would give some general
3 information on their type of business, number of
4 vehicle-related subhaulers, and the location of their
5 California facilities.

6 Second, entities would group their facilities
7 into ten categories - stores, truck yards, warehouses, and
8 so on - and answer questions about each group. These
9 questions include how many facilities there are, whether
10 they receive items using their own trucks or by
11 outsourcing, and whether the company as a whole manages
12 vehicle contracts or each individual facility.

13 Third, the entity would pick one representative
14 facility for each of the ten categories and give more
15 detailed information on its size, the number of truck
16 trips it receives during one typical week, and a number of
17 suppliers.

18 Last, the entity would report the number of
19 vehicles at each facility as well as the existing
20 infrastructure at the site and describe the operational
21 characteristics of similar vehicles.

22 --o0o--

23 AIR RESOURCES ENGINEER ARNEJA: The information
24 collected though the large entity reporting would be used
25 to support future zero-emission fleet regulations.

1 First, the information will help determine which
2 regulatory strategies make the most sense for different
3 sectors and vehicle types. Questions are designed to
4 explore different regulatory frameworks, like fleet
5 purchase requirements or other ideas, such as requiring
6 larger entities to hire fleets that use zero-emission
7 trucks or establishing zero-emission zones, where only
8 fleets with zero-emission trucks could operate.

9 Next, by better understanding how different
10 fleets meet their transportation needs, we will be in a
11 better position to ensure that we maintain a level playing
12 field between different types of fleets. Specifically,
13 better understanding how large and small fleets operate
14 their trucks will be key in ensuring that our future
15 zero-emission fleet rules do not disproportionately impact
16 smaller fleets. We also want to make sure that large
17 fleets that own their own trucks are treated equally as
18 those that outsource their transportation needs.

19 Information about where fleet's vehicles are
20 located will help the California utilities and our sister
21 agencies plan infrastructure to support an expanding
22 zero-emission vehicle market.

23 Lastly, vehicle usage information will help
24 identify fleet operational needs and how to match these
25 needs with commercially available zero-emission vehicles.

1 --o0o--

2 AIR RESOURCES ENGINEER ARNEJA: On the large
3 entity reporting requirement, staff is proposing three
4 primarily 15-day changes.

5 First, we are considering options to soften or
6 waive certain reporting requirements if enough regulated
7 entities report before 2021.

8 Second, we would add guide posts to clarify that
9 one week of truck trip data collection is sufficient, how
10 a representative week can be determined, and other changes
11 to improve clarity and minimize concerns about inadequate
12 reporting.

13 Third, we -- additional updates to clarify
14 staff's intent in response to comments received.

15 --o0o--

16 AIR RESOURCES ENGINEER ARNEJA: This slide
17 outlines the timeline for this rule and future
18 zero-emission fleet actions. This upcoming February, we
19 will hold a kick-off workshop to begin development of
20 zero-emission fleet rules. Around May, we plan to return
21 for the second Advanced Clean Trucks Board hearing, which
22 you will be voting on.

23 In April 2021, we will be receiving the
24 information reported from entities operating in
25 California. This will be used to support development of

1 the zero-emission vehicle fleet rule.

2 In 2022, we plan to return with a proposed
3 zero-emission fleet rule that will drive fleet purchase of
4 zero-emission vehicles in California.

5 Both the manufacturer sales requirement and the
6 fleet purchase requirement will launch at the same time in
7 2024.

8 --o0o--

9 AIR RESOURCES ENGINEER ARNEJA: Staff recommends
10 that the Board adopt the proposed resolution directing
11 staff to return next year with the final proposed rule.
12 In addition, staff will return as expeditiously as
13 possible with a Zero-Emission Fleet Rule no later than
14 2022 with implementation beginning in 2024.

15 Thank you for your time today. This concludes
16 staff's presentation. However, we have one guest speaker.
17 I would like to introduce Dr. Paul Miller, Executive
18 Director of the Northeast States for Coordinated Air Use
19 Management, or NESCAUM.

20 CHAIR NICHOLS: We're awaiting his arrival here.
21 Has he disappeared?

22 BOARD MEMBER RIORDAN: We have his slides.

23 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:
24 We seem to have lost Paul.

25 (Laughter.)

1 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

2 Perhaps, we could come back to him when we can
3 track him down. He was here earlier.

4 CHAIR NICHOLS: Well, why don't we proceed. We
5 have, as of this moment, 101 people who have signed up to
6 testify on this item. I am going to start off with a
7 two-minute time limit for speakers and we may well go to
8 one, particularly if people begin to repeat themselves or
9 the testimony is just the same.

10 So I think hopefully we'll be able to get through
11 it. It's not that we don't want to hear from you, but we
12 physically can't always hear from people. And when you're
13 saying the same things, it oftentimes doesn't actually add
14 to the effectiveness of the message. So with that, I am
15 going to start off, however, with one of our two-minute
16 presenters, Mr. Miyasato from the South Coast AQMD.

17 DR. MIYASATO: Good afternoon, Madam Chair --

18 CHAIR NICHOLS: Hi.

19 DR. MIYASATO: -- members of the Board. Give a
20 shout-out to Judy Mitchell our board member. I'm Matt
21 Miyasato, the Deputy Executive Officer for Science and
22 Technology Advancement at the South Coast Air Quality
23 Management District. That's a long way of saying I'm the
24 chief technology guy at the nation's largest air district.

25 As you heard from the last item, the South Coast

1 basin suffers from the worst ozone pollution in the
2 nation. And you also noticed that we are -- we are not
3 able to regulate our federal or State sources. And so
4 what we -- most of our pollution comes from mobile
5 sources. And, in particular, heavy-duty trucks is our
6 number one NOx emitter in the basin.

7 And so in order for us to meet not only the 2023
8 standard that you just heard about, but the 2031 standard
9 for ozone attainment, we need very strong regulations.
10 And our concern with the ACT is it's not going to get us
11 there. Even when you take ACT, the Advanced Clean Truck,
12 in concert with our omnibus low NOx rulemaking that you're
13 undergoing that staff talked about, we don't see how we
14 get the number of trucks turned over in the amount of time
15 that we have, even between now and 2031.

16 We are concerned that by the time we have to show
17 attainment, that most of the trucks will still be diesel.
18 They'll be 0.2 gram diesel -- 0.2 gram NOx diesel trucks
19 that are still on the road.

20 And so what we're urging you to do is have your
21 staff work with our staff to determine what is that fleet
22 makeup and what does that rollout look like, because we
23 think what you're going to determine is what we found in
24 our 2016 AQMP is that we're going to need a very, very
25 strong incentive program and to force commer -- to replace

1 trucks today with commercialized technologies that are
2 available, for instance, the ultra low natural gas.

3 And with that kind of suite of different
4 technologies and the rollout, we think that we can then
5 work with you to ensure that the 17 and half million
6 residents in the South Coast Basin will be guaranteed
7 clean air.

8 So with that, I thank you.

9 CHAIR NICHOLS: Than you.

10 MR. TANG: Good afternoon, Chair Nichols and
11 members of the Board. My name is Mark Tang and I'm a
12 manager at the Bay Area Air Quality Management District.

13 And I'm here to express the Air District's
14 support of the proposed Advanced Clean Trucks Regulation
15 and to provide additional suggestions on how we believe it
16 may be strengthened. We share similar concerns to the
17 South Coast Air Quality Management District. And we do
18 recommend that increasing the 15 percent zero-emission
19 vehicle sales requirements is important for Class 2b, 3,
20 and 7 and 8 tractor groups.

21 In the Bay Area, diesel particulate matter
22 disproportionately impacts low income and communities of
23 color. This is especially true of communities located
24 along Bay Area highways.

25 For example, medium- and heavy-duty truck

1 emissions contribute over 40 percent of diesel particulate
2 matter, impacting our West Oakland AB 617 communities.

3 Therefore, zero-emission truck standards and
4 quicker fleet turnover are a key component to reducing
5 both those emissions and associated health risks. So we
6 believe more aggressive zero-emission vehicle adoption is
7 needed to reduce those localized health risks.

8 Additionally, the Air District believes that the
9 currently proposed sales requirements will not be
10 sufficient to achieve California's clean air goals. And
11 while technologies and infrastructure may not be available
12 today, zero-emission truck technology and infrastructure
13 is rapidly improving and becoming more readily available.

14 So we would therefore respectfully request that
15 the sales targets in this rule be periodically reviewed,
16 over time and strengthened to reflect the increasing
17 availability of zero-emission vehicle technologies and
18 infrastructure.

19 Thank you.

20 CHAIR NICHOLS: Thank you.

21 MR. LEWIS: Good afternoon, Board Members. My
22 name is Mike Lewis and I'm the representative of the
23 Construction Industry Air Quality Coalition. It's made up
24 of the largest construction associations in California.
25 Our estimate is that we have about 75,000 trucks that

1 would be affected by this.

2 We are not a last mile delivery service, as they
3 talk about and is part of the motivation for this rule.
4 The issues that we have with this proposal are we outlined
5 in a couple of comment letters, but I'd like to highlight
6 a couple of them.

7 First of all, we don't think there's been enough
8 outreach to the people who going to be required to report
9 under this provision. And I think there's thousands and
10 thousands of businesses who have no idea that they're
11 going to be required to report.

12 We think the questions are very intrusive. I
13 brought copies of the questionnaire that was handed to us
14 in August. And since that time, more items have been
15 added to it, but I would ask you to take a look at it and
16 decide for yourself whether or not all of this information
17 is necessary and whether it's useful. I'd also suggest
18 that you give a copy of it to the staff and have them fill
19 it out for this building and time how long it takes them,
20 and how much it costs you, and then turn it over to your
21 enforcement people when they're done and ask them whether
22 it's correct and whether or not they're entitled to some
23 fine for not having filled out the information correctly.

24 I think it's a foregone conclusion that you're
25 going to mandate that everybody go electric, whether

1 that's an appropriate technology for the various
2 applications that we have, as your staff outlined, for the
3 extent of this fleet.

4 But I think the problem is is what you say it
5 costs and what it really costs are two different things.
6 And we've already got some pretty crushing requirements in
7 our industry for the off-road and the portable equipment,
8 as well as the trucks that we -- that we operate today.

9 Part of the problem with this questionnaire is it
10 never asks the question, if you had to do this, how would
11 you do it, how long would it take you, and how much would
12 it cost you? You're going to apparently take all this
13 data and you're going to jump those conclusions yourself.
14 And I don't think that that's the appropriate way to get
15 to the information that you want.

16 We've suggested, as have others, that you
17 bifurcate this process, that you pull out this reporting
18 requirement and spend a little more time or a lot more
19 time with those who would be required to respond and get
20 it right, and maybe look at other ways to collect this
21 data, other than throwing out a net and seeing what you
22 catch.

23 CHAIR NICHOLS: So I'm going to ask you, if
24 you're willing, on behalf of your industry, your members
25 to assist in helping to design a questionnaire that will

1 get us the information that we need, because we
2 obviously -- I think it's obvious that we need the
3 information. Maybe you don't think we even need it. But
4 assuming we're going to proceed some way or another to do
5 something to promote this kind of transportation that
6 we're talking about, how can you -- how can you help us do
7 that the way you think it should be done?

8 MR. LEWIS: I think we'd be happy top help you do
9 that. I'm not sure that your staff can define what it is
10 they need, so they're throwing out a very broad
11 questionnaire asking for a lot of data. I mean, most of
12 the businesses in the construction industry, 90 plus
13 percent of them, are small family-owned businesses. Some
14 of this data they don't keep. Some of it they're not
15 going to give you, frankly, because they consider it
16 proprietary or it has to do with they don't want it to get
17 in the hands of their competitors.

18 You have a lot of data available to you from
19 Caltrans. You share data with Caltrans, which was another
20 concern about the confidentiality. I mean, the data that
21 Caltrans doesn't lose, they sell. So what benefit is it
22 to us to turnover all this information to you and then not
23 know where it's going to go.

24 CHAIR NICHOLS: You know, the data has value to
25 somebody clearly.

1 MR. LEWIS: But specific -- specific -- let's
2 figure out specifically what you need and why you need it,
3 because I think --

4 CHAIR NICHOLS: Yeah.

5 MR. LEWIS: -- I think the sense is is you're
6 going to -- you're going to take all this information and
7 you're going to say, oh, you can afford to do this, if you
8 just ran your business better.

9 CHAIR NICHOLS: That may be an artifact of, you
10 know, lack of trust here, which I would not -- I would
11 understand, but --

12 MR. LEWIS: I trust you implicitly.

13 CHAIR NICHOLS: -- you know, the point is that if
14 we don't have the data, we'll do something that is even
15 worse. So, you know, I think from your perspective, you
16 need to be thinking how you could help us design something
17 that would actually get the information. I think they're
18 pretty clear. Maybe there are too many points of data
19 that people are asking for.

20 But the basic issue is how do people use their
21 trucks? Where, how, when, how much? Because what's going
22 to happen is we'll adopt a rule and then everybody will be
23 lined up asking for exemptions, or changes, or, you know,
24 different ways of doing it, because we've gotten it wrong,
25 because you didn't really understand how the industry

1 worked.

2 And we're not -- you know, we're not your
3 industry, so I'm not defending this proposal particularly.
4 I had the same -- frankly, the same reaction when I first
5 saw it, which is wow, this is a lot. You know, if I -- as
6 a small business, I don't know how I would respond to it
7 either. But, okay, let's figure out how we can get the
8 information then and do it in a better way.

9 MR. LEWIS: I think we're happy to work with you
10 on that. We have since this process started. And I think
11 we're just a little concerned that much of what we offered
12 up didn't get considered or didn't get included, so...

13 CHAIR NICHOLS: Thank you. You just happy to be
14 the first one up who made that point, so you got --

15 MR. LEWIS: Well, I'm sure you're going to hear
16 it again, and again, and again.

17 CHAIR NICHOLS: You got the opportunity to be
18 asked the questions.

19 MR. LEWIS: Thank you.

20 CHAIR NICHOLS: Thank you.

21 DEPUTY EXECUTIVE OFFICER CLIFF: Chair Nichols?
22 This is Steve.

23 CHAIR NICHOLS: Yes.

24 DEPUTY EXECUTIVE OFFICER CLIFF: Paul Miller is
25 back.

1 CHAIR NICHOLS: Ah, well.

2 (Laughter.)

3 CHAIR NICHOLS: All right. Let's take a brief
4 pause here and then hear from your colleague from NESCAUM.

5 Mr. Miller.

6 Yes. Sorry. We called this item before you were
7 ready.

8 MR. MILLER: I'm sorry I wasn't here. This is,
9 for me, quite an entrance. It wasn't planned, but thank
10 you for providing the time --

11 CHAIR NICHOLS: Well, thanks for coming.

12 MR. MILLER: -- and I missed my slot.

13 So. My name is Paul Miller. Apparently, I've
14 been announced already.

15 (Laughter.)

16 MR. MILLER: I am the Executive Director with the
17 Northeast States for Coordinated Air Use Management.

18 And how do I do slides?

19 Next slide.

20 --o0o--

21 CHAIR NICHOLS: You have an assistant working for
22 you.

23 MR. MILLER: Okay. So NESCAUM is the regional
24 association of state air quality agencies of the eight
25 northeast states, New York, New Jersey, and the six New

1 England states. Seven of our eight states have adopted
2 the California Low Emission Vehicle Program, including the
3 zero-emission vehicle mandate. We began doing that in the
4 early 1990s. So we've been working closely with
5 California and your efforts for a number of years.

6 And there's no question that the zero-emission
7 vehicle mandate for light-duty vehicles has been a driver
8 of electrification in our region in the consumer market in
9 our region.

10 And I'm here today to support our region's strong
11 support for the proposed Advanced Clean Trucks Rule. A
12 strong mandate from California will provide the industry
13 with the certainty it needs to invest in new electric
14 technologies. It will accelerate zero-emission vehicle
15 trucks and buses, not just for California but for us.

16 And our states are taking significant steps right
17 now to support electrification of the medium- and
18 heavy-duty vehicle sector, providing incentives for
19 investing VW settlement funding into buying electric buses
20 and infrastructure support, as well as electric transit
21 and school buses.

22 And it's important that we eliminate tailpipe
23 emissions from the sector to meet our climate and air
24 quality goals.

25 --o0o--

1 MR. MILLER: So in our region, transportation is
2 about 40 percent -- 42 percent roughly of our overall
3 greenhouse gas emissions. And within the transportation
4 sector, light-duty vehicle is about 54 percent and the
5 medium- and heavy-duty sector about 23 percent. So it's a
6 big segment of our emissions. And that's why we're
7 interested in it, because no single sector, as you know,
8 is going to solve our climate problem.

9 --o0o--

10 MR. MILLER: We have made, with the assistance of
11 the California program, a dent in the greenhouse gas
12 emissions from light-duty vehicles over the years. This
13 is a bar chart comparing 1990 to 2015 emissions. What we
14 are seeing on the heavy- and medium-duty side is that
15 emissions are increasing and it's increasing at a faster
16 rate than any other mobile source sector in our region,
17 and we need to get a handle on this.

18 We project that by 2030 for every two trucks on
19 the road now, we'll have one more truck. So the -- it's
20 only going to increase without addressing the issue.

21 --o0o--

22 MR. MILLER: But greenhouse gases aren't our only
23 concern with this sector, mobile sources in general. As I
24 mentioned earlier on, we began adopting the California
25 program and the zero-emission vehicle mandate for air

1 quality issues. We have a persistent ozone problem. The
2 on-road diesel sector heavy-duty vehicles is the largest
3 source of nitrogen oxides in the northeast region. This
4 is the ozone transport region, which is Northern Virginia
5 up through Maine.

6 And you can see cross these two years the
7 heavy-duty vehicle diesel sector is our highest sector in
8 2011 and 2018. And without addressing it, it will
9 continue to be that way.

10 --o0o--

11 MR. MILLER: And this is our ozone problem. And
12 Los Angeles isn't the only one -- or Southern California,
13 the inland valleys aren't the only one with a high ozone.
14 We have a persistent ozone problem in the northeast. This
15 entire blue shaded area is in violation of the most recent
16 ozone standard, the 2015 standard. And the New York City
17 area just recently got bumped up to a higher
18 classification for the older 2008 standard.

19 And what's driving that is NOx. This is NOx seen
20 from space. What you can see in the northeast from this
21 image, which is only from September 19th of this year,
22 it's -- a whole lot of NOx along the highway corridors in
23 the northeast. This is what's driving our air quality
24 problem. And it ends the big dot -- well, it doesn't end,
25 but you can see it, kind of like a tadpole. The head is

1 New York City.

2 We've been doing field research, field campaigns
3 looking at this ozone problem for the past two years and
4 we know we've got to drive down NOx even more than what
5 we've got on hand to do now.

6 --o0o--

7 MR. MILLER: So in reference to electric
8 vehicles, with California as a partner, we signed -- we
9 worked with our states, a number of states, to develop a
10 Governors Memorandum of Understanding on light-duty
11 vehicles. Ten states ultimately have signed on. Created
12 in 2013. This is a multi-state collaborative effort to
13 promote consumer education, outreach, infrastructure
14 development, incentives, working with dealerships and
15 other stakeholders to promote the more rapid introduction
16 of light-duty electric vehicles in our region and across
17 the country.

18 And with that template, with that experience, we
19 have announced today, once again, with California and a
20 number of other states a similar initiative to also
21 accelerate the more rapid introduction of electric
22 vehicles in the heavy-duty and medium-duty vehicle sector.

23 The states signing on are California,
24 Connecticut, Maine, Massachusetts, New Jersey, Oregon,
25 Rhode Island, Vermont, as well as the District of

1 Columbia. And in this partnership, it's a statement of
2 intent, in which we'll be working with these states and
3 other interested states that we expect to join on later to
4 develop a Governors, and a Mayor in that case for D.C.,
5 memorandum of understanding to move forward in this
6 particular sector, once again looking at California and
7 its leadership and what you're doing here today.

8 In this process we expect to have a memorandum of
9 understanding in the next few months and that will lead to
10 the development of an action plan, in which we will work
11 on regional coordination on those similar kind of issues
12 we've been dealing with with light-duty vehicles. And
13 we're going to leverage that experience and pursue this as
14 well.

15 And so I want to thank you for your leadership in
16 this area and we look forward to continuing our working
17 relationship going forward in this important area.

18 And I also want to close with the statement, it's
19 a climate issue, but it's also an air quality issue. They
20 both go together.

21 Thank you.

22 CHAIR NICHOLS: Thanks. Thanks for making the
23 trip and for all your work to organize your fellow states
24 and the NESCAUM members as well. I think that this will
25 help a lot as we move forward in the discussion about the

1 market, because where we're going to have to get obviously
2 is to a lot of trucks. So we want to be able to send the
3 message to the manufacturers that if they build them, they
4 will be bought. There will be a place for them to go.

5 So thanks very much.

6 MR. MILLER: Thank you.

7 CHAIR NICHOLS: Okay. Let's get back to our
8 regular order here then. And I'm going to ask people to
9 come down actually in threes. It my help us a little bit
10 here, and to use the two different microphones, because we
11 just are using time just because we -- it takes a little
12 time to move from your chair to the podium. So thank you.

13 Go ahead.

14 MR. ASTI: Good afternoon, Chair and Board
15 members. David Asti, Southern California Edison.

16 I'll be very brief in my comments. The Advanced
17 Clean Truck Rule supports California's critical goals of
18 confronting climate change and improving air quality. SCE
19 supports the ACT rule and stands ready to facilitate the
20 transformation of the transportation sector across all
21 medium- -and heavy-duty segments.

22 We stand ready to help with infrastructure needs
23 and rate designs that support vehicle electrification.
24 SCE is proud to partner with the customers and communities
25 in our service territory to support the transition to

1 clean transportation. We know there will be challenges
2 ahead from incentive funding to infrastructure, but we
3 view this as a call to action.

4 The ACT rule is a critical start in the right
5 direction for meaningful momentum in accelerating the
6 transition to zero-emission technologies in the medium-
7 and heavy-duty sector.

8 Thank you very much.

9 CHAIR NICHOLS: Thank you. You're on.

10 MR. BOUWKAMP: It says green light must be on. I
11 don't see a green light.

12 CHAIR NICHOLS: Don't worry about it. The buzzer
13 will go off or a hook will come down.

14 MR. BOUWKAMP: Good afternoon, Madam Chair,
15 members of the Board. I'm speaking on behalf of the
16 California Fuel Cell Partnership, a public-private
17 partnership for both government and industry. I have some
18 items to consider in addition to the proposed rule. And
19 those are mostly related to hydrogen fuel cell trucks.

20 There is currently a lack of dedicated funding
21 for heavy-duty ZEV infrastructure. This will be essential
22 for these vehicles to be operated and to be rolled out.
23 And a lot of effort has to happen in that space. An
24 example is that hydrogen is currently a motor vehicle
25 fuel. Electricity is not yet, but it is in the process of

1 becoming one.

2 And there are a significant number of items
3 related to that, such as the sale of the fuel and the
4 measurement of that fuel so consumers get what they are
5 told they would get, and that includes truck -- truck
6 operators that will eventually fuel at truck stops,
7 because it is a public sale -- point of sale.

8 The next point is that there should be other
9 policies facilitating the rollout of these vehicles, both
10 for infrastructure and vehicles. And the reason I'm
11 saying that is because we do want to incentivize and
12 create certainty for private industry to invest here and
13 not for government to facilitate and fund this whole
14 effort, so eventually it can be a sustainable business
15 solution. Currently, there are insufficient incentives
16 for heavy-duty trucks. This applies both to the trucks
17 and the vehicles. And it's something to consider and to
18 be figured out between the A -- between ARB, California
19 Energy Commission, and the Public Utilities Commission.
20 And this is also to facilitate the rollout and the
21 development of these zero-emission trucks.

22 One point that I do want to make that often is
23 brought up and most likely will be mentioned again is the
24 renewable content of hydrogen. Our members, as well as
25 those that are participating in the Hydrogen Council, they

1 have set a goal for 2030 of 100 percent decarbonized
2 hydrogen. That includes renewable hydrogen. And one
3 point for that as well for hydrogen is that hydrogen will
4 facilitate the grids to become more renewable -- to allow
5 more renewable content on it through storage and through
6 using stranded assets in the renewable power generation
7 sector.

8 Those are all my comments. Thank you for your
9 attention.

10 CHAIR NICHOLS: Thank you.

11 MR. HARRIS: All these years, I didn't know this
12 thing went up and down.

13 (Laughter.)

14 CHAIR NICHOLS: Hi.

15 MR. HARRIS: Madam Chair and the Board, thank you
16 for the opportunity to talk today. My name is Frank
17 Harris. I represent the California Municipal Utilities
18 Association. And as the representative from Edison
19 mentioned earlier, California's electric utilities stand
20 behind the State's clean transportation goals.

21 My members are actively developing programs to
22 promote clean transportation and accelerate electric
23 vehicle adoption. And my members also appreciate the
24 effort to collect information in advance of the
25 rulemaking, as you said earlier, Madam Chair, in the hope

1 of better informing the final regulation that gets
2 implemented.

3 Nobody likes another reporting regulation. Some
4 of the information that's being requested is already being
5 reported in other venues. And we would all like it to
6 just be collected here, so that we don't have to engage in
7 duplicate reporting. But the initiative to collect more
8 information and better inform the regulation is one that
9 we support.

10 Where we have concerns is in one element, and
11 that is the request to report information on trucks,
12 fleets over which we have no vision, over which we have no
13 control, that being the trucks that are owned and operated
14 by vendors and other organizations that deliver to our
15 facilities.

16 It's interesting. I mean, if you look at the
17 SRIA for any regulation, staff will underestimate the
18 burden. And the regulated community will say it's going
19 to take a lot more time. But you mentioned oh, my gosh,
20 when you read it, the SRIA indicates that this report can
21 be complied -- complied -- compiled and the regulation can
22 be complied with in four hours.

23 I don't see how that's possible, particularly
24 when you consider the idea that much of this information
25 we don't already collect. And those vehicles that are

1 being used by somebody else, we're going to have to go
2 physically observe to be able to answer that.

3 I'd ask that the Board direct staff to reconsider
4 how to collect that data.

5 CHAIR NICHOLS: Thank you.

6 MR. HARRIS: Thank you very much for your time.

7 CHAIR NICHOLS: Ms. Kanabay.

8 MS. KANABAY: Chair Nichols and Board members, my
9 name is Kate Kanabay. I'm here today on behalf of Autocar
10 Truck, a small manufacturer of heavy-duty vocational
11 trucks with manufacturing plants in Indiana and Alabama.

12 On behalf Jim Johnston, President of Autocar, I
13 thank you for the opportunity to speak to you about the
14 ACT regulations and their impact on small business.

15 Autocar supports the ACT regulation and CARB's
16 efforts to accelerate the development of electric
17 vehicles. Autocar has been a leader in bringing lower
18 emission heavy-duty trucks to market in California.
19 Today, thousands of Autocar's natural gas trucks are
20 collecting garbage and recycling on California's streets,
21 while running on near-zero engines.

22 As set forth in our written comments submitted
23 this morning, we are requesting a small change to the
24 regulations with regard to the low-volume exemption. The
25 reason for the change is two-fold. First, it's important

1 that small businesses have a reasonable sales threshold
2 for becoming subject to the manufacturer's sales
3 requirement.

4 Second, it is important to incentivize small
5 manufacturers who are in a unique position to drive the
6 vocational market to work to develop electric vocational
7 trucks, while providing an adequate runway for us to
8 invest our limited resources in this development of
9 technology.

10 We're asking the Board to raise the low-volume
11 threshold from 500 to 1,500 annual sales in California.
12 In our discussions with CARB staff, we learned that the
13 sales data they relied on in setting the threshold was
14 inaccurate. They thought we were coming in below 500.
15 Autocar sells about 3,000 trucks a year. And because
16 we've been ahead of the curve on alternative fuels, we're
17 happy to say that we do average over 500 of those sales in
18 California over the last few years.

19 But based on the staff report and the reasoning
20 set forth therein Autocar was intended to receive the
21 small business exemption. And in order to fulfill that
22 intention, we need to bump up the sales threshold that
23 will give us the time and the revenue we need to devote
24 the necessary resources to ZEV development.

25 What happens if we don't get the exemption? We

1 believe that product lines like refuse trucks, yard
2 tractors, street sweepers, concrete pumpers will remain
3 fueled by diesel and gas. Autocar will be forced to stop
4 selling trucks in California and our competitors will use
5 their credits rather than invest in electrifying these
6 trucks.

7 We do suggest one other separate reporting
8 requirement for exempt small businesses. Let us share
9 data and progress with you over time to show you how we're
10 utilizing that extra time wisely and we'll work with end
11 users and body companies to provide a viable product.

12 CHAIR NICHOLS: Thank you. I'm going to ask
13 people to pay attention to the timelines also.

14 Okay.

15 MR. GELLER: Good afternoon, Chair Nichols and
16 members of the Board. My name is Michael Geller, Deputy
17 Director for the Manufacturers of Emission Controls
18 Association.

19 From combustion to electrification, MECA members
20 are focused on delivering all mobility solutions to
21 improve overall emissions footprint of vehicles including
22 battery and fuel cell materials, components for hybrid, as
23 well as all-electric commercial vehicles.

24 We believe that the targets in this proposal are
25 very aggressive based on experience with the passenger car

1 ZEV targets. And we are generally supportive of the ACT
2 proposal, but would like to recommend the addition of
3 multiple compliance pathways, which we believe will
4 strengthen the proposal and enhance ZEV penetration.

5 In those truck sectors with near-term challenges
6 to fully electrify, hybrid electric vehicles can offer
7 significant emission benefits. In addition to the plug-in
8 hybrids that are already in this proposal, MECA recommends
9 CARB allow HEVs in model year 2027 Phase 2 Greenhouse Gas
10 Standard early to be able to earn partial credits that are
11 eligible for a portion of ZEV compliance. China has
12 recently proposed such a parallel technologies pathway
13 approach in its New Energy Vehicle Program.

14 In the transition to CARB's goal of a net
15 zero-emission fleet, conventional engines will continue to
16 be built. And if operated on low carbon fuel, these will
17 offer criteria and greenhouse gas reductions. MECA
18 suggests that CARB consider complementary fleet and
19 vehicle sales rules that allow for partial compliance with
20 ZEV mandates via combined vehicle and low carbon fuel
21 approaches, such as ultra low NOx trucks fueled by net
22 zero carbon fuels.

23 Finally, as the fully electric truck market
24 matures, we support establishing performance standards for
25 these vehicles and components in order to drive continual

1 improvement and innovation in clean mobility. These can
2 include battery performance standards, such as lifecycle
3 emission reduction goals, range requirements, and short-
4 and long-term deterioration limits.

5 To conclude, we look forward to working with
6 staff on some of these multiple pathways to help
7 strengthen this rule and ensure that your goals are met in
8 time. It is our belief that parallel technology
9 approaches would not subtract from the proposed ACT, but
10 only expand the pathways toward meeting the State's
11 environmental goals.

12 CHAIR NICHOLS: Thank you.

13 MR. GELLER: Thank you.

14 CHAIR NICHOLS: Okay. Mr. Frank. And will Mr.
15 Pingle, and Ms. Fenton, and Mr. Coates move on down too.
16 Thanks.

17 DR. FRANK: Good afternoon. Professor Frank.
18 And I retired as a professor at UC Davis some years ago.
19 And I've built the first strong plug-in hybrid electric
20 vehicle, much like just mentioned. The strong means, long
21 range. That means long range electrically. So we
22 could -- we could build vehicles that will get 90
23 percent -- that will use 90 percent annually electricity
24 and less than ten percent liquid fuel. That liquid fuel,
25 if biofuel, it -- that means you have a zero-emission

1 vehicle.

2 So around 2006 I sold the company -- I formed a
3 company Efficient Drivetrains, Inc. And we built trucks
4 of all manners from Class 2 to Class 8, trucks and buses.
5 Our customers were Chinese customers. They were PG&E work
6 trucks and service trucks, school buses and delivery
7 trucks of all manners.

8 The company was told the Cummins, Inc. just
9 recently. And they have acquired all 45 of my patents
10 belonging to me and EDI.

11 There are many applications which can be done
12 much better with plug-in electric vehicles, especially in
13 the fleet truck market. Our experience in fleet trucks --
14 by the way, you don't have zero emissions unless people
15 use these trucks. If you have a fleet of vehicles out
16 there, and it's electric, but it's not plugged in, the
17 customer will -- their drivers will not use it.

18 So the key is zero-emission miles accumulated on
19 an annual basis.

20 So I want to say to you --

21 CHAIR NICHOLS: Your time is up.

22 DR. FRANK: This is my last sentence here. I
23 want to say to you that I have acquired a lot of
24 experience on these trucks, building them, and having
25 customers -- seeing customers use them.

1 I would be happy to answer any questions or
2 contribute to this, because I support this idea.

3 CHAIR NICHOLS: I appreciate your support.

4 Okay.

5 DR. FRANK: Thank you.

6 MR. PINGLE: Hello, all. My name is Ray Pingle
7 and I'm with Sierra Club California. We commend CARB for
8 initiating this critical rulemaking, but believe that the
9 proposed rule needs to be significantly strengthened in
10 two ways.

11 First, it would only result in four percent of
12 trucks being zero-emission by 2030. This is really only
13 just a drop in the bucket. The rule must be strengthened,
14 so that at least 15 percent of trucks are zero-emission
15 buy 2030.

16 Second, the rule exempts Class 2b and 3 pickup
17 trucks entirely from any zero-emission requirements until
18 2027. And yet, these pickup trucks actually represent
19 more than 50 percent of all trucks. The zero-emission
20 requirement for these trucks must begin in 2024. CARB's
21 mission is to reduce health-harming pollution. And
22 finally, we have the cost-effective technology to realize
23 this goal.

24 A stronger rule, as we proposed, would triple
25 pollution reductions. We have a moral responsibility to

1 move as quickly as we can to reduce childhood asthma and
2 save lives, especially in disadvantaged communities.

3 We have an economic responsibility to move
4 faster. CARB's analysis and others point to a positive
5 total cost of ownership for many truck applications today.
6 The proposed rule will result in public health benefits of
7 \$5.5 billion statewide and economic benefits to
8 California's trucking industry of 4.8 billion through
9 2040.

10 These economic savings increase substantially
11 with a stronger rule. We shouldn't slow down the trucking
12 industry from being able to realize these savings or
13 citizens from having healthier lives or lower health care
14 costs.

15 The UN is currently meeting in Madrid to try and
16 save our planet. Scientists now tell us if we don't
17 reduce our greenhouse gases by at least seven percent a
18 year for the next ten years, we're likely irretrievably
19 doomed to catastrophic climate disasters. Each of us owes
20 it to our children, grandchildren, and future generations
21 that we will do everything we personally can to leave them
22 with a livable planet.

23 One way to keep this commitment is to adopt a
24 stronger rule.

25 Thank you very much.

1 CHAIR NICHOLS: Thank you. Okay. Dawn Fenton.

2 MS. FENTON: Yes. Good afternoon, Madam Chair
3 and Board members.

4 CHAIR NICHOLS: There you. Yes. Sorry, you have
5 four minutes.

6 MS. FENTON: Yes. Okay. Thank you.

7 CHAIR NICHOLS: Um-hmm.

8 MS. FENTON: My name is Dawn Fenton and I'm with
9 Volvo Group North America. I'm here to say that he Volvo
10 Group believes that electrification of the transportation
11 sector is critical to improving air quality, addressing
12 climate change, and providing a more sustainable and
13 efficient means of goods and people movement.

14 Through our involvement in the Volvo LIGHTS
15 project, which is funded through California climate
16 investments, we are working with more than a dozen
17 different organizations, partner companies, and agencies
18 to bring 23 battery electric Class 8 trucks into
19 commercial service. And we've committed to have a
20 low-volume market offer of these vehicles before the end
21 of next year.

22 We have already learned so much through this
23 project, which is providing valuable insight into the
24 challenges and complexity we will all face as we embark on
25 this paradigm shift to electrification of our

1 transportation sector. Let me be clear, Volvo is
2 committed to bringing battery-electric vehicles to market.
3 And we are aligned with CARB's goals in this regulation.

4 Our concern is that the Advanced Clean Truck
5 Regulation, as currently drafted, will undermine the
6 realization of these goals and negatively impact
7 California's economic and environmental well-being, as
8 well as our own investments. As a result, we request that
9 the Board direct senior CARB staff to work together with
10 industry and other stakeholders to develop a more focused
11 approach over the coming months to assure that all
12 elements of a successful program are addressed.

13 Lessons learned from existing commercial pilot
14 projects and these early market segments using ZEV
15 vehicles will build positive experiences and best
16 practices for continued success in subsequent vehicle
17 applications.

18 We strongly urge that a more holistic approach to
19 financial incentives be developed to minimize obstacles to
20 fleet adoption by consolidating vehicle and infrastru --
21 charging infrastructure incentives into one complete
22 program.

23 Finally, we support action to waive prohibitions
24 against using incentive funding for regulated purchases in
25 light of the vastly different investment and pay-back

1 models facing fleets in this new ZEV market.

2 The Volvo Group has taken a leap of faith by
3 investing hundreds of millions of dollars to bring these
4 zero-emission vehicles to market. We are asking fleets to
5 jump with us. But we both need the supporting winds from
6 CARB to fill our parachutes and create safe landing for
7 all stakeholders.

8 I'd like to thank the Board for giving me the
9 time today to present our comments.

10 CHAIR NICHOLS: Thank you.

11 MS. QUIROZ: Hi. Good afternoon, Board Chair and
12 members. My name is Priscilla Quiroz. And I am here on
13 behalf of the Legislative Task Force of California
14 Chapters of Solid Waste Association of North America,
15 better known as SWANA LTF.

16 SWANA is an organization of more than 11,000
17 public and private sector professionals committed to
18 advancing from solid waste management to resource
19 management through their shared emphasis on education,
20 advocacy, and research.

21 SWANA LTF understands the enormous air quality
22 challenges air districts face in California and the
23 challenging GHG goals developed by CARB that have led to
24 the development and the aggressive transportation and
25 electrification strategy. We support these efforts where

1 appropriate.

2 However, SWANA LTF strongly suggests that in many
3 instances a single transportation technology, such as
4 electric-powered EVs rather than a technology-neutral
5 approach, may not be the correct strategy. The solid
6 waste and recycling industry in California is an example
7 where our industry has invested over one billion to
8 develop the use of low carbon renewable gas -- natural gas
9 in the reuse -- refuse and recycling vehicles we use.

10 Now, our industry is working to make your
11 shit[SIC] -- short-lived climate strategies of organic
12 diversion from stand -- landfills a reality, through the
13 use of ultra low near-zero NOx trucks powered by renewable
14 gas -- biogas generated from the digestion of organics.

15 However, strategies such as what you see what is
16 before you today counter our efforts. We believe the ACT
17 should recognize the importance of these ultra low NOx
18 technologies through of the use of concepts such as
19 credits to manufacturers of low -- ultra low NOx truck
20 production at least in the short term.

21 We conclude by asking the Board to broaden the
22 Advanced Truck Regulations to not only encourage electric
23 vehicles, but near-zero ultra low NOx technologies. This
24 builds on the one billion investment our industry has
25 already made in renewable natural gas and is the

1 cornerstone in helping local air districts meet their
2 challenging attainment deadlines in the critical goals of
3 CARB's short-lived climate strategies.

4 Thank you.

5 CHAIR NICHOLS: Thank you.

6 MS. MITROSKY: Good afternoon. Micah Mitrosky,
7 IBEW Local Union 569 speaking on behalf of over 3,300
8 electrical workers throughout San Diego and Imperial
9 counties. We stand united with our environmental,
10 community, environmental justice, public health partners,
11 and fellow labor unions urging CARB to strengthen the
12 proposed rule.

13 The draft proposal falls far short on both what
14 is possible and needed. And we urge CARB to strengthen
15 the proposal by increasing the overall mandates to ensure
16 that by 2030 no less than 15 percent of the medium- and
17 heavy-duty trucks on the road are zero emitting, including
18 Class 2b pickup trucks in the mandates beginning 2024,
19 outlining CARB's longer term objectives for achieving 100
20 percent zero-emission trucks in various categories and
21 explaining how this phase of the rule is consistent with
22 those objectives in attaining federal and State air
23 quality and greenhouse gas objectives and committing to
24 adopt corresponding fleet purchase requirements in 2021.

25 In 2011, California passed the 33 percent by 2020

1 renewable portfolio standard, one of the most ambitious of
2 its time. Today, less than ten years later, not only have
3 the state's clean energy requirements been vastly expanded
4 to 100 percent renewable and carbon-free energy by 2020 --
5 2045, but as PV magazine reported in April of this year,
6 for a moment, California was running on 93 percent clean
7 electricity.

8 This historic renewable energy build-out created
9 millions of hours of union construction work and
10 dramatically decreased technology costs through economies
11 of scale. The same transformative change is possible for
12 transportation, and, in fact, must happen if we are to
13 avert the worst effects of a climate disaster and clean
14 our air.

15 Electrifying trucks also has -- we urge you to
16 strengthen this rule.

17 Thank you.

18 (Laughter.)

19 CHAIR NICHOLS: Good work. Good work.

20 Go ahead. I guess they don't flip the sign --
21 the light on

22 MS. KROPKE: Hi. Good morning.

23 They don't have the green light on. Is it -- is
24 it official? Shall I start?

25 Yes. Okay. Thank you.

1 CHAIR NICHOLS: Great.

2 MR. KROPKE: Good morning, Madam Chair -- good
3 afternoon Madam Chair and council members.

4 CARB's leadership is critical for our businesses,
5 for our job creation, and also for our health. As you
6 know California is one of the largest economies in the
7 world, a state that is a head of many nations, in fact. A
8 stronger rule will create economies of scale for
9 businesses in and related to zero-emission technologies.

10 By strengthening this rule to 15 percent by 2030,
11 we expand the universe of electrification, which is
12 critical for infrastructural planning purposes.

13 I am Jennifer Kropke. I am here on behalf of the
14 12,000 electric workers in Los Angeles County of IBEW, as
15 well as the over 250 electrical contractors. Electrical
16 contractors, I might add, who drive medium-duty trucks to
17 haul all their equipment around in and are so excited for
18 this rule, not only to drive those trucks, but also for
19 the infrastructural planning purposes.

20 As well, there's an additional workforce
21 development aspect to this that we haven't discussed, but
22 we just touched on. A stronger rule will create
23 apprenticeship-based electrical green job careers to those
24 living and working in our state's worst air quality
25 regions.

1 So I just want to get this straight. With a
2 minimum 15 percent zero-emission trucks by 2030, you can
3 provide green jobs that pay family-sustaining wages to
4 those living in the worst impacted regions. Gosh, guys.
5 It's very win-win.

6 We hope you'll strengthen this rule to 15 percent
7 by 2030 and thank you to staff for their considerable time
8 and commitment to such an important issue.

9 MR. YOW: Thank you and good afternoon, Chair
10 Nichols, Board members, staff. And we'll echo the thanks
11 to your staff as well for all the hard work on this issue.
12 David Yow on behalf of the Port of San Diego.

13 The Port of San Diego supports the State's vision
14 to reduce emissions of criteria pollutants and greenhouse
15 gas emissions from mobile sources. In the early 2000s, we
16 established a Clean Air Plan to reduce emissions from our
17 maritime sector. And we're one of the first ports in the
18 nation to adopt a Climate Action Plan committing to reduce
19 GHGs. And just like the state, we have seen emissions
20 decrease.

21 Mobile sources though are one of the largest
22 sources of emissions in our inventory and we do need
23 regulatory help to help achieve even further emission
24 reductions. Port tenants and operators down in San Diego
25 have been on the cutting edge of ZEV demonstrations in the

1 heavy-duty sector. We have electric drayage trucks and
2 electric cargo handling equipment operating along the
3 working waterfront today.

4 And these demonstrations have been possible
5 through grant funding - thank you - and been critical to
6 increase customer confidence that these technologies can
7 do the job that traditional diesel-powered vehicles can
8 do.

9 Just in the interests of time, five quick
10 suggestions as you move forward. One, looks to the State
11 agency alignment. The need for consistency across
12 agencies regarding implementation and funding. Down in
13 San Diego, a quick example, SDG&E, San Diego Gas and
14 Electric, that's our utility, is creating a rate for
15 medium- and heavy-duty vehicles. And time will tell if
16 that's appropriate and cost competitive.

17 But we need to ensure that rates and demand
18 charges help ensure that these technologies are cost
19 competitive and can help them be adapted quicker.

20 Two, funding. Resources are necessary. You have
21 already done a tremendous job, the CEC as well, with
22 advancing this industry in our state. But we know that
23 manufacturers are still figuring out how to lower costs
24 and make things more efficient. So that -- that is a
25 reason for continued pilots and demonstrations.

1 And on -- thank you very much.

2 (Laughter.)

3 VICE CHAIR BERG: Thank you very much. We do
4 have your written testimony, so we appreciate that.

5 MR. GRANHOLM: Good afternoon. My name is Ben
6 Granholm with the Western Propane Gas Association. First
7 off, thank you for the opportunity to comment today. WPGA
8 would like to align ourselves with the comments submitted
9 by a coalition of organizations working to clean
10 California's air and help the state meet its greenhouse
11 gas emission goals by working to address heavy-duty truck
12 carbon emissions by including both zero and low NOx truck
13 strategies in the proposed Advanced Clean Trucks Rule.

14 WPGA, along with many others, are strong
15 supporters of clean energy and believe that low NOx
16 heavy-duty trucks using renewable fuels will be a vital
17 piece to reducing greenhouse gas emissions in the
18 transportation sector, especially over the near term,
19 where heavy-duty zero-emission vehicles remain largely
20 unavailable.

21 When looking towards the future, the propane
22 industry is investing heavily in renewable propane, which
23 is derived from sustainable sources such as beef tallow or
24 vegetable oil. The carbon intensity for renewable propane
25 is on par with that of electric, and including medium- and

1 heavy-duty low NOx trucks in the ACT regulation can play
2 an important role by sending a signal to the market of the
3 importance of the in-state production of renewable propane
4 and the continued production of low NOx engines to help
5 reduce greenhouse gas emissions for decades to come.

6 The use of renewable propane, for example, in
7 near-zero propane trucks significantly reduces carbon
8 emissions and NOx emissions that remain to be an important
9 focus in many areas across California today.

10 And with that, I would just like to thank you for
11 all of your work in this area, and we look forward to
12 working with you in the future.

13 Thank you.

14 VICE CHAIR BERG: Thank you very much.

15 MS. WILLIAMS: Good afternoon. I'm Joy Williams
16 from Environmental Health Coalition. On behalf of our
17 members, board, and staff, I urge your support of an
18 Advanced Clean Truck Rule that includes the following
19 essential elements:

20 One, increases the overall mandates to ensure at
21 least 15 percent of medium- and heavy-duty trucks on the
22 road are zero-emission by 2030; includes Class 2b pickup
23 trucks beginning in 2024; three, establishes goals and
24 objectives for achieving 100 percent zero emissions; and
25 four, commits to adopt corresponding fleet purchase

1 requirements in 2021.

2 Like many of the groups and individuals here
3 today, EHC works in EJ communities that rank high on
4 CalEnviroScreen, and suffer the health and safety impacts
5 of disproportionate truck traffic. We're already doing
6 everything we can locally to reduce truck impacts.
7 Working with the City of San Diego, the San Diego APCD,
8 and the Port of San Diego, we're working with the city to
9 establish and enforce truck routes.

10 We're working with the Port to educate truck
11 drivers on the new routes. We're working through AB 617
12 to incentivize cleaner trucks in our communities, and
13 we're pursuing an effort of three decades to reform the
14 land-use plans in these communities to better separate
15 industrial from residential land uses.

16 However, local efforts cannot compel a faster
17 industry-wide shift to electric trucks and away from
18 fossil fuels. We do need action at the State level to
19 require zero-emission trucks in California at the earliest
20 possible date.

21 And so, to close, we ask that you support the
22 Advanced Clean Truck Rule with the higher targets, goals,
23 and mandates for the Class 2b pickups in 2024, and that
24 you move ahead with fleet purchase requirements in 2021.

25 Thank you.

1 MR. PORTILLO: Thank you to the Board and staff
2 for all your hard work on this proposal and thank you for
3 allowing me to provide testimony today.

4 I'm Patricio Portillo with the Natural Resource
5 Defense Council. ATC's goal is to ensure California can
6 meet its State and federally mandated air quality
7 requirements, and cut climate pollution by ensuring a
8 sufficient number of zero-emission trucks are deployed.
9 It's a critical rule, because it addresses the lack of
10 supply.

11 But the current proposal will not deliver enough
12 zero-emission trucks to meet our targets. The Board
13 should direct staff to increase stringency by raising the
14 sales requirement across all classes -- include all
15 classes beginning in 2024, set a goal for 100 percent
16 zero-emission trucks, and expedite the timeline for the
17 fleet rule.

18 The Board can justify a stronger rule based on
19 strong initial demand for electric trucks. Studies
20 showing most truck classes are economic today on a total
21 cost of ownership basis supported by State incentives, and
22 the fact that California utilities are making the largest
23 investments globally in medium- and heavy-duty charging
24 infrastructure.

25 Demand for zero-emission trucks is here today.

1 Companies are already committed to purchasing electric
2 trucks. And there are hundreds of thousands of
3 zero-emission trucks on pre-order amounting to tens of
4 billions of dollars.

5 Why are companies shelling out money just to wait
6 in line?

7 Yesterday, ICF International released a major
8 report finding that the total cost of ownership for most
9 electric truck classes are competitive with diesel today
10 with California's supporting ecosystem. And all will be
11 competitive by 2030 without subsidies. We have provided
12 the Board with a summary for policymakers of the ICF
13 report.

14 Just today, we heard about a new agreement to
15 work towards truck electrification between California and
16 seven other states, and hopefully more will join. The
17 rest of the country and the world look to ARB to craft
18 policies that slash emissions from transportation, while
19 boosting economic growth.

20 ARB's policies should set goals for the market
21 based on where it needs to be and not the minimum floor.
22 These are the bold actions ARB must take to protect public
23 health, the climate, and our future.

24 Thank you.

25 VICE CHAIR BERG: Thank you.

1 MR. MANDEL: Good afternoon.

2 VICE CHAIR BERG: Good afternoon.

3 MR. MANDEL: I'm Jed Mandel, President of the
4 Truck and Engine Manufacturers Association. All EMA
5 members are investing in developing and marketing
6 zero-emission powertrains and commercial vehicles. As
7 such, we support CARB's efforts to assure the market
8 acceptance of ZEV products.

9 I do need to note, however, that we have
10 significant and legitimate concerns with the design of the
11 propose ZEV mandate, but not its overall goals. Properly
12 designed, the proposed ZEV volume targets and
13 implementation schedule should be achievable. And we are
14 committed to working with the Board and staff to assure
15 that result.

16 We have a simple request today, direct the staff
17 to work with us and other interested stakeholders through
18 the 15-day notice process to identify those specific
19 segments of the heavy-duty ind -- heavy-duty market that
20 are more readily amenable to electrification, and that
21 with 100 percent mandates we'll achieve or even
22 overachieve the volumes and time frames that the staff is
23 proposing.

24 EMA's members have invested billions in
25 developing ZEV technologies for the heavy-duty market. We

1 support efforts to develop and expand the market for
2 heavy-duty ZEVs. But designing a program based on a naked
3 sales mandate is fundamentally flawed. Trucks are not
4 cars. Our customers invest capital to purchase vehicles
5 that must return a profit. We all know that today ZEVs
6 are more expensive than traditionally fueled vehicles,
7 that an extense -- that an extensive and costly
8 infrastructure is needed, and that without incentives to
9 offset those differentials, customers either will keep
10 their old products longer or, given the choice, which the
11 proposed rule allows, will buy new diesel-fueled vehicles.

12 We want the ACT rule to be a success. We want
13 and need the rollout of ZEV technologies to be successful.
14 Our members need to know that they will be able to recoup
15 their investments in developing ZEV technologies.

16 We believe there is an answer. We believe that
17 the ACT rule should be focused on mandating the use of ZEV
18 technologies in prioritized, specific segments that are
19 more readily suited to that technology - let me be
20 specific - even earlier than the staff is proposing. We
21 think that new school buses and municipal fleet step vans
22 could be 100 percent ZEVs in 2023.

23 That in 2024, a hundred percent of new public
24 utility vehicles and yard tractors can be ZEVs. That in
25 2025, 100 percent of the new step vans, airport service

1 vehicles, and non-airport shuttle buses can be ZEVs. And
2 that in 2026, 100 percent of refuse trucks can be ZEVs.

3 By our estimate, that would result in both
4 earlier introduction and greater number of ZEVs than the
5 current proposal. It also would assure of having a high
6 positive impact on disadvantaged communities.

7 We also believe that the population of trucks and
8 the implementation dates targeted by the innovation --
9 Innovative Clean Truck -- Transit Rule, the city buses,
10 and by the zero-emission airport shuttle bus rule can be
11 accelerated. We're actually willing to pull that ahead.

12 The approach that we are outlining will create
13 significant beachheads for ZEV vehicles in California,
14 earlier and in greater volumes than the approach set forth
15 in the proposed ACT rule. We believe it will create
16 momentum for successfully expanding the acceptance and
17 rollout of ZEV technologies in even greater numbers.

18 It also will allow interested stakeholders to
19 work together to identify those specific markets in
20 greatest need of incentives and infrastructure
21 development, and therefore to seek the needed funding
22 assistance from the Legislature and other sources in a
23 more targeted fashion.

24 We are committed to working with staff to
25 identify the further expansion of the ACT rule beyond the

1 time period that I've outlined. We urge the Board to
2 direct the staff to proceed with a 15-day notice to
3 implement the approach we've outlined and to work with us
4 and other stakeholders to expand the approach beyond the
5 timeline we've identified.

6 Thank you very much.

7 VICE CHAIR BERG: We have one question for you,
8 but thank you.

9 BOARD MEMBER TAKVORIAN: Thank you for your
10 testimony. That sounded like all good news.

11 MR. MANDEL: It is all good news.

12 BOARD MEMBER TAKVORIAN: So I'm waiting for the
13 other shoe to drop about -- so if all those sectors are
14 ready to go earlier, then what -- what are your
15 projections? Because you seem to be quite precise about
16 when you feel like these sectors can come forward, which
17 is great.

18 So where -- what do you think the other -- when
19 do you think the other sectors will be available? Are you
20 saying that they are further out than staff is projecting
21 at this point or what -- what are your thoughts about
22 that?

23 MR. MANDEL: Our thought is to make this rule as
24 successful as possible to develop the acceptance in the
25 marketplace of the technologies that my members have

1 invested billions in developing. We think with the early
2 introduction and rollout in targeted sectors, we can focus
3 the funding, focus the infrastructure development, and
4 that are most amenable from their operating
5 characteristics to being able to operate on ZEVs will seed
6 the market and will allow us to better focus our efforts
7 to further expand that market beyond 2026.

8 We're prepared, by the way, to meet immediately
9 with the staff to identify that. We're not saying don't
10 do anything beyond 2026. We were just not prepared today
11 to come forward with greater specifics, but there are more
12 vehicles out there. You heard us already say that rules
13 that you already adopted a year ago on transit buses and
14 airport shuttle buses that have dates that go out, I
15 think, to 2035 if not beyond can be pulled ahead. We want
16 to count those as earlier pull-aheads.

17 And by the way, we purposely said 2023 for the
18 initial category, because we're sensitive to the South
19 Coast needs in 2023. Otherwise, this rule doesn't really
20 help them for what we heard in the previous agenda item.
21 So there's more that can be done. We don't think it's
22 appropriate for us to unilaterally say this is exactly the
23 rollout beyond that, because it gets more and more
24 challenging beyond these particular segments that I
25 identified initially.

1 BOARD MEMBER TAKVORIAN: So that's these very
2 helpful. And I guess I'm drawing, but I'll ask you the
3 question.

4 MR. MANDEL: Sure.

5 BOARD MEMBER TAKVORIAN: It sounds like, as a
6 result of the adoption of the previous rules, like the
7 Advanced Clean Transit Rule, that that has helped your
8 industry to move forward faster than we even anticipated?

9 MR. MANDEL: Absolutely. Knowing where the
10 market is for our products helps us. Obviously, there are
11 certain applications that just are not amenable. Driving
12 a truck across country and having it be electrified is a
13 challenge, just because of the infrastructure.

14 There are other markets like transit buses, like
15 airport shuttle vehicles that are much more amenable.
16 If -- you can help us and we can work with your staff to
17 target those markets. It allows us to focus the
18 investment and allows others to focus the investment.

19 The concern we have with the design of the
20 existing rule is by just having a blanket percentage, when
21 people can buy less expensive traditionally-fueled
22 vehicles, our customers who need to return a profit will
23 buy those less expensive vehicles, and it creates great
24 uncertainty that won't allow us to target those
25 investments and make this rule a success.

1 We can't afford to have hiccups in the rollout of
2 electric or hydrogen-fueled vehicles. We want this rule
3 to be successful. We need to recoup those investments.
4 And as we have heard, you, the South Coast, San Joaquin,
5 we all need this rule to be successful.

6 BOARD MEMBER TAKVORIAN: Thank you so much.

7 MR. MANDEL: Thank you.

8 MR. GRAHAM: Thank you, Board members. My name
9 is Bob Graham. I'm speaking in front of you today on
10 behalf of a newly formed coalition of over 20 electric
11 transportation champions with many years of experience,
12 which we are calling the Strong Plug-In Hybrid Vehicle
13 Coalition.

14 If my senior memory serves me right, the last
15 time I spoke to the CARB Board was in 2001 when I
16 championed plug-in hybrid vehicle technology as a
17 precursor to the light-duty battery electrics. Also, in
18 2001, I was probably the only person in Washington D.C. on
19 9/11 arguing that we should be putting lithium ion
20 batteries in electric vehicles, that the technology was
21 ready.

22 I concluded my career at the DOE as director of
23 EV Everywhere, which was President Obama's signature EV
24 program. My purpose today is two-fold. One, to thank you
25 for your continuing support of light-duty, plug-in

1 hybrids, especially those with 35 miles of all-electric
2 range. We need more of these stronger PHEVs.

3 I refer you to CARB's study by UC Davis, which
4 shows the last version of the Chevy Volt achieved 68
5 percent of annual miles from electricity in real-world
6 driving and equaled approximately 80 of the CO2 reductions
7 achieved by Tesla Model S.

8 This UC Davis study also found that a large
9 proportion of annual miles were in urban stop-and-go
10 traffic. And that's extremely important when we listen to
11 what we just heard about the vehicles that every day run
12 around airports and deliver products in our communities.
13 This implied that plug-in hybrid vehicle -- plug-in hybrid
14 trucks with large battery packs can similarly electrify
15 those urban stop-and-go miles.

16 Second, the prime message for today is that our
17 coalition supports the ACT Regulation, especially the
18 progressive sliding scale where a PHEV can earn between 10
19 and 75 percent of the credit of a battery electric truck.

20 The Strong PHEV Coalition believes that
21 regulations and incentives, in general, have done -- not
22 done enough to encourage long-range plug-in hybrid cars
23 and trucks that can achieve 90 percent or more annual
24 miles using electricity.

25 We suggested in our written testimony that you

1 should consider working with these vehicles that are
2 manufactured vehicles as we just heard and provide
3 real-world actually data to make a difference.

4 And finally, when we think about fires, there's
5 nothing better than a plug-in hybrid with a large battery
6 that can help export power to those in need.

7 Thank you.

8 VICE CHAIR BERG: Thank you.

9 MR. CAMPBELL: Good afternoon --

10 VICE CHAIR BERG: Good afternoon.

11 MR. CAMPBELL: -- Madam Chair, members of the
12 Board. Todd Campbell representing Clean Energy.

13 I'm here today to say that bold vision for the
14 ACT Rule is necessary. No, it's paramount. In the South
15 Coast and the San Joaquin, every diesel purchased today is
16 a lost opportunity for air quality.

17 Just last month, ICCT released a study that
18 confirms that CARB staff -- or a fact that CARB staff has
19 known for a very long time, that our 2010 heavy-duty truck
20 standards are being violated. Specifically, diesel are
21 five times higher than their 2010 certification for NOx
22 emissions, nearly a decade after the standard was adopted.

23 The 2023 federal attainment deadline is nearly
24 upon us and the failure to meet ozone standards will
25 trigger a federal implementation plan that removes local

1 control, sanctions that include potential loss of DOT
2 funds. By the way, we receive about \$19 billion, the
3 largest share in the union, of those fund, and other
4 penalties and restrictions that will impact regional
5 economies.

6 Clean Energy would like to support this rule, but
7 ask that you include South Coast Air Quality Management
8 District's definition for near-zero, which includes the
9 strictest optional low NOx standards for Class 7 and Class
10 8 trucks.

11 It is important to note that ARB staff will not
12 propose this standard manda -- to be mandatory until 2027,
13 eight years from now. Incorporating ultra low NOx trucks
14 into staff's proposed near zero standards means more
15 choice and flexibility for fleet operators, a stronger
16 case that California did everything it could to address
17 the number one source of pollution impacting communities,
18 three, greater certainty to meet ARB's main objective
19 cleaning the air, and four, great confidence to be bolder
20 than staff's Class 7 and Class 8 recommendations today,
21 leading up to the 2030 -- leading up to be -- 2030 to be
22 strengthened.

23 So we agree with the South Coast's request to
24 have your staff work with them under the 15-day period to
25 further strengthen this rule. Short of that, please

1 expand your near-zero definition to include the most
2 stringent low NOx standard up until 2027.

3 Thank you, Madam Chair.

4 VICE CHAIR BERG: Thank you.

5 Leah.

6 MS. SILVERTHORN: Good afternoon, Madam Vice
7 Chair and members. Leah Silverthorn with the California
8 Chamber of Commerce. CalChamber represents the interests
9 of 14,000 businesses both large and small. We, along with
10 a coalition of over 50 organizations, are concerned about
11 the extension of this regulation from a few entities to
12 now directly regulating over 11,000 California businesses.

13 While we strongly believe that good data makes
14 for good rulemaking, we have both short-term concerns with
15 the reporting requirement and long-term concerns with the
16 end goal of this rule, that is how an end-user purchase
17 will be implemented, given the ambitiousness of the
18 all-electric mandate.

19 As the end users of these vehicles and those who
20 will ultimately bear those costs, we can state with
21 certainty that this proposal is already on a very, very
22 ambitious implementation timeline that will have a large
23 financial impact to end users and customers.

24 With respect to the reporting portion of the
25 rule, it could and should be its own separate rulemaking.

1 And our request is to -- to the Board is to ask staff to
2 bifurcate this rule and hold a series of workshops to
3 create a workable streamlined data gathering process. At
4 minimum, the current draft has many issues that must be
5 addressed. To that end, we do appreciate staff's
6 commitment and recommendations to narrow the dates upon
7 which businesses will be required to count vehicles,
8 clarify how businesses will choose representative weeks
9 and facilities, and to work to revise unclear definitions.

10 We also recommend, in order to ensure useful and
11 meaningful data, specifically outlining the likely paths
12 of the Fleet Rule prior to finalizing the data request
13 rule, identifying the specific data gaps to be filled by
14 the rule, narrowing the scope of the data requests to
15 those issues relevant to the subsequent end-user rule - we
16 are more than willing to work with staff to ensure the
17 data collection rules result in high response rates -
18 solicit useful and useable data necessary to create a
19 future rule, considers the availability of infrastructure
20 and does not put an undue burden on entities, many of
21 which have never been regulated by CARB prior to this rule
22 and are not direct sources of GHG emissions.

23 We request that staff's data evaluation and
24 strategy for implementation of this and future EV rules
25 consider how previously incentivized adoption of

1 alternative fuel vehicles have been implemented.

2 VICE CHAIR BERG: Thank you.

3 MS. SILVERTHORN: Thank you to both the staff and
4 the Board for their time spent with us on this issue

5 VICE CHAIR BERG: Thank you very much.

6 Good afternoon.

7 MR. CONOVER: Chair Berg and members, Gary
8 Conover representing the California Automotive Wholesalers
9 Association. We're your mom and pop auto parts store,
10 including the larger membership of Napa, O'Reilly,
11 AutoZone, et cetera.

12 We're signatories to the Chamber's newsletter, so
13 I'm not going to go into depth about what that says,
14 except to support the bifurcation of the LER from the
15 manufacturing regulations, and just note that a \$37,500
16 violation notice is very significant to our members.
17 That, in and itself, should drive CARB to offer up
18 workshops to our membership. It's obviously a significant
19 step to collect the data in lieu of the violation.

20 Thank you.

21 VICE CHAIR BERG: Thank you.

22 MR. DUNHAM: Good afternoon and thank you very
23 much. I'm Ken Dunham. I'm the Executive Director of the
24 West Coast Lumber Building Material Association. We
25 represent the independent lumber dealers in the State of

1 California and some throughout the west here. We agree
2 with the comments that have been collected and circulated
3 by the coalition and coordinated by the California Chamber
4 of Commerce.

5 I just want to remind you of the practical aspect
6 of a business or an industry that will be affected greatly
7 by this. The lumber industry uses a variety of trucks of
8 all types, of all shapes, of all different capacities.
9 Even your own report reflects the fact that there's
10 challenge for electrical vehicles with large payloads.

11 We're concerned about the cost, the technical
12 availability, and the feasibility at times in some of
13 this. Just simply here to remind you that we're one of
14 the end recipients of rules like this. And we urge that
15 you consult with the people who will be affected by it and
16 come up with something that is feasible and workable for
17 everybody.

18 Thank you very much.

19 VICE CHAIR BERG: Thank you very much.

20 MR. CHUCK WHITE: Good afternoon, Board Chair and
21 members. My name is Chuck white. I work with Manatt,
22 Phelps & Phillips here in Sacramento. I'm here
23 representing the Western Independent Refiners Association.
24 As a trade association, representing small and independent
25 refineries in the West Coast, WIRA has been an active

1 participant in CARB rulemakings for many years. And the
2 Board, this Board, has consistently acknowledged that
3 small and independent refiners are an important
4 pro-competitive force in the market for refined
5 transportation fuels and product.

6 WIRA recognizes and supports the efforts of CARB
7 to reduce greenhouse gas and criteria pollution from
8 transportation vehicles. WIRA remembers are positioning
9 themselves to increasingly rely on biogenic, low carbon
10 sources of fuel feedstocks to produce fuels and other
11 source.

12 However, we're extremely concerned that the
13 proposed ACT rule is heading in a California direction to
14 focus on limited fuel types, electric and hydrogen, for
15 all vehicles. While CARB has historically been fuel
16 neutral with respect to looking at GHG emissions through
17 the Low Carbon Fuel Standard, the ACT with its focus on
18 only limited fuel types would be a substantial departure
19 from past CARB policy we believe.

20 There are -- while there are many opportunities
21 to reduce greenhouse gas emissions, some of the lowest
22 greenhouse gas emissions are not from the electricity
23 sector or hydrogen sector. They're from other sources of
24 biogenic soil -- fuels, which we would like to be --
25 remain a possible fuel source going into the -- at least

1 the near-term future.

2 We expect a downward trend in all carbon
3 intensity of all fuel types, including electricity and
4 other types of fuels. Until such time as CARB and the
5 manufacturers are able to collaboratively show that goals
6 are achievable at some reasonable point in time, we urge
7 CARB not to shut the door on continued advances in other
8 transportation fuel types.

9 We know how to support California's
10 transportation fuel needs with substantially reduced
11 emissions. We're not sure that the same level of ability
12 to support that has been demonstrated for zero -- electric
13 heavy-duty vehicles.

14 So I would -- we're not opposed to the expansion
15 of ZEVs. We would just like to make sure that there's
16 recognition of other fuel types going forward at least for
17 the foreseeable future, until such time as we can really
18 demonstrate zero-emission vehicles can take a significant
19 place in a realistic marketplace.

20 Thank you.

21 VICE CHAIR BERG: Thank you very much.

22 Good afternoon, Erin.

23 MS. GUERRERO: Good afternoon. Erin Guerrero on
24 behalf of the California Attractions and Parks
25 Association, representing amusement, theme, and water

1 parks throughout the state.

2 Very briefly, we echo the comments that have been
3 made by the chamber and just wanted to highlight a couple
4 of points. The current draft we find definitely lacks
5 stakeholder input. We were brought into this -- as
6 businesses that would be part of the large entity
7 reporting, we were brought into the process quite late, so
8 we are hopeful that future drafts will include
9 stipulations that will help in our concerns.

10 Especially considering the very high -- hefty
11 penalties at stake, we find the regs to be too broad, too
12 vague, and they don't provide enough guidance for
13 compliance. Additionally, staff has grossly
14 underestimated the time and cost that it will take for us
15 to provide the reports.

16 California's parks are in the business of
17 providing fun and entertainment. Trucking is not a main
18 component of their business model. They lack the
19 infrastructure and the programs that will be required in
20 order to collect and crunch the data that ARB is seeking,
21 especially given the extremely aggressive timelines in the
22 regs. Basically, they're going to have to start
23 collecting this information beginning January 1 under the
24 current draft.

25 So we appreciate the changes that have been

1 recommended by staff and we urge you to continue working
2 with us to ensure that we can comply and provide you with
3 the data that will actually be useful in your efforts.

4 Thank you.

5 VICE CHAIR BERG: Thank you.

6 Hi, Steve.

7 MR. McCARTHY: Good afternoon, Madam Vice Chair
8 and Board members. I'm Steve McCarthy with the California
9 Retailers Association. We, too, are part of the coalition
10 with CalChamber and others requesting that the large
11 entity reporting requirement be bifurcated from the
12 manufacturer rule and be studied in a separate process.

13 Our retailers are supportive of the underlying
14 goals to reduce GHG emissions and improve air quality. We
15 have a number of concerns, however, with the reporting
16 requirement and would like to have more time to review the
17 proposed requirements to ensure that definitions are clear
18 and that expectations are well understood, particularly
19 with respect to how businesses are to recruit and report
20 substantial amounts of information we do not currently
21 have or track.

22 For retailers, these reporting requirements do
23 not occur in a vacuum. We have many reporting
24 requirements and data demands coming at us at once,
25 including a packaging initiative for which we are working

1 with the administration and CalRecycle, as well as a new
2 privacy law coming along very soon, along with its
3 associated regulations. So it is important to us that we
4 get these things right.

5 So we ask you help in -- your help in separating
6 this requirement for further review.

7 Thank you.

8 VICE CHAIR BERG: Thank you.

9 Jennifer.

10 MS. HELFRICH: Good afternoon. My name is
11 Jennifer Helfrich. I'm a Senior Manager for California
12 Policy at Ceres. I'm here today representing the BICEP
13 network, a coalition of 55 major corporations committed to
14 advocating for strong climate policy.

15 I am also here to speak on behalf of the
16 signatories of two letters, which I hope you have in front
17 of you or will soon. One from major companies and the
18 California Health Care Climate Alliance representing 119
19 hospitals in the state, and one from investors with over
20 237 billion in assets under management, both supporting a
21 stronger ACT Rule.

22 Many of the companies' investors that we work
23 with see transitioning to electric trucks as an economic
24 opportunity. We strongly support stepping up the ambition
25 of the ACT Rule, so that it results in 15 percent of

1 trucks on the road being zero-emission by 2030. The ACT
2 Rule will accelerate the electric truck deployment
3 necessary to meet the needs of businesses. The rule will
4 be essential for addressing some of the primary challenges
5 highlighted by major companies with an interest in fleet
6 electrification.

7 First, lack of EV model availability and high
8 upfront cost, especially for medium and heavy-duty trucks.
9 This rule would push manufacturers to increase model
10 availability and encourage economies of scale that could
11 bring down costs, as well as increase innovation in the
12 technology.

13 Moreover, cities across the world are introducing
14 low and zero-emission zones, a trend that is likely to
15 spread to the United States. For companies who operate
16 trucks in city centers, the availability of diverse
17 zero-emission models is crucial for the viability of their
18 business.

19 Second, lack of control over leased or
20 upstream/downstream transportation. For our companies,
21 reducing both the emissions and the cost of transportation
22 is an economic imperative. Yet, they often have limited
23 ability to choose or encourage electrification within
24 their value chain.

25 A stronger ACT will help transform the market in

1 a way that our companies cannot accomplish on their own.

2 For the signatories of the investor letter --
3 I'll read the last sentence quickly.

4 VICE CHAIR BERG: We do have your letter, so we
5 will be able to read it.

6 MS. HELFRICH: Yeah. All right.

7 VICE CHAIR BERG: And we realize two minutes goes
8 by really, really fast --

9 MS. HELFRICH: It does.

10 VICE CHAIR BERG: -- but we're on speaker 31.
11 We've got to go 103.

12 MS. HELFRICH: Thank you very much.

13 VICE CHAIR BERG: Thank you.

14 MR. KOTLIER: Good afternoon, Chair Nichols and
15 Board. I'm Bernie Kotlier representing IBEW and NECA of
16 the electrical contracting industry and a member of the
17 coalition, led by the Sierra Club, supporting a stronger
18 rule, and a big fan of the Air Resources Board and staff.

19 There have been many comments about the cost,
20 difficulty, pace, and challenge of the transition to
21 electric trucks. While these concerns are critical to the
22 decision-making process, the question is what will it cost
23 if we do not implement a much stronger rule?

24 Bay Area taxpayers are beginning to pay \$500
25 million for Measure AA. SFO's new seawall will cost 587

1 million. The 2018 wildfire season was the deadliest and
2 most destructive ever. According to NOAA climate.gov, it
3 cost approximately \$24 billion.

4 In addition annually, we could soon pay 200
5 million more for air conditioning, three billion from the
6 effects of a long drought, and 18 billion a year to
7 replace buildings inundated by rising seas. Killer heat
8 waves could add more than 11,000 heat-related deaths per
9 year by 2050 and cost tens of billions of dollars.

10 UCLA scientists predict a major increase in the
11 likelihood of a massive -- of massive severe floods and
12 forecast at least one near trillion dollar disaster in
13 decades to come.

14 UN Secretary General Guterres says the world's
15 efforts to stop climate change have been utterly
16 inadequate and warns that the point of no return is no
17 longer over the horizon. We may have 12 years to limit
18 climate catastrophe.

19 He further noted that the world has the science
20 and technology to limit global warming, but what is
21 lacking is political will. A stronger truck will -- rule
22 will require sacrifices. But please keep in mind the much
23 greater economic health, safety, and environmental
24 sacrifices we will all face if we fail to move
25 aggressively.

1 The Air Resources Board has had the foresight,
2 the courage, and the political will to lead. We need your
3 leadership again now on much stronger Clean Truck Rule,
4 even stronger than what the coalition has proposed.

5 Thank you.

6 VICE CHAIR BERG: Thank you.

7 MS. WHITTICK: Hi. Good afternoon, Vice Chair
8 Berg, members of the Board. I'm Janet Whittick here on
9 behalf of the California Council for Environmental and
10 Economic Balance, CCEEB.

11 So, first, I wanted to say thank you for the
12 discussion with Mr. Lewis that kind of started us off.
13 It's going to save me a lot of time. Yes, we at CCEEB
14 would be happy to work with you on a better survey,
15 particularly in regards to scope and data period.

16 Right now, as we interpret the rule, there's at
17 least two major sections that require collection of data
18 on all facilities and vehicles for all of 2020. And yet,
19 the rule won't be adopted until maybe spring of this year.
20 So right now, people don't know what they need to start
21 tracking possibly as soon as January 1st.

22 And now I have to be honest, I'm not quite sure
23 what softening reporting requirements means from the staff
24 slides. I think I like it. I think I'm excited about it.
25 But right now, it creates a little bit more uncertainty,

1 so we do welcome those further conversations with staff.

2 Second, others have already talked about the
3 notification issues, especially around commercial and
4 institutional entities, but now need to report. And we
5 agree with those concerns. But I wanted to flag for you
6 that this issue extends beyond the ACT Rule in front of
7 you today. And I think more and more as CARB tries to
8 reach out to those commercial, industrial, indirect
9 sources that more can be done to create a network or
10 distribution list that really tried to get you, so that
11 you can engage with those folks that you want to regulate
12 and it's not just us who you see all the time here before
13 you.

14 And I think this will be important not just for
15 rule and policy development, but also for compliance and
16 enforcement later on.

17 So thank you so much. CCEEB members really and
18 truly want to comply with this reg and we look forward to
19 working with staff on creating something that's feasible.

20 Thanks.

21 VICE CHAIR BERG: Thank you.

22 MS. HERNANDEZ: Good afternoon Madam Chairwoman
23 and Board members. My name is Consuelo Hernandez,
24 Director of Governmental Affairs for the City of
25 Sacramento.

1 The city is committed to advancing
2 transformational zero-emission vehicle programs and
3 technology. Our city council and mayor have adopted
4 aggressive goals to establish Sacramento as the
5 zero-emission vehicle capital of California and to lead by
6 example hand-in-hand with our efforts to increase active
7 transportation and transit ridership, and reduce the
8 number of cars owned and driven on our streets. These
9 efforts are critical to us meeting our climate goals.

10 We thank ARB staff, who were very responsive and
11 met with us and invited our feedback. Based on their
12 clarifications, we believe that one-time reporting
13 required of public agencies is appropriate and feasible
14 and can play an important role in forming future programs
15 of the ARB. We encourage additional outreach to other
16 local agencies like ours and are happy to provide
17 recommendations to make sure that everyone is aware of the
18 regulation.

19 We also recognize the importance of this
20 regulation in advancing the heavy-duty zero-emission
21 vehicle market. We welcome this expanded market and
22 applaud the ARB's leadership. We look forward to a
23 greater array of zero-emission vehicle options that can
24 meet all of our varied operational needs.

25 Thank you very much.

1 MR. SAADAT: Thank you members of the Board, and
2 thank you staff for this really thorough record. I
3 believe it shows that none of the barriers identified by
4 the industry is really that reasonable.

5 The ISOR shows that a much higher volume of
6 zero-emission truck sales are highly suitable to
7 electrification, will be more cost effective, and are
8 supported by existing and increasing investments in
9 infrastructure.

10 And lack of demand is also not the barrier, since
11 commitments through the Clean Air Action Plans from the
12 Ports of L.A. and Long Beach, and from the AB 617 plan,
13 which creates similar commitments at the Port of Oakland,
14 both of which, by the way, staff has stated as primary
15 objectives of the rule. Those require roughly 24,000
16 zero-emission drayage trucks. Staff's proposal falls
17 hopelessly short of that, reaching just one-sixth of that
18 need with 3,800 tractors cumulatively.

19 Any honest assessment of staff's proposals shows
20 it is inadequate to meet the ports' commitments, and in
21 the bigger picture to meet our health-based air targets or
22 carbon neutrality goals.

23 Under their proposal, 96 percent of a far larger
24 population of trucks in 2030 will continue polluting.
25 Members of the Board, isn't it reasonable to ask staff to

1 reconcile their regulation with any realistic path to
2 meeting our stated commitments? They have told us --
3 staff has told us that the rule is less about a specific
4 number and more about sending a signal to manufacturers.

5 But by aiming so far below what is feasible, that
6 signal appears to be take your time. That's the wrong
7 signal. We need a much stronger rule if we're going to
8 bring manufacturers' full power to this effort.

9 Thank you.

10 VICE CHAIR BERG: Thank you. We're going to go
11 ahead and ask if you haven't signed up yet, if you would,
12 because we are now at 104 people. And so we're going to
13 cut this off in 15 minutes, okay? So go ahead and sign
14 up, if you haven't. Otherwise at 2:15, we'll be cutting
15 the list off.

16 Thanks. Just that one thing, Mary.

17 (Laughter.)

18 CHAIR NICHOLS: That's what happens when you have
19 a Vice Chair, you know?

20 (Laughter.)

21 MS. GREENWALD: Okay. Are you ready?

22 My name is Sara Greenwald. I speak for the
23 combined memberships of 350 Bay Area, 350 Humboldt, 350
24 South Bay Los Angeles, and 1000 Grandmothers.

25 With our densely populated coastline and Central

1 Valley depending on agriculture, climate-related sea level
2 rise, droughts, deluges, and fires are going to hit us all
3 where we live.

4 Four percent is not enough. On behalf of 350 Bay
5 Area, 350 Humboldt, 350 South Bay Los Angeles, and 1000
6 Grandmothers, I ask that you raise the standard for
7 medium-duty and heavy-duty vehicles to achieve on-road
8 deployment in 2030 of at least 15 percent.

9 Thank you.

10 MS. BROWN: Good afternoon --

11 CHAIR NICHOLS: Hi.

12 MS. BROWN: -- Chair and CARB Board members.

13 Thank you for holding this hearing. I'm Clair Brown,
14 economics professor from UC Berkeley. I'm volunteer with
15 350 Bay Area Action, and I represent San Diego 350, Fossil
16 Free California, and 350 Silicon Valley.

17 We are here to urge you to have a much stronger
18 goal on ACT, because you see the science. You all are
19 really smart. Your staff is really smart. You know the
20 science. You know the technology. You know we can do
21 much more than set a low goal and hope.

22 As an economist, let me tell you, California now
23 has 15 of the 30 cities with the worst air pollution in
24 the United States. One half of the cities suffering from
25 bad PM2.5 and ozone are in California. We have to do

1 better. The rotten tomatoes have been thrown at me all
2 across the country when this report came out.

3 So also as an economist, we've got to ask who is
4 paying right now for diesel trucks? The people of
5 California are paying with bad health, and especially the
6 kids who live in the Central Valley and Southern L.A.
7 We've got to do better. We can't keep them paying for
8 diesel fuels with their health.

9 As an economist, we also have been hearing today
10 about the power of regulation. Once you set high goals,
11 once its their certainty that we know we have to have
12 certain goals for electric vehicles in ZEV, then we can
13 see that the manufacturing will happen, the infracharging
14 will happen, the batteries will get better, and the jobs
15 will be there, and we'll make sure they're good jobs.

16 So thank you. Thank you for all you're doing.
17 And let's go forward with a really strong ACT Rule.

18 MR. KATZ: Hi. My name is Richard Katz. I'm
19 with No Coal in Richmond.

20 I'm a biochemist. But once upon a time when I
21 was a kid, I was in the trucking business. Tree Frog
22 Trucking, Cal T 119009, general commodities statewide
23 service. And we did a little bit of long-hauling too.

24 And what I wanted to tell you today was that's
25 the first electric truck I've ever seen, that Pepsi-Cola

1 truck that's outside. And I think you could take most of
2 the trucks here in California or anywhere else that had a
3 reasonably long frame. Did you know that all the trucks,
4 every single big truck, Class 8 truck, the distance
5 between the frame rails is the same. They're totally
6 standardized in that respect. And you could take all
7 those trucks -- it's just my opinion. You can take all
8 those trucks and put that electric motor on there with
9 those batteries, because that electric motor would
10 practically fit in the glove box. Did you see the size of
11 it? It's only this big.

12 We're talking about a huge diesel engine, you
13 know, like a big Cummins 6 being replaced by a little
14 electric motor. You can look at it out -- you couldn't
15 even find it. I couldn't even find the motor. That's
16 how efficient they are.

17 Well, a person that could help you out with that
18 is sitting in back. There's a Highway Patrol in the back
19 there to keep order. And he'll tell you that the Highway
20 Patrol takes a pretty dim view of heavily modified
21 vehicles. You've got to help these people -- not the
22 Highway Patrol. You've got to help out the people who
23 would really like to electrify their trucks. And I
24 haven't heard anything about there -- that from any of
25 your reports or from anything you're saying, but you ought

1 to look into that.

2 And if I have one more second, I'm going to tell
3 you that I have a little bit of experience with this,
4 because I have a Bolt. That's an electric car. I drove
5 it here today. I'm very impressed by that. But even more
6 to the point, I have an electric motorcycle. It's a Zero
7 made Scotts Valley. It's exactly analogous to what we're
8 talking about. When I ride around with people who have
9 these big heavy Harley-Davidsons, they're really
10 impressed.

11 (Laughter.)

12 MR. KATZ: Thanks.

13 CHAIR NICHOLS: Harley-Davidson is now making an
14 electric motorcycle too.

15 BOARD MEMBER GIOIA: Hey, Richard, when I get
16 back to --

17 MR. KATZ: I'll race them for pink slips.

18 (Laughter.)

19 BOARD MEMBER GIOIA: When I get back to Richmond,
20 I want to ride your electric motorcycle, okay, Richard?

21 MR. KATZ: Yes, sir. Yes, Supervisor Gioia. Of
22 course. Anytime. Let me know.

23 (Laughter.)

24 CHAIR NICHOLS: Okay. Ms. Kim.

25 MS. KIM: All right. Good afternoon. My name is

1 Candice Kim. And I'm here on behalf of the Moving Forward
2 Network, a national coalition of over 50 member
3 organizations, including community-based groups, national
4 environmental organizations, and academic institutions in
5 over 20 major U.S. cities representing over two million
6 members committed to resolving the public health harms
7 created by our country's freight transportation system and
8 achieving environmental justice and climate justice.

9 On behalf of the MFN, I urge your support of a
10 truck rule that includes the most aggressive medium- and
11 heavy-duty truck mandate possible. Fifteen percent by
12 2030 should be the floor and not the ceiling. The current
13 proposal does not reflect the urgency of the global
14 climate crisis or the public health crisis experienced by
15 communities living in diesel death zones.

16 Epidemiological studies have consistently
17 demonstrated that children and adults living in close
18 proximity to diesel pollution have poorer health outcomes,
19 including increased cancer risk and premature mortality.

20 Freight communities across the nation are
21 watching this rule development so closely. A bold
22 zero-emissions rule here will become a model and a beacon
23 of hope for freight impacted regions across the country
24 and across the globe.

25 CARB has an opportunity to tackle the single

1 largest source of NOx emissions in our state. I urge you
2 to be bold, to act with urgency, and to prioritize
3 environmental justice by adopting the most aggressive
4 medium- and heavy-duty truck mandate possible; prioritize
5 public health in diesel death zones; aim higher, because
6 our lives depend on it.

7 MS. TOVAR: Hello. My name is Jessica Tovar and
8 I'm also with the Moving Forward Network.

9 Low-income communities of color are withstanding
10 the worst of freight-related pollution. We need
11 aggressive approaches now to bring relief to these
12 communities and also to meet the California need to reduce
13 GHG and NOx emissions.

14 Climate change is an environmental justice issue.
15 California's fourth climate change assessment spells the
16 grave reality that our future holds and the consequences
17 will be most severe in most -- in some of the same
18 communities also fighting freight pollution.

19 A new first-of-its-kind study was released
20 yesterday called the *Comparison of Medium- and Heavy-Duty*
21 *Technologies in California*. The report concluded that
22 electric trucks and buses can deliver the largest
23 reductions in greenhouse gases and nitrogen oxide
24 pollution, that they are essential for meeting
25 California's climate and air quality targets, and that the

1 trucks will be most -- cost competitive by 2030.

2 They will create the greatest economy -- economic
3 benefits, when compared to other emission reduction
4 strategies for heavy-duty trucks and buses.

5 Given the study results, it is clear that you
6 must adopt a more aggressive percentage today. Other
7 states around the country look to California, and we need
8 to -- we need your leadership and commitment to increase
9 the percentage of sales requirements to no less than 15
10 percent and we need zero-emissions now.

11 Thank you.

12 MS. VERDUZCO: Good afternoon, Chair Nichols and
13 members of the Board. My name is Iris Verduzco. I'm a
14 long-time resident of the City of South Gate and presently
15 work with the Moving Forward Network, which is based out
16 of the Urban and Environmental Policy Institute at
17 Occidental College.

18 I'm here today in support of an Advanced Clean
19 Truck Rule that includes the most aggressive medium- and
20 heavy-duty truck mandate possible. As a resident of a
21 highly industrialized community that is heavily inundated
22 with diesel emissions, living near railyards, freeways,
23 and the ports, I'm here to urge you to protect public
24 health, advance clean air and environmental justice.

25 Our communities need relief from these toxic

1 emissions. Our communities need zero-emissions technology
2 now. As I think of what a strong Truck Rule means for our
3 communities, I can't help but to feel emotional, as I
4 think of the relief we'll experience and how better off
5 our future generations will be.

6 It makes me hopeful to think of how many
7 emergency room visits we'll be spared from. And I can't
8 shake that feeling because the first thing I got to do as
9 a legal adult was sign myself out of the hospital on my
10 18th birthday because I was suffering from a bronchitis
11 respiratory flare.

12 When the clock struck 12:00, the nurses and I
13 just exchanged a glance, because there's nothing happy
14 about not being able to breathe.

15 At this age, I had already learned that these
16 health issues are a result of our exposures, the result of
17 living in diesel death zones, the result of having our
18 schools use the L.A. River to host our sports practices,
19 when the L.A. River runs adjacent to the I-710 freeway
20 that carries out over 40,000 truck trips a day. When we
21 say we are just trying to breathe, we mean it.

22 We need relief now. I ask the Board that you
23 adopt the most aggressive medium- and heavy-duty truck
24 mandate possible. Our communities, our health, and our
25 lives depend on it.

1 Thank you.

2 CHAIR NICHOLS: Thank you.

3 BOARD MEMBER DE LA TORRE: Thank you, Iris, for
4 coming to visit from South Gate and Occidental. I feel
5 total kinship here.

6 (Laughter.)

7 BOARD MEMBER DE LA TORRE: Thank you.

8 CHAIR NICHOLS: Duly noted. Thank you for
9 coming.

10 Okay. Mr. Horton.

11 DR. HORTON: Good afternoon, Chair Nichols and
12 Board members. I AM Dr. Mark Horton, a pediatrician and
13 former State Health Officer speaking today on before of 20
14 health and medicine organizations that have signed on to a
15 letter urging a strengthened ACT Rule.

16 These include the American Lung Association, the
17 American Academy of Pediatrics, the American Cancer
18 Society, the American College of Physicians, and many
19 more.

20 Through recent reports, we have gained a deeper
21 and more troubling understanding of the impacts of air
22 pollution and climate change on our health and on our
23 future. The recent Lancet *Countdown on Health and Climate*
24 *Change* is just the latest report showing the dire
25 consequences that climate change will have on our health

1 and that of our children.

2 According to the American Lung Association's
3 State of the Air 2019 Report, over 90 percent of
4 Californians live in counties impacted by unhealthy air.
5 And our cities dominate the lists of the most ozone and
6 particulate polluted cities in the United States.

7 Their report showed that climate-driven events
8 like extreme heat and wildfires make the job of achieving
9 healthy air that much harder. We must act decisively now.
10 The transportation sector is the leading source of harmful
11 air pollution -- air pollutants that threaten our health.
12 We need a rapid transition to a zero-emissions
13 transportation sector.

14 We applaud you for bringing this rule forward and
15 urge you to consider strengthening the rule, so that by
16 2030, we see not tens but hundreds of thousands of
17 zero-emission trucks displacing those currently fossil
18 fueled.

19 Californians rely on our State agencies like CARB
20 to fight for clean air and healthy climate, consistent
21 with our State clean air and climate plans. We urge you
22 to move quickly to set a stronger rule that applies to all
23 truck categories and sets clear goals for 100 percent
24 transition to a fossil fuel free transportation sector in
25 the foreseeable future.

1 Thank you.

2 MR. BARRETT: Hi. Good afternoon. I'm Will
3 Barrett with the American Lung Association and to be very
4 brief, following Dr. Horton's great comments.

5 The American Lung Association is one of those
6 more than two dozen health and medical organizations in
7 strong support of the ACT Rule becoming a stronger rule in
8 the final analysis. We think that the rule should be
9 aiming for hundreds of thousands of trucks on the road --
10 zero-emission trucks on the road by 2030. We think that
11 all of the truck classes should come forward to 2024,
12 including the pickup sector. And we think that the fleet
13 rule should be brought forward in time to make sure that a
14 stronger rule is matched with the feet requirement at the
15 same time.

16 So to keep it brief, this is a really important
17 priority for the health community in California. We think
18 that this takes a very important step forward in achieving
19 our clean air and climate standards to protect public
20 health. And we appreciate the fact that the staff and the
21 Board members have worked on this for three years now to
22 really improve the -- on the rule. And we think that it
23 can go further with your direction today.

24 So thank you very much and look forward to
25 working with you in the future.

1 MR. KENNY: Hi. Good afternoon, Chair Nichols,
2 members of the Board. I'm Ryan Kenny with Clean Energy.
3 And we do share some of the concerns that were expressed
4 thus far today. But I do want to make just one targeted
5 point and that is on the definition of near zero. As you
6 saw in the slide earlier, there is a near-zero -- are
7 near-zero credits.

8 But the definition is actually limited to quote,
9 "Plug-in hybrids with some all-electric range". And this
10 does expressly and purposely omit low NOx vehicles from
11 the definition. And this is something that we're
12 concerned about not just with this proposal, but also
13 other issues that might come before the Board and have
14 come before the Board.

15 There is a long history of including low NOx
16 vehicles verbally or in writing in the definition of
17 near-zero including in California State statutes, regional
18 air districts. For instance, the South Coast Air Quality
19 Management District does include it -- the definition in
20 the Indirect Source Rules. CARB in agency documents have
21 also included it at various times. And even opponents do
22 refer near-zero -- as near-zero for low NOx vehicles.

23 So we do believe that this historical pattern has
24 been established in a terms that is generally accepted.
25 And we do ask that there be an amendment to either include

1 low NOx vehicles in the definition or just change the
2 definition and not include a near-zero definition in the
3 regulation.

4 I'll also make a note too that I think there was
5 a lot of stakeholders who do share this concern, and there
6 just hasn't been a public process yet to provide input to
7 staff and to -- also to the Board members. So going
8 forward, we do ask that this be considered with this
9 rulemaking and other rulemakings as well, and make sure
10 that low NOx vehicles are considered near-zero.

11 Thank you.

12 CHAIR NICHOLS: Thank you.

13 MR. COSTANTINO: Hi. Good morning. Jon
14 Costantino, Tradesman Advisors. And I had to put my
15 company's name and it's not a marketing ploy. There's
16 just so many clients, that I couldn't list all the members
17 that are affected by this.

18 Every client I work with is affected by this, the
19 large entity reporting rule. And we worked hard with
20 staff to get those three bullet points in the slide deck
21 to clarify and narrow down the reporting requirements.
22 It's important that those are followed through and we look
23 forward to working with staff on those.

24 One of my clients is the Southern California
25 Public Power Authority. And we're usually speaking on

1 behalf of their members. But the scope of this rulemaking
2 is such that even they are included and they're just the
3 joint powers agency. So it really does impact quite a few
4 entities that don't normally get impacted by these rules.
5 So I want to make sure that that's a key component of what
6 staff is working on moving forward.

7 And then on behalf of - I'll mention one other
8 client - Trillium, they're a heavy-duty infrastructure
9 provider. They support the coalition, the renewable
10 natural gas, low NOx comments that have been made before.
11 And thank for your time.

12 MS. NAVARRO: Hello. My name is Lauren Navarro
13 from Environmental Defense Fund. Good afternoon, both to
14 the Board and to the staff.

15 Despite making up just seven percent of vehicles
16 on the road, medium- and heavy-duty vehicles, meaning
17 trucks, release 35 percent of total statewide NOx, 25
18 percent of statewide diesel PM emissions, and 23 percent
19 of all on-road greenhouse gas emissions, all of which must
20 be greatly reduced if we are to reach our state's
21 greenhouse gas and air quality goals.

22 Fortunately, there is a solution and that's what
23 we're here talking about today, that is zero-emission
24 trucks. Zero-emission trucks, or ZEV trucks, will grow
25 jobs in California as well. According to Forbes, electric

1 vehicles are already California's eighth largest export
2 worth even more than oil. And there are eight electric
3 truck manufacturers in California. For all of these
4 reasons, we both support the passage of the ACT Rule and
5 want to see it made as successful as possible.

6 Specifically, we offer to you today two
7 recommendations for the Board to consider. First, include
8 in the adoption resolution direction to staff to develop
9 an analysis for ZEV truck sales, similar to the one CARB
10 staff presented in the Board -- to the Board in July for
11 passenger vehicles. And this was called the Cunningham
12 Curve, but this time it would be for trucks.

13 This curve clearly showed the need to increase
14 the rate of passenger vehicles that are ZEVs to nearly 100
15 percent by 2035 in order to achieve the 80 percent
16 reduction in greenhouse gas emissions by 2050. A similar
17 analysis will be absolutely necessary to guide the vision
18 for trucks before and beyond 2030.

19 Second, given the magnitude of the local and
20 global problem of truck emissions, which we've heard about
21 today, we ask the Board consider where the percentages of
22 ZEV trucks sold in each medium- and heavy-duty class can
23 be strengthened and to adopt those higher percentages.
24 One example is for 2b to 3 pickup trucks.

25 Thank you.

1 CHAIR NICHOLS: Thank you.

2 MR. LAWSON: Good afternoon. My name is Thomas
3 Lawson. I'm with the California Natural Gas Vehicle
4 Coalition. We are a trade association made up of engine
5 manufacturers, utilities, fuel providers, fleets. And so
6 we have a lot of different stakeholders that care about
7 this rule. Because of that, we've signed on to a couple
8 of letters that share our concerns. And as an early
9 Christmas present to you, we condensed those wonderful
10 letters down to three main bullet points, a one-pager for
11 you right in front of you.

12 And, you know, one of the things I wanted to take
13 a deeper dive on is number three, which the near-zero
14 definition. And kind of just provide a little bit more
15 color on why that's important.

16 Last year 2018 session, we co-sponsored a bill,
17 AB 2061, that provides a weight exemption for alternative
18 fuel vehicles. That bill specifically uses zero and
19 near-zero as the vehicles that get that exemption in an
20 effort to foster more turnover from fleets with
21 alternative fuels.

22 We worked with a broad coalition on that bill.
23 It was very important. It was very important, especially
24 in the long-haul industry and provided a lot of
25 clarification for enforcement under CHP on what types of

1 vehicles those are, so they know what to look for. So
2 this muddled definition where the one that we have right
3 now is definitely not the one that was intended in the
4 bill, so we have these two issues.

5 I'd hate for fleets that are carrying these
6 vehicles that have invested in alternative fuel vehicles
7 to be cited or towed because of confusion as they go
8 through the state on the scales. So it's really important
9 that we clear that up. And, you know, my association
10 stands ready to work with CARB on how we can do that in
11 2020. But it's probably one of our top issues, because
12 that bill and that law is really important.

13 Thank you for your time. We, you know, would
14 like to chime in on other concerns that folks heard from
15 the different letters that we signed on to and we
16 appreciate it.

17 Thank you.

18 DR. PHADKE: All right. I'm Dr. Amol Phadke.
19 I'm a scientist and the deputy department head at the
20 Lawrence Berkeley National Laboratory. And I lead our
21 international work on clean power and transport.

22 Our research finds that the battery technology
23 has improved, which is the key component of electric truck
24 has improved much faster than what we had anticipated.
25 The price reductions have come about 10 to 15 years ahead

1 of schedule. We find that the total cost of ownership of
2 most electric trucks are already lower than diesel, given
3 the right policy ecosystem.

4 So then we conducted a very high level
5 assessment, a cost-benefit assessment of the proposed ACT
6 Rule, which we have submitted as our comments. It's a
7 fantastic start, but it leaves a significant share of the
8 ICE trucks still on the road, and it is inconsistent with
9 the carbon neutrality order.

10 So we then went ahead and conducted cost-benefit
11 assessment of ZEV trajectory that will be consistent with
12 the carbon neutrality order, and which basically requires
13 that ambition to be raised by four to five X. Given the
14 battery price trends, we find that the net present value
15 of the benefits of a climate consistent and more ambitious
16 rule is about \$60 billion.

17 So that's it. So this is my comment as a
18 scientist. I'm a scientific organization. I'm not taking
19 any advocacy positions, but I'm also father of a four year
20 old, so my scientist comments stop here.

21 But I feel that, look, the technologies move very
22 rapidly. And there's a crisis. An there are \$60 billion
23 of net benefits on the table, so I really believe that
24 strengthening the rule will serve the planet well.

25 Thank you.

1 MR. CHERIN: Good afternoon, Madam Chair, Board
2 members, and staff. My name is Alex Cherin. I currently
3 serve as the Executive Director of the California Trucking
4 Association's Intermodal Conference, where I represent
5 Nearly 200 Class 8 drayage fleets and truck drivers,
6 servicing California's largest container ports.

7 As you know, the CTA submitted a comprehensive
8 comment letter addressing both the challenges presented by
9 the proposed manufacturer rule and the fleet reporting
10 requirement. And the Intermodal Conference wishes to
11 support those comments as well.

12 In addition, the members of our conference wanted
13 to provide context for that letter to the Board, including
14 our demonstrated commitment to investing in alternative
15 fuel technologies, all modes of near zero and zero
16 emission trucks, and our unwavering support for further
17 incentives to help bridge the gap between outdated engine
18 technologies and new cleaner platforms.

19 Of note is the fact that our drayage industry
20 invested nearly \$1 billion since the inception of the
21 original San Pedro Bay Clean Air Action Plan in 2008 in
22 order to turnover and change the drayage fleet in Southern
23 California.

24 In addition, our members have worked with regular
25 agencies including yours, South Coast AQMD, the Federal

1 Maritime Commission, and the CEC to deploy, when
2 available, larger scale demonstration projects testing the
3 feasibility of near-zero and zero-emission platforms.

4 Some of our members, most notably TTSI of Carson,
5 California have integrated the largest percentage of
6 near-zero and zero-emission trucks of any Class 8 drayage
7 fleet throughout the state of California.

8 We bring up this background to provide context
9 for the CTA comment letter and to reaffirm our commitment
10 to working with CARB and other agencies to realize a more
11 efficient goods movement environment throughout -- through
12 the adoption of near-zero and zero-emission truck
13 strategies to allow the industry to fulfill their
14 operational obligations.

15 Thank you.

16 MS. CREMERS: Good afternoon. Noelle Cremers
17 with the California Farm Bureau Federation.

18 I want to start by thanking CARB staff for
19 meeting with us and considering the concerns that have
20 been raised to date and committing to work to address some
21 of those concerns moving forward. Really quickly, there
22 is some ambiguity over who is subject to the reporting. I
23 think most farmers would not be subject. However, the
24 ambiguity in the definition of broker could bring farmers
25 into reporting if they have two or more deliveries a week,

1 if they're viewed as controlling those deliveries. That
2 also could raise concerns with double counting some of
3 those reporting, if you have both entities.

4 Another issue is if you do have a business that
5 owns enough farms to meet the \$50 million threshold, if
6 you have employees living on those properties, by
7 requiring the reporting of the specific location of where
8 those trucks are domiciled, you could be releasing home
9 addresses of those farm employees. And so we just need to
10 make sure that that doesn't happen moving forward.

11 On the specific mandate, I do have concerns about
12 the potential costs that future mandates will have on
13 farmers specifically. We appreciate the recommendation
14 that the pickup trucks be extended until 2027 before
15 requirements come into affect, but we expect the cost of
16 all pickup trucks to increase under this rule.

17 And I just want to point out that in 1980 to
18 purchase a pickup truck for a rancher, they had to sell
19 approximately 17 calves to pay for that truck. Today, to
20 buy a diesel pickup truck, they have to sell approximately
21 47 calves to purchase that same truck. So any additional
22 Cost is borne by that business and they don't have the
23 ability to pass that on. They have to somehow come up
24 with that new money.

25 We think incentives are the way to go. It's

1 worked in plenty of other areas. The FARMER Program is a
2 great example. And we'd like to see the push to ZEV
3 vehicles be done through incentives rather than mandates.

4 Thank you.

5 MS. AGUAYO: Hi. Good afternoon, Chair Nichols
6 and members of the Board. Thank you for the opportunity
7 to submit public comment.

8 My name is Leslie Aguayo. I'm an Environmental
9 Equity Program Manager at the Greenlining Institute, a
10 research, policy, and advocacy organization committed to
11 economic and racial equity.

12 I'd like to address the Board for a stronger
13 Advanced Clean Truck Rule. From 1999 to 2005, my family
14 started a new life Inglewood California, exactly two miles
15 away from Los Angeles International Airport. It was not
16 until years later after an asthma diagnosis that it dawned
17 on me, the planes were only one part of the problem.

18 LAX, along with the Port of Los Angeles and Long
19 Beach make up the nation's number one U.S. cost -- customs
20 district, accounting for billions of dollars in
21 California's international trade.

22 From these major air and sea transportation
23 centers, trucks carry cargo across the country, delivering
24 not just products, but diesel exhaust. With the greatest
25 amounts of toxic air concentrating in surrounding

1 neighborhoods known as diesel death zones, a majority of
2 which are populated by low income communities of color.

3 African-American and Latino Californians face 43
4 percent and 39 percent higher rates of fine particulate
5 matter pollution respectively than white Californians,
6 exposing them to health consequences like asthma, heart
7 and lung diseases, cancer, and premature death.

8 The Greenling Institute urges the California Air
9 Resources Board to strengthen what could be an
10 unprecedented Advanced Clean Truck Rule and lead our state
11 to clean -- a cleaner future more quickly by, one,
12 increasing the overall mandates to ensure that by 2030 no
13 less than 15 percent of medium- and heavy-duty trucks on
14 the road are zero emitting; two, including Class 2b pickup
15 trucks and the mandates beginning in 2024; three,
16 outlining CARB's long-term objectives for achieving a
17 hundred percent zero-emission trucks in various
18 categories; and four, committing to adopt corresponding
19 fleet purchase requirements in 2021.

20 I often wonder what illnesses my classmates,
21 teachers, and neighbors still experience for all the
22 diesel exhaust we breathed. Policies like the ACT Rule,
23 if done right, will allow future generations to never have
24 to wonder.

25 Thank you.

1 MR. EVAN EDGAR: Chair and Board members. My
2 name is Evan Edgar. I'm the John Cash of trash and
3 compost.

4 (Laughter.)

5 MR. EVAN EDGAR: We are the collectors, and
6 processors, and haulers of organic waste. We divert
7 organics from landfills and heavy-duty vehicles to reduce
8 short-lived climate pollutants. We oppose the proposed
9 definition of near-zero. In no way we can be electrical
10 by 2026 as a guy mentioned. We have contracts,
11 franchises, infrastructure, fueling stations. But we're
12 on it -- in it to win it.

13 As collectors and processors, we produce in-state
14 renewable natural gas today. We fuel our fleet, both the
15 Class 7 collector and a Class 8 haul to the valley to
16 sequester carbon in the valley. So we've invested
17 billions of natural gas platform. We're off diesel,
18 getting off landfills, and getting off greenhouse gases
19 today. We are net zero now. We're deep carbon now, not
20 in 2045. We can do this today.

21 The short-lived climate pollutants are very
22 important to get organics out of the landfill. That alone
23 will get four million metric tons of CO2 just by getting
24 organics out of the landfill and take it to anaerobic
25 digestion composing. But another 2.2 million tons of

1 getting off diesel to be renewable natural gas.

2 We are carbon negative today, net zero today.

3 Our fleet owners -- the refuse fleet owners offer an
4 elegant solution. We're in-state, where we can produce 75
5 million diesel gallons equivalent in SB 1383. Government
6 -- local government procurement by 2022 and 2025. Fifty
7 million gallons per year by dairy, 36 by wastewater, and
8 470 million gallons of in-state RNG. And today
9 technically it's feasible.

10 We need to have the near-zero truck in order to
11 have -- to fuel our fleet. So we need to include the low
12 NOx engine into the near-zero definition. Near-zero
13 counts in horse shows, hand grenades and heavy-duty.

14 We cannot let climate change policies get in the
15 way of greenhouse gas reductions today. Instead of
16 getting 15 percent by 2030, by doing near zero and RNG
17 in-state, we can get 50 percent by 2025 and implement SB
18 1383.

19 Thank you.

20 MR. DE LA CRUZ: Good afternoon, Chair -- Madam
21 Chair and members of the Board. My name is Carlo De La
22 Cruz and I'm with the Sierra Club. I work with
23 communities impacted by freight and air pollution in
24 Southern California. Today, I want to use my time to
25 share a story of a community member living in the Inland

1 Empire. His name is Ricardo Caballero.

2 "Good afternoon, everyone. My name is
3 Ricardo Caballero. And I am 17 years old. I am
4 currently living in Perris, California. I live
5 in an area which it feels like there's a
6 warehouse in every corner. Developers are adding
7 a football sized warehouse to our region every
8 day.

9 "Some might think that these warehouses are
10 positively impacting us, because they are
11 creating new job opportunities, but that is
12 wrong. Many of the jobs provide barely livable
13 wages and continue to contribute to our air
14 pollution from trucks. The pollution from trucks
15 is worsening our health. Gas and diesel
16 pollution doesn't just stay in one place. It
17 travels across our inland valley.

18 "Diesel trucks are coming out of the
19 warehouses near houses and schools. When I was
20 younger, I attended numerous doctor visits
21 because of my asthma condition. I had to carry
22 my inhaler everywhere I went. I already had to
23 be attentive to what would -- what I was doing
24 and what could potentially trigger an asthma
25 attack. With this fear, I come to you today, to

1 take a stand and better care for our community,
2 so that this terrible air quality doesn't affect
3 anymore unsuspecting children.

4 "Today, I encourage you all not to forget
5 about us in the Inland Empire and that we need a
6 strong, Advanced Clean Trucks Regulation that
7 protects our health, and our air, and our air
8 quality. In school, our teachers tell us to
9 strive for our best work. Is four percent really
10 your best work? Fifteen percent clean trucks by
11 2030 is not too much to ask to protect our lives
12 and our health.

13 "Thank you". Smiley face emoji.

14 (Laughter.)

15 MS. KATHERINE GARCIA: Hello. I'm Katherine
16 Garcia with Sierra Club California. I am ceding my time
17 to Jimmy O'Dea to talk more about the technical analysis
18 he's done.

19 But I just wanted to mention first that many have
20 reminded you that we need to think about the next
21 generation. And as a pregnant woman who will be giving
22 birth in the spring, I just want to say that my family
23 deserves -- my growing family deserves clean air. And
24 this is really about clean air and we would like you to
25 strengthen this rule and think about our growing family.

1 Thank you.

2 MR. O'DEA: Chair Nichols, members of the Board.
3 Jim O'Dea from the Union of Concerned Scientists.

4 I agree with Professor Sperling that this measure
5 is one of the most important policies being considered for
6 transportation, not just in California, but in the world.
7 We need to get to as close to possible -- close to 100
8 percent zero-emission trucks in the next 25 years.

9 The current proposal gets us to four percent in
10 ten years. Those numbers don't add up. We have to seize
11 the opportunity we have today to make this proposal
12 stronger. If we don't, decisions in the future are only
13 going to get tougher.

14 Even if we get to that 15 percent target that
15 we're proposing, we'll still have a long ways to go. And
16 I want to just indicate that it's an analysis of truck
17 sales in California and their operating characteristics
18 that led us to conclude a 15 percent on-the-road
19 population is both reasonable and achievable.

20 So even if we get to that 15 percent, we have a
21 long ways to go. And I want you to know that you have not
22 only the support of the Union of Concerned Scientists, but
23 all of the organizations behind me that we will support
24 CARB and other agencies to get there.

25 We've been doing this on incentive funding.

1 Working with the Legislature, we know there's a lot more
2 to do there. On infrastructure investments at the PUC.
3 We support fleet purchase standards. We support fleet
4 reporting standards to inform those standards.

5 And I want to emphasize CARB's role in informing
6 these secondary policies. I spend a lot of time working
7 in policies at the PUC, notably the \$700 million of
8 infrastructure investments the PUC approved recently for
9 medium- and heavy-duty infrastructure.

10 And it was CARB's policies that gave the
11 Commission the justification to approve those investments.
12 And so what we need to do now is adopt a policy to set a
13 policy that will provide justification for these many
14 supporting policies for the next decade. And that's what
15 this manufacturer standard will do.

16 Thank you for your time. I thank you for
17 considering this rule. It is one of the mows important
18 policies being considered in transportation today.

19 MS. FLORES (throug interpreter): Hi there. My
20 name is Olga Flores. I am coming from the Inland Empire
21 and I am here to talk to you about my community that is
22 very polluted. This is due to all of the warehouses that
23 keep appearing in our communities, all the trucks going in
24 and out, and the trucks going close to residences.

25 We're asking that you do not wait until 2030 to

1 be passing zero emission rules. Okay. You guys are
2 asking for four percent, which is about 75,000 trucks.
3 And I want to remind you that the company of Amazon, which
4 is the largest private employer in the Inland Empire, is
5 moving already 20 -- over 20,000 trucks just in that area.
6 That's why we're asking for four percent to go at minimum
7 to 15 percent. And we also want to ask when we will be
8 able to see full zero-emission targets by -- what year by.

9 Just on personal note, I have a child. I have a
10 young son. He has asthma and he can't go and play outside
11 regularly.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

14 MR. FLORES (through interpreter): Okay. I'm here
15 for the same reason. I come from the Inland Empire. I've
16 been living there for 20 years and I've seen the massive
17 increase of trucks and warehouse that have come into the
18 community. So not only are they coming in and ruining the
19 infrastructure in the streets, but we're also seeing all
20 of this black smoke coming from these trucks that keep
21 coming in and out. And if you start to go outside at
22 around three, four, or five, your eyes will literally
23 start to burn.

24 I also have a son -- a young son. He has asthma
25 and I have to be very careful on what time I allow him to

1 go outside. I have to give him a short amount of time to
2 go outside and then has to go back inside. He's already
3 had a giant asthma attack and that's why we're here asking
4 for 15 percent at the very minimum.

5 Thank you.

6 MS. RODARTE (through interpreter): Hi, everybody.
7 Good evening. My name is Lorena Rodarte. I live in San
8 Bernardino and I take care of my home. My community is
9 surrounded by warehouses, railyards, cement factories, gas
10 plants and we have really high levels of pollution in our
11 community. And because -- and due to that, we have lots
12 of illnesses, such as asthma, cancers, respiratory issues
13 in my community.

14 In my family, it has touched us personally. We
15 have a family member with cancer and clots in their lungs.
16 We are asking for clean air, not just for us, but for the
17 youth who are the future. That's why we're asking for
18 four percent -- not four percent in 2030, but 15 percent.

19 In the streets of my community, I counted 147
20 trucks that passed in 30 minutes and sometimes there's
21 much more than that.

22 I thank you, guys, from the bottom of my heart
23 for the possibility of all the laws that you can change
24 that would affect my community. Please feel in your heart
25 as if you're helping someone in your family or act as if

1 you would be helping someone in your family that was in
2 this situation.

3 Thank you.

4 MS. ULLOA(through interpreter): Hello there. MY
5 name is Lilia Ulloa. I come from the Inland Empire. And
6 first of all, I just want to say thank you for having us
7 here.

8 I am here to raise my voice -- I'm here from
9 Riverside. I'm here to raise my voice and lend my voice
10 to the disabilities community, who are the most vulnerable
11 in situations like this. These people in our community
12 that have mini -- that have the most vulnerability to
13 things in their environment, and -- but yet again, they
14 are put in places where they're most susceptible to the
15 contamination in their community.

16 As human beings, we have the right to clean air.
17 And in this proposal, it is for sure that four percent
18 would not be enough. And that's why we're here asking for
19 15 percent of the sales mandate. I think we all here
20 deserve clean air, and for all of us that are here and all
21 of the people that could not be here, and especially for
22 those people that do not have a voice and cannot speak,
23 like the children and the adults and the disabilities
24 community.

25 I ask you from the bottom Of my heart that you

1 take this proposal and accept it. Do more than what has
2 been offered to you right now, the 15 percent, and you let
3 us know at what year you're going to be doing that.

4 Thank you very much.

5 MS. ROMAN(through interpreter): Good evening.
6 My name is Veronica Roman.

7 I'm a community organizer with the Center for
8 Community Action and Environmental Justice. I live in the
9 community of San Bernardino, California, and I'm a mother
10 and a grandmother. I am here to let you know that our
11 community is being attacked by high levels of pollution.

12 This past year we had a hundred -- more than a
13 hundred days of air that was polluted. The sicknesses
14 have increased, the asthma, cancer, respiratory issues,
15 and more.

16 I'm here to be heard, but also as a
17 representative of my community. I am here -- I am here
18 because of the respiratory issues that my grandson faces.
19 I'm here to tell you what -- how our community is
20 suffering. We are not asking, we are demanding, as the
21 right that everyone must have for clean air.

22 We want zero-emission trucks and we want them
23 now. We want 15 percent by 2030, because every day that
24 goes by is one less day of life for people that live in
25 these communities. But instead, it's one less day of

1 life.

2 Thank you.

3 MS. TRUJILLO (through interpreter): Good
4 afternoon. My name is Adu Trujillo. I am a mother of
5 three children. My oldest son is in high school, which is
6 in front of a cement factory. My middle child -- my
7 daughter is going to middle school right next to a
8 freeway. And I have my youngest child who is in kinder --
9 or in elementary school lives right next to natural gas
10 refueling station.

11 And one block away from that -- from my child's
12 school is BNSF, the railroads. And that's in San
13 Bernardino, San Bernardino the largest county. San
14 Bernardino County has really beautiful mountains that get
15 filled with snow. They have forests and deserts, but they
16 also have some of the worst pollution, in which many
17 people are suffering. I know way too many people with
18 kids that have asthma and many people that are also having
19 cancers, respiratory issues, and allergies.

20 Everything is -- all of those things are caused
21 by diesel trucks that are driving through the Inland
22 Empire. We don't live in an industrial area, but even
23 then, there's 300 trucks that pass by an hour, which I
24 counted one day by myself.

25 This is very dangerous because we have to be

1 driving right next to them with three kids in the back
2 seat. This is the way that we live day-to-day. The
3 streets are filled with potholes, because the trucks are
4 too heavy. And just this past year, we had more than a
5 hundred days where the air quality outside was unhealthy.

6 And that's what our kids breathe in every single
7 day and they have to live with that contamination, which
8 is causing sicknesses. And I think that all kids have a
9 right or deserve to have a bright future.

10 At the school that my youngest child goes to
11 school at, Loma Linda University at the school where my
12 youngest child goes to, and 47 percent of the children
13 have asthma. I'm here to say thank you for allowing us to
14 make a comment and asking if they can be zero-emission,
15 why aren't they?

16 Thank you

17 CHAIR NICHOLS: Thank you.

18 VICE CHAIR BERG: Excuse me, before you go, can
19 we thank you for translating. You did just an outstanding
20 job. Thank you very much.

21 CHAIR NICHOLS: And running back and forth from
22 one podium to the other. She's getting her workout today,
23 too.

24 MS. CHAVEZ: Hi. My name is Kimberly Chavez. I
25 come a long way from the Inland Empire, specifically for

1 this. I work with children with disabilities that all
2 seem to have similar health problems such as heart
3 disease, lung problems, liver, kidneys, you name it. Some
4 of us don't understand the difficulties in living with all
5 these problems.

6 Recently, I was given an inhaler, because of my
7 difficulty breathing, and I was told I have asthma.
8 Growing up, I did not have health problems, and slowly I
9 started realizing that my breathing got more and more
10 difficult.

11 How did it happen? I don't know. I don't come
12 from a smoking environment. Typically, the low poverty
13 class are the ones that live near the trains and the
14 trucks that go by our neighborhoods every day. Nowadays,
15 more and more children are affected by the air pollution
16 beginning from the womb of their mothers and continuing
17 their entire lives.

18 We hear more often that we have more children
19 with down syndrome, with autism, and we don't know why.
20 Let's make the changes that we all clearly know that we
21 can for ourselves, for our children, for our community.
22 We need 15 percent by 2030.

23 Thank you.

24 MR. RIVERA: Good afternoon. And I want to thank
25 Chair Nichols and the rest of the board for allowing me to

1 speak today. And I come from the Inland Empire, and more
2 particular Fontana.

3 And although I do appreciate the policies you
4 guys are trying to enact, I do feel like they could be
5 stronger. I believe that for four percent can be
6 increased by 15 percent by the year 2030. And to give you
7 an example, I work with people with developmental
8 disabilities. Mainly I work with people that range on the
9 autism spectrum and down syndrome. And some of their
10 favorite activities involve going at and going onto nature
11 walks.

12 And from these moments, they enjoy the little
13 components that make life beautiful. And they're stripped
14 away from this opportunity because they don't have the
15 luxury to have -- not even the luxury actually. It's just
16 done have the right to have clean air in our community.
17 So because of this, they're stripped from that
18 opportunity.

19 And also, I just really want to advocate for my
20 community, that you guys really should reconsider your
21 four percent goal. I feel like we can do better. As you
22 guys being my elected officials, you guys have the power
23 today to make something happen and I do believe in you
24 guys. I live in the communities being affected. My
25 family, friends, and peers, they're all at higher risk of

1 cardiovascular and respiratory problems. And they're
2 being stripped of the simple activities of enjoying the
3 outdoors.

4 And weak policies are what hurt our community as
5 a whole and lead for future generations to deal with the
6 irreparable harm caused by us.

7 Once again, I thank you for allowing me to talk
8 today. And I hope you reconsider your four percent to 15
9 percent.

10 MS. MENDEZ: Hi, everyone. How is everyone doing
11 today? Good?

12 Because some kids back in the Inland Valley
13 aren't doing that well.

14 I'm Gabriela Mendez with the Inland -- I'm
15 Gabriela Mendez with CCAEJ, the Center for Community
16 Action and Environmental Justice. And I would like to
17 share a concern of mine. I have been fortunate enough to
18 join with community to do truck counts inside the Inland
19 region and on the L.A. -- on like Southeast L.A. one
20 of -- that was the most concerning to me.

21 We gathered on the 60 freeway behind my work,
22 many homes and schools. Close to 500 trucks pass an hour,
23 about 340 trucks on the 91 freeway, and 664 trucks on the
24 710 in Southeast L.A. per hour. And these are only
25 counting the semi-trucks.

1 These numbers are alarming as sensitive receptors
2 are usually found less than 500 feet from a freeway. And
3 we do not need any more Band-Aids. We need per -- we need
4 permanent solutions. I'm here for this very reason, as
5 you have proposed to set a sales target for four percent.

6 And as I appreciate that goal being set and you
7 guys hearing the concerns, I think that it is extremely
8 low for the trucks that we are seeing in California right
9 now.

10 I urge you to set the rule for 15 percent sales
11 target. We need to put our economic benefits before
12 our planet and people, as folks will not even have a
13 planet to spend their money on.

14 Thank you.

15 MS. ANGULO: Good evening, Madam Chair and Board.
16 My name is Brenda Angulo and I grew up in the City of
17 Fontana, an industrialized city, where the importance of
18 steel production was so highly honored that it made its
19 first high school mascot a Steeler.

20 While the mills are now closed, Fontana's initial
21 embrace of the commerce and manufacturing rendered the
22 city as a production manufacturing site, many recognize it
23 as warehouse city, where trains and trucks pass by on a
24 daily. Truck routes surrounding my city have affected the
25 health conditions of my family and friends, neighbors who

1 have been plagued with health issues, such as asthma and
2 cancer as a result of air and water pollution.

3 I am also a kindergarten teacher at Sunnyslope
4 Elementary in Jurupa Valley, which resides on a hill, a
5 hill that overlooks a skyline of brown and blue, a sky
6 that does not share the very similitude with skies in the
7 books that I read to them.

8 On top of having to look at this layered sky, my
9 student's also have to breathe in the layers of this sky.
10 I share my perspective with you to clear the myopia of an
11 elementary student's recess in Jurupa Valley. We have
12 days where we cannot go outside due to air quality. We
13 have days where students must walk instead of run, in
14 order to make sure that they do not exacerbate their
15 asthma systems, days where students wear face masks in
16 order to breathe.

17 As a community member in a warehouse city, as an
18 elementary teacher, and as a concerned California citizen,
19 I ask that you hear our pleas and raise the standards for
20 future plans with green technology.

21 We are tasked with supporting the creation of
22 climate equilibrium, supportive of life, my student's
23 life. We ask that CARB initiates policies that are built
24 on moral infrastructure of climate change with ensuring
25 that commerce and manufacturing is contingent on emission

1 cuts and implement sanctions for squirrely carbon
2 behavior. We hope that you strengthen the rule to 15
3 percent by 2030.

4 Thank you.

5 MS. VIDAURRE: Okay. Hello, Board members. My
6 name is Andrea Vidaurre. I'm with the Center for
7 Community Action and Environmental Justice. You might
8 have seen me tweeting at you guys and tagging you all
9 trying to get your attention over to us and over to what's
10 happening in San Bernardino and Riverside County.

11 I'm trying to get your attention over here,
12 because I want you guys to know what the reality is of the
13 situation that's going on there, the reality and the
14 amount of trucks and traffic of pollution that's going
15 through our cities. We live in a beautiful community
16 surrounded by hills and mountains that sadly have been
17 deteriorated and are being destroyed by the negligence of
18 leadership, the endless pursuit of greed and this false
19 promise of prosperity.

20 In the Inland Empire there is no plan for
21 sustainability from leadership. It's just grow, grow,
22 grow, more trucks, more trucks, more trucks, without
23 thinking about the damage it has been doing to people,
24 real living people who are just trying to play outside,
25 who are just trying to go on a walk, who are literally

1 just trying to breathe.

2 We the community and the workers have a vision of
3 sustainability for where we live. So we come to this
4 agency believing that we have an ally in this struggle
5 against the corruption of local leadership. And what do
6 we get? A proposal that is totally out of touch with our
7 reality.

8 I want to ask how many diesel trucks do you see
9 on a given day on your commute, ten, 20, 50? On our
10 commute we're seeing over 500, 600 per hour. But at the
11 end of the day, it doesn't matter, right? It doesn't
12 matter if it's 50 or if it's 500. Nobody deserves to be
13 breathing in cancer-causing toxins that are found in
14 diesel, because diesel kills. It's as simple as that.

15 We ask that you not settle for the proposal that
16 is being given to you. We demand that you as
17 representatives of ours represent us accurately and ask
18 for the sales target that doesn't ignore our lived
19 experiences. Come spend some time with us in our
20 communities, and see -- and you'll see that four percent
21 is an insult, and you'll see that 15 percent is barely a
22 drop in the bucket for 2030. We absolutely need more.

23 Many of our family members work in this industry
24 as warehouse workers or truck drivers. Many are
25 misclassified. I want to emphasize that this rule will

1 only be as strong as its reporting mandate, because the
2 same intentional exclusion of our communities from
3 decision making locally is the same exclusion that our
4 families feel from those that unlawfully misclassify and
5 gaslight us with economic burden.

6 Thank you.

7 CHAIR NICHOLS: Thank you.

8 MR. ALLEN HERNANDEZ: Good afternoon, Board.

9 Thank you for having us here today. I also really want to
10 just thank our community here from the Inland Empire who
11 showed up, who traveled a long distance here. Can I get
12 everyone from the Inland Empire to please stand up just so
13 folks know.

14 (Applause.)

15 MR. ALLEN HERNANDEZ: We wouldn't be here today
16 if this wasn't extremely important to us, right? We have
17 family members, parents, you heard teachers, who all had
18 to make accommodations today, find babysitters, you know,
19 try to get time off work to be able to come here and
20 testify on such an important topic, right?

21 Earlier, we heard about profit margins and, you
22 know, all that kind of stuff. And we're here to really
23 emphasize, you know, the human cost of this, right? You
24 heard the stories. This is not, you know, just a
25 selective group who just, you know, lives in one specific

1 community. This is the story for us throughout the entire
2 region.

3 I don't know if introduced myself yet, but I'm
4 Allen Hernandez and I'm with CCAEJ. And I also -- I live
5 in Fontana, from the Inland Empire. My little niece also
6 lives in Fontana and -- I have two little nieces now,
7 right, an eight-year old and a 12-month old, right?

8 The eight-year old has had asthma since she was
9 eight months old. And it's gotten so bad now, that when
10 she comes home we have to -- you know, she comes home from
11 school and we have to replace her clothes from where she
12 went to school at, because they're so covered in
13 pollutants and all these things that cause allergies. And
14 her doctor has aid, we need to throw those immediately in
15 the washer, wash them, and put her into new clothes. And
16 as she plays during the day, replace those at the end of
17 the night.

18 These are stories that are very cormon in our
19 community. It's happening to a lot of our children, and
20 so I'm here today to really say, right? You heard the
21 talk about profit margins. It's more important than that.
22 It's about real lives out there, right?

23 So I think 15 percent is a good starting point.
24 Four percent is just not going to do it for our community.
25 So thank you very much, Board.

1 CHAIR NICHOLS: Thank you.

2 (Applause.)

3 MR. SAKAGUCHI: Chair and members of the Board,
4 my name is Dan Sakaguchi. I'm a researcher with
5 Communities for a Better Environment, which is a statewide
6 organization, environmental justice, that organizes in
7 Richmond, East Oakland, South East Los Angeles, and
8 Wilmington.

9 And I'm deep humbled by all the stories that I've
10 heard today from folks that have traveled really far. And
11 I'm here to join them to call for a stronger Advanced
12 Clean Truck Rule. So one of the communities that I have
13 the privilege to work with is East Oakland. Oakland is
14 home to the Oakland Foreign Trade Zone which is one of the
15 largest on the west coast, which makes it easier for
16 companies to trade goods in the region.

17 These are generally not goods that East
18 Oaklanders receive any benefit from or ordered. Instead,
19 they have to bear the burden of the pollution from the
20 diesel trucks that cut through their neighborhoods to
21 deliver.

22 Because the trucks are prohibited from traveling
23 on the highway that goes through whiter, wealthier
24 foothills, they're routed directly through the East
25 Oakland flatlands, which are predominantly low-income

1 black and brown neighborhoods.

2 Between the relentless stream of passing trucks
3 on highways and idling trucks in residential
4 neighborhoods, East Oaklanders constantly breathe in the
5 diesel particulate matter that put them in, what others
6 have called today, the diesel death zones.

7 It's no accident that children in East Oakland
8 have a rate of asthma one and a half to two times the
9 county average or the life expectancy in East Oakland is
10 ten years less than those living in the hills.

11 It' important to say also today that in East
12 Oakland the air quality issue is not just about the
13 trucks. It's not just about the -- one of the worst
14 polluting iron foundries in the state. It's not about a
15 crematorium that currently builds -- burns 3,000 bodies
16 per year in East Oakland. The threat is the combination
17 of the emissions from all these sources. Toxics layered
18 on top of NOx on top of particulates.

19 And so this rule today is an opportunity to
20 dramatically reduce one of those major sources of
21 cumulative emissions in places like East Oakland.
22 However, the current four percent requirement doesn't
23 sound like a victory. It sounds like a compromise that
24 asks EJ communities to continue to wait for clean air.
25 And East Oakland members are tired of waiting. Please

1 strengthen this rule to give East Oaklanders the clean air
2 they deserve.

3 CHAIR NICHOLS: Thank you. We're going to hear
4 from this speaker and then we're going to take a 10-minute
5 break for the court reporter and everybody else.

6 MS. PINTO-CABRERA: Hello. Good afternoon, Chair
7 Nichols and members of the Board. I'm Cynthia
8 Pinto-Cabrera with the Central Valley Air quality
9 Coalition. Thank you for taking your afternoon to listen
10 to all this public comment. And staff as well, thank you
11 for your presentation and for also taking the time to
12 consider our comments.

13 I just wanted to highlight how important this
14 rule is going to be for public health. Approximately
15 between 40 to 50 percent of the San Joaquin Valley falls
16 under sensitive receptors, which means that they're most
17 at risk during pollution events. Myself -- I include
18 myself in that 40 to 50 percent.

19 Just yesterday, in my attempt to workout, despite
20 take all the proper precautions of being indoors in a well
21 air-filtered room, I attempted to workout and I started
22 wheezing. And my first thought was, hey, where is my
23 inhaler, just as a precautionary. Despite taking all the
24 proper precautions, it still happens. And I can only
25 imagine what our EJ communities are suffering through.

1 Those who can't afford the proper ventilation, for those
2 who can't afford to stay indoors during these pollution
3 events.

4 It's clear evident that public health is
5 extremely important for us advocates and community
6 members. And truck emissions just contribute
7 significantly to the formation of both ozone and fine
8 particulate matter, not only with San Joaquin Valley, but
9 as you can see today, throughout California.

10 I'm here today to echo a lot of the comments
11 you've heard today for a stronger ACT Rule. With a strong
12 ACT Rule, we can achieve significant reductions and
13 relieve the numerous burdens that a lot of these
14 environmental justice communities are suffering through.
15 With a stronger rule, we can achieve a reduction in
16 premature deaths. We can achieve approximately about
17 \$3.14 billion of public health savings. We can achieve a
18 safer environment for the EJ communities.

19 And CARB has done tremendous work in cleaning the
20 air. So I just would like to end by urging you guys to at
21 least have a 15 percent minimum and keep in mind how
22 important this will be for public health.

23 Thank you and Happy Holidays.

24 (Laughter.)

25 CHAIR NICHOLS: Thank you. All right. We're

1 going to take a break and try to be back here by 20 past.
2 So thanks, everybody, get up and stretch.

3 (Off record: 3:09 p.m.)

4 (Thereupon a recess was taken.)

5 (On record: 3:23 p.m.)

6 CHAIR NICHOLS: Welcome back. We're ready to
7 resume this hearing. And we're now up to number 69. So
8 we've made great progress.

9 MR. MAGGAY: Shall I start?

10 CHAIR NICHOLS: It's okay to start, because
11 everybody is either here or right in the back.

12 MR. MAGGAY: Okay. Good afternoon, Chair
13 Nichols, Vice Chair Berg, Board Member Riordan, Board
14 Member Mitchell. I guess I do it individually this time.

15 My name is Kevin Maggay. I'm with SoCalGas. We
16 did submit a letter and we also signed on to a comment
17 letter from CNGVC and you can look at those. They both
18 include the inclusion of low NOx as a recommendation in
19 the plan. But I did want to touch on a couple things
20 specifically in my comments.

21 First, in addition to a weight multiplier, we
22 recommend adding a range modifier -- a range multiplier
23 for Class 7 and 8 trucks. If the State wants to make real
24 dents in trucking emissions, it should focus on long-range
25 high VMT truck applications, which accounts for a

1 significant amount of transportation emissions within the
2 state. We think the CARB should take leadership in
3 spurring the development and investment in long-range
4 zero-emission trucks with hydrogen or even long range
5 battery-electric trucks.

6 Second, and I mentioned this at the HVIP Board
7 meeting, that we're concerned with the redefining of the
8 term "near-zero" to mean hybrids. I say redefine, because
9 several agency documents refer to near-zero-emissions as
10 having 90 percent reduction or better -- reduction of
11 emissions or better. CARB defines near-zero as a 90
12 percent reduction in its pathways to zero-emission or --
13 zero and near-zero technologies document. South Cast AQMD
14 defines near-zero as a 90 percent reduction in its AQMP in
15 other documents. CEC defines it as 90 percent reduction
16 in its most recent funding plan. So it's been clearly
17 defined in other documents. We find the redefinition a
18 little peculiar at this time.

19 Redefining this term would impact a number of
20 policies, plans, legislation, and regulations throughout
21 the state. And we ask that staff, for the purposes of
22 this regulation, just merely call it something else.
23 Perhaps, trucks with zero-emission miles, something as
24 simple as that, and then move forward with a public
25 process to thoughtfully define the term.

1 Thank you.

2 CHAIR NICHOLS: Thank you.

3 I don't see the green light.

4 MS. CEBREROS: Good afternoon, Board members. My
5 name is name is Edith Cebberos. I am a Coachella Valley
6 native with Communities for a New California Education
7 Fund. I urge your support of the Advance Clean Truck Rule
8 and immediate transition to cleanest available
9 technologies.

10 I was raised in Indio, which is located in
11 eastern Riverside County. And I am an educator and soon
12 to be a counselor. Knowing that the air quality in my
13 community is terrible prompts me to take action now. My
14 family, my neighbors, and everyone is affected. I work
15 with young children ages five to ten, and there are days
16 where we can't play outside, because the bad -- because of
17 the bad air quality.

18 This hurts me, because their cognitive
19 development is being harmed. We know that children learn
20 best when they play outside. I'm constantly having to
21 check the air quality -- quality index to determine if the
22 air is safe or unhealthy, especially for the kiddos that
23 have asthma.

24 My family plays soccer. And again, we have to
25 cancel practice because of the bad air quality. I am here

1 today because I'm thinking of all the children and future
2 children. Our communities deserve better. The exposure
3 to this toxic pollution is constant, which is why we must
4 transition to a zero-emission truck fleet.

5 We shouldn't put convenience and cost above human
6 lives and the health of our communities. If you don't act
7 now, then the future cost to our communities will far
8 exceed the profits that indus -- that the industry is
9 currently protecting. I am hopeful we will have a health
10 environment where our future generations can thrive.

11 Thank you.

12 CHAIR NICHOLS: Thank you.

13 MS. VARGAS: Hello. My name is Anna Lisa Vargas,
14 and I am a native of the Eastern Coachella Valley. I was
15 born and raised in Thermal. And I am a community
16 organizer representing Communities for a New California.

17 And I am here as well to urge you to act for the
18 clean -- the ACT, and also so that we can move to the
19 cleaner technologies. I myself had made a commitment and
20 I bought a more expensive car, because I bought a 2018
21 Honda Clarity hybrid plug-in. And so I think as a person,
22 if I can make that personal commitment, I think it's --
23 and I'm doing my fair share, I believe that industry
24 should also be doing their fair share.

25 As I drive down the 10 -- Interstate 10, I'm

1 driving along in my zero-emission car and I see the
2 rail -- the outdated trains, you know, chugging along
3 polluting our air and ruining my view actually because we
4 live in the beautiful Coachella Valley, if you've ever
5 been there.

6 And also, I see that semi-trucks, diesels,
7 outnumber cars. And I'm always having to look to make
8 sure when I get on the freeway to make sure a diesel --
9 I've almost been knocked off the freeway, as I'm trying to
10 enter on Monroe Street in Indio, California, where I
11 currently reside.

12 So this is an issue that is really affecting our
13 communities, and, as Edith said so eloquently, we cannot
14 let convenience and basically cost rule, because that's
15 what's been happening. That's why we're in this
16 situation. And not only are we -- the bad air, we have
17 the Salton Sea, toxic dust that we breathe in which IID
18 has said proven to have neutrophils, which cause -- which
19 they only see in bacterial pneumonia.

20 So I suffer from autoimmune Lupus, so I can -- on
21 any given day, I know by just waking up and my joints
22 ache, I know that it's a bad air day. I don't have to
23 even look at the air quality index.

24 So thank you. I urge you. We plead. It's a
25 plea. So we thank you for your time and to make the right

1 decision.

2 CHAIR NICHOLS: Thank you.

3 MR. HARPER: Chair and members, Adam Harper with
4 the California Construction and Industrial Materials
5 Association. We represent construction, aggregate, sand
6 and gravel, ready-mix concrete, and industrial mineral
7 producers across the state.

8 We're glad to hear that it sounds like CARB is
9 going to work on the reporting program. And we will
10 commit to work with staff on that. So it's important to
11 get that right to plan everything for the future.

12 In general, I've heard a lot of the frustration
13 here. But I wanted to focus on what the engine
14 manufacturers and some of the natural gas producers have
15 said to you, as someone who represents a consumer of the
16 technology. Our industry doesn't decide what gets built
17 and what technology they can purchase. They've already,
18 you know, went through the initial diesel rules that, you
19 know, were phased in by CARB the moment we had engine
20 standards on heavy-duty trucks that could phase them in.

21 You know, many of them, that was a hard
22 capitalization cost for their businesses. They are not
23 Amazon. They are smart business men obviously in order to
24 stay in business in such a competitive environment. And
25 they have seen that diesel was going, you know, down a

1 regulatory path that was undesirable to continue being
2 invested in. And we're looking at things like low NOx,
3 natural gas, which have significant NOx benefits. And,
4 you know, my phone stopped ringing about low NOx about
5 this summer in July when this Board discussed -- you know,
6 it became really apparent you're looking at almost all
7 electric. And there's uncertainty that that investment in
8 natural gas is something they're going to get a lifecycle
9 out of.

10 And, I mean, I know economics sounds cold, but
11 in -- these companies only have the money that society
12 will spend on housing and infrastructure, and waterworks.
13 It's not infinite for them either. They aren't Amazon.
14 So there is a constrained system and they do need that
15 business benefit. And low NOx natural gas, renewable
16 natural gas that we know we're going to produce in this
17 state off our farm economy seemed viable to us.

18 So thank you.

19 CHAIR NICHOLS: Thank you.

20 MR. TUNNELL: Good afternoon Chair Nichols --

21 CHAIR NICHOLS: Hi.

22 MR. TUNNELL: -- members of the Board. My name
23 is Mike Tunnell with the American Trucking Association.

24 We would like to agree with the Chamber coalition
25 and others who have raised comments pertaining to

1 clarifying and streamlining the large entity reporting
2 requirements.

3 Let me give you an example. Interstate trucks,
4 those large trucks that operate high miles traveling the
5 interstates across state lines and rely on nationwide
6 fueling network. Those are unlikely candidates for the
7 state's initial electrification effort. Yet, they're
8 included in the reporting requirements.

9 We believe they should be -- should not be
10 included and would look forward to working with your staff
11 in further streamlining that. We would also like to
12 support comments of the California Trucking Association
13 recognizing the need to further extend the reporting
14 deadline, busy season reporting leading to overcapacity,
15 and the handling of confidential reporting data.

16 Finally, a comment pertaining to electric trucks.
17 There's a great deal of intrigue among our membership when
18 it comes to electric trucks, but not a lot of experience.
19 There's hope and anticipation that these vehicles will be
20 able to stand up to the daily demands of the industry in
21 terms of range, durability, and reliability. But
22 companies are largely evaluating prototypes at this point.

23 We are just beginning the stages of understanding
24 the challenges and opportunities this technology presents.
25 So we look forward to continuing that journey and we'll

1 work with your staff and the Board to move forward on
2 this.

3 Thank you.

4 CHAIR NICHOLS: Thank you.

5 MS. BLANCO: Hi. My name is Brittany Blanco.
6 Hello, Board. I am a -- well, I coordinate a school air
7 quality program. I'm with Comite Civico del Valle. And
8 I'm from a disadvantaged community called the Imperial
9 Valley, where the number of hospitalizations due to asthma
10 is the highest in our state of California.

11 A large amount of schools within the Imperial
12 County are located in industrial areas near warehouses or
13 areas of high traffic. It's not fair that the children
14 are exposed to particulate matter of 2.5 and it's not
15 normal for classrooms to have four to six students who
16 are -- who have asthma. And for a school district to only
17 have one electric school bus, it's just not acceptable.

18 As and advocate clean air and emission reduction,
19 I hope to see the standard -- well, the percentage raised
20 and pushed to its fullest -- fullest potential, because
21 our community's health depends on it.

22 Thank you.

23 CHAIR NICHOLS: Thank you.

24 MS. SANDOVAL: Hello, everybody. Good afternoon.
25 My name is Isumay Sandoval. And just like Brittany, I am

1 from Comite Civico del Valle here at advocating for the
2 community that you know every day we're exposed to
3 numerous amounts of trucks and diesel pollution, like they
4 mentioned earlier, you know, diesel deaths, because that's
5 what it is.

6 And if I could account for how many times that I
7 see all that exposure, I mean, there wouldn't even be a
8 number for it. But I am hoping -- and thank you for
9 having me here, but I would love to see, I mean, something
10 higher than 15 percent, because 15 percent can be the
11 minimum to start with, just because we want to ensure that
12 there's something higher than that. Because, you know,
13 we're exposed to the contamination from the Salton Sea.
14 We're exposed to the diesel trucks. And then on top of
15 that, you know, the agriculture fields that we're
16 surrounded by and the pollutants that they release.

17 But I'm hoping that -- and I'm urging that it is
18 into your consideration to have a higher percentage,
19 because 15 percent should be the minimum to start with.
20 And hopefully by 2030, these clean air vehicles are what
21 we see on the highway, instead of seeing the fumes from
22 the diesel trucks. Thank you.

23 MR. MIGUEL HERNANDEZ: Hi. Good evening.
24 Thank -- thanks to the Board. Thanks, Chairwoman Nichols,
25 for having this opportunity -- giving me this opportunity

1 to provide this comment.

2 And I believe that the -- the ACT it is something
3 that will be beneficial to our disadvantaged community.
4 I'm from Imperial County, an area that has been affected
5 by different sources of pollution. As was just mentioned,
6 we have the Salton Sea, right across the border, we have
7 our friends in Mexicali, the lack of regulations for air
8 pollution. We also have pesticide spraying. We have
9 different sources and fried and diesel emissions are just
10 another burden being added to -- to what's impacting our
11 communities.

12 So I believe that this regulation has been put
13 forward for benefit of the community. However, as it is
14 presented today, it is -- it needs a stronger commitment
15 from the staff that's presenting here to you and from
16 yourself to make it stronger, to make it more impactful,
17 and to make it beneficial to our community that needs zero
18 emissions today.

19 We need to make a more robust regulation in order
20 to achieve those goals that everyone is aiming to achieve
21 by early as possible. And I think there is -- there is a
22 market for these -- for these -- for these vehicles to be
23 sold. I mean, just look at Tesla just recent numbers --
24 the pre-order is -- last time I checked it was like
25 200,000 pre-order vehicles. So there's a market for all

1 of that. And I think this regulation could help and
2 push -- move it forward and create a demand for more
3 productions of these vehicles to be out there and be made
4 available to our communities.

5 Therefore, if we see those vehicles around our
6 communities, we will start to have all that much needed
7 infrastructure that we don't have. At least in Imperial
8 County, we have a couple of State charging stations,
9 because, you know, these vehicles are not available.

10 Thank you.

11 CHAIR NICHOLS: Thank you?

12 MR. VALENZUELA: Good afternoon, Board. One more
13 from Comite Civico. So I'm Sergio Valenzuela. I'm a
14 Community Air Monitoring Technician in Imperial County.
15 And I come here today to speak a little bit about my
16 hometown located 30 miles northwest of the U.S./Mexico
17 border of Imperial Valley. Westmorland, California is
18 known as the gateway city, as it is the first city that
19 you pass through traveling eastbound from Los Angeles and
20 enter the Imperial County and westbound from Phoenix, a
21 disadvantaged and underrepresented community of color only
22 one mile from end to end and split right down the middle
23 by California Highway 78.

24 My hometown where I'm raising my kids is also
25 known as something else, a truck stop. With a hotel,

1 three gas stations and a newly developed rest area that
2 caters to semi-trucks, it's no wonder that it has
3 unfortunately been dubbed so

4 All day and overnight, there is non-stop trucks
5 passing and stopping to fuel and parking for a night's
6 rest. These trucks will stay idling for hours on end.
7 Even during the produce season, dozens upon dozens of
8 semis can be counted idling all night and their reefers as
9 well. And that's why I urge you guys to raise it from
10 four to 15 percent, because my kids are growing up there.
11 All these neighborhoods that are being affected are next
12 door to these trucks that have been idling for hours on
13 end. The school that my kids are going to is ride off the
14 78. They can throw a rock and hit a semi, if they wanted
15 to.

16 It's -- that's how bad it is. That's how
17 impacted my community is. All the kids -- or, I'm sorry,
18 not all the kids. Lots of kids have asthma where I come
19 from. My cousins have asthma. I used to watch my cousin
20 go to the hospital and have to be like hospitalized for
21 asthma for a whole day just because we're outside playing
22 in trees. And that's playing in trees, so imagine how bad
23 it must be for other communities. And we would like for
24 that push.

25 Thank you.

1 CHAIR NICHOLS: Thank you.

2 MR. OLMEDO: Good afternoon, Chairman Nichols and
3 members of the Board. Great to see all of you.

4 First of all, I want to thank all the advocates,
5 all the organizations that -- especially those who are
6 working in metropolitan areas that have carried on this
7 struggle for so many years. But we're also here to do the
8 heavy lifting as well coming from rural communities, and
9 that, you know, that we're choking from the industry, even
10 though that we're smaller populations.

11 I also wanted to remind you that there are inland
12 ports that are also affecting our communities, affecting
13 our neighborhoods. And every product that comes out of
14 our fields, every product that goes in raw product or to
15 assembly lines down in Mexico comes through our ports,
16 whether it's San Diego, whether it's the Imperial in our
17 air basin.

18 We're also choking out there, because while we
19 don't have the luxury of having the coastal winds, but we
20 do have the impacts of all that emissions sweeping into
21 the bowl that we live in in the Salton Sea region.

22 I'm not here to educate you on our issues,
23 because I know all of you are experts in what they are.
24 And I look forward to seeing you January 15. I'm here to
25 support you in going further and going stronger. And

1 we're going to be here to make sure that we continue to
2 advocate for all California to transition to cleaner
3 technologies faster and sooner.

4 Thank very much.

5 CHAIR NICHOLS: Thank you.

6 MS. XI: Good afternoon. And thank you Board
7 members for hearing our comments today. My name is Joyce
8 Xi. I'm with the Union of Concerned Scientists. And I'm
9 here to let you know that many leading scientists and
10 health experts across the country are supporting taking
11 the strongest possible measures around the ACT Rule.

12 Over 120 scientists, including notable university
13 professors, including doctors, deans of public health
14 schools, directors of leading research centers, national
15 academy members, former EPA and CDC staff have signed on
16 to a letter in support of a stronger ACT Rule, based on
17 their understanding of the negative impacts of truck
18 pollution on human health and the environment. I hope you
19 will take their recommendations into consideration and
20 make the needed changes for a stronger rule.

21 Furthermore, UCS supporters sent in almost 5,000
22 comments asking for a stronger rule that were part of
23 19,000 comments from members of other organizations also
24 calling for a stronger rule. We've also submitted
25 petitions from the San Francisco youth climate strike, the

1 American Public Health Association annual conference
2 calling for a stronger rule.

3 And today, I've submitted another petition. As
4 some of you may know, this week is one of the largest
5 annual convenings of climate scientists, the American
6 Geophysical Union conference. And we've submitted 65
7 additional petition signatures from scientists at the AGU
8 conference, who are currently meeting in San Francisco.

9 They're also adding their voices for a stronger
10 rule.

11 Thank you.

12 CHAIR NICHOLS: Thank you.

13 MR. SHIMODA: Good afternoon, Chair Nichols,
14 members of the Board. Chris Shimoda California Trucking
15 Association. It's just going to be myself since Alex
16 Cherin already spoke.

17 But first, I would like to thank staff for really
18 three years of discussion to get to this point in time on
19 this rule.

20 On the substance of the rule, we'd like to just
21 support the California Chamber of Commerce and our
22 coalition partners' comments on the need to do some
23 additional streamlining on the reporting requirement. And
24 just a couple things I'd like to highlight. First, on
25 enforcement, we heard some comments today about smoking

1 trucks in the community. And I think, you know, through
2 our work with the Board, we know what that means.

3 There are some folks that we all know are still
4 not complying with existing regulations, as well as we're
5 working with other parts of your staff on new regulations
6 to make sure that clean trucks stay clean. We just need
7 to keep a focus on enforcing those regulations, make sure
8 that there's a level playing field for the folks who are
9 compliant, and also cleaning up these emissions in the
10 communities.

11 We don't want to end up in a situation with this
12 rule where we're chasing down a bunch of paper. So we
13 want to make sure that the enforcement burdens of this
14 rule are not too great, because there's going to be a lot
15 of folks who we just need to inform that they need to do
16 the reporting to begin with.

17 Second, we'd just like to urge staff in the
18 15-day comment period to consider further streamlining.
19 And there are some issues around release of confidential
20 data that we think are going to take up a lot of staff
21 time, and we'll continue to work with staff on those
22 issues.

23 Finally, large entities have only three months to
24 gather quite a bit of information. Our folks are saying
25 it may take up to six months, so we would ask the Board to

1 consider that flexibility.

2 And then finally, just as the original light-duty
3 ZEV Rule was adopted in the early nineties, you know, I
4 think we understand this to be the beginning of this
5 process, not the ending. And so we would like to urge
6 continued dialogue between the ARB, the manufacturers, and
7 the end users to make sure that this goes well and is a
8 success.

9 And I'll just thank you very much for the time.

10 BOARD MEMBER SPERLING: Could I -- Chair, could I
11 say something?

12 Chris. Mr. Shimoda. You know, we made -- Chair
13 Nichols made an offer or an inquiry to Michael Lewis
14 earlier. It was hours ago.

15 (Laughter.)

16 MR. SHIMODA: Right.

17 BOARD MEMBER SPERLING: It seems like yesterday.

18 (Laughter.)

19 MR. SHIMODA: Yes.

20 BOARD MEMBER SPERLING: Because, you know, many
21 of us are concerned about the, you know, what might be an
22 onerous and excessive set of questions and questionnaires.
23 Would CTA be willing to be a partner with us in helping to
24 administer and streamline the survey and work with us on
25 that?

1 MR. SHIMODA: No, absolutely. And we did some
2 early work with staff where I think the response rate to
3 the initial surveys was around five percent. And I will
4 just point out that we have been through a reporting rule
5 before on the TRU regulation, where the response rate was
6 two percent. We included that in our written comments.

7 And so we'd love to do whatever we can to try to
8 get additional information to staff to help them sort of
9 consider what the strategies are going to be moving
10 forward. And we have some other ideas on it I don't want
11 to expound on, but I'd be happy to have further
12 conversations.

13 BOARD MEMBER SPERLING: Thank you very much.

14 MR. SHIMODA: Thank you.

15 MR. CORT: Good afternoon. Paul Cort with
16 Earthjustice. I also am here to urge you to ask staff to
17 come back with a stronger rule. I think you've heard wide
18 support for a stronger rule, and in addition, the need for
19 a stronger rule.

20 And I want to talk about why we think a stronger
21 rule is possible. And we've been arguing over this for
22 three years. And I feel like we've had to sort of knock
23 down one argument after another for why we can't
24 strengthen the rule. We know that it's feasible. We can
25 show that the trucks are there that are ready to be

1 electrified. We know the costs are competitive. We know
2 the infrastructure investment is there and we know the
3 consumer demand is there. And now, in the last few days,
4 the argument that I have been hearing is that we don't
5 want to expand the rule because it might require us to get
6 some of these zero-emission trucks in smaller fleets and
7 with smaller businesses.

8 And I want to clarify, first off, that I hope the
9 argument is not that we don't want small businesses to
10 have these zero-emission trucks, because the record is
11 full of examples of how these trucks will be cheaper to
12 operate and have a lower total cost of ownership, not just
13 the staff's analysis, but Lawrence Berkeley, Luskin,
14 McKinsey, and ICCT. So we want these trucks to be
15 widespread.

16 Now, initial cost certainly is a concern, but
17 the -- to address initial cost concerns, the answer is not
18 to produce fewer trucks, the answer is to deal with those
19 cost barriers, look at incentives, look at, you know,
20 leasing and other sorts of models. But if you don't
21 produce the trucks, you're not going to get these trucks
22 into the hands that need them.

23 In fact, if you go with a low target, you're
24 ensuring that you're not going to be bring down those
25 costs as quickly as we could with scaled production and

1 you're also allowing big trucking fleets, like Amazon, to
2 buy up all the trucks and exclude some of these small
3 businesses. So I urge you, even for small businesses, to
4 adopt a stronger rule.

5 Thank you.

6 CHAIR NICHOLS: Thank you.

7 MS. ALEXANDER: Good afternoon, Chair Nichols and
8 members. I'm Meredith Alexander with CALSTART. I'm
9 hoping I will not use my four minutes today.

10 Thank you for your time. And I'm here today
11 representing our over 240 members, many of whom you've
12 already heard from, who all support clean transportation
13 and clean air. So first, we wish to note that whether
14 truck segments, all those that we're discussing here
15 today, reach full commercialization on the timelines as
16 expected by this rule is highly dependent upon whether the
17 State provides sufficient and consistent funding for HVIP
18 and CORE, and pilots, and demonstration projects.

19 We don't think the truck market can fully
20 transform without investment commitments by the State.
21 And we also hope the Board will continue providing
22 incentives in those regulated categories beyond 2024 or
23 2027 to increase the pace of change.

24 We also agree with many of the comments made by
25 EMA and Volvo, specifically regarding further segmentation

1 within the rule as consistent with our Beachhead Strategy,
2 which could potentially lead to even higher and more
3 ambitious requirements in certain vehicle segments.

4 And also, as discussed by many others, we think
5 that the current requirement to not phase in pickups until
6 2027 is still very ambitious, but we also encourage
7 creative solutions that could have near-term impact on
8 emissions, such as credits for plug-in hybrids, and
9 potentially new ideas like technologies that reduce idling
10 emissions from work trucks, such as electric power
11 take-off. And we would like to see more focus on how to
12 incentivize pickups, specifically given that they're
13 driven by small businesses and they may not be able to
14 earn LCFS credits. Those may be going to the utilities.

15 So again, we're all doing our part to help
16 determine how manufacturers can develop and prove
17 technology that can meet the wide variety of work
18 applications these trucks are used for.

19 We also really appreciate the commitment from the
20 Board today about developing a suite of programs together
21 to be implemented on the same timeline. And we encourage
22 the Board to accelerate the development of fleet rules for
23 those segments that, as identified by staff, are best
24 positioned for electrification.

25 And we see multiple fleet rules being more

1 effective than one blanket fleet rule to be implemented in
2 2024. And these will be provide certainty to
3 manufacturers that demand further products will exist on a
4 complementary timeline to this proposed rule.

5 Thank you again for your time and your
6 commitment.

7 CHAIR NICHOLS: Thanks. Good to see you back at
8 CaleEPA.

9 MR. SEAN EDGAR: Good afternoon, Chairman Nichols
10 and Board members.

11 CHAIR NICHOLS: Hi.

12 MR. SEAN EDGAR: I'm Sean Edgar with Clean
13 Fleets. And I'll offer a few moments for what I'll call a
14 pep talk. And my pep talk is about providers of essential
15 public service. But before I get into that, I'll just
16 touch on the last two speakers.

17 You heard from Mr. Cort what we know about small
18 businesses and their desire -- his desire to have those
19 small businesses participate. I'll just remind you the
20 average fleet is struggling today to comply with your
21 Truck and Bus Regulation. And we know that, because Board
22 staff indicates that 82,000 noncompliant vehicles are
23 rolling around California highways today. So that much we
24 know. And we know that that is dominated by small
25 businesses. So small businesses are probably the least

1 susceptible to be able to make the jump to lightspeed.

2 I'll just follow up by that by saying you heard
3 from Ms. Alexander that it's a problem that's only solved
4 with money. And my provider of essential public service
5 contribution today is to tell you that the above-average
6 company that we've had the privilege to work with in front
7 of your Board for the last 20 years has actually been very
8 successful in that near-zero low-NOx engine issue that
9 we've talked about. So the folks that we're privileged to
10 work with run over 5,000 natural gas vehicles every day of
11 the week, a lot of those in disadvantaged communities.
12 And that's been a challenge to get to, which has been
13 billions of dollars -- over a billion dollars just in the
14 waste industry.

15 And now what we're talking about is the above --
16 above-average company is what the subject of this ZEV
17 regulation is. So just to ground ourselves in reality, I
18 was been -- I've been in this chamber for pretty close to
19 20 years, and we have average regulation, above average
20 beyond the regulation, and now we're talking about way up.

21 So just on the minute I have left, I'll just
22 address that public essential providers are defined by
23 your Board as folks that perform essential publish --
24 public services to make sure that the wastewater flows, to
25 make sure that the trash gets picked up, and to make sure

1 that electricity and natural gas are moving.

2 Those are the folks that should be the target.
3 And we want to work on the Beachhead Strategy. But just
4 thank you for the time to contribute and our letter is in
5 the file.

6 CHAIR NICHOLS: Yes, it is.

7 MS. TUTT: Thank you, Madam Chair and members of
8 the Board. My name is Eileen Tutt. And I'm with the
9 California Electric Transportation Coalition.

10 I really want to recognize the CARB staff who put
11 a tremendous amount of time in developing this extremely
12 complicated regulation. It is going to be a very, very
13 heavy lift to electrify the transportation
14 electrification -- the transportation -- the medium- and
15 heavy-duty segment of the transportation sectors. And I'm
16 here to tell you that my myself, my organization, and my
17 members are 100 percent behind making that happen.

18 This regulation is very, very ambitious. And we
19 agree with everyone who said we need to go further, but
20 we -- I do -- I don't have the full confidence that we can
21 go further in the context of this regulation alone.

22 What we need is the fleet mandates to come up
23 quickly. We need more incentives, reliable and adequate
24 as Meredith from CALSTART said. We need the State fleets
25 to commit to buying zero-emission vehicles, and hopefully

1 local governments fleets too. We need a tremendous amount
2 of investment in infrastructure and vehicle incentives.
3 And I will tell you that the utilities in particular are
4 very interested in investing in this infrastructure. And
5 we fully are committed to working with staff in developing
6 the tools to look at what it will mean to build out the
7 infrastructure necessary to support their trucks, not just
8 in the actual, but in all the rules that are coming down
9 the pike.

10 So thank you very much. Thank you to the staff.
11 And I hope you will approve this very, very ambitious
12 approach to the ACT Rule.

13 Thank you.

14 CHAIR NICHOLS: Thank you.

15 MS. AZAMIAN: Hello, members of the Board.
16 Before giving public comment, I'd like to say that the
17 next two residents speaking will be in Spanish. Our
18 interpreter had to step away, so -- and there's no
19 interpretation available, I believe. But if anyone is
20 available -- okay. Thank you. Or if -- yeah, if anyone
21 else can -- would like to volunteer as well.

22 Thank you so much.

23 So thank you, Chair Nichols, and members of the
24 Board for the opportunity to comment on the Advanced Clean
25 Truck Rule.

1 My name is Shayda Azamian from the Leadership
2 Counsel for Justice and Accountability in Fresno,
3 California. And we work with residents in inland
4 California, across the San Joaquin, and Eastern Coachella
5 valleys.

6 We're all brought here today, I hope, by the same
7 mission to improve our air quality and reduce climate
8 change impacts via greenhouse gas emissions reductions.

9 Where it appears consensus is lacking, however, is in the
10 urgency reductions must be achieved. Simply put, there's
11 no allowable amount of time left that disadvantaged
12 communities can wait for actual improvements in their air
13 quality.

14 It is a fact that if we're not living it,
15 breathing it, we just don't know or feel the full impacts.
16 And this isn't a lack of experience deserving of derision,
17 but there is a task ahead of us to learn from those who do
18 have more intimate and personal knowledge when it comes to
19 living and breathing in a fog of emissions that's only
20 murkier every year.

21 There are folks here who can tell you what that's
22 like to have to watch hundreds of trucks passing three
23 feet across their homes every day and be freshly reminded
24 what the damage will be on their lungs, their bodies, and
25 their consciences.

1 Due to the unsurprising urgency of climate change
2 and it's long-time impacts on disadvantaged communities,
3 who have been saying we are out of time, we will support
4 nothing short of an achievable and reasonable 15 percent
5 target for electric trucks on the road by 2030.

6 We look forward to meaningful implementation and
7 bold action to address these climate change impacts felt
8 by all and with particular urgency in inland California.

9 The importance of a direct public process for
10 residents to design what works for them has always been
11 great and is not forgotten now.

12 With me today are several residents from Fresno
13 who can further illustrate the urgency of a strong rule.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 MS. PEREZ (through interpreter): Hi. My name is
17 Elodia Perez. I'm coming from the City of Fresno,
18 California. I'm here because the area where we live is
19 very bad with all the pollution. Where I live, they're
20 building a lot of factories -- a lot of factories instead
21 of housing and schools. It's hard to see big trucks every
22 day where I live instead of schools every single day.
23 There's lots of big trucks.

24 Due to all the big trucks that are coming,
25 there's a lot of traffic. That alleys near my childrens'

1 school is full of trash and nobody cleans it. There are
2 streets that aren't even paved. It's all just mud and
3 stagnant water. I have a child with special needs and his
4 school is an hour and a half away. And it makes me sad
5 that there's not a school closer that can provide for his
6 needs.

7 I see that our representative is not making an
8 effort to better our community, and we really need help in
9 our community. We need change. And I tried to meet with
10 them, but nothing has been done. And they say that
11 there's going to be changes, but no dates or timelines.

12 On the news on the television, they announced
13 that if you don't have to leave your house, don't leave,
14 because the air is so bad and the children shouldn't be
15 leaving the home. And it really breaks my heart as a
16 mother to see the children suffer this way. The decisions
17 that adults make can really have a big effect on the
18 children and they suffer the consequences.

19 We ask that you please don't let them build any
20 more factories in Fresno, instead of housing, and more
21 parks.

22 Thank you for your time.

23 MS. JORDAN: The next resident on the list is no
24 longer able to make it, but I'd like to share a letter on
25 behalf of Katie Taylor another resident of Fresno. My

1 name is Julia Jordan with Leadership Counsel for Justice
2 and Accountability, but Katie wanted to share this letter
3 today and couldn't be here.

4 "My name is Katie Taylor. I reside at 1415
5 East Central Avenue in southeastern Fresno
6 County. I'm writing this letter simply because
7 I'm presently experiencing a myriad of challenges
8 as a result of the major developments, Amazon and
9 Ulta, in my neighborhood. As a result of the
10 building construction, I've developed sinus
11 problems, as well as increased allergies, due to
12 the implementation, erection, and construction of
13 these projects.

14 "Furthermore, many neighbors have also shared
15 their concerns and sentiments in relation to the
16 existence of these structures. Many neighbors
17 alluded to experiencing similar and/or more
18 severe sinus problems, resulting in compromised
19 immune pathologies, as well as continued
20 ailments.

21 "These various projects have fostered and
22 posed further concerns within our communities.
23 For example, the development of Amazon, which
24 faces just south of Orange Avenue, creates a
25 penetrable glare all through the night in my

1 living room. Because of this, it has created a
2 hardship for me and my daughter. We are no
3 longer able to obtain adequate rest due to the
4 scrutiny of the very bright light fixtures along
5 the frontage roads at South Orange Avenue.

6 "Secondly, the pollution, as a result of
7 vehicles being rerouted closer to my residence
8 and others, has been unbearable. For instance,
9 this has generated congestion and traffic due to
10 an influx of larger trucks and more vehicles.

11 "Moreover, there is more pollution as a
12 result, which has aggravated, as well as
13 compromised, the health and safety of concerned
14 neighbors. Incidentally, these hardships have
15 impacted me, as well as my neighbors, within the
16 communities as these challenges persist on a
17 daily basis. We have endeavored to work with the
18 city and county officials in an effort to achieve
19 suitable measures to mitigate these challenges.

20 "Unfortunately, we have yet to hear a viable
21 or suitable provision that would be sustainable
22 in assisting us in this matter. At this time,
23 we're open to suggestions and/or measures that
24 are aligned in helping the above-before mentioned
25 needs for our neighborhood and the residents who

1 reside within them.

2 "Respectfully, Katie".

3 MR. MAGAVERN: Good afternoon. Bill Magavern
4 with Coalition for Clean Air.

5 My neighborhood in Supervisor Serna's District is
6 at the junction of Interstate 5 and the Capital City
7 Freeway. So we have constant truck traffic and so much
8 diesel exhaust that we are classified in the most 15
9 percent disadvantaged communities in the state, according
10 to CalEnviroScreen.

11 Last week, we were in West Oakland, where a
12 number of Board members, as well as community members,
13 noted the amount of truck traffic and consequent diesel
14 pollution in the neighborhoods of West Oakland. And this
15 morning, we talked about the South Coast ozone problem and
16 how we need a rapid truck clean-up in order to have any
17 hope of finally delivering healthy air to those residents.

18 So -- and, of course, last month, at your last
19 Board hearing, you heard about the latest research on
20 diesel particulate matter, which is even more dangerous
21 than other types of fine particulate matter.

22 So we obviously need to electrify our trucks as
23 fast as possible. I wanted to first address the reporting
24 rule. We support that reporting rule and, in fact,
25 approve of the option presented by staff where there could

1 be voluntary compliance, which would lead to actually
2 quicker collection of the data, which would allow for
3 expediting getting to the fleet purchase requirements,
4 which we think are essential to go in tandem with the
5 manufacturing requirements.

6 The manufacturing requirement we've been working
7 on since it appeared in the Mobile Source Strategy a few
8 years ago. And since then, we've been calling for it to
9 be more ambitious. I agree with the scientist from
10 Lawrence Berkeley, who said the proposal is a good start,
11 but it does need to go further, faster, in order to get us
12 the clean air that we need.

13 And I also wanted to raise the question of why
14 motor coaches would be exempted from this. We're
15 requiring public transit buses to go zero-emission, so why
16 not private buses.

17 Thank you.

18 CHAIR NICHOLS: We'll ask staff to address that
19 question.

20 Thank you.

21 BOARD MEMBER SERNA: Madam Chair?

22 CHAIR NICHOLS: Yes.

23 BOARD MEMBER SERNA: May I ask a question of the
24 speaker, please?

25 CHAIR NICHOLS: Oh, go ahead. Sure, if you have

1 a question for this particular witness.

2 BOARD MEMBER SERNA: Yeah. Thank you.

3 So, Bill, thanks for your testimony. There's
4 been a lot of reference this afternoon to this four
5 percent versus 15 percent angle. And I'm certainly going
6 to have some questions when it comes back to the Board for
7 deliberation about that. But you -- your -- one of your
8 last statements was this interest in going further, but I
9 didn't hear you necessarily quantify it or qualify it the
10 same way that other speakers have. Do you have any
11 thoughts on that?

12 MR. MAGAVERN: Right. I mean, we don't
13 necessarily know what's the best exact number or timing.
14 But, you know, I note that Union of Concerned Scientists
15 analysis thinks we can definitely get to 15 percent.
16 Lawrence Berkeley Lab thinks we can go beyond that. And I
17 would just say especially when we're looking at 2030 or
18 further out to 2040, if there were ever a time to say we
19 should stretch, this is a standard where we should be
20 stretching as much as possible.

21 And, you know, as we get further along, you can
22 always look at any adjustments that would need to be made.
23 But I think it's crucial to send that signal now to the
24 manufacturers to get their product out there.

25 BOARD MEMBER SERNA: So -- so I heard you say

1 "get to", right, not "be at". So I'm still -- I'm still
2 trying to kind of pin you down a little bit in terms of,
3 you know, do you have a number in mind now, similar to
4 some of the others that have spoken this afternoon?

5 MR. MAGAVERN: Well, I think that we want to get
6 to a hundred percent zero-emission by 2040. That would be
7 one number I would have in mind and then look at making
8 sure that we have benchmarks along the way, so that, you
9 know, we're on target to meet that and not backloading it
10 too much.

11 BOARD MEMBER SERNA: Thank you.

12 BOARD MEMBER GIOIA: I have a question.

13 CHAIR NICHOLS: Yes.

14 BOARD MEMBER GIOIA: I just want to make sure I'm
15 understanding all these numbers. So the proposed rule as
16 drafted looks at starting in 2030 of new purchases 50
17 per -- 15 percent of new purchases in Class 2 and 3 -- 2b
18 and 3, 50 percent Class 4 to 8, and 15 percent in Class
19 7/8 tractor group. So the 15 percent number that
20 you're -- you and others are mentioning are of the total
21 fleet, not of new purchases?

22 MR. MAGAVERN: Right. When that's discussed,
23 it's about the fleet in-use --

24 BOARD MEMBER GIOIA: Right, not --

25 MR. MAGAVERN: -- as compared to new purchases.

1 BOARD MEMBER GIOIA: Right, as opposed to the new
2 purchases. That -- because that's at 15, 50, and 15,
3 depending on the class.

4 MR. MAGAVERN: Right.

5 BOARD MEMBER GIOIA: Right. Right.

6 MR. MAGAVERN: And then if we look at -- the
7 staff proposal does anticipate that by 2040, a hundred
8 percent of pickup and delivery would be zero emission, I
9 don't think the manufacturer requirement in the proposal
10 alone would get us to that. I understand there's an
11 anticipation that the fleet rules would get us there, but
12 I wonder if that might put too much of a burden on the
13 fleet rules alone and we should probably be asking more
14 the manufacturing side -- or we think we should be asking
15 more on the manufacturing side.

16 BOARD MEMBER GIOIA: Has -- has anyone computed
17 if -- to reach a 15 percent fleet requirement in 2030,
18 what the percentage requirements of new purchases would
19 have to be in this schedule? Is -- it -- that may be in
20 someone's comment letter. I don't recall. But does the
21 staff know what new purchase requirements would be need to
22 be phased in by year to achieve a 15 percent?

23 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

24 Yes. Several of the environmental comment
25 letters did have those percentages.

1 BOARD MEMBER GIOIA: I'll look at those. Okay.

2 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

3 And I have one of them in front of you, if you
4 want me to read it off.

5 BOARD MEMBER GIOIA: Sure.

6 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

7 It would be percentages in 2030 of 60 percent of
8 all vehicles in the 2b/3 category; 75 percent in our
9 middle 4 to 8 category; and 30 percent in the Class 8
10 tractor category.

11 BOARD MEMBER GIOIA: And just by comparison,
12 what -- and the -- for the -- and in 2024, what would they
13 need to be?

14 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:
15 Fifteen percent in '24 for the 2b/3 category.

16 BOARD MEMBER GIOIA: Right.

17 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

18 Thirty percent in that middle category and ten
19 percent of Class 8 tractors.

20 BOARD MEMBER GIOIA: And do you -- do you believe
21 that those numbers reflect -- are accurate in reflecting
22 what it would take to get to -- do you agree with the
23 assumptions and calculations on those percents that get us
24 to 15? Just trying to understand.

25 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

1 Those percentages would get us in the range of 15
2 percent.

3 BOARD MEMBER GIOIA: Right.

4 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

5 It's going to be dependent on --

6 BOARD MEMBER GIOIA: Right.

7 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

8 -- sales volumes --

9 BOARD MEMBER GIOIA: Right. Got it.

10 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

11 -- and things like that.

12 BOARD MEMBER GIOIA: Okay. Thank you.

13 CHAIR NICHOLS: Okay. Thanks.

14 MS. BEKEMOHAMMADI: Good afternoon, Chair Nichols
15 and Board members. My name is Roxana Bekemohammadi. I'm
16 here on behalf of Ballard Power Systems. We support the
17 proposed Advanced Clean Trucks Regulation and appreciate
18 the work that the staff has done to date. Ballard would
19 like to reiterate that fuel cell technology can reliably
20 serve the trucking sector with the range necessary for
21 many applications, while simultaneously achieving
22 California's air quality goals.

23 We currently are demonstrating a fuel cell
24 drayage truck at the Port of Long Beach and have an
25 additional 500 trucks operating in China.

1 Independent owners/operators deem that fast fuel
2 times for a hydrogen fuel cell truck is critical to
3 operating similarly to incumbent technologies. We
4 encourage the Board to assess the adequacy of heavy-duty
5 fueling and charging infrastructure required to support
6 these new ZEV fleets, particularly electric grid upgrades
7 in an expansion versus hydrogen non-grid alternatives to
8 ensure that rapidly-deployed zero-emission infrastructure
9 for trucks that are mandated through this regulation do
10 not become stranded assets.

11 Lastly, we encourage you to support the
12 regulation in its current form and ensure that it's
13 implement in a technology-neutral manner.

14 Thank you.

15 MR. APPEL: Hello. Good afternoon, Chair, Board
16 members, and staff. My name is Sam Appel. I'm the
17 California Advocate for Blue Green Alliance, an alliance
18 of nine major national unions and five environmental
19 groups.

20 I'm here to share the position of a coalition of
21 labor, EJ, and environmental groups on the reporting
22 requirement. A representative of the California Teamsters
23 union couldn't be here, but I've been given permission to
24 speak on their behalf in supporting the coalition's
25 comments.

1 We support the reporting requirement in concept.
2 The Board and stakeholders need accurate industry data to
3 engage in informed dialogue about essential fleet rule
4 policies. However, we do need a stronger reporting
5 requirement that captures key data on industry adoption
6 barriers.

7 One particular barrier that we draw your focus to
8 is contracting. One top line -- our top line point is
9 that firms that rely on contractors, particularly
10 misclassified contractors, are positioned poorly to adopt
11 clean truck -- clean truck rules. CARB has begun in the
12 proposed regulation to develop an understanding of
13 contracting, but we do need to know more about where and
14 how contractors operate and to -- in order to successfully
15 develop fleet rules.

16 Contractor truckers are highly exploited workers
17 operating on the margins of legality, earning very little
18 income, and facing high financing costs. Many contractors
19 earn under the state minimum wage per hour with net
20 incomes between \$28,000 and \$35,000 per year.

21 For these reasons, contractors maintain the
22 lowest rates of compliance with CARB's most significant
23 emissions technology rules. Forty-four percent of truck
24 and bus noncompliant trucks are in the contractor segment.
25 And truck and bus noncompliance in turn doubles statewide

1 PM2.5 emissions from heavy-duty vehicles. And we know
2 that the impacts of this are most heavily felt in EJ
3 communities.

4 Our request is that the Board lower the reporting
5 threshold for firms in trucking segments with high
6 concentrations of contractors like port trucking, and
7 package delivery.

8 CHAIR NICHOLS: You can finish up your sentence
9 there.

10 MR. APPEL: Thank for your consideration.

11 CHAIR NICHOLS: Okay. Thank you.

12 MS. HOANG: I'll expand upon some of those
13 reporting requirements in my comments.

14 Good afternoon, Chair Nichols and Board members.
15 My name is Kathy Hoang. And I'm with the Partnership for
16 Working Families. We are a network of 20 organizations
17 nationwide, including in California the Warehouse Workers
18 Resource Center of the Inland Empire and the Central Coast
19 Alliance United for a Sustainable Economy of the Central
20 Coast, which you'll be hearing from both of those
21 organizations, as well as representing Los Angeles
22 Alliance for a New Economy, who has been organizing truck
23 drivers and community members of the -- around the
24 communities of the ports of Long Beach and L.A. for the
25 past decade, as well as the Center on Policy Initiatives

1 in San Diego.

2 We are urging the Board to consider the 15
3 percent manufacturing requirement of clean trucks by 2030,
4 as well as these reporting requirements to be strengthened
5 to really address the underlying economic dynamics of
6 contracting in the trucking industry. Companies that rely
7 on contractors as has been mentioned, especially
8 misclassified drivers, are really poorly positioned to
9 adopt Clean Truck Rules.

10 As mentioned, many contractors earn under the
11 State minimum, 28,000 to 35,000 per year. And these
12 drivers will be unable to afford the upfront costs of
13 transitioning to new clean trucks. A 20-year truck driver
14 shared with us, who works for Southern Counties Express,
15 you know, I'm barely making enough money to keep food in
16 my refrigerator, you think I'm going to spend the little I
17 have on a truck.

18 And so in order to achieve compliance with the
19 new rules, we need to ensure that the companies that are
20 employing these drivers are taking responsibility for the
21 transition to clean trucks.

22 And so we're urging the Board to consider
23 reporting requirements that include lowering the firm size
24 threshold to 15 or more dispatched vehicles; clarifying
25 the distinction between subhaulers and subcontractors, so

1 that all businesses operating under contract are covered;
2 collecting data on contractors, not just those with
3 one-year plus contracts; collecting data on total hauls
4 and hauls performed by direct employees versus
5 contractors; and requiring annual reporting so that we
6 have a comprehensive picture of a changing industry.

7 So we're hoping that the Board has a
8 comprehensive data on the contract industry in order to
9 achieve the adoption of clean truck technology.

10 And speaking personally as a mother of a two-year
11 old in Los Angeles, you know, I urge you to consider the
12 environmental, labor, and community issues as interwoven,
13 so that children, like my son, can grow up with clean
14 healthy air.

15 Thank you.

16 MR. VALLECILLO: Good afternoon, everyone. Wow.
17 You guys -- you all have a big decision in front of you
18 all.

19 My name is Anthony Vallecillo. I'm actually a
20 community organizer with the Warehouse Workers Resource
21 Center. I actually used to work for a company called Cal
22 Cartage based out in L.A. I'm pretty sure you all heard
23 about this company that took advantage of a lot of a
24 com -- a lot of company drivers that were misclassified.
25 I've seen so many incidents that happened with these

1 workers that I don't want to see again today.

2 Back in 2008, I think -- I don't know if you all
3 remember. There were similar regulations that had passed
4 that was burdened -- that took the burden was the workers.
5 They all were, you know, responsible for all these fees.
6 The companies were making all the decisions, at the same
7 time not holding accountable for their real -- role as an
8 employee -- as employers.

9 So my main concern is just to make sure that you
10 all understand that you all have a big decision in front
11 of you, and that hopefully they don't -- you know, it
12 doesn't take a bear -- takes a toll on the workers and
13 make sure that companies are reli -- are liable for all
14 these issues that are happening today at this moment.

15 I've seen so many accidents, workers, you know,
16 struggling to get by, you know, workers trying to make
17 ends meet, trying to really make a living. And besides
18 these trucks that are, you know, going to be expensive, I
19 get that. But at the same time, not have accountable --
20 accountability as well for the companies that are not
21 reli -- or not re -- or not paying their, you know,
22 share -- share fair and making, you know, a greater
23 California.

24 And actually -- we're going to be actually --
25 we're going to be one of -- one of the actual, you know,

1 first -- I don't know. I'm thinking. I'm not too sure
2 now, one of the first regulations that are going to be
3 seen by other states and other countries as well. So this
4 is a big issue. Hopefully, you all really, you know, do
5 your due diligence and do some investigation, as well as
6 really in depth find out what's going on with the root
7 cause of the issues today finding right now.

8 Thank you.

9 CHAIR NICHOLS: Thank you.

10 MR. DIAZ: All right. Is this on?

11 Adam Diaz, Warehouse Workers Resource Center.

12 Again, thank the chair and the Board.

13 I'll make this brief. I don't want duplicitous
14 testimony. Our Organization, Warehouse Workers Resource
15 Center, has taken on the ambitious task of advocating for
16 Southern California Amazon workers. We are part of a
17 national coalition, which was announced in the New York
18 Times the week before Thanksgiving.

19 That being said, we're in a unique position in
20 terms of the issue of independent contractors and
21 misclassification. I won't repeat what other folks have
22 said, other than to underscore that this is not only a
23 labor issue, but it's a climate and environmental justice
24 issue as contractors, particularly misclassified
25 independent contractors, have the lowest CARB -- or excuse

1 me lowest rates of compliance with CARB's most significant
2 emissions rules. Actually 44 percent of non-compliant
3 trucks are in this segment. And additionally,
4 misclassified drivers will struggle to properly maintain
5 clean diesel trucks, as these costs are approximately 70
6 percent more than the conventional trucks.

7 So therefore, our ask is is very short and
8 succinct, and much to the chagrin of the Chamber of
9 Commerce and industry. We're actually asking for more
10 stringent reporting standards.

11 Thank you.

12 CHAIR NICHOLS: Thank you.

13 MS. KIMBERLY GARCIA: All right. Good afternoon.
14 My name is Kimberly Garcia. And I'm a member of the CAUSE
15 Youth Committee.

16 I'm here to implore the Board to increase sales
17 requirements, which would facilitate the process of
18 getting a minimum of 15 percent zero-emission trucks on
19 California's roads and supporting those in the trucking
20 industry through this transition.

21 I come from Oxnard, California, one of the many
22 low income communities of color being affected by poor air
23 quality that a multitude of speakers before me referred to
24 today. Oxnard is affected daily by a neighboring city's
25 port, the Port of Hueneme which plans on expanding soon

1 and the diesel trucks entering and exiting the city every
2 day to access the aforementioned port.

3 These trucks are one of the many factors
4 contributing to my city's poor air quality, which starkly
5 increases local asthma and cancer rates. The pollution
6 affected me specifically, in such a manner that I have to
7 get injected with a custom vaccine made at a specialist's
8 clinic one town over every three weeks to control my
9 allergies that will flare up my asthma, allergies that I
10 was diagnosed at six years old and allergies that my
11 younger brother was diagnosed with at the exact same age.

12 However, switching from diesel to zero emission
13 trucks is easier said than done. Truck drivers only make
14 between \$28,000 to \$35,000 a year, which isn't enough for
15 a truck driver to maintain a zero-emission truck and
16 support their own livelihood.

17 Keeping a zero-emission truck would cost a driver
18 approximately 70 percent more than it would a conventional
19 truck. The misclassification of these drives as
20 independent contractors isn't doing them any favors
21 either. Because of their misclassification, truck drivers
22 are being deprived of their minimum wages, benefits, and
23 workers' compensation. While we need to make changes for
24 the sake of our community and the environment, we don't
25 want it to come at the -- we don't want it to come at the

1 expense of the trucking industry's employees.

2 We urge the Board to strengthen the Advanced
3 Clean Truck Rule to increase the sales requirements to
4 achieve a minimum of 15 percent zero-emission trucks out
5 on the roads, and we support the strengthening of the
6 reporting requirement.

7 Thank you.

8 CHAIR NICHOLS: Thank you.

9 MS. PACHECO: Hello. My name is Citlalli
10 Pacheco. And I'm a young adult member of the -- for the
11 organization CAUSE. In CAUSE, we strive for the
12 betterment of our city, Oxnard. And today, we're focusing
13 on the -- on clean truck manufacturing quotas and the
14 impact they would have in our community, as well as the
15 misclassification of drivers that ties them into economic
16 stress.

17 We ask now that the ACT Rule add a 10 percent
18 increase apart from the proposed five percent in Clean
19 Truck Regulation and increase truck maintenance reporting.
20 This is possible by setting up a sustainable business and
21 having truck manufacturers increase their sale
22 requirements in order to have the 15 percent of trucks in
23 California be clean by 2030.

24 In Oxnard, we have an abundance of air pollution
25 due to farming chemicals, factory exposure, and in recent

1 years, because of the exponential rise of delivery
2 services and transportation, as well as Oxnard's planned
3 port expansion, Oxnard is currently experiencing increased
4 diesel pollution.

5 The state of California reported that 70 percent
6 of the risk for cancer and air pollution comes from diesel
7 polluted air. And in Oxnard, we have a large asthmatic
8 population who would not -- who would largely benefit from
9 the diesel pollution cuts.

10 Drivers of these trucks are considered
11 independent contractors, which allows the company that
12 hires them to be rid of any responsibility in regards to
13 truck maintenance and driver health.

14 Unfortunately, the ownership of clean trucks is a
15 financial burden on many of the drivers who earn less than
16 the state's minimum wage per hour, which makes it harder
17 and oftentimes impossible for drivers to afford clean
18 truck maintenance. If trucking companies were to cover
19 maintenance costs for their drivers, then not only would
20 we have cleaner air for workers/drivers, who wouldn't have
21 to host as many financial struggles while just simply
22 trying to do their job.

23 The ACT -- the ACT Rule having a 15 percent goal
24 for clean trucks by 2030 doesn't only reduce diesel
25 emissions, but it has a lasting impact on marginalized

1 communities and their health, as well as provide --
2 improving better working conditions for drivers.

3 CHAIR NICHOLS: Thank you.

4 MR. OCHOA: Hello. My name is Evan. I am with
5 CAUSE Youth Organization. And if you don't know, I am the
6 handsome fellow on that screen right there.

7 (Laughter.)

8 MR. OCHOA: All right. But more importantly, I'm
9 here to discuss the unfairly treated independent truckers,
10 as my uncle is an independent contractor himself. His
11 name is Emanuel. And he doesn't really have enough. He
12 has a daughter. Doesn't have enough to support her. She
13 lives with her mother all the way in Arizona. And it
14 sucks, because every time he wants to go see her, he
15 can't, because he's either out on long business trips
16 doing his work, trying to earn enough just to support
17 himself. And I really think that we could do better.

18 I would say is give them benefits, more
19 insurance, and have the company you know -- how would I
20 say in a nice matter? I would say that the companies
21 could give them more benefits for whatever independent he
22 is doing.

23 My uncle means a lot to me. And I want him to
24 get better working conditions. And it sucks knowing that
25 there's more people that are just like him, and for people

1 to suffer that much just to barely get enough to pay rent.
2 Sometimes they have to save their money to pay rent and
3 not even be able to get food for the month. My uncle has
4 to do that just to be -- make sure he has enough for rent.
5 And some truckers actually have to do that, which is
6 really unfairly cruel and unjustified.

7 And as Adam said before, you guys do have a big
8 decision up to you. And I hope you guys will come up with
9 a policy or an act. But you guys do represent everybody,
10 and I hope you guys choose well.

11 Thank you.

12 CHAIR NICHOLS: Thank you.

13 MS. PONCE: Good afternoon. My name is Yesenia.
14 I'm a youth leader with CAUSE. And I'm from the City of
15 Oxnard. I'm here today to advocate for clean trucks,
16 because it will make a change in my community and many
17 others.

18 The port in Oxnard is trying to expand and we
19 noticed that there will be more diesel trucks that will be
20 polluting my community. Our community is already in the
21 80 percentile of diesel emission and suffers tremendous --
22 tremendously from pollution. These trucks will be passing
23 by the elementary schools, which will risk the health of
24 so many kids.

25 This is very important to me, because my little

1 brother was born with asthma and he had to take many
2 medications in order to decrease it. And seeing my little
3 brother going through this made me realize that not only
4 him but many -- but thousands of people are going through
5 the same problem.

6 We urge you to at least increase 15 percent of
7 trucks on the road in 2030 to be electric. I believe that
8 the drivers should not be the one to pay 70 percent more
9 to maintain the conventional trucks, because most of the
10 drivers earn minimum wage per hour, which means that they
11 don't have much left, since everything goes to fixing
12 their trucks.

13 As we noticed, drivers can't afford the cost of
14 purchasing or maintaining electric trucks. And so we need
15 to address the issues of misclarification[SIC] drivers as
16 dependent contractors. We urge you to increase trucks to
17 15 -- electric trucks to 15 percent and strengthen
18 reporting issues.

19 Thank you for your time.

20 CHAIR NICHOLS: Thank you.

21 VICE CHAIR BERG: Great job.

22 CHAIR NICHOLS: Um-hmm.

23 MS. CRISTEL GONZALEZ: Hello. My name is
24 Cristel. And I am youth -- I'm a youth at CAUSE. I'm
25 here to advocate to increase the percentage of sales

1 requirements, so that at least 15 percent of trucks on the
2 road in 2030 are electric. More clean trucks are
3 important to people in Oxnard like me, because I have a
4 family -- I have family members that have asthma and the
5 air quality is very bad for them to breathe. Also, people
6 can get asthma by the bad air. They can also get cancer
7 from the diesel emissions and we can have people getting
8 sick.

9 I also want to make sure that as we transition to
10 electric trucks for the sake of communities and families
11 like mine, and while doing this, we don't leave the
12 workers behind. I just think it's not fair that the folks
13 that drive the trucks have to pay 70 percent more to
14 maintain them, which means that if something stops
15 working, they have to fix it.

16 I think that it's not fair, because the drivers
17 have to stress to see if they have enough money to fix it.
18 Also, they are the ones doing all the work and taking
19 stuff when they need to go. So the Board should help them
20 out more that way they won't have to waste their money
21 that they've earned.

22 We can do this by enforcing stronger reporting
23 requirements and start to tackle the issue of the
24 misclassification of workers. We urge you to increase 5
25 to 15 percent and strengthen reporting.

1 Thank you.

2 CHAIR NICHOLS: Thank you.

3 MS. YESENIA GONZALEZ: Okay. Good afternoon. My
4 name is Yesenia and I'm a youth leader involved with CAUSE
5 from the City of Oxnard.

6 I'm here today to ask that the Board increases
7 the percentage of sales requirements, so that at least 15
8 percent of trucks on the road in 2030 are zero-emission,
9 and to voice my opinion on diesel trucks, and that -- and
10 the impact it has on communities like mine; also, how we
11 can support truck drivers, because it is hard to maintain
12 diesel trucks.

13 Coming from City of Oxnard, I've noticed many
14 people have asthma, when we are in the 90th percentile of
15 asthma rates in the state and have a higher chance of
16 getting asthma. Some of my family members have been
17 affected by the pollution and have gotten asthma, because
18 of the pollution from power plants, pesticides, factories,
19 and toxic waste sites.

20 Growing up and having to see your siblings gasp
21 for air that isn't all that healthy is horrifying. All I
22 want is for young children to grow and not have to worry
23 about how bad the air quality is or if I'll have trouble
24 breathing today.

25 I don't want them to ask themselves will my kids

1 have asthma or worse, cancer, as well as it's just going
2 to be an ongoing cycle bad lungs plus bad air, and diesel
3 trucks are contributing to these health issues. In fact,
4 diesel emissions is linked to cancer. They cause a lot of
5 pollution and are always causing traffic, which increases
6 more time cars are on doing nothing, and that causes more
7 pollution, even if it's just for a second.

8 Also, most of the drivers are not provided with
9 health care or rights that should be given to workers.
10 Companies are not giving the rights that should be
11 guaranteed to drivers and also the companies are not
12 taking care of the trucks.

13 Putting that burden on drivers, most drives have
14 to take the money to maintain the cars out of their
15 pockets. This is why I'm here to stop the pollution in my
16 city and to help truck drivers get their rights. I urge
17 you to increase the policy to 15 percent clean trucks and
18 strengthen report requirements.

19 Thank you for your time.

20 MS. HERREJON: Hi. Good evening. My name is
21 Ocil Herrejon. I'm from Oxnard also from CAUSE.

22 And we're here today to urge you all to
23 strengthen the ACT Rule to mandate that 15 percent of
24 trucks on the road are electric by 2030, as well as
25 strengthen reporting requirements. Oxnard, if you don't

1 know, is 80 percent people of color. Many of our folks
2 are indigenous. And what that means to us is a beautiful
3 and unique culture, traditions, and languages.

4 Our folks are farmworkers. We tend to lends and
5 grow foods for the country, so folks can nourish
6 themselves, but we are constantly being taken advantage
7 of. Oxnard has been treated as a dumping ground, like so
8 many of other cities around the state. We are currently
9 overburdened by pollution that is putting many of our
10 families at risk. We have toxic waste sites. We have
11 power plants.

12 We're number one in the state for the number of
13 students who go to schools near the highest levels of the
14 most dangerous pesticides. And some of our neighborhoods
15 are in the 87th percentile of diesel emissions, which has
16 drastically -- sorry. We are threatened by a port
17 expansion, which will drastically increase the number of
18 heavy-duty diesel trucks that will pass through our
19 neighborhoods that are already densely populated, working
20 class, and primarily immigrant families. What that means
21 is we can't afford these health issues that come along
22 with pollution, because our parents and our grandparents
23 are excluded from the health care system, even after
24 working their whole lives in the pesticide-ridden fields.

25 We cannot afford an increase of diesel emission

1 in our neighborhoods. And as you all -- and we really ask
2 you all to be ambitious when considering clean trucks for
3 the sake of our families.

4 As we continue this transition to zero-emission
5 technology, we urge you all to support workers, especially
6 the drivers who are bearing the financial burden due to
7 misclassifying them as independent contractors.

8 Workers, while making close to minimum wage, are
9 responsible for raising the funds to purchase an electric
10 truck then maintain it.

11 So we urge you all to strengthen the ACT Rule to
12 15 percent for electric vehicles and strengthen reporting
13 requirements. Thank you, all.

14 MR. ARONIN: Hi, everyone. Good afternoon. I'm
15 Ruben Aronin with the Better World Group. And for too
16 many years, we've been in the trenches with our advocate
17 colleagues and California allies fighting federal
18 rollbacks on pollution standards. I'm thrilled to be here
19 today helping to marshal the arguments for moving forward
20 and catching up a bit.

21 I'm also here to help some folks who didn't get
22 their homework in on time. We did a lot of outreach to
23 get local voices to speak, and you've heard from a
24 tremendous diversity of voices today. I want to represent
25 some mayors, including those from Chula Vista, Culver

1 City, Davis, Malibu, Norwalk, San Luis Obispo, Santa
2 Barbara, Santa Monica, South Pasadena, West Hollywood, and
3 Huron, and many mayoral staffs that could not get sign-on
4 to a letter, but are anxious to hear about what the Board
5 is doing. These mayors also represent folks who already
6 are taking initiative to meet State benchmarks in building
7 electrification and transportation and they're looking for
8 your leadership.

9 They all echo many of the sentiments you've heard
10 today. And I've submitted the letter into the record
11 today with their call for accelerating the deployment of
12 zero-emission and medium- and heavy-duty vehicles.

13 I also am representing Mary Leslie and the LA
14 Business Council and their 500 business members. They --
15 their membership sees a great opportunity for California
16 to be a world leader in clean energy technology and they
17 specifically are calling for not exempting the pickup
18 truck sales from the '24 timeline. Many companies,
19 especially utilities, use pickups in their day-to-day
20 operations. They're eager to electrify that part of their
21 fleet, but are limited by the lack of EV models. They
22 urge an increase of the yearly and final percentage goals
23 from 24 to 30, and urge setting overarching and weight
24 vehicle class specific timelines for 100 percent
25 zero-emissions. Clarity around that timing is really

1 important.

2 Happy to provide you their full comments and
3 thank you for your time.

4 MS. KOLPITCKE: Kirstin Kolpitzke with
5 Calforests. We would like to echo the comments made by
6 CalChamber, specifically with regards to the large entity
7 reporting requirements. Calforest represents private
8 timberland owners. The vast majority of the trucks we use
9 need to be able to be driven on rough off-road conditions
10 while capable of hauling heavy loads long distances.

11 There are no zero-emission trucks in our
12 industry. Yet, we are required to report under this
13 regulation. We are often in very rural locations to say
14 the least. And yet, CARB wants to know how many EV
15 charging stations we have at our facilities. We fail to
16 see the benefit that any information we would have would
17 provide to the survey. We are also concerned with the
18 amount of information that is being sought.

19 Given that survey information is going to inform
20 CARB with regards to zero-emission trucks and a possible
21 mandate on the types of vehicles manufactured, the need
22 for the number of cars and light pickups seems
23 superfluous. The information required for the survey
24 should be as streamlined as possible, making it easier not
25 more onerous on companies looking to provide information

1 as accurately as possible.

2 Our companies need to know -- I'm sorry. It was
3 mentioned at a meeting with CARB staff that there was
4 intent to include language to protect companies that
5 complied with the survey, but were off on a number,
6 because they had say 11 instead of 10 deliveries.
7 Language was to be included soften, the enforcement of the
8 regulation for those acting in good faith. This is not in
9 the draft regulation.

10 Finally, our companies are concerned that this
11 new burdensome regulation, which proposes a fine of up to
12 \$37,500 per day could result in huge fines for information
13 that was the result of a company's best estimate. Our
14 companies have been labeled violators by CARB in the past,
15 which incorrectly issued thousands of dollars of fines.
16 It took months of work to straighten out the problem,
17 which turned out to be an issue with CARB's own database.

18 Ultimately, we're asking for a delay in the
19 implementation of the survey, so that this regulation can
20 be done with more precision, thoughtfulness, and actually
21 address the critical concerns that were raised today.

22 Thank you.

23 CHAIR NICHOLS: Okay. That actually concludes
24 the list of witnesses.

25 And so I think we should congratulate everybody

1 on having done an amazing job of making all of the points
2 that have been made here today.

3 First of all, I guess I want to reiterate the
4 fact that we're not voting on anything today. We're not
5 actually adopting a rule today. What we will be doing is
6 giving the staff some direction about what we want to see
7 them do between now and the time that they bring this back
8 to the Board.

9 Did you want to speak at this moment or just in
10 the course of -- I mean, we're going to have some
11 discussion here.

12 BOARD MEMBER SERNA: Yeah, I just wanted to be
13 the first in the queue to speak when the time is
14 appropriate

15 CHAIR NICHOLS: Okay. You -- I promise you you
16 will be.

17 (Laughter.)

18 CHAIR NICHOLS: You've been absent for a long
19 time --

20 BOARD MEMBER SERNA: Right.

21 CHAIR NICHOLS: -- so you've built up some
22 extra --

23 BOARD MEMBER SERNA: That's right.

24 CHAIR NICHOLS: -- credits here.

25 VICE CHAIR BERG: He's raring to go.

1 CHAIR NICHOLS: That's right. I know. Okay. So
2 just to say to -- for all of us to remind ourselves, what
3 we have an opportunity here to do, however, is to give the
4 staff some direction about what we want to see them do.
5 And I think I can say on behalf of everybody, even though
6 I know others will say it in their own words, this entire
7 Board is excited, proud to be involved in something of
8 this magnitude. And we understand that we are the first
9 and that we want to do it right. I cannot imagine that
10 there's anybody who would disagree with me when I say that
11 our goal here is to transform the transportation system.
12 It's not just to meet a target. Although, we understand
13 targets have to be met, and we have to set them. We have
14 set specific goals, so we can enforce them.

15 But part of the vision of this -- the vision of
16 this is that it's part of a set of actions, including the
17 Fleet Rule, that is being worked on right now, which are
18 designed to get us to 100 percent of everything being zero
19 as quickly as possible, but no later than 2045, which is
20 the goal that's in -- in our Executive Order.

21 So having said that, we all want this rule to be
22 strong and I think we all have some ideas. We've heard
23 some things today that may help to get us there. And so
24 we will be talking about those in the next few minutes.

25 But really I just want to reiterate that the

1 views of the people who are here today, as well as many
2 others who wrote to us and send us messages have been
3 heard and are appreciated, and that includes the
4 representatives of the industry, by the way, who, by and
5 large despite their concerns about the reporting rule,
6 which we will have to talk about, have not challenged the
7 notion that what we're doing has to be done.

8 They may wish to have it take a little longer, be
9 a little easier path, have different ideas about how to do
10 it, but I think we're in a place now where we can really
11 make some very major progress.

12 So with that, I want to start by Board member
13 comments at the far end of the table here with Supervisor
14 Serna.

15 BOARD MEMBER SERNA: Thank you, Chair Nichols.
16 Appreciate your comments before you hear from other
17 members of the Board. I think they're spot on.

18 First, I'd like to start by thanking those that
19 are still present after a number of hours of testimony.
20 As you can see, we had well over a hundred folks speak on
21 this critical issue today. And I want to especially thank
22 the CAUSE folks, the youth, that are still in the audience
23 that did a wonderful job in their testimony in
24 articulating what's important to them in the context of
25 what's before us today.

1 And as Chair Nichols mentioned, obviously, we're
2 not -- we're not making a decision necessarily today. We
3 are refining some direction for staff. But that, to me,
4 is nonetheless very important. And before I ask some
5 specific questions of staff, I just want to remind
6 everyone too, that this -- it is -- will be a momentous
7 decision when we do make a final determination on the
8 regulations for Advanced Clean Truck, but it's not unlike
9 a lot of momentous decisions that this Board tends to
10 make, as kind of the plow blade nationally when it comes
11 to really challenging the marketplace to evolve and to do
12 so very thoughtfully.

13 But, you know, one of the things that occurs to
14 me is that this is very much a very delicate balancing act
15 for us, whether we have -- you know, we have half the
16 speakers, many representing industry saying you're going
17 too far. And, of course, we have the other half saying
18 you're not going far enough. That seems to be fairly
19 thematic when it comes to issues before this Board.

20 And that is somewhat of an indication that
21 perhaps we're at the appropriate place to begin to hone
22 and really focus in on what we want staff to ultimately
23 bring back in terms of final regulations.

24 So with that, I'd -- the first question I have
25 for staff, and I talked with Tony earlier during the break

1 is -- and I also mentioned it to -- relative to some
2 public testimony earlier, is many speakers have really
3 looked at this from a percentage standpoint. This four
4 percent versus 15 percent. And as is kind of customary
5 where we're asked to look at rulemaking, setting
6 regulations that are intended to affect the market for
7 EVs, whether it be cars, light-duty, or heavy-duty,
8 medium-duty, you know, one of the things that I think
9 probably to a Board member that we want to understand as
10 best we can is, are what are some of the likely unintended
11 consequences if you go too far, if you go too -- or if
12 you are too timid in really trying to achieve that
13 objective.

14 So I'd kind of like to hear from staff about what
15 they believe they might do between now, the time that
16 we're giving for the direction, the time that this
17 eventually is adopted, in terms of better informing both
18 the Board and the public about what some of those
19 unintended consequences would be, for instance, if we were
20 to take a much more aggressive stance, position in terms
21 of trying to start at a -- with a higher bar in terms of
22 that percentage?

23 And I don't know if that's clear enough for staff
24 to be able to respond. But, for instance, one of the
25 things that I'm thinking about is the eventual secondary

1 market, and this is somewhat long term, for -- for
2 electric heavy-duty tractor rigs that eventually could be
3 available to especially the smaller trucking firms that --
4 at a reduced cost. And, you know, you need to ignite this
5 at some point.

6 So, you know, where do -- where do we -- where do
7 we think -- why do we think that four percent, or ten
8 percent, or 15 percent is the right way to go relative to
9 not excluding the ability of firms to meet that mark and
10 put them at out business versus addressing many of the
11 health impacts that many of the advocates spoke to here
12 today as a justification to start with 15 percent?

13 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

14 Yeah. Let me -- let me start that. This is Jack
15 Kitowski.

16 I think in answering that question, it's also
17 important to characterize how we were structuring this as
18 a two-part rule. And reemphasize that, that this is --
19 the first step here today is making sure the manufacturers
20 are producing vehicles in significant volumes, but -- and
21 that is the objective is to make sure the large OEMs are
22 coming into the market, but we always considered that a
23 floor and that the volumes would increase as we look at
24 the fleet rules. But what we wanted to understand as
25 we're going through those fleet rules is, you know, where

1 can we push harder, where do we need exemptions, how to
2 structure the timing, but knowing we had flood there to
3 build off of gave us that leverage.

4 When we put together our estimates of the
5 percentages that you see in your proposal, we used the
6 best available information we had at the time, breaking
7 down the heavy-duty sector into 87 different segments and
8 analyzing those. But even as we did that and locked down
9 those numbers three or four months ago, then we go and we
10 see announcements by, you know, Tesla, that they have a
11 new cyber truck. And we just heard from them in their
12 announcement that that, in fact, will be a 2b/3 pickup
13 truck.

14 And we hear from Rivian -- or Amazon, purchasing,
15 you know, a significant amount of Rivian trucks since that
16 time. So dynamics are changing quickly. And I'd say the
17 first -- the first order is, you know, those numbers can
18 be looked at again and there may be some opportunities
19 there. I would also though get more precisely into your
20 question, say some of the areas that we're concerned
21 about, if in fact, we push too hard, especially the early
22 years are the ones that we have a lot of infrastructure to
23 put in. And, you know, right now we have a couple of
24 thousand vehicles on order, less than half of that, you
25 know, a few thousand that we've ordered, and not that many

1 that, you know, actually on the road.

2 And so we're moving very quickly into -- into
3 tens of thousands of vehicles. So the infrastructure is
4 really critical, making sure manufacturers work out the
5 kinks is really critical. We were sensitive about -- we
6 mentioned small fleets -- placing these into small fleets
7 for two reasons. You know, if they can accommodate them,
8 great. But, in general, small fleets have more challenges
9 with higher upfront costs and how are we going to deal
10 with that.

11 And they also just have general -- generally less
12 operational flexibility. If you have a hundred vehicles,
13 you can have one combustion vehicle that needs to do a
14 long route. If you have five, you have much less ability
15 to figure out how to do that with your fleet. So those
16 were some of the concerns we had in those early years.

17 BOARD MEMBER SERNA: Is there anything from
18 staff's standpoint that you heard from the ample testimony
19 today that gives you any stronger sense that we need to
20 better understand some of this -- kind of this elasticity
21 relative to -- especially the smaller -- the smaller firms
22 and how they would be able to absorb the initial capital
23 cost and an investment in EV across the various different
24 types of vehicles, medium- and heavy-duty?

25 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

1 Right. Exactly. And that's -- that is -- that
2 is an area we knew we needed to investigate. And that was
3 part of planned fleet rule development over the next two
4 years.

5 BOARD MEMBER SERNA: Okay. All right. Thank
6 you.

7 CHAIR NICHOLS: Okay. Dr. Sperling. We could
8 just go in order, I think, if -- unless -- I think we
9 should just go down the -- down the row in order here.

10 Go ahead, if you have thoughts.

11 BOARD MEMBER SPERLING: So as I said before, this
12 is a hugely important, and I would add hugely ambitious,
13 proposal, and I strongly endorse it. I know there's a
14 lot -- a lot of people are pushing for something more
15 aggressive. And let me address that, why I think this is
16 at least as aggressive -- this is as aggressive as we
17 should be going at this point. And let me just focus on
18 the total cost of ownership, because we've heard various
19 people say these trucks are going to be cost competitive
20 very soon and even the staff report says that.

21 But I do know a little bit about total cost of
22 ownership analyses and I did go through it. And I would
23 deem that this one, as well as others, is highly
24 optimistic. I'll just go really quickly through it. This
25 analysis assumes 12-year life for the batteries. Well,

1 maybe. It assumes a 12-year payback. You know, companies
2 don't -- none of us work on 12-year payback. So it's nice
3 say sigh, but the reality is that creates a huge cost
4 burden on companies that are being investing -- it's a
5 large upfront capital -- extra capital cost.

6 It assumes a hundred mile range. Well, you know,
7 those of us that have had electric cars, we know what that
8 means. You know, if you're -- if the weather is bad, if
9 there's a lot of hills, it's going to be much shorter.
10 There's going to be degradation of the battery over time,
11 especially if we're talking 12 years.

12 So the staff did use 30 percent, but some
13 analyses that I've had some of my researchers look at and
14 do their own calculations come up with much higher -- the
15 need for a much higher buffer than that. And so
16 therefore, the hundred miles becomes much bigger and
17 therefore the battery size becomes much bigger, and
18 therefore the cost becomes much higher.

19 So -- and then there's other assumptions like Low
20 Carbon Fuel Standard. You know, there's an estimate of
21 \$7,200 coming back. Well, you know, for certain fleets
22 that run a -- you know, that actually have a large fleet
23 operation and have a charging operation, you know, that
24 would work. But for many, they won't be able to get that
25 LCFS money. There's electricity price.

1 You know, there's demand chargers. You know,
2 there's a lot of cases where these prices might not be
3 what we hoped that they will be. So I'm just making the
4 point that these costs, these total costs of ownership
5 numbers that everyone is doing, you know, including our
6 staff are, let me just be generous and say, optimistic in
7 terms of cost competitiveness.

8 So a couple things I wanted to say more about the
9 actual -- the purchase mandate part of this. And that is,
10 we heard a number of people talking about the beachhead
11 concept. And I really think we should be giving some more
12 thought to that, because there are many of these fleets
13 where it does make a lot of sense. Many -- it's going to
14 be much harder. And, you know, I know we have credit
15 trading going on, but some companies only specialize in
16 certain types of trucks. So -- so I think we out -- so
17 it's a concept worth pursuing.

18 I can't confirm this, but I was told that there
19 were a few people that testified about plug-in -- by a
20 plug-in hybrid version. And I understand that they
21 disappear -- the credits disappear after 2030 the way it's
22 proposed?

23 MSCD TRANSPORTATION AND CLEAN TECHNOLOGY BRANCH
24 CHIEF BRASIL: Yes.

25 BOARD MEMBER SPERLING: I would strongly suggest

1 that's not a good idea.

2 MSCD TRANSPORTATION AND CLEAN TECHNOLOGY BRANCH
3 CHIEF BRASIL: The credits that were earned will continue
4 for five years, but no more credits would be generated
5 after 2030.

6 BOARD MEMBER SPERLING: Right. I think that's a
7 mistake. I mean, maybe the amount of credits can be
8 reduced. But, you know, the reality is we're hoping
9 batteries will keep getting cheaper. You know, we're
10 hoping on a lot of things, but -- and hopefully most of it
11 will come true. But plug-in hybrids, there's a lot of --
12 you know, you have these big vehicles and having these big
13 battery packs in them. These are massive battery packs
14 we're talking about. They're heavy. They're big. And
15 there could be a lot of creativity where -- with a plug-in
16 hybrid version. It could be done in a way that is
17 geofenced to be zero-emission in EJ areas and so on. So
18 anyway, I just, urge that that be rethought.

19 So that's my thoughts on the purchase part. And
20 then on the reporting part. As a few of us have
21 discussed, I think it's urgent that we do the fleet man --
22 the purchase mandates much sooner than what we're
23 talking -- much sooner -- having them done much sooner
24 than 2022. I mean, here we are telling these companies to
25 sell all these trucks. And they're coming at it and

1 they're saying, well, are people going to buy them?
2 They're going to be more expensive. And then we're not
3 sure there's going to be incentives. And, you know, we're
4 uncertain about the charging infrastructure.

5 So, there's -- I think it's not fair. It's not
6 fair to the manufacturers to delay that mandate so long.
7 And what that means is figuring out how to do -- to -- to
8 devise that, and design it, and adopt it much faster. And
9 some of the thoughts, like Chair Nichols and I were asking
10 CTA and the construction industry to help us streamline
11 it, do it faster, because to me a lot of it is some people
12 would use it -- call it a shotgun approach. I'd call it a
13 fishing expedition. You know, that think set of
14 questions. That's a lot of information being asked for a
15 lot of companies that typically don't deal with these
16 kinds of questionnaires.

17 So how can we streamline it? And I think the
18 answer is we figure out sooner rather than later what
19 these fleet mandates are going to be like. So I would say
20 let's get together. Let's have more conversations. Let's
21 figure out what we want to do. And then we can refine it
22 a little bit with the surveys as opposed to using the
23 surveys as -- the questionnaires as just kind of
24 collecting all this data and then we'll figure it out.
25 You know, with my researchers, you know, there's a

1 tendency nowadays with big data, you know, let's just get
2 the data and then we'll figure out what the hypothesis is.

3 (Laughter.)

4 BOARD MEMBER SPERLING: That's -- in many cases,
5 it's not a good idea. I think in this case, it's
6 especially not a good idea.

7 So that's -- so that's why I just urge. You
8 know, figure out how to -- how we can do these fleet
9 mandates much sooner, and figure out how to be more
10 strategic about it up front. Because at the end, I know a
11 lot of the effort is to find out about these contract
12 services and so on. You know, okay, that's important, but
13 there's a lot more at stake here that's more important to
14 get at.

15 Thank you.

16 BOARD MEMBER GIOIA: Thank you, everybody, for
17 all your input and for those that have stuck around.

18 I think where this agency has been successful the
19 most is when it sets very aggressive and bold goals and
20 the technology has moved along with that to reach that
21 goal. And we've had a lot of improvement in the
22 technology. And I actually -- I have confidence of
23 industry that they will be able to advance the technology
24 to achieve even more aggressive goals. I have confidence
25 in the manufacturers and industry that they can achieve

1 those goals.

2 So I think we should think about how do we set a
3 bar that's higher than what's in the proposed rule so far.
4 I'm not sure what that is. I think we need to discuss.
5 You know, we want to set something that's also -- that's
6 aggressive, but realistic. And there has been some
7 discussion -- you're calling it the beachhead. I guess a
8 few people have called it that.

9 But there were comments by the representative
10 from the Truck and Engine Manufacturers association that
11 did talk about specific categories where at least they
12 believe that we could reach 100 percent total market ZEVs
13 by early dates in the early and mid-2020s. And so I think
14 that is worth looking at, but not just stop in these
15 areas. Are there other opportunities in other categories
16 where we can do the same thing.

17 So I get -- he's defined news school buses,
18 municipal fleet step vans a hundred percent by 2023, a
19 hundred percent of new public utility vehicles and yard
20 tractors a hundred percent in 2024, new step vans a
21 hundred percent in 2025, same with airport. Well, we've
22 done airport shuttle, but non-airport shuttle.

23 And then actually I found interesting refuse
24 trucks by 2026. And it occurs to me, you know, a number
25 of highly impacted communities, like the one I represent

1 in Richmond, it would sure be nice having zero-emission
2 refuse -- refuse trucks rolling through our communities,
3 rather than the dirty diesel -- noisy dirty diesel trucks.
4 And, you know, in many communities, it's more than one
5 truck that comes through, because it's different trucks
6 for recycling, and composting, and garbage. So actually
7 sometimes you get three trucks rolling through on garbage
8 pick-up day, not one. So imagine if they're all quiet
9 zero-emission vehicles coming through highly impacted
10 communities.

11 So I'd like for us to sort of think and explore
12 about sort of building on the concept that the
13 manufacturers talked about, but looking at all also how
14 that may apply in some other categories as well.

15 You know, if the staff believes that more
16 aggressive new purchase requirements could make some
17 sense, I'm also open to hearing that. So my message is
18 how can we strive to do more than what we're doing and
19 what's the best approach to be there, because I think
20 ultimately we've shown with these aggressive goals, the
21 industry is innovative and reaches this technology goal.
22 And I'm confident that that could happen again, if we're
23 realistic.

24 BOARD MEMBER FLETCHER: Thank you.

25 A number of us up here lived through -- we were

1 in the Legislature when we did the RPS standards. And a
2 number of the concerns that you hear when you talk about
3 items like this are almost verbatim the concerns we heard
4 then, which is this isn't possible, and we can't get
5 there, and it's too soon, and it's too hard, and it's not
6 going to possibly happen.

7 But when we passed that first one, what we saw
8 was that by setting an aggressive goal and a bold goal,
9 you essentially created a public market that folks figured
10 out how to meet. And not only did we meet that initial
11 goal, but prior to meeting that initial goal, they came
12 back and upped to goal and continued to see progress.

13 And so I'm not unsympathetic to the concerns of
14 folks who say this is really hard. But when we're talking
15 about a 2030 goal, we're talking about something that's
16 more than a decade away in an industry that is vastly
17 changing. And if we are not more aggressive in setting
18 our targets, and we are not more aggressive in setting
19 goals for things that are a decade from now, then I think
20 we're missing out on the potential to create that market
21 force

22 And so I think that the notion that you could be
23 at 15 percent a decade from now is something that is
24 achievable and something that is doable.

25 And I think that if we set those markers too low,

1 then we are missing out on the tremendous opportunity for
2 a market the size of ours to really essentially create
3 that market. And I think, you know, it's something that
4 if you get down the road and it's just an insurmountable
5 impossible thing, then there's always an opportunity to
6 revisit. But you can't revisit being more aggressive in
7 casting the goal of where we want to go.

8 And if we miss that mark on the low side, we're
9 going to have a tremendous lost opportunity, both in terms
10 of the economic opportunities, but particularly in terms
11 of the environmental opportunities.

12 And so I think getting to a hundred percent
13 eventually on all classes is something that we should
14 throw out. I think the conversations around 15 percent
15 are something that a decade from now certainly appears to
16 be doable in an industry that is changing so rapidly and
17 so fast.

18 On the segmenting parts, I understand and I think
19 that can be a part of it. Maybe, there's different
20 classifications or categories of certain things that can
21 get their sooner than others. As someone who has an AB
22 617 community that has tremendous impacts on air quality,
23 the acceleration or advancement of those in ports or those
24 surrounding our areas that have the biggest environmental
25 justice issues also seems to be like something that we

1 could prioritize and something that we could look to help
2 incentivize in a greater way. And so I support all of
3 those.

4 I also was particularly struck by the disconnect
5 at times between the manufacturing and the purchase. I
6 think that aligning those better really does also help
7 create that market. It sends those signals that this is
8 where we're heading and people begin to put in place
9 things. But you don't want to leave the manufacturers
10 hanging with a requirement that they produce things that
11 does not align with the requirement that people have to
12 buy them, because then again it's not as likely to achieve
13 the outcomes that we want, which is cleaner air, lower
14 greenhouse gas emissions. But it also places an undue
15 burden on one side of the market and not the other side of
16 the market. And so I want to echo those comments that
17 were made.

18 On the reporting requirements, I -- I was really
19 struck reading the UC Berkeley study that came out in
20 August that looked at the Truck and Bus Rules and the
21 compliance rates as it varied between different segments
22 of the trucking industry, segments of the trucking
23 industry that have employees, and segments of the trucking
24 industry that have contractors.

25 And it was a noticeable difference, a 61 percent

1 versus an 83 percent compliance, which I think is easy to
2 understand when you look at the economics of those two
3 business models in the trucking sector. But I also think
4 it should inform our thinking of where we can get the most
5 bang for our buck in terms of what we're doing.

6 And so I think looking at the possibility of
7 greater incentives for those trucking companies that have
8 employees, because we know that they have a higher
9 compliance rate, we know that they may be able to get
10 their sooner, they may be able to get their quicker, is
11 not only incentivizing something that's in the best
12 interests of the environment, it's also incentivizing
13 something that's in the best interests of the California
14 economy.

15 And so given this is an industry that is in such
16 a state of flux and transition, I think the more data that
17 we can get, the better we can inform our decision-making
18 and really understanding this industry that we're going to
19 be intimately involved in for a long time to come. And
20 that includes, I believe, I would lower the number of
21 trucks that have to be -- in terms of those that comply
22 with the reporting requirements. I think that it should
23 be broader.

24 I think that if we're committed to achieving
25 these goals, then we should be committed to understanding

1 the entirety of the trucking industry, and not just the
2 large entities. And so I think being more diligent with
3 data, more diligent with the trucks, the types, the hauls,
4 and more aggressive on the firm size threshold, we'll
5 better inform our understanding of the industry in terms
6 of future regulatory actions, and also better potential
7 opportunities to incentivize the outcomes that we want.

8 And so those are, in summary, the kind of key
9 points I think that we really should -- should consider as
10 we move forward with this.

11 Thank you.

12 BOARD MEMBER DE LA TORRE: I think the really
13 important thing -- I agree, you know, that we do need to
14 be as aggressive as we can be and more aggressive in
15 general. But the -- but the -- I think the key thing is
16 availability as of right now. We're at the very end of
17 2019 and where are we right now?

18 Unlike some other goals that we've set for
19 ourselves, most of the time we have some semblance of the
20 thing that we're pushing. In this case, in some of these
21 categories, we don't. And so I think that's very
22 important. We have -- currently, we're supporting no less
23 than seven major manufacturers who are doing either fuel
24 cell or battery-electric heavy-duty trucks that are being
25 prototyped at the ports in Southern California all major

1 manufacturers. These aren't startups. And not to
2 denigrate startup. But, you know, those folks have
3 financial power, the wherewithal to actually bring these
4 heavy-duty trucks to market, but they're prototypes.

5 And so we're not there yet. I -- you know, from
6 what I'm hearing, mid-2020s commercially available
7 heavy-duty trucks. I'm talking 7 -- you know, long-haul 7
8 and 8s. So we're not there yet with those clearly.

9 The 2b and 3, and the 4 through 8 in various
10 levels of availability. And so I think we need to be
11 aggressive on the ones that are available now and push
12 hard -- harder on those at the outset and anticipate a
13 slower glide path for the heavier duty ones that just
14 aren't there yet.

15 So somebody mentioned, you know, the Tesla as
16 a -- the Tesla pickup truck as a model. That truck, if it
17 comes to fruition, is -- is not coming before 2022 at the
18 earliest. That's their estimate. And so Ford F150
19 electric, they're talking 2022, 2023 at the earliest. It
20 just doesn't exist right now. I mean, there's a lot of
21 press releases and cute videos and whatnot, but the truck
22 is not available.

23 So I think we need to be conscious of what's
24 available today and doable today, if it's trash trucks, if
25 it's some of these other vehicles that can be done today,

1 then we go all in with our incentive dollars, all of it,
2 and try to push those out there. And then as those others
3 come online, then we push those as well.

4 So I think the timing of all of this comes along.
5 And so for that, I think what I call an on-ramp, not an
6 off-ramp. We usually do off-ramps on our regulations. We
7 need an on-ramp, where we will come back. We will commit
8 in this reg to come back in a couple of years and see
9 where the lay of the land is on all of these different
10 types of vehicles and the commitment is the ratchet up in
11 certain areas, not get off, not ratchet down.

12 And so I think we need to incorporate that to
13 send a signal to the public, to the manufacturers. We're
14 coming back and we're going to -- we're going to step this
15 thing up as we see what's happening at that given time,
16 two, three years out. I don't know. Whatever people are
17 comfortable with.

18 The goods movement calendar, all of our regs,
19 which were shown on one of the slides, you know, that's my
20 Bible for the next three years.

21 (Laughter.)

22 BOARD MEMBER DE LA TORRE: And so the truck
23 fleets in '22, I agree we need to move that up. Drayage
24 truck in '22, I agree we need to move that up and put both
25 of those on a fast track. We're doing all this other

1 wonderful stuff on goods movement. But on those two, we
2 need to -- thank you. Those two we need to move up as
3 soon as possible. And I'm not going to throw a date out.
4 I'll leave that to you over the time frame that you're
5 going to be repackaging all of this.

6 I think that's important for the public to know
7 and that we again push harder on those two, because, you
8 know, this is all a virtuous cycle.

9 On the reporting just -- I think repeating what
10 some folks have said, we need to have the information in a
11 reasonable time relative to this reg and like starting in
12 January doesn't seem fair, because we're not going to have
13 the reg until, you know, sometime in 2020. So I just
14 don't feel like retroactive is -- or prospect -- whatever
15 that is. I don't even know what that is a in time frame.
16 It just doesn't sound fair to me. And that we have just
17 the data that we really, really need for the purposes of
18 what we're doing here.

19 I agree with Supervisor Fletcher about reducing
20 the threshold. A hundred is very high. We need to bring
21 it down to - I don't know what the number is - 20, 25.
22 Some number that gets -- gets us more to who's out there,
23 what kind of trucking firms are out there, what they're
24 doing. I get it's a pain to go to smaller entities. But
25 if we were going to reflect what's really out there, we

1 have to get down to that lower threshold, smaller
2 companies, and see what they're doing, what they have, et
3 cetera.

4 So those are my comments. Thank you.

5 BOARD MEMBER TAKVORIAN: Thank you. I want to
6 thank everyone who's not only here today, but thank you
7 all for -- all of you who are today, but everyone who's
8 been participating in the process, because I know it's
9 been lengthy. And so everyone who came from communities
10 all over California today, I really appreciate you being
11 here.

12 I have to say that I feel like there's more
13 agreement between at least the environmental justice
14 communities, environmental justice organizations,
15 environmental organizations, air districts, labor
16 organizations about the direction we need to go. And I
17 think it's clear that we need to strengthen the rule.

18 Manufacturers are saying we can go farther
19 faster. So that seems contrary to some of what we heard
20 in terms of the staff proposal. So I think we should take
21 that as a good sign. Hopeful, positive that we can
22 move -- move faster.

23 And I think we're at a turning point. We've
24 talked about this having worldwide impacts. And yet,
25 we're still acting in kind of a timid way. We have this

1 opportunity. The time is now to adopt a strong rule and
2 drive the changes that we know we need. Four percent in
3 ten years is not going to cut it. It won't meet any of
4 the State goals that we have. It doesn't meet the port
5 goals that we have. It doesn't meet the local climate
6 plan goals that we have. So that's where we need to
7 start, at least with the State goals of zero emissions by
8 2040.

9 I mean, that, to me, should be where we -- what
10 we look at first and say so what do we need to do to get
11 there and then we can say, well, so we don't get there,
12 because of the feasibility. But we've got to look at what
13 the path looks like, in my mind, to get there by 2040.
14 That's -- that's the map I want to see in the next rule --
15 in the next version of the rule, so that we can prioritize
16 then. Not to say, well, we can't do it, so let's not look
17 at it. And that is a little bit of what I feel like we're
18 saying right now.

19 And I think it's really that we need to set
20 targets based on where we need to go and not based on
21 where we are. And I feel like that's what we've done as
22 CARB previously very successfully with the -- with the
23 Transit Rule, with the light-duty, the airport shuttles.
24 And so that's the model we've used and I think we need to
25 continue to use that.

1 The opportunity seems to be now. With the number
2 of port trucks that are turning over according to the data
3 in the next several years, we don't want to be timid on
4 this rule and let a whole new generation of port trucks go
5 forward in disadvantaged environmental justice communities
6 that will then be around for the next 10, 15, 20 years.
7 That seems like a huge mistake and really backing off on
8 the obligation that I think this Board has to our
9 communities.

10 So I also think that a stronger rule is really,
11 really necessary, not only to meet the goals that the
12 ports have set, but the 617 communities as well. Last
13 week, many board members were in West Oakland. We
14 approved the Community Emissions Reduction Plan that's
15 heavily dependent on heavy-duty reductions. And I can
16 guarantee to you that almost every Community Emission
17 Reduction Plan is going to be reliant on this rule. And
18 they're reliant on the shore-power rule that we adopted as
19 well or moved forward on this first hearing last week.

20 So we have -- we have to look at what our
21 obligation is to those communities, because they need this
22 rule to go forward. And speaking as San Diego resident,
23 with the portside communities that are identified in the
24 617 program, I know that that will be an element in our
25 Community Emission Reduction Plan and will be in most of

1 the others.

2 There's no question about it. I think that they
3 are -- they're counting on CARB to come forward. So I
4 have seven ideas for what I think ought to happen.

5 (Laughter.)

6 BOARD MEMBER TAKVORIAN: So this is -- the first
7 I've already said. I think we need to articulate a clear
8 goal of a hundred percent zero-emission by 2040. And then
9 we need to, secondly, create a manufacture, and sales, and
10 purchase timeline that achieves that goal with the
11 benchmarks at key points during the implementation, like
12 every two to three years.

13 And then we need to look at what that's going to
14 cost obviously. So it's a timeline, it's benchmarks, and
15 it's cost that go along with it. I do think that we
16 should meet with the - third - meet with the truck and
17 engine manufacturers to identify the sectorial approach as
18 part of that second recommendation. But I do think we
19 ought to exhibit some caution with that.

20 It would be great to have the three refuse trucks
21 that go through our neighborhoods a week be zero-emission.
22 But that's compared to the 600 trucks a day that are going
23 through other people's neighborhoods. So there's no
24 contest, in my mind. We really need to focus on those --
25 that volume of heavy-duty trucks that's going through

1 people's neighborhoods.

2 And really importantly, I think we need to
3 prioritize the trucks that are serving the ports and the
4 distribution centers to be 100 percent zero-emission by
5 2035 to comply with the already existing Port and Clean
6 Air Plans and provide relief to the most impacted
7 communities. And if we can do it faster than that, great.
8 But that seems to be the number that's out there at this
9 point.

10 I would consider supplementing on reporting --
11 the reporting requirements by utilizing existing data and
12 contracted services to secure the use data. I worry about
13 their being this struggle between what the data we need,
14 and how we get it, and people not complying. And I think
15 we've got to go out and get it. But I also think we use
16 modeling in air quality regulations all the time. So
17 let's use some modeling in regards to how we get data
18 about fleet usage and that.

19 I think we really need to include in the
20 reporting securing data on the misclassification of
21 employees in rule development and really pay attention to
22 that element as we move the rule forward.

23 And then lastly, setting a goal of adopting the
24 Fleet Rule by more like mid-2021 effective in 2023, if we
25 can get there. But again, that's reliant on the

1 overarching timeline.

2 So those are my recommendations.

3 CHAIR NICHOLS: Okay.

4 VICE CHAIR BERG: I'm going to build on both what
5 Hector De La Torre and Diane just said, but I'm going to
6 start with the reporting and data gathering. I'm going to
7 respectfully disagree that bringing that down to 50 that I
8 worry that our intent was to truly go after the companies
9 that could afford to get this out there, get done, get it
10 adopted and build that secondary market, that those others
11 so clearly need in order to be successful. They need to
12 buy those used EV trucks.

13 And already today, we have people coming and
14 testifying about one and two truck owners. We aren't even
15 talking about one or two truck owners yet. And so I worry
16 that as we start these Fleet Rules that our hearing room
17 is going to be overflowed with people that are
18 legitimately concerned, but we're not talking about that
19 yet.

20 So I'm not quite sure how to, Mary. I agree we
21 need the information, but when we need the information and
22 setting expectations I think is really, really important.
23 And so I'm sure we're going to have a lot more
24 conversation about that.

25 I think the penalties should reflect what you

1 want -- what do you want people to think? There -- the
2 level of penalties that you set is going to be the level
3 of clarity that people are going to keep coming back to.
4 And so I would look at that.

5 I'm willing to fill out your survey right now.
6 You could send it over to me Monday. I have trucks. I
7 have trucks that I receive every day and I'll have my
8 people fill it out. Yes, I'm much smaller than what you
9 want to go after, but let's start. Let's see how
10 difficult this is and happy to communicate that back. And
11 I'm happy to attend a workshop as you go after to get the
12 information from our industry folks. So that's my input
13 for you on the reporting data.

14 I would like to advocate for a dual strategy. I
15 do think that there are -- that we can accelerate in
16 certain areas. And if we could focus on those areas, I
17 think we could do it sooner than later. And so if we're
18 looking at some of the -- the -- not only the categories,
19 but the types of trucks, the port trucks, the buses, the
20 shuttles, the cargo vans, the last mile.

21 School buses is wonderful to put in there. We
22 just know they can't afford them.

23 Government. You know, there's no reason that
24 government from city to State shouldn't be on board on
25 those trucks that are, what I'm considering, electric

1 ready. And again, as you said, the sectorial approach,
2 but I absolutely agree that we need to focus on our
3 CalEnviroScreen and EJ communities.

4 You know, I think about the trucks that are out
5 of compliance and I wonder how many of those trucks are in
6 our EJ communities. And so what's the expectation? How
7 are we really going to make a difference in these
8 communities?

9 And I think we need to spend some time talking
10 about that. So how quickly could we get to a hundred
11 percent as Ms. Takvorian suggested in some of these
12 electric-ready areas, and how can we track the number of
13 zero-emission trucks that truly are benefiting our
14 CalEnviroScreen communities. I think that's a really
15 critical thing right now.

16 Parallel path truly would be then to look at the
17 remaining truck categories in determining are we at the
18 right level. And what are we going to need to have a
19 secondary fleet rule?

20 I would write two fleet rules. I would go after
21 a fleet rule today that you could put together quicker,
22 that would focus on these electric-ready, or this
23 beachhead strategy, because I think we know a lot more
24 about that than we know about the things that aren't
25 ready. And so maybe you do need to really, truly run a

1 dual path.

2 And so I'm excited about the acceleration. I do
3 think we do need to understand flexibility, not an
4 off-ramp, but verable time -- verifiable timing issues
5 caused by infrastructure, and including permitting, and
6 the only question I had for staff is I didn't truly
7 understand the issue around the ultra low NOx definition,
8 other than there seems to be a lot of them floating around
9 and how that really affected. And so maybe someone can
10 get back to me about that another time, since we're
11 running late.

12 CHAIR NICHOLS: Okay. Mrs. Riordan.

13 BOARD MEMBER RIORDAN: Thank you.

14 Let me just piggyback on Ms. Berg's. I certainly
15 agree with you about not lowering a level for reporting.
16 I do think you need to work with the affected industry to
17 get the information that you need but to be mindful of how
18 much time it's going to take and the accuracy that they're
19 going to be able to provide. And I do think the larger
20 fleets have the consultants or the people on staff that
21 can get you that information.

22 Mr. Mandel, I guess we're going to work with you
23 a lot, because we want to take you up on some of your
24 offer of how to move this around and get some early action
25 items.

1 I just would like, and I'm trying to be sure that
2 I understand, we are considering, as we move things
3 forward, the infrastructure. And I will never forget
4 going to United Parcel in my area that changed their fleet
5 to electricity, and it was wonderful. However, the cost
6 of the infrastructure was tremendous. And so I think we
7 can't miss that factor.

8 So as we move things around, and we accelerate
9 them, there has to be the infrastructure to make it all
10 happen. And it can be costly, and it can be very
11 difficult. I think we now have our organizations that
12 provide electricity to work with us maybe a little bit
13 more than might have been a few years back when we
14 dedicated that United Parcel facility.

15 But I can tell you there's a cost that is
16 significant. And I want the Board members -- it's not all
17 involved in the new truck or whatever, there is a
18 tremendous cost. And any of you who drive your, you know,
19 electric vehicles, you know, that if there's not enough
20 charging stations when you're traveling, and somebody else
21 is there, and, you know, getting a charge, you're in deep
22 trouble. You have to wait for that person. Well, if
23 you're in business, you can't wait two hours while
24 somebody else is charging and there's a queue back to
25 maybe three or four trucks. So we've got to think about

1 that. And that's all I have.

2 Thank you.

3 CHAIR NICHOLS: Okay. Dr. Balmes.

4 BOARD MEMBER BALMES: So I want to start off with
5 a brief story. My son, a senior in college, was fortunate
6 to attend the COP25 conference in Madrid, the first week.
7 And he came back -- I mean, he went there as a climate
8 activist and he came back even more active. And he said,
9 dad, you're on the California Air Resources Board. You
10 have to do more.

11 (Laughter.)

12 BOARD MEMBER BALMES: So with that said, I do
13 think we have to be aspirational, but I also think we have
14 to be practical. And so I'm going to highlight where I
15 agree with my previous Board members, because, A, the time
16 is late, and B, most of them have said thoughts that I
17 agree with.

18 So one thing I would agree with Professor
19 Sperling, we have to be careful about the questionnaire
20 that we're -- I'm totally fine with us having reporting,
21 but we should tailor that report as much as possible. I
22 do question -- I'm very involved in my own research with
23 questionnaires to people. And the longer they are and the
24 more unclear the information value is to the people
25 filling it out, the less compliance you'll get.

1 And I really think we need to take up the offer
2 of various industry folks about working with them to make
3 a questionnaire that's going to be complied with wherever
4 we set the reporting mark for. And I can't say that
5 strongly enough. I just think that, yeah, if we go after
6 data mining, it's going to be a failure. We won't get
7 what we need.

8 I also agree with multiple Board members about
9 this -- being enthusiastic about the sectorial approach,
10 where we can get, as the industry says, Mr. Mandel
11 suggested, we could go farther in some areas than we're --
12 the staff is proposing, but maybe be more careful with
13 regard to the heavy-duty tractors that we all want. I
14 totally agree with Ms. Takvorian, we need those tractors
15 to help the disadvantaged communities, but we also
16 can't -- and so we need to be aspirational. We need to be
17 technology forcing. But I don't think we want to go too
18 hard too fast.

19 I don't know the answer. I think we just need to
20 be very intentional about that. But I like the sectorial
21 approach, because I think we can help those communities if
22 we're careful about working with industry to get cleaner
23 trucks in certain sectors faster.

24 I also like the suggestion of both Ms. Takvorian
25 and Ms. Berg about trying to target where we can help

1 disadvantaged communities. And I think one area that
2 that's really pretty obvious is the drayage truck -- I
3 think we should push the drayage truck market as much as
4 we can.

5 And I like Ms. Takvorian's overall concept that
6 we should figure out what's the path to our goal and have
7 milestones along the way, as opposed to just say what we
8 can do now, and sort of guess what will be -- you know,
9 what our milestones should be in the future. I really
10 like that as an overall strategic approach.

11 And then I just, you know, finally would say that
12 I heartily agree with Ms. Riordan about the
13 infrastructure. I think we didn't talk enough about
14 infrastructure today. I am one of those battery electric
15 vehicle drivers that is frustrated continuously about the
16 lack of availability of charging stations. At my
17 hospital, Zuckerberg San Francisco General, there have
18 been four stations for, you know, I don't know, seven,
19 eight years. And I've watched while all my fellow
20 physicians and staff at the hospital are buying battery
21 electric vehicles.

22 And, you know, there's three, four people can
23 charge those at a time. It's just ridiculous. And I fear
24 that's going to be even more of a problem as Ms. Riordan
25 said for commercial fleets. I mean, maybe we're making

1 good progress with infrastructure for commercial fleets.
2 But if it's anywhere near like we were with passenger
3 vehicles, I think -- I'm not so sure. So I want to be
4 convinced that we have the infrastructure there.

5 And then finally, I agree with other members who
6 have said that we can do more with fleets faster. But
7 maybe there should be a bifurcation of fleet size. I'm
8 totally open to that.

9 Thank you.

10 BOARD MEMBER FLOREZ: Thank you.

11 I'll try to be brief. I took a lot of notes
12 during the hearing. But I think just generally maybe to
13 put it in context, I asked a lot of questions during the
14 break of various people. I asked our Executive Director
15 about this 15-day rule and trying to figure out what we're
16 actually doing here today. And I think the Chair laid it
17 out. We're not voting today, but I would like staff to
18 pay careful attention, because we are supposed to be
19 giving some direction to the fact that this Board is very
20 divided and we are going to be taking a vote on this soon.

21 So I would say that because a Board that's rarely
22 divided is divided means we have a lot more work to do.
23 And staff has a lot more work to do. It basically is
24 saying that some of us aren't convinced. And, you know, I
25 would say that if -- for staff direction, I would go back

1 to what Supervisor Fletcher started with, and that is one
2 standard of going to the Berkeley study. And as I
3 remember, the Berkeley study says if we're going to get to
4 a hundred percent by 2045, and in some sense we're going
5 to need 20 percent.

6 So this whole 15 percent discussion to me has
7 been almost a compromise. You know, I really feel like if
8 we start with the Berkeley study and we really have staff
9 convince us by looking at that as some sort of benchmark
10 that it really is not achievable, I'll feel more
11 comfortable. But I really feel like not having a
12 benchmark and not looking at a study like that kind of
13 leaves us to listen, in some way, and in some context of
14 how our people are forecasting the market.

15 I'd also like to say that, taking out my vote
16 counting legislative past, which is signaling to staff
17 hopefully, if you want to get the majority of this Board,
18 I think, on board by the time we do vote on this, there is
19 a lot of work to be done.

20 Let me put on my business hat for a moment, and
21 that is that we're not going to have a strong fleet rule,
22 unless we have very strong manufacturing requirements and
23 a much higher, stronger manufacturing target. You know,
24 people -- as I remember it, countries really do well when
25 we push hard on the manufacturing side. So it feels like

1 to me that, you know, I understand the distinction between
2 technologies that are in play now, technologies that are
3 coming, and technologies that are somewhat speculative.

4 But I also know that when you put that in some
5 sort of matrix with how fast technology is increasing --
6 again, I'm going to talk about Nathan Fletcher for a
7 moment. You know, when we debated that RPS standard, no
8 one would have ever thought that the falling cost of all
9 of those factors from solar to batteries -- I mean, this
10 is an amazing time in our world where the cost of
11 everything, particularly in the renewable side, is falling
12 so quickly. We would have never guessed that debating
13 that particular rule then.

14 But I would say that it's hard to look at
15 manufacturing and somehow not bring into the fact that
16 these costs are falling very quickly. So I would hope
17 that, you know, we could have a little more of what those
18 costs look like. I know we talk about total cost of
19 ownership, but there's also health, and whole bunch of
20 other factors that need to be put into that context.

21 But I would just want to strongly say that unless
22 we're focused on the manufacturing side, that is all kind
23 of a moot conversation. We're not going to have a very
24 strong fleet rule. We're not going to signal to the
25 markets.

1 And, Dr. Balmes left, but he said something on
2 break as well, and he says let the engineers engineer.
3 Let's just set the high standard and let's make sure that
4 the engineers are doing what they do.

5 And I feel like this Board has always been that.
6 I've always admired the Board, even when I was in the
7 Legislature, that somehow, you know, Mary Nichols would
8 say this lofty statement and somehow it would come true.
9 You know, like things are going to happen in 2020, or
10 2030, and 2040, and somehow, they happen.

11 And it happens, because I think you have vision,
12 you have leadership, you set the standard -- you set the
13 bar very high, you challenge. You know, in some way, I
14 feel like this is that moment for us. And one last person
15 I'll mention on the Board that I really enjoyed her
16 comments and we did meet with staff was Diane, who said
17 something that -- very powerful and that is she couldn't
18 go home to her community with a yes vote on this, unless
19 this changes, because those who are impacted by this truck
20 rule at the very heart -- so the Central Valley, where we
21 have numerous inland ports, numerous amounts, not just San
22 Bernardino, but numerous amounts of trucks that are moving
23 into the valley and people have quoted -- we're quoted
24 today, the communities. I admire them coming forward.

25 You know this is one of those votes you just have

1 to look people in the eye when you go home. I mean this
2 is really, really one of those true votes that has a true
3 impact. I think this might be the most important thing we
4 do in the next year.

5 So I -- you know, I definitely would say that
6 staff to work harder. And, Jack, I know you work hard. I
7 know the staff works hard, but I would say that, you know,
8 count votes, look at how to get the majority there, work
9 harder, think harder. You know, and I know folks are
10 looking at today, but we'd ask you to look a little bit
11 more into tomorrow, look at some of those falling costs,
12 look at those manufacturing pushes, try to figure out how
13 to get to, you know, something near 20 percent, and if you
14 fall at 15 percent, good for you. But I still feel like
15 that's the compromise. I think we have to push as hard as
16 we can, being realistic, yes, but at the same time knowing
17 that things and the technologies are changing so quickly.

18 And that's all I have to say. And I really
19 admire the Board for taking this debate on. This is the
20 first in the world. We just don't want to end up
21 somewhere in the community's mind that we didn't really
22 come through for them from a pollution perspective. And I
23 think that's the name of the game of this whole exercise
24 is that pollution reduction.

25 BOARD MEMBER EISENHUT: So I'm going to adopt, I

1 think, the Dr. Balmes method and refer to other comments
2 made by members.

3 I'll start with the timing. And we've mentioned
4 several times the 1940 -- or 2045 target. And from a very
5 personal perspective, in 2045, I will be, or could be, a
6 hundred years old. And so that is a dangerously proximate
7 time to me. It doesn't seem like it's that close, but it
8 is very proximate. And so I am one of those who is
9 aligned, and I think I closely align with Mr. De La
10 Torre's comments about pushing the envelope with a
11 specific eye toward what we know about the current
12 available technology.

13 On the survey, it needs work. I absolutely
14 embraced the need for the data. I don't think we're
15 refined enough in our thinking about how much we need. I
16 think comments have been made about the longer the form,
17 the more data we seek, the less likely we are to get
18 meaningful and good information, the more pushback we're
19 going to incur.

20 And piggybacking on Sandy's comment, is it -- is
21 it possible -- we heard from -- we heard from every
22 industry representative who spoke today, that they would
23 embrace and work with us on this survey.

24 So is it possible that as a first cut through the
25 survey we could do a sample survey, let the industry reps

1 decide who gets the short straw, do a sample survey, see
2 how it goes by industry, and fine-tune -- fine-tune the
3 survey methodology. I just throw that out there as a
4 possibility.

5 I think we've been entirely too casual about
6 infrastructure. We have substantive funding for vehicle
7 light-duty infrastructure. Our success has been frankly
8 disappointing. And I think as we look at infrastructure,
9 we need to evaluate the barriers that have occurred with
10 regard to our current push for vehicular charging stations
11 which I think have largely accrued or partially accrued to
12 zoning kinds of restrictions. We need to be prepared and
13 have a plan to reach out to those entities in order to
14 enable heavy-duty charging infrastructure. When we were
15 at the Port of Oakland last week that was one of the
16 number one issues that restricted the port from converting
17 to a more electrified fleet. And I did didn't hear that
18 much about infrastructure when -- in the presentation
19 today.

20 And I'm hopeful that we will have resolved these
21 issue, vote tomorrow, and have a plan that the Legislature
22 consider -- can and might consider funding as appropriate
23 in this budget cycle. So -- and I would encourage us to
24 be prepared to reach out and share this event with the
25 Legislature, so that they can be involved. I think that

1 concludes my comment.

2 Thank you.

3 BOARD MEMBER SHERRIFFS: Thank you.

4 Wow, five hours of testimony.

5 (Laughter.)

6 BOARD MEMBER SHERRIFFS: Six hours. This was
7 terrific. Well, it's been terrific when we -- when we
8 look at the engagement, we look at the communities that
9 came, Fresno, Inland Empire, Central Valley, South Coast,
10 Oxnard, East Oakland, Imperial Valley. You know, these
11 are the communities living the challenges of the
12 CalEnviroScreen. And they are the communities that are
13 living the direct immediate effects of these dirty trucks
14 that we're struggling with here. So very appropriate,
15 really appreciate their taking the time coming the
16 distance to participate in this.

17 I hope staff's notes are neater than mine, and
18 not quite as zen, and -- there's a lot here. And it is --
19 it is so critical.

20 You know, starting with -- starting with the
21 survey. As a small business owner, as a physician, as
22 somebody who's done research, don't ask a question unless
23 you're going to do something with it for all kinds of
24 reasons. And it's great stakeholders have stepped up and
25 said, yes, we'll help -- we'll help streamline this, make

1 it work. Every question should have a purpose. And it
2 seems that we really can align incentives here, because if
3 people understand why they're filling it out, they will do
4 it cheerfully, gratefully, and the answers will be good.

5 And, you know, we're out to ensure a level
6 playing field. We're out to assess what the
7 infrastructure needs are. We're out to help be sure that
8 we are setting policies that they're going to match the
9 technology with the various duty cycles. So in many ways,
10 this should be an easy sell. But again, we have to be
11 sure that every question is leading to give us all better
12 answers for that, and that it's clear transparent, for
13 those who are going to be filing this out.

14 A lot of the testimony has said, yes, set the bar
15 higher. And I think there's general agreement in terms of
16 the Board. So staff, yes, thinking about ways to how do
17 we do that. And I like very much the suggestion from
18 Supervisor Gioia, you know, that certainly, you know,
19 whatever targets we've talked about, maybe a little higher
20 in some areas. But certainly within that, there are --
21 there are classes, there are groups that we could set one
22 hundred percent targets. And that is dealing with proven
23 technologies. It's going to help the economies of scale.
24 It's going to be great in terms of visibility of having
25 electric trucks out there that are succeeding, that people

1 can see them working.

2 And also, these are the most measurable places to
3 be working, the school buses, the public utility vehicles,
4 the step vans at the airports, the refuse trucks and other
5 ones. And I remind Supervisor Gioia, my operation of the
6 refuse truck was not quiet.

7 (Laughter.)

8 BOARD MEMBER SHERRIFFS: I almost took out a
9 parking meter.

10 (Laughter.)

11 BOARD MEMBER SHERRIFFS: But it was fun.

12 Yes. As we do this work, boy, align the
13 incentives. What we're doing here, how does it align with
14 our port work, with the 617 communities. These things
15 definitely working together. They can work together.
16 They need to work together. As staff mentioned at the
17 beginning, this is a moving target, because there are
18 developments. But the developments all tell us we can ask
19 for more. When we hear about the commitments of UPS,
20 FedEx, Amazon to electrifying their fleets, this is
21 telling us, yes, push, set higher targets, because
22 that's -- that's where things are moving. Frito-Lay in
23 Modesto really doing vertical integration of electric and
24 renewable natural gas with public fueling available. So
25 it's a great, great, great potential mix.

1 The last thought I have before passing it to my
2 colleague in South Coast. What can we do in terms of the
3 NOx problem and how can we integrate this into the NOx --
4 solutions for the NOx problem? And, you know, are there
5 ways to work the definition whatever in terms of low NOx,
6 low NOx, renewable natural gas, into near-zero for a
7 limited time period, but to help us -- the technology is
8 there. We certainly desperately need what that can help
9 us with in terms of ozone for the Central Valley and for
10 the South Coast and can be an important part of this as
11 well.

12 Thank you.

13 BOARD MEMBER MITCHELL: Thank you.

14 And we're all anxious to finish up and go to
15 dinner, I think. So I want to say thank you to staff,
16 first of all, for all the work they've done on this. And
17 as Alex mentioned, thank you to all the people that came
18 from all across the state to express their interest in
19 this, and the interest in reducing emissions, and becoming
20 healthier without asthma, and without respiratory diseases
21 in their families.

22 I want to start out by saying, too, that we did
23 not get any pushback from the OEMs that are in this
24 sector. They all have expressed a willingness to go
25 forward. They want -- they don't want to delay this rule.

1 They want to do it. But the other side of that is they
2 want to do it right. They don't want to end up going
3 backwards or having a failure as we proceed with this.

4 And I want to mention that in the ports of Long
5 Beach and Los Angeles, as Hector mentioned - he's no
6 longer here - we are doing some pilot projects with the
7 big OEMs. And I think it's noteworthy to say that we
8 finally got some big OEMs working with us in the electric
9 vehicle sector.

10 We have Volvo. We have Daimler. We have
11 Peterbilt. We have quite a few of these big OEMs. Now,
12 they're in there and they're saying, yes, this is the wave
13 of the future. They're doing it in Europe. They're doing
14 it in China. We want to do it too. So we have that going
15 for us.

16 But I also think that it's important that as we
17 are looking at these pilot projects and getting them
18 underway that we learn from the information that we are
19 going to glean from these projects, and that we use that
20 information in our regulatory structure. So I'm going to
21 suggest that the next several months this rule is going to
22 come back to us, as we're not making a decision tonight,
23 that we be working with these OEMs in the pilot projects
24 that they're now -- that are now underway to help us
25 inform our decision making.

1 The other part of this that Barbara mentioned is
2 the infrastructure. And this is huge. I mean, we can
3 look at the experience we had with light-duty
4 infrastructure and multiply that about ten times, because
5 heavy-duty infrastructure is going to require a lot of
6 involvement with our utilities. It's going to involve
7 changes to the whole grid operation. It's going to be
8 expensive.

9 And so one of the things that I should -- that I
10 think should be happening, as we do this, I think it would
11 be good to form some kind of working group. And this
12 would involve CARB. It should involve CEC. It should
13 involve the PUC probably, GO-Biz and the Governor's
14 office, a couple of the key OEMs, and the utilities. And
15 it shouldn't be a huge group. It should be a small group
16 that really know their business in each of these sectors,
17 and we work together to figure out how we can make this
18 whole business work. We want to transform transportation
19 into electrification.

20 And obviously, we're going to need these people
21 at the table to do that. And I would suggest that we get
22 that going as soon as possible and that we work -- that we
23 start this working group to be working with our staff over
24 the next several months, so that when you come back to us
25 with the rule, we have some good decision makers at this

1 working group that help us inform our decisions and the
2 final regulation.

3 I agree with Jed Mandel and the Truck and Engine
4 Manufacturers Association's position that we could look at
5 this in segments. And there are certain segments along
6 this spectrum of trucks that are probably more ready than
7 others. And we can prioritize -- prioritize some of those
8 segments and the investments in those segments, so that we
9 experience early success. I think that's important. And
10 what those segments are and how that pans out that's not
11 something I'm going to say here. It's something that has
12 to be, you know, worked out and worked through with staff
13 and with industry.

14 As far as accelerating, we can't get their fast
15 enough, in my mind, because of the huge emission
16 reductions we need. But I also recognize that because we
17 want to be successful, you run this balance of going too
18 fast and having failure, because we haven't put all the
19 pieces together the way they should be put together.

20 So I think that where we can accelerate and where
21 it makes sense, perhaps in that segmenting of the spectrum
22 of trucks, we could do that.

23 As far as reporting, it may be that the reporting
24 requirements are too much, because I think it was Dr.
25 Balmes who said, if it's too onerous, they won't even

1 reply. So we do need to gather the data and gather the
2 information. And I think it's important to do that,
3 because we want to learn the operational systems that are
4 out there, so that we know how to work with them over the
5 broad scope of what we're doing, so -- and we heard from a
6 lot of truckers who are independent truckers. I know that
7 from my area, they're -- most of truckers are
8 independents, small fleets. And we have to ask ourselves
9 how are they going to transform their small one or two
10 truck operation to an electric truck? How are they going
11 to be able to afford that?

12 And while the maintenance and operational costs
13 of an electric truck are going to be less for them, but
14 that initial move from their duty heavy-duty diesel truck
15 to a cleaner truck is something that, you know, we need to
16 be thinking about. Investment money needs to be there.
17 Incentive money needs to be there to help them.

18 The other thing I think is important is we have a
19 whole suite of regulations out there right now. The
20 airport shuttle buses, school buses, our Truck and Bus
21 Rule, the Omnibus Low NOx Rule. And now we're setting out
22 this Advanced Clean Truck Rule. How do these coordinate
23 with one another? And does complying with one defeat
24 another or does complying with them mean that we end up
25 with a bunch of new diesel trucks that we don't want on

1 the road?

2 So I think that's important that we're looking at
3 overall from up here, looking at that suite of rules that
4 we put out there and how they coordinate with one another.
5 So I mean, we have a lot of things out there and hopefully
6 we'll be successful as we work through these. But I do
7 think that's important that we take a look at all of that.
8 So thank you for your work. We've got a lot of work cut
9 out for us, but we're going in the right direction. It's
10 very exciting.

11 CHAIR NICHOLS: Okay. I see a lot of pale faces
12 out there.

13 (Laughter.)

14 CHAIR NICHOLS: And I'm not really surprised.
15 But, you know, not only was it a long hearing, but, you
16 know, I hope you understand, everybody who's listening or
17 watching, that the Board was paying attention, that we
18 have a lot of thoughts about this. And so it was
19 important that people be able to articulate what the
20 thoughts are and how they want to see this move.

21 I do need to actually close the hearing on this
22 item. Close the record, I guess. Although, it will be
23 reopened when the staff is ready to issue a 15-day notice.
24 And that's going to take some time obviously. But in the
25 meantime, this is it, as far as this phase is concerned.

1 We won't be accepting anymore comments on this agenda item
2 until the 15-day period is open again, at which point
3 people can submit written comments which will be responded
4 to.

5 I know there's a resolution in front of us. And
6 I suppose we should pass it, just because it moves the
7 issue forward. But frankly, I'm really -- if it's not
8 necessary, I don't know that we have to do it, because I
9 think we're going to end up wanting to wordsmith it. And
10 it's just not -- it's not a good time for doing that right
11 now.

12 So I would like to rather tell the staff to --
13 yeah, we can table it, if it's -- according to Robert's
14 Rules, we can -- we can table the resolution for the time
15 being. That's probably a good idea and I can just do
16 that. But I would like to have just a moment of clarity
17 here that we've heard what mainly needs to be worked on.

18 And I've heard some restructuring of the
19 regulation, particularly to take advantage of the offer
20 that we heard to focus on getting to a hundred percent
21 faster in certain segments. I've heard some direction
22 that those should focus on the communities where we see
23 the most need in terms of immediate or at least quick
24 reductions in emissions and turnover of the fleet, so
25 ports, drayage trucks, buses, school buses, trash trucks,

1 delivery centers, et cetera. And a lot of conversation
2 around just how to structure this, so that we make it
3 absolutely clear that the production mandate, which is the
4 new thing and really the thing that only California in the
5 world is doing, works with the other mandate for fleets to
6 buy these vehicles, and that we are also building in our
7 incentive programs and our other approaches that we have
8 for how to make the whole market move forward together.

9 This is partly a matter of communications, but
10 it's also, I think, a matter of thinking. As often
11 happens, I think Ms. Takvorian is helpful in sort of
12 laying out the approach here, which is, again, we know
13 where we need to go. Backing up from there, how are --
14 how are going to get there?

15 So I think that's all been pretty well covered by
16 the -- by the Board and the need to, you know, move as
17 fast as we can while not screwing things up.

18 (Laughter.)

19 CHAIR NICHOLS: So that's our usual mandate
20 actually. We try to do that whenever we can. And
21 whenever we have made mistakes in the past, we've moved to
22 learn from them and correct them, so I'm not too worried
23 about that part of it.

24 But I think that -- I think we've covered the
25 ground pretty well. And I want to thank the staff for

1 their patience and flexibility here. This is -- this is
2 tough stuff. If it was easy, it would have been done by
3 now, right?

4 So I think we can -- we can leave this item as it
5 is.

6 But we do have one more item to cover quickly and
7 the court reporter needs a break, and probably the Board
8 members do also. So I think if we could again do the
9 ten-minute break, come back do a five-minute staff
10 presentation on the indoor air cleaners, and then we will
11 actually have done our days works. So thank you
12 everybody,

13 (Off record: 6:06 p.m.)

14 (Thereupon a recess was taken.)

15 (On record: 6:14 p.m.)

16 CHAIR NICHOLS: All right, everybody. Do we have
17 a court reporter?

18 THE COURT REPORTER: (Raises hand.)

19 CHAIR NICHOLS: We do.

20 We have a staff. We have a presentation. We
21 have Board members. We're all here.

22 Okay. So we'll get the -- we've got ourselves on
23 line again, please?

24 Yes. You're ready. Okay. Great. This is the
25 last item of our agenda for the day. And we're very

1 pleased that we have a staff who has been so patient and
2 has agreed also to make their oral presentation brief,
3 because we have the material.

4 So this is Item number 19-12-5, Proposed
5 Amendments to the Regulation for Limiting Ozone Emissions
6 from Indoor Air Cleaning Devices. In 2007, the Board
7 approved an air cleaner regulation to limit ozone
8 emissions from indoor air cleaning devices. I was there
9 at the time and so were you.

10 (Laughter.)

11 CHAIR NICHOLS: I know.

12 The regulation has successfully reduced
13 Californian's exposure to ozone from portable indoor air
14 cleaning devices. However, CARB staff have identified
15 amendments that are necessary to protect Californians from
16 ozone emissions from in-duct air cleaners, which were not
17 covered at that time.

18 So, Mr. Corey, would you please introduce the
19 item?

20 EXECUTIVE OFFICER COREY: Yes. Abbreviated as
21 well.

22 The proposed amendments expand the regulation to
23 cover the fast-growing sector of in-duct air cleaning
24 devices to further ensure that Californians are not
25 exposed to unhealthy levels of ozone from indoor air

1 cleaners. The amendments also include regulatory
2 streamlining as well as updates to approve test standards
3 and changes to labeling requirements.

4 And with that, I'll ask Julia Gress of the
5 Research Division to give the staff presentation.

6 Julia.

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

9 AIR POLLUTION SPECIALIST GRESS: Good evening,
10 Chair Nichols and members of the Board.

11 We're to present amendments to the indoor air
12 cleaner regulation.

13 --o0o--

14 AIR POLLUTION SPECIALIST GRESS: The air cleaner
15 regulation went into effect in 2008. And since that time,
16 over 2,500 models have been certified from over 300
17 companies. The regulation requires all air cleaners sold
18 in California to be certified, which means they must meet
19 electrical safety standards and an ozone emissions limit
20 of 0.05 parts per million.

21 --o0o--

22 AIR POLLUTION SPECIALIST GRESS: Two classes of
23 devices were exempted in the regulation. In-duct air
24 cleaners installed in the duct work of HVAC systems and
25 ozone generators used for specific industrial

1 applications.

2 --o0o--

3 AIR POLLUTION SPECIALIST GRESS: The exempted
4 industrial use applications include the ones listed on
5 this slide. And the uses that have an asterisk next to
6 them also include language saying ozone can only be used
7 for that application when people are not present.

8 --o0o--

9 AIR POLLUTION SPECIALIST GRESS: We're amending
10 the regulation at this time because the market for in-duct
11 air cleaners is expanding in California, partly due to
12 specific California drivers, such as public health concern
13 for widespread air pollution including wildfire smoke.

14 --o0o--

15 AIR POLLUTION SPECIALIST GRESS: CARB
16 commissioned a market research report that stated 100,000
17 electronic in-duct air cleansers were sold in California
18 in 2017, with the number projected to grow to 146,000 by
19 2023.

20 --o0o--

21 AIR POLLUTION SPECIALIST GRESS: The goals of the
22 amendments are to strengthen, streamline, and clarify
23 portions of the regulation.

24 --o0o--

25 AIR POLLUTION SPECIALIST GRESS: To strengthen

1 the regulation, we proposed expanding the definition of
2 the types of devices covered in the regulation requiring
3 the certification of electronic in-duct air cleaners and
4 revising industrial use exemption.

5 --o0o--

6 AIR POLLUTION SPECIALIST GRESS: We propose
7 expanding the definition of the type of device covered by
8 the regulation to include those that clean air being drawn
9 into a room, such as window-mounted AC units with an air
10 cleaning component.

11 --o0o--

12 AIR POLLUTION SPECIALIST GRESS: The most
13 significant amendment is eliminating the exemption for
14 in-duct air cleaners and requiring their certification.
15 We are able to do this at this time, because there is now
16 test method for measuring ozone from in-duct devices.

17 --o0o--

18 AIR POLLUTION SPECIALIST GRESS: We propose
19 revising the industrial use applications by clarifying
20 that all uses are permitted only when people are not
21 present. We also update the advisory label and expand
22 exposure-related information for manuals.

23 --o0o--

24 AIR POLLUTION SPECIALIST GRESS: To streamline
25 certification, we also propose exempting portable air

1 cleaners with UV lamps emitting light above 240 nanometer
2 wave lengthy from the ozone testing requirement, because
3 these do not produce significant amounts of ozone.

4 We also propose limiting the notification
5 requirement for manufacturers of certified air cleaners.
6 We're clarifying conditions underwhich a previously
7 certified air cleaner would need to be recertified, which
8 is when the device is rebranded, the air cleaning
9 technologies have changed, or the manufacturing facility
10 have moved.

11 --o0o--

12 AIR POLLUTION SPECIALIST GRESS: Other minor
13 changes include updating versions of test standards and
14 adding new ones, clarifying auditing requirements for
15 laboratories, and adding language for when certification
16 may be withheld.

17 --o0o--

18 AIR POLLUTION SPECIALIST GRESS: Benefits include
19 public health protection from unhealthy exposures to ozone
20 from indoor air cleaners, including workers and bystanders
21 engaged in occupations where ozone is intentionally
22 applied. Manufacturers will also experience reduced
23 administrative burden and cost savings.

24 --o0o--

25 AIR POLLUTION SPECIALIST GRESS: The total net

1 cost is estimated to be less than \$1 million over ten
2 years. This includes the cost associated with ozone
3 testing of in-duct air cleaners and the cost savings from
4 eliminating the ozone testing requirement for some
5 portables and eliminating the notification requirement.

6 --o0o--

7 AIR POLLUTION SPECIALIST GRESS: Amendments
8 eliminating the notification requirement and testing of
9 portable UVs will go into effect on the effective date,
10 while changes made to the industrial-use exemptions will
11 go into effect 12 months later. Electronic in-duct air
12 cleaners must be certified no later than 24 months after
13 the effective date.

14 --o0o--

15 AIR POLLUTION SPECIALIST GRESS: We anticipate
16 making some minor clarifying changes requiring a 15-day
17 notice. These include stating the manufacturing date of
18 the portable devices will be used to determine compliance
19 requirements, clarifying the definition of UVGI lamp, and
20 specifying which devices need to have updated manuals.

21 --o0o--

22 AIR POLLUTION SPECIALIST GRESS: In conclusion,
23 staff recommends the Board adopt the proposed amendments.

24 Thank you very much.

25 CHAIR NICHOLS: Thank you.

1 I think this is a nice piece of work. I just
2 want to say that when we heard the original regulation we
3 were besieged with people who were in the business of
4 selling portable home air cleaners that were deliberately
5 designed to basically expose people to ozone. And we
6 heard a lot about how great ozone was and all that.

7 So I think we've come a long ways since then.
8 And I'm very pleased that we're at the point now where
9 we're just making relatively technical amendments that
10 improve the overall efficiency of the program. Although,
11 there is a public health benefit certainly from these
12 in-duct -- getting to this in-duct cleaners.

13 We have two witnesses who've signed. Will
14 Barrett and Kevin Messner.

15 MR. MESSNER: Oh, well, I'll make this quick. I
16 had a -- I have a 50-page statement that I'll read.

17 (Laughter.)

18 MR. MESSNER: I just wanted to say -- well, first
19 of all, we support the 15-day language. These are
20 clarifications that we really need. But you know what --
21 besides the technicalities after sitting through five
22 hours of the testimony, what -- on the trucking issue,
23 what really struck me is just thinking -- maybe it's late,
24 a higher issue -- you know what's really important here is
25 you guys have spent a lot of time on the outdoor air,

1 understandably so.

2 But let's not forget, and this is one of the
3 times where I really like representing home appliances,
4 indoor air quality is very important. People spend their
5 time in the house, in the home more than they spend
6 outside. So let's not forget the benefits of having good
7 indoor air quality. And we represent manufacturers of
8 portable air cleaners, not the in-duct, but the portable
9 air cleaners that people have in their homes. And people
10 that have asthma or people that have allergies, this
11 really does help.

12 And so we've been working really well over the
13 years with CARB, and the staff, and on this regulatory
14 changes. And its's just -- it's just a good news story I
15 think and how air cleaners can really benefit people's
16 lives, along with the range hoods and vacuums, which are
17 also hand products.

18 But thank you, we support the 15-day language,
19 and look forward to continuing to work with you all on
20 these products.

21 SO thank you.

22 CHAIR NICHOLS: Thank you for being here and to
23 giving us the message.

24 Mr. Barrett.

25 MR. BARRETT: Thank you very much. Will Barrett

1 with the American Lung Association. I do want to say
2 thank you to the staff for bringing this forward. And we
3 do support this as a smart and responsive update to the
4 existing rules that our organization has worked on for all
5 those years as well.

6 So with that, thank you very much. I support the
7 rule. The Lung Association looks forward to working with
8 you going forward and thinks that is a good responsive
9 step forward.

10 Thank you.

11 CHAIR NICHOLS: Dr. Balmes, would you like to
12 make the motion?

13 BOARD MEMBER BALMES: Yes. I'd like to make the
14 motion. And I also would like to say, I totally agree
15 that indoor environment is very important. I think you
16 warmed the heart of Peggy Jenkins, who is sitting in the
17 audience when you said that.

18 CHAIR NICHOLS: I actually to have to close the
19 record anyway.

20 BOARD MEMBER BALMES: Okay. All right.

21 CHAIR NICHOLS: So you can't make your motion
22 anyway.

23 BOARD MEMBER BALMES: And I just want to say I
24 actually bought a filter, a nice one, for my wife who has
25 asthma, because of the wildfire smoke. And, of course, I

1 couldn't use it, because my -- our power was shut off, so
2 I'm going to get a battery.

3 CHAIR NICHOLS: So you bought a diesel generator.
4 (Laughter.)

5 BOARD MEMBER BALMES: No.

6 CHAIR NICHOLS: No.

7 BOARD MEMBER BALMES: I haven't bought a power
8 cell yet, but I'm going to.

9 CHAIR NICHOLS: Sorry, I couldn't resist.
10 (Laughter.)

11 BOARD MEMBER BALMES: But the other thing is you
12 mentioned range hoods. And I just received funding from
13 the NIEHS to do a range hood -- a stove range hood study
14 in Richmond. Supervisor Gioia is going to help me do
15 that, because the indoor air is very important and we --
16 especially for people with asthma.

17 CHAIR NICHOLS: Thank you very much.
18 That was a helpful statement. I appreciate it.
19 Does anybody else want to comment?

20 BOARD MEMBER SERNA: Second.

21 CHAIR NICHOLS: Yes, Mr. Serna.

22 BOARD MEMBER SERNA: Just second it.

23 CHAIR NICHOLS: Oh, you wanted to second the
24 motion.

25 Okay. Well, first of all, I do need to close the

1 record on this item and then to say that the 15-day notice
2 will come out. And when it does, people will have a
3 come -- an opportunity to propose comments on that. And
4 in the meantime no further comments will be received until
5 that happens.

6 And if there's any reason to do so, the Executive
7 Officer may present this regulation to the Board for
8 further consideration. But if not, the Executive Officer
9 has the ability to go ahead and adopt this regulation
10 without further input from us after addressing all
11 appropriate conforming modifications.

12 BOARD MEMBER BALMES: So I move adoption of the
13 resolution.

14 CHAIR NICHOLS:

15 BOARD MEMBER SERNA: Second.

16 CHAIR NICHOLS: There's a second.

17 All in favor, please say aye?

18 (Unanimous aye vote.)

19 (Board Member De La Torre not present.)

20 CHAIR NICHOLS: Opposed?

21 Any abstentions?

22 Wonderful. Thank you all so much. Good work.

23 Do we have any public come at?

24 BOARD CLERK CARLOS: (Shakes head.)

25 CHAIR NICHOLS: Yea.

1 Okay. So with that, we will be adjourned until
2 tomorrow and have a good evening, everybody.

3 (Thereupon the Air Resources Board meeting
4 adjourned at 6:26 p.m.)

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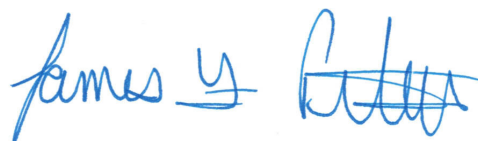
C E R T I F I C A T E O F R E P O R T E R

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of January, 2020.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063