

VIDEOCONFERENCE MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

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

THURSDAY, AUGUST 27, 2020
9:01 A.M.

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

BOARD MEMBERS:

Ms. Mary Nichols, Chair

Ms. Sandra Berg, Vice Chair

Mr. Hector De La Torre

Dr. John Balmes

Mr. John Eisenhut

Supervisor Nathan Fletcher

Senator Dean Florez

Mr. John Gioia

Ms. Judy Mitchell

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. Annette Hebert, Assistant Executive Officer

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

STAFF:

Dr. Paul Adnani, Staff Air Pollution Specialist, On-Road Heavy-Duty Diesel Section, Mobile Source Control Division(MSCD)

Ms. Heather Arias, Division Chief, Transportation and Toxics Division(TTD)

Mr. Michael Carter, Assistant Division Chief, MSCD

Ms. Angela Csondes, Manager, Marine Strategies Section, TTD

Mr. Jonathan Foster, Air Resources Engineer, Marine Strategies Section, TTD

Mr. Daniel Hawelti, Staff Air Pollution Specialist, On-Road Heavy-Duty Diesel Section, MSCD

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

Mr. Jack Kitowski, Division Chief, MSCD

Mr. Stephen Lemieux, Manager, On-Road Heavy Duty Diesel Section, MSCD

Ms. Nicole Light Densberger, Staff Air Pollution Specialist, Marine Strategies Section, TTD

Mr. Nick Rabinowitsh, Senior Attorney, Legal Office

Mr. Bill Robertson, Vehicle Program Specialist, MSCD

Ms. Bonnie Soriano, Branch Chief, Freight Activity Branch, TTD

Mr. Alex Wang, Senior Attorney, Legal Office

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

ALSO PRESENT:

Mr. George Aburn, Maryland Department of the Environment

Ms. Yasmine Agelidis, Earthjustice

Ms. Veronica Aguirre

Ms. Meredith Alexander, CALSTART

Ms. Katrina Au, Agility Fuel Solutions

Ms. Shayda Azamian, Leadership Counsel for Justice and Accountability

Mr. Tracy Babbidge, Connecticut Department of Energy and Environmental Protection

Mr. Rob Bamford, Northern Sonoma Air Pollution Control District

Mr. Will Barrett, American Lung Association

Mr. Roman Berenshteyn, Bay Planning Coalition

Mr. Paul Black, Breathe LA

Mr. Jofil Borja, Sacramento Regional Transit

Ms. Susy Boyd, Mohave Desert Land Trust

Mr. Damian Breen, Bay Area Air Quality Management District

Dr. Rasto Brezny, Manufacturers of Emission Controls Association

Mr. Kevin Brown, Manufacturers of Emission Controls Association

Mr. Todd Campbell, Clean Energy

Mr. Chris Cannon, Port of Los Angeles

Ms. Morgan Caswell, Port of Long Beach

Mr. David Cooke, Union of Concerned Scientists

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

ALSO PRESENT:

Ms. Coralie Cooper, Northeast States for Coordinated Air Use Management

Ms. Kelly Crawford, District of Columbia Department of Energy and Environment

Mr. Carlo De La Cruz, Sierra Club

Ms. Janet Dietzkamei

Mr. Tom Dow, Carnival Corporation

Mr. Sean Edgar, Clean Fleets

Mr. Steven Ernest, Jacobs Vehicle Systems

Mr. Dominick Falzone

Mr. Eric Feeley, Oregon Department of Environmental Quality

Ms. Dawn Fenton, Volvo Group North America

Mr. Steve Flint, New York State Department of Environmental Conservation

Mr. Chet France, Environmental Defense Fund

Mr. Mike Geller, Manufacturers of Emission Controls Association

Ms. Gail Good, Wisconsin Department of Natural Resources

Mr. Ben Granholm, Western Propane Gas Association

Ms. Peg Hanna, New Jersey Department of Environmental Protection

Ms. Laurie Holmes, Motor and Equipment Manufacturers Association

Ms. Regina Hsu, Earthjustice

Dr. Karen Jakpor, 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:

Mr. Thomas Jelenic, Pacific Merchant Shipping Association

Ms. Yassi Kavezade, Sierra Club, My Generation

Ms. Melina Kennedy, Cummins

Mr. Ryan Kenny, Clean Energy

Dr. Lee Kindberg, MAERSK

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

Ms. Jennifer Kropke, International Brotherhood of
Electrical Workers

Ms. Heather Kryczka, Natural Resources Defense Council

Mr. Thomas Lawson, California Natural Gas Vehicle
Coalition

Mr. Tung Le, California Air Pollution Control Officers
Association

Ms. Paola Loera, American Lung Association

Mr. Bill Magavern, Coalition for Clean Air

Mr. Kevin Maggay, SoCalGas

Mr. Jed Mandel, Truck and Engine Manufacturers Association

Mr. Keith Martin, Yuba-Sutter Transit Authority

Mr. Jesse Marquez, Coalition for a Safe Environment

Mr. Brian McDonald, Marathon Petroleum Corporation

Mr. Avi Mersky, American Council for an Energy-Efficient
Economy

Ms. Martha Miller, California Association of Port
Authorities

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

ALSO PRESENT:

Mr. Wayne Nastri, South Coast Air Quality Management District

Mr. Michael Pimentel, California Transit Association

Mr. Marvin Pineda, International Longshore and Warehouse Union

Mr. Zorik Pirveysian, South Coast Air Quality Management District

Mr. Patricio Portillo, Natural Resources Defense Council

Ms. Catherine Reheis-Boyd, Western States Petroleum Association

Ms. Tiffany Roberts, Western States Petroleum Association

Ms. Erin Rodriguez, Union of Concerned Scientists

Ms. Katelyn Roedner Sutter, Environmental Defense Fund

Ms. Janet Rogers, Embarcadero Coalition for San Diego

Ms. Madeline Rose, Pacific Environment

Ms. Laura Rosenberger

Mr. Doug Schneider, World Shipping Council

Mr. Andy Schwartz, Tesla

Mr. Ben Shade, AVL Test Systems

Mr. Christopher Sharp, Southwest Research Institute

Mr. Ben Shears, Center for Energy Efficiency and Renewable Technologies

Mr. Samir Sheikh, San Joaquin Valley Air Pollution Control District

Mr. Chris Shimoda, California Trucking Association

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

ALSO PRESENT:

Mr. Richard Sinkoff, Port of Oakland

Mr. Cam Spencer, Port of Hueneme

Ms. Emily Spokes, The NELA Climate Collective

Ms. Kathy Taylor, Washington Department of Ecology

Mr. Ivette Torres, Center for Community Action and
Environmental Justice

Mr. Mike Tunnell, American Trucking Association

Mr. Norman Tuitavuki, Monterey-Salinas Transit

Mr. Francisco Vega, Washoe County Air Quality Management
Division

Mr. Daniel Velazquez, EneRep

Ms. Mallory Warhurst

Mr. Peter Warren, San Pedro and Peninsula Homeowners
Coalition, Indivisible San Pedro

Dr. Erik White, Placer County Air Pollution Control
District

Ms. Joy Williams, Environmental Health Coalition

Mr. Francis Yang, Sierra Club, My Generation

Mr. David Yow, Port of San Diego

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P R O C E E D I N G S

CHAIR NICHOLS CHAIR NICHOLS: Good morning,
everybody and welcome to the August 27th, 2020 public
meeting of the California Air Resources Board. The Board
will please come to order and we'll begin with the clerk
calling the roll, please.

BOARD CLERK SAKAZAKI: Thank you, Chair Nichols
Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK SAKAZAKI: Mr. De La Torre?
Mr. Eisenhut?

BOARD MEMBER EISENHUT: Here.

BOARD CLERK SAKAZAKI: Supervisor Fletcher?

BOARD MEMBER FLETCHER: Here.

BOARD CLERK SAKAZAKI: Senator Florez?

BOARD MEMBER FLOREZ: Here.

BOARD MEMBER MONNING: Assemblymember Garcia?
Supervisor Gioia?

BOARD MEMBER GIOIA: Here

BOARD CLERK SAKAZAKI: Ms. Mitchell?

BOARD MEMBER MITCHELL: Here.

BOARD CLERK SAKAZAKI: Senator Monning?
Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

BOARD CLERK SAKAZAKI: Supervisor Serna?

1 BOARD MEMBER SERNA: Here.

2 BOARD CLERK SAKAZAKI: Dr. Sherriffs?

3 BOARD MEMBER SHERRIFFS: Here.

4 BOARD CLERK SAKAZAKI: Professor Sperling?

5 BOARD MEMBER SPERLING: Here.

6 BOARD CLERK SAKAZAKI: Ms. Takvorian?

7 BOARD MEMBER TAKVORIAN: Here.

8 BOARD CLERK SAKAZAKI: Vice Chair Berg?

9 VICE CHAIR BERG: Here.

10 BOARD CLERK SAKAZAKI: Chair Nichols?

11 CHAIR NICHOLS: Here.

12 BOARD CLERK SAKAZAKI: Madam Chair, we have a
13 quorum.

14 CHAIR NICHOLS: Thank you. Well, here we are
15 again meeting by Zoom. I think we all are still
16 continuing to believe that there will be a day when we'll
17 be able to meet again in person. But in the meantime,
18 we've become quite practiced at doing meetings this way.
19 And I think all in all, we're doing a pretty good job of
20 replicating the same format that we use in our old fashion
21 in-person Board meetings. We will review some of the
22 logistics again in just a couple of minutes. But I again,
23 as always, ask for your patience in case the technology
24 throws up unexpected roadblocks in our way.

25 I want to make sure that everybody knows that we

1 have interpretation services available today in Spanish.
2 So if you are joining us via Zoom, there's a button
3 labeled interpretation on the Zoom screen and if you click
4 that button and select Spanish, you can hear the entire
5 meeting in Spanish.

6 (Interpreter translated in Spanish.)

7 CHAIR NICHOLS: Thank you.

8 Before we move to the regular agenda, I do want
9 to follow up on one item that came up at the end of the
10 meeting last month during the public comment period. And
11 that concerns a request for the Board to adopt a
12 resolution, as quite a number of other public and private
13 organizations have done, making a statement condemning
14 racism. During the session, several points I think became
15 very clear. One was that there is an overwhelming
16 consensus on the part of the Board that we would like to
17 take a strong stand. And we also believe that any
18 statement that we make should be more than just a
19 statement and should both recognize past long-standing
20 injustices and make some explicit commitments that can be
21 measured, and will hold us accountable to making
22 sustainable change.

23 I felt, at that point, that we needed to do some
24 more work before attempting to adopt some other
25 organization's statement or try to draft something in

1 haste, and that it took time to hear from all the Board
2 members, as well as staff, before we came out with
3 something in public that we would then make available in a
4 public meeting. And so I asked Supervisor Phil Serna to
5 take this assignment of leading the effort to develop the
6 statement.

7 Phil's experience as a local elected official, a
8 member of an air district board that has an active AB 617
9 steering committee, as well as his long record of making
10 decisions that are really at the intersection of land use
11 and community empowerment has given him some skills that I
12 think will serve us well as we go along.

13 I know that Supervisor Serna plans to consult and
14 has already begun consulting with other Board members, in
15 particular those whose appointments or their professional
16 lives focus on issues of environmental justice in order to
17 develop a resolution that will incorporate the best of
18 what we can learn from other groups as well. And I am
19 expecting that he'll come back with a resolution to the
20 Board for adoption in the fall.

21 I'm mentioning that here to make sure that anyone
22 who's watching understands that that's the process that
23 we're planning to use. And if you wish to communicate any
24 thoughts to him, please feel free to do so. You can
25 address any comments through the Board Clerk and

1 they'll -- they will get to him.

2 So with that, I'd like to begin by asking the
3 clerk to give us some more detail and reminders of how the
4 process for conducting the hearing will work.

5 BOARD CLERK SAKAZAKI: Thank you, Chair Nichols.
6 Good morning, everyone. My name is Ryan Sakazaki and I am
7 one of the Board's clerks. I will provide some
8 information on how public participation will be organized
9 for today's meeting. If you wish to make a verbal comment
10 on one of the Board items or if you want to make a comment
11 during the open comment period at the end of today's
12 meeting, you must be using the zoom webinar or calling in
13 by telephone. If you are currently watching the webcast
14 on CAL-SPAN but you do want to comment, please register
15 for the Zoom webinar or call in. Information for both can
16 be found on the public agenda.

17 To make a verbal comment, we will be using the
18 raise hand feature on Zoom. If you wish to speak on a
19 Board item, please virtually raise your hand to let us
20 know you wish to speak at the beginning of that Board
21 item. To do this, if you are using a computer a tablet,
22 there is a raise hand button. If you are calling in on
23 telephone, dial star nine to raise your hand. Even if
24 you've previously registered and indicated on which item
25 you want to speak, please raise your hand at the beginning

1 of the item, if you wish to speak on it. If you do not
2 raise your hand, your chance to -- your chance to speak
3 will be skipped. If you are giving your verbal comment in
4 Spanish, please indicate so at the beginning of your
5 testimony and your translator will assist you.

6 During you comment, please pause after each
7 sentence to allow for the interpreter to translate your
8 comment into English.

9 When the comment period starts, the order of
10 commenters will be determined by who raises their hand
11 first. I will call each commenter by name and then
12 activate each commenter when it is their turn to speak.
13 For those calling in, I will identify you by the last
14 three digits of your phone number. We will not show a
15 list of commenters. However, I will be announcing the
16 next three or so commenters in the queue so you are ready
17 to testify and know who is coming up next. Please note,
18 you will not appear by video during your testimony.

19 I would like to remind everyone, commenters,
20 Board members, and CARB staff to please state your name
21 for the record before you speak. This is important in
22 this remote meeting setting and especially if you're
23 calling in to testify on your item.

24 We will have a time limit for each commenter.
25 The normal time limit is three minutes, though this could

1 change based on the Chair's discretion. During public
2 testimony, you will see a timer on your screen. For those
3 calling in by phone, we will run the timer and let you
4 know when you have 30 seconds left and when your time is
5 up.

6 If you wish to submit written comments today,
7 please visit CARB's send-us-your-comment page or look at
8 the public agenda on our webpage for links to send these
9 comments -- to send these documents electronically.
10 Comments will be accepted on each item until the Chair
11 closes the record for that Board item. I would like to
12 give a friendly reminder to our Board members and CARB
13 staff to please mute yourself when you're not speaking to
14 avoid background noise. Also, when you do speak, please
15 speak from a quiet location.

16 If you experience any technical difficulties,
17 please call (805)801-3676, so an IT person can assist.
18 Again, that's (805)801-3676.

19 Thank you. I'd like to turn it back to Chair
20 Nichols now.

21 CHAIR NICHOLS: Thank you very much, Mr.
22 Sakazaki. I would just add a little bit more detail on
23 the hearings. We have two major rulemakings on the Board
24 agenda this morning. And I understand, based on advanced
25 registration to comment that's already come in, we have

1 about 30 speakers for the At-Berth Regulation, and
2 something like 60 for the Omnibus NOx Rule.

3 So just to get people thinking in advance, I want
4 to make two comments. First of all, I would like to have
5 everyone who plans to speak on an item sign up to speak as
6 the item is called, or during the original staff
7 presentation, so we can get a full sense of how many
8 speakers there really are going to be. And I think that
9 for the second item, you should be planning in advance to
10 have a two-minute versus a three-minute time limit
11 imposed. This is an important rule and we want to hear
12 from people, but I think experience has shown that often
13 we get to the point where people are repeating comments.
14 And so if you can plan to hone in on the important
15 elements that you think the Board should hear, that would
16 be extremely helpful.

17 Our first item this morning is a recognition from
18 the Northern Sonoma Air Pollution Control District. And
19 this is not a -- not an item that requires Board action,
20 but it's one that we're delighted to hear. So I want to
21 welcome the representative of the Northern Sonoma Air
22 Pollution Control District who wishes to make a
23 presentation.

24 MR. BAMFORD: Thank you, Chair Nichols and
25 members of the Board. Today, I am here before you on

1 behalf of the Northern Sonoma County Air Pollution Control
2 District to formally recognize CARB's Incident Air Report
3 Air Monitoring Program and its dedicated staff for their
4 invaluable assistance during the Kincade Wildfire of 2019.

5 The Kincade Wildfire started on the morning of
6 Wednesday, October 23rd, 2019, north east in the town --
7 near the town of Geyserville. That afternoon, our
8 district requested assistance from CARB due to the
9 projected rapid fire growth and excessive smoke impacts in
10 the region. CARB's incident monitoring team coordinated
11 with our district to deploy six PM2.5 monitors in
12 strategic geographic locations.

13 The CARB-deployed monitors are equipped with
14 satellite communication systems which allow for quick set
15 up and transmission of the monitored data to websites
16 accessible to the public.

17 During these catastrophic wildfire events,
18 residents within the region, and those several miles away,
19 experience elevated levels of fine particulate matter from
20 the wildfire smoke and they greatly benefit from access to
21 timely, air quality information to make informed health
22 decisions for themselves and their families.

23 The air quality information from the monitors was
24 also used by our District staff, specially trained U.S.
25 Forest Service Air Resource Advisors, the Sonoma County

1 Department of Education, and the Sonoma County Health
2 Department to help with local agency response and for our
3 district to develop daily air quality advisories and
4 forecasts for our communities.

5 The Kincade Wildfire was active for 13 days. It
6 caused the mandatory evacuation of 180,000 people
7 countywide, it burned 78,000 acres, and destroyed 374
8 structures.

9 I would be remiss if I did not share with you
10 today that as I stand before you that Sonoma County is
11 currently experiencing two major wildfires, the Meyers and
12 the Walbridge, which have burned for nine days so far and
13 have consumed over 57,000 acres. Sixteen thousand
14 residents, including myself, had to leave the area under a
15 mandatory evacuation order. We are still awaiting
16 permission to return home.

17 These fires are happening only nine months after
18 the Kincade Wildfire mentioned in our resolution today.
19 Unfortunately, this does not appear to be an anomaly.
20 There have been four large wildfire events in our region
21 in the last four years, plus a flood in 2019, plus
22 recurring PSPS events, and, of course, the COVID-19
23 pandemic.

24 Now, more than ever, the Northern Sonoma County
25 Air Pollution Control District appreciates and supports

1 the mission of the Incident Air Monitoring Section and
2 asks this Board to continue its support of the Incident
3 Air Monitoring Section and the District's accessibility to
4 it. In addition, we would ask the Board to please be
5 supportive of proactive forest management and biomass
6 removal from our lands that helps to prevent these
7 catastrophic wildfires and to protect our air quality.

8 Thank you very much.

9 CHAIR NICHOLS: Thank you, Mr. Bamford. And I
10 think I should also say that the context that we're
11 hearing this presentation in does include another year of
12 very intense and widespread wildfires in California, and
13 that prescribed burning, when done under careful --
14 careful control is one of the best tools that we have for
15 reducing the intensity of these fires and their overall
16 air quality impacts.

17 So the Incident Air Monitoring Section has been
18 working on implementing a prescribed fire monitoring
19 program working with local air districts, including
20 Northern Sonoma and State agencies, tribal groups,
21 environmental advocates and other stakeholders. I think
22 this is an example of a really important and vital
23 partnership between the State and local air agencies to
24 increase the overall quality and quantity of air
25 monitoring for both the wildfires and the prescribed

1 burns, and, perhaps most important of all, to keep the
2 public informed during wildfire events, so that people can
3 take protective measures to the maximum extent possible.

4 So we appreciate very much your joining us at
5 this meeting and raising these issues. And we wish you
6 the best of luck and hopefully a speedy return to your
7 home.

8 MLD COMMUNITY AIR MONITORING BRANCH CHIEF STROUD:

9 Chair Nichols, this is Ken Stroud with the
10 Monitoring and Laboratory Division. And if I may
11 momentarily share my screen.

12 CHAIR NICHOLS: Yes.

13 MLD COMMUNITY AIR MONITORING BRANCH CHIEF STROUD:

14 It has an image of the resolution. We're very
15 appreciative of this recognition. And once again, our
16 thoughts are with the people of Sonoma and neighboring
17 counties during the current fires.

18 Chair Nichols, back to you.

19 CHAIR NICHOLS: Thank you, Mr. Stroud. I
20 appreciate that. Does any other member of the Board or
21 the staff wish to comment on this item?

22 All right. If not --

23 BOARD MEMBER BALMES: Actually, raised my hand.

24 CHAIR NICHOLS: Sorry, I don't -- wasn't able to
25 see it.

1 BOARD MEMBER BALMES: Okay.

2 CHAIR NICHOLS: Excuse me. Go ahead, yes.

3 BOARD MEMBER BALMES: Well, I would just say -- I
4 especially wanted to, well again, thank both our incident
5 team and the local air district for a really good job last
6 year with the Kincade Fire. I would just sort of remind
7 everyone that, you, know it's only August and actually our
8 worst fires over the last few years have been in the fall,
9 when we have high winds, and if the rain doesn't come
10 early. So this could really be a bad year, since it's
11 already -- we've already had the second and third worst
12 fires ever in terms of surface areas burned -- surface
13 area burned.

14 And in terms of the public being informed, I'm
15 trying to do my part. I've given 15 interviews in the
16 last week, media interviews. But I keep getting asked
17 questions by the media that suggest that people don't
18 really understand the air quality and risk to health
19 related to wildfires. So I think we need to do a better
20 job with our sister agencies in sort of a simple public
21 health informed message about how the public should deal
22 with poor air quality due to wildfire smoke.

23 CHAIR NICHOLS: I know there is an extensive
24 communications effort underway, but you can never
25 communicate too much. Unfortunately, people often don't

1 hear the message, even those who are directly involved in
2 the situation, until they've heard it many, many times.

3 So perhaps at the next Board meeting or even in
4 between, by way of a memo, Mr. Corey, you might just
5 update all the Board on some of the health -- specifically
6 health-oriented communications work that's going on around
7 the fires.

8 EXECUTIVE OFFICER COREY: Very good. Happy to do
9 that.

10 CHAIR NICHOLS: Okay. Thank you for that.

11 BOARD MEMBER TAKVORIAN: Chair Nichols, can I
12 say --

13 CHAIR NICHOLS: Yes.

14 BOARD MEMBER TAKVORIAN: Yes. Hi. Diane
15 Takvorian. I just wanted to also echo my support for this
16 resolution and so glad to hear that there was such a good
17 response from the District -- Air District as well as
18 CARB. I wanted to let you know, we talked about it a
19 little bit at the beginning of the meeting, that -- the
20 Navy ship fire that occurred in July. There seemed to be
21 some issues with incident response and air monitoring
22 during that fire. And I know that's different than a
23 wildfire.

24 But I wanted you to know that the 617 Committee
25 has requested CARB to take a look at the air monitoring

1 procedure, and maybe advise our District on that. And we
2 appreciate Mr. Corey's response to that and look forward
3 to seeing how we can improve that for the future. So, you
4 know, fires that impact people in dense urban areas as
5 well as wildfires are pretty important to be responsive
6 to.

7 So I just wanted to acknowledge that and thank
8 Mr. Corey for his responsiveness and look forward to
9 seeing what we can do to improve and then maybe those are
10 lessons learned that everyone can learn from and benefit
11 from.

12 CHAIR NICHOLS: I appreciate that comment. I
13 want to interject a moment here and ask the clerk offline
14 to see what you could do about the fact that the
15 hand-raising function does not appear to be working. So
16 for these last two comments by Board members, I had my
17 screen up to the participant list and I was not seeing a
18 hand raised. I do want to ask the Board members to use
19 that feature, if they can, because the easiest way for me
20 to call on you, and it automatically sorts you in order
21 also, is if -- is if we can all use that hand raise
22 function on Zoom. So I'm going to ask the Clerk to work
23 on that on my end as well, if you can send me a message
24 separately and let me know if there's something else I
25 need to do.

1 Are there any other Board members who wanted to
2 speak on this item?

3 Okay. Hearing none.

4 We'll turn to the first Board rulemaking item on
5 our agenda, which is number 20-8-1. This is the proposed
6 control measure for ocean-going vessels at berth.

7 And for members of the public who might wish to
8 comment, it's also time for you to click the raise-hand
9 button or dial star nine, so we can call on you when we
10 get to the public comment portion of the item.

11 Over the past few months, we've seen the economic
12 effects of the public health crisis continue to impact
13 both global trade and the shipping industry. And as we
14 look forward to reigniting our economy, when we are able
15 to look back on the current pandemic, we have to invest in
16 transitioning our system to a cleaner human-operated and
17 zero-emission approach.

18 The proposed control measure in front of us today
19 would build on the success of the existing At-Berth
20 Regulation by expanding the requirement for controls to
21 additional types of visits from currently included vessel
22 categories, as well as adding new vessel categories and
23 including more ports and terminals across the state.

24 The public health benefits to the port
25 communities that are already heavily burdened by air

1 pollution from port-related sources remains a critical
2 concern for us.

3 So Mr. Corey, would you please introduce this
4 item?

5 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.
6 Over several decades, CARB, local air districts, and
7 federal air pollution control programs have made
8 substantial progress towards improving air quality in
9 California. Despite this progress though, many
10 communities surrounding California's ports remains
11 significantly impacted by freight-related air pollution
12 just as you noted.

13 And in 2007, the Board approved the Airborne
14 Toxic Control Measure for ocean-going vessels at berth.
15 That regulation reduces emissions from container,
16 refrigerated cargo, or reefers, and cruise vessels while
17 docked at ports, six ports, across California and has been
18 highly successful.

19 In 2017, the Board directed staff to expand the
20 existing regulation to achieve additional reductions of
21 criteria pollutants and toxic air contaminants in
22 communities near ports, where residents are
23 disproportionately exposed to air pollution. This
24 proposal will achieve additional health benefits by
25 greatly increasing the number of vessels and terminals

1 required to reduce emissions while at berth. Reducing
2 port-related emissions helps to reduce localized cancer
3 risk and helps California meet federal clean air
4 standards, which require regions in the state with
5 unhealthful levels of the ozone, particulate matter, NOx,
6 and other key pollutants to develop State Implementation
7 Plans.

8 Today, staff is presenting the regulation to you
9 for your consideration and final vote. I'll now ask
10 Nicole Light Densberger of the Transportation and Toxics
11 Division to begin the staff presentation.

12 Nicole.

13 (Thereupon an overhead presentation was
14 presented as follows.)

15 TTD STAFF AIR POLLUTION SPECIALIST DENBERGER:

16 Thank you, Mr. Corey. Well, good morning, Chair
17 Nichols and members of the Board. During today's
18 presentation, we will present to you staff's finalized
19 proposal for the Control Measure for Ocean-Going Vessels
20 At Berth.

21 --o0o--

22 TTD STAFF AIR POLLUTION SPECIALIST DENBERGER:

23 As you're well aware, CARB has an existing
24 At-Berth Regulation governing emissions from container,
25 refrigerated cargo, and cruise vessels at berth, which has

1 been successfully implemented since 2014 and is achieving
2 an 80 percent reduction in emissions from regulated
3 vessels. The regulation has resulted in significant
4 investments in shore power at regulated ports throughout
5 the State and on over 500 vessels visiting these ports.
6 And since implementation of the regulation began, we've
7 seen emissions reductions from over 13,000 vessel visits.

8 --o0o--

9 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

10 While the regulation has seen reductions in NOx
11 and PM emissions, there are no additional measures on the
12 books to continue reducing the remaining health burdens
13 associated with ocean-going vessels at berth. The current
14 pandemic our country is facing has served to further
15 remind CARB staff of the risk that air pollution brings to
16 vulnerable Californians.

17 People suffering from asthma and other health
18 disorders may be more susceptible to illnesses like
19 COVID-19, particularly those with conditions that impact
20 the lungs. With many of California's ports and terminals
21 surrounded by densely populated areas and located within
22 close proximity to disadvantaged communities, further
23 reducing emissions from ocean-going vessels at berth is
24 perhaps more important than ever.

25 --o0o--

TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

Staff conducted extensive community and industry outreach throughout the rulemaking process, participating in over 250 engagements with stakeholders, including workshops in both Northern and Southern California, in-person meetings, phone conversations, site visits and vessel tours. We published the initial 45-day notice on October 15th, 2019, which included draft regulatory language and staff's Initial Statement of Reasons report, or ISOR as you may hear it called, and presented it to the Board at the December 5th, 2019 hearing.

Subsequent modifications, also called 15-day changes were released for public comment in March of this year. Staff then provided the Board with an update at the June hearing regarding the impacts seen by the shipping industry as a result of the current ongoing economic situation. This update was shortly followed by a second round of 15-day changes, which staff released in July for another round of public comments.

Throughout the course of this rulemaking effort, staff reviewed over 175 public comments received from both community advocates and industry stakeholders. All comments submitted during the three public comment periods associated with these rulemaking efforts will be formally responded to as part of staff's Final Statement of Reasons

1 Report, or FSOR, which will be released later this year or
2 in early 2021 after approval of the regulation with the
3 Office of Administrative Law.

4 --o0o--

5 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

6 As mentioned, we released a second set of 15-day
7 changes after our last discussion with you in June. And
8 this slide summarizes those changes. Staff adjusted the
9 implementation dates for container, reefer, cruise, and
10 ro-ro vessels on the understanding that by doing so,
11 minimal impacts are expected to the overall emissions
12 reductions achieved by the regulation. And staff also
13 extended the approval period for innovative concepts
14 projects from three years to up to five years in order to
15 provide increased compliance certainty to regulated
16 entities. And we also made a few definition and language
17 clarifications.

18 --o0o--

19 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

20 And here is a summary of comments we received in
21 regards to those changes. While the adjusted
22 implementation dates are generally appreciated by
23 industry, community members and environmental advocates
24 expressed some concern about lost emissions reductions
25 with this change. But because the overwhelming majority

1 of container, reefer, and cruise vessels are regulated
2 under the existing At-Berth Regulation, staff expects
3 minimal emissions reduction loss to occur.

4 The extension of the approval period for the
5 innovative concepts was also generally accepted, as long
6 as the emissions reductions achieved are real, verifiable,
7 and equivalent or in excess of what is required.

8 Several stakeholders also requested that the 2020
9 interim evaluation include all vessel types, not just
10 tanker and ro-ro vessels. CARB staff commit to assessing
11 the economic impacts and other concerns brought forward by
12 all regulated entities in the resolution in front of you
13 today.

14 Regarding incentives, staff understands the need
15 and desire for increased funding and are working
16 internally and with regulated entities to help connect
17 them with funding programs that may be available for
18 offsetting some of the costs of reducing emissions from
19 vessels at berth.

20 --o0o--

21 TTD STAFF AIR POLLUTION SPECIALIST DENBERGER:

22 Slide 6 shows a high level overview of the final
23 proposal as it stands today. Control requirements and the
24 "every visit" structure of the regulation would begin on
25 January 1, 2023 with container, reefer, and cruise

1 vessels. Ro-ro vessels and those tanker vessels visiting
2 Southern California terminals would follow beginning
3 January 1, 2025, then followed by tanker vessels visiting
4 Northern California terminals beginning January 1, 2027.

5 Terminal, port plan, and innovative concept
6 application due dates were adjusted in response to the
7 change in implementation dates. For advanced planning
8 purposes, these plans and applications will be due to CARB
9 staff by December 1, 2021, prior to the initial year with
10 control requirements.

11 This will enable staff to review and assess plans
12 and innovative concept applications prior to the first
13 implementation date to ensure that regulated entities are
14 on track for compliance.

15 Under this proposal, the currently regulated
16 fleets will remain under the existing regulation through
17 December 31, 2022, and limited provisions of the new
18 regulation, such as port and terminal plans and the
19 innovate concept application period, would begin prior to
20 control requirements for all vessel types. Reporting
21 requirements would also begin on January 1, 2023 for all
22 vessel types.

23 Vessel and terminal operators can elect to use
24 the innovative concept option as an alternative compliance
25 pathway if there are more cost effective ways in which

1 regulated entities can achieve equivalent or greater
2 emissions reductions as required by the regulation versus
3 directly reducing vessel at-berth emissions. Innovative
4 concepts could potentially include fleet-based averaging
5 or non-vessel based projects.

6 Staff also adjusted the time to connect to an
7 emissions control technology from one to two hours based
8 on information provided by CARB Enforcement staff. Staff
9 redefined the definition of a vessel visit in order to
10 address complications with the existing regulation that
11 prevent vessels from plugging in as soon as they're tied
12 to a berth.

13 The regulation also has an interim evaluation
14 scheduled for December 1, 2022, which will allow staff an
15 opportunity to assess the impacts of the ongoing economic
16 downturn to assess progress made in adopting control
17 technologies for use with tanker and ro-ro vessels, as
18 well as the status of landside infrastructure improvements
19 that may be needed to support emissions reduction at ro-ro
20 and tanker terminals.

21 The interim evaluation will include the
22 evaluation of port and terminal plans and other public
23 information provided to CARB, including terminal-specific
24 engineering evaluations, logistical considerations, public
25 engagement and independent studies. Staff will also

1 review control technologies for use with bulk and general
2 cargo vessels, and for ocean-going vessels at anchor and
3 potential requirements for these vessel types.

4 As mentioned, staff will publish a report by
5 December 1, 2022 as part of the interim evaluation and
6 will present the findings and any recommendations to the
7 Board in a public hearing.

8 --o0o--

9 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

10 The projected NOx reductions of 46 percent and
11 diesel PM reductions of 52 percent at full implementation
12 of staff's latest proposal are shown on slide 7. These
13 two pollutants are highlighted because of the importance
14 of reducing NOx to meet State Implementation Plan goals,
15 particularly in areas like the South Coast, and the need
16 to reduce cancer-causing diesel PM to lower near source
17 cancer risk for portside communities.

18 --o0o--

19 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

20 Staff's current proposal is expected to result in
21 significant health benefits with around a 55 percent
22 decrease in potential cancer risk.

23 --o0o--

24 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:

25 In addition to the reduction in potential cancer

1 risk, staff's proposal is also expected to result in 237
2 avoided premature deaths, reduced hospital visits and
3 emergency room visits, as well as a reduction in exposure
4 levels. For example, staff's health analysis for the
5 South Coast shows reductions in cancer risk to around 3.7
6 million residents, about 2.2 million of which are in
7 disadvantaged communities.

8 As we discussed with you in our previous
9 hearings, the monetized statewide health benefits outweigh
10 the cost of the regulation. And there are additional
11 health benefits associated with the emissions reductions
12 achieved by the proposal that are not currently monetized,
13 including elevated vulnerability and impacts in
14 disadvantaged communities, brain and lung health, cancer
15 risk, and birth outcomes.

16 There are also anticipated benefits from the
17 proposed regulation not directly related to health, as
18 highlighted here on this slide.

19 --o0o--

20 TTD STAFF AIR POLLUTION SPECIALIST DENBERGER:

21 While the direct compliance costs of the
22 regulation are high, the health benefits of the proposed
23 regulation outweigh the cost as seen here on slide 10.
24 And in looking at real cost for the regulation, so in
25 other words those costs that may be passed down to the

1 consumer, the total costs of the proposed regulation are
2 expected to be minimal on a per unit basis, for example,
3 less than one cent per gallon of fuel.

4 --o0o--

5 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER: A
6 Draft Environmental Analysis, or EA, was completed for the
7 proposed regulation and was released in October of 2019.
8 Staff determined that implementation of the proposed
9 regulation may have potentially significant indirect
10 impacts to some resource areas. However, these impacts
11 are mainly due to short-term construction-related
12 activities.

13 The Draft EA was released for a comment period of
14 at least 45 days, which ended on December 9th, 2019.
15 Staff prepared a final Environmental Analysis and written
16 responses to all comments received on the Draft EA and
17 posted them on our website this month.

18 --o0o--

19 TTD STAFF AIR POLLUTION SPECIALIST DENSBERGER:
20 Finally, staff recommends the Board adopt the
21 resolution, which includes certifying the Final EA,
22 including the written responses to environmental comments,
23 making the required CEQA findings and Statement of
24 Overriding Considerations, adoption of the proposed
25 regulation, and by directing staff to: Seek engagement

1 with local community groups or local AB 617 steering
2 committees when considering innovative concept strategies
3 for approval; to support human operated zero-emission
4 technologies; to continue engagement with the articulated
5 tug barge industry to best address the most appropriate
6 way to regulate these unique vessels; and to provide the
7 Board with annual updates regarding implementation and the
8 status of the shipping industry.

9 Staff must submit the regulatory package to the
10 Officer of Administrative Law later this year.

11 We thank you for your time today and welcome any
12 questions or comments you might have.

13 CHAIR NICHOLS: Thank you.

14 And I believe we can turn now to the members of
15 the public who had raised their hand. So the clerk will
16 please call the first few commenters.

17 BOARD CLERK SAKAZAKI: Thank you, Madam Chair.
18 We have 26 commenters who wish to speak on this item. If
19 you wish to verbally comment, please raise your hand or
20 dial star nine right now. I apologize in advance if I
21 mispronounce your name. So the first three speakers we
22 have are Bill Magavern, Christopher Cannon, and then Peter
23 Warren.

24 So, Bill, I have activated your microphone. You
25 can unmute yourself and begin.

1 MR. MAGAVERN: Good morning, Madam Chair and
2 Board members. I'm Bill Magavern with the Coalition for
3 Clean Air. And we've been working on this rule for many
4 years. And to use a nautical analogy, the rule has been
5 on a long voyage and it's time to steer it into port and
6 plug it in.

7 As your staff have reported, there has been a
8 robust and lengthy public process, that all interested
9 parties have been involved in. There have been the three
10 Board hearings, three official comment periods, five
11 workshops, many unofficial comments, and the staff, of
12 course, have met with everyone concerned, the Statement of
13 Reasons documents, the feasibility, and the cost
14 effectiveness of this proposal as well as health benefits
15 that we cannot afford to give up.

16 There's already been much discussion and
17 compromise. And in our opinion, some of the timelines for
18 compliance are too long, but we think overall, this is an
19 important rule, and we fully support it and urge you to
20 adopt it today.

21 We know that the current burdens of the exhaust
22 coming from ships docked at ports are not distributed
23 equally, that the deaths, hospitalizations, cancer risk,
24 asthma cases fall disproportionately on the low income
25 communities of color that are near our California ports.

1 And even if the multi-national oil companies who
2 profit from having their tankers at our ports were to
3 incorporate the costs of this rule into their products, it
4 would raise the price of a gallon of gasoline less than a
5 penny. Whereas, the benefits would far outweigh that and
6 would flow mostly to those people who are
7 disproportionately exposed to the toxic diesel exhaust
8 coming from those tankers.

9 So we see this proposal as an overdue expansion
10 to cover more vessels and more ports. And we urge you now
11 at the end of this long process to not delay, to go ahead
12 and approve this today, so that those expansions and those
13 protections can be put into place as soon as possible.

14 Thank you very much.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Christopher Cannon. I have
17 activated your microphone. You can unmute yourself and
18 begin.

19 MR. CANNON: Good morning, Board members. Chris
20 Cannon, Chief Sustainability Officer at the Port of Los
21 Angeles. First of all, your staff has worked closely with
22 the Port of Los Angeles staff and we're really grateful
23 for their willingness to engage on these issues,
24 especially during the unprecedented challenges of 2020.
25 We appreciate Nicole Light Densberger Angela Csondes, and

1 Bonnie Soriano, and, of course, Heather Arias who've
2 all -- they've been very professional. We haven't always
3 agreed on everything, but they've been very willing to
4 talk whenever we've wanted to reach out to them.

5 And they wanted -- they're very willing to work
6 through these issues. And so we very much appreciate them
7 and wanted to let you know that their professionalism is
8 very much -- very much a credit to the Air Resources
9 Board.

10 We remain concerned about some issues for ro-ros
11 and tankers. We're particularly concerned about the
12 timing issues. We still think that the technology for
13 commercialization of at-berth emissions control
14 technologies for these vessel categories is still very,
15 very early. And so the timeline of having requirements by
16 2025 for both of these is too soon. We think 2027 would
17 be better for roll-on roll-off ships, and we think really
18 2029 is better for tankers.

19 That being said, we support the idea of
20 connecting vessels to at-berth controls as part of our
21 Clean Air Action Plan. And the at-berth control concept
22 was born at the Port of Los Angeles. We want to see it
23 succeed. We just want to make sure there's time for the
24 technology in these particular vessel categories to become
25 commercialized and able to be deployed on a wide scale.

1 We also think and it was noted by staff that
2 there is a lot of money. The cost to do this will exceed
3 \$2 billion. We hope that the State can allocate money for
4 this for ports all up and down the State of California,
5 because this is not going to be an easy thing to do for us
6 to implement this and to install the infrastructure to
7 support these increased at-berth controls.

8 And finally, you mentioned the check-in in 2022.
9 We actually ask that you would do it more frequently than
10 that. As we've seen in recent weeks, as well as
11 throughout this pandemic, things come up that we're not
12 aware of, and it would be helpful for staff to be able to
13 evaluate whether the timelines are still on target or the
14 technology is still able to accomplish its objectives.

15 And so thank you for your time and thank you for
16 the opportunity to speak today.

17 BOARD CLERK SAKAZAKI: Thank you.

18 Our next speaker is Peter Warren. After Peter,
19 we have Catherine Reheis-Boyd, Lee Kindberg, and Bernie
20 Kotlier.

21 So, Peter, I have activated your microphone. You
22 can unmute yourself and begin.

23 MR. WARREN: Hi. Pete Warren. I speak for San
24 Pedro and Peninsula Homeowners Coalition and Indivisible
25 San Pedro. As residents of the diesel death zone, we

1 support implementing the At-Berth Rule update without
2 further revision or delay. They are overdue and strike a
3 compromise as laid out by Ms. Densberger. We are
4 concerned that long-time opponents of emission controls
5 have suddenly discovered COVID-19. Climbing a new
6 environment in an opaque future dictate rethinking the
7 proposals. Their cynicism and opportunism is
8 breathtaking. This new environment is killing people.
9 That is a certainty.

10 Rather than support delay, the pandemic
11 underscores the need for a tough regulation. That's
12 because Californians, whose health is damaged by goods
13 movement-driven pollution, those with lung, asthma, heart,
14 cardiovascular disease, high blood pressure are the very
15 people who are most susceptible to COVID and most likely
16 to die from it.

17 The current at-berth regulation has been
18 effective. The December proposals will save lives and
19 money, as well as provide significant -- the updated
20 proposals -- significant and widespread health benefits.
21 The answer to those who would use the pandemic to
22 undermine these rules is shame on you. It would be
23 particularly wrong-headed and disgraceful to delay the
24 original at-berth update, because of the pandemic, which
25 is not going away this year or next, perhaps not in our

1 lifetimes.

2 Secondly, there is no connection between the
3 proposed regulations and a feared decline in business at
4 the ports. You could cut emission rules entirely and it
5 would not fix the looming shipping recession, which is
6 caused by worldwide pandemic. Next is in defeating the
7 virus.

8 This cynicism from goods movement is to be
9 expected. They subscribe to disaster capitalism, which
10 exploits any catastrophe to externalized costs at the
11 expense of people's health. Environmental justice demands
12 going ahead timely with the current proposals.

13 To be clear, the public health benefits outweigh
14 the costs to industry. This is an environmental justice
15 moment. And to ignore it would do further injury to
16 millions of Californians.

17 Finally, as you deliberate on behalf of the
18 health and economy of California, that for the past five
19 months, dozens of tankers are anchored off SoCal ports
20 spewing pollution without needed mission. We, living in
21 the diesel death zone, breathe this pollution daily. We
22 ask for a strong At-Berth Rule, because clean air is our
23 right.

24 Thank you for your consideration. Thank you for
25 all your work. Thank you to the staff.

1 BOARD CLERK SAKAZAKI: Thank you. Our next
2 speaker is Catherine Reheis-Boyd. Catherine, I have
3 activated your microphone. You can unmute yourself and
4 begin.

5 MS. REHEIS-BOYD: Yes. Thank you. Good morning,
6 Chairman Nichols, members of the Board. My name is
7 Catherine Reheis-Boyd and I'm President of the Western
8 States Petroleum Association. I'm here representing the
9 tanker and related marine terminals that are subject to
10 this regulation. And I just want to say up front that we
11 have been and continue to be fully supportive of achieving
12 emission reductions in port communities, as long as the
13 measures have been subject to proper feasibility analysis
14 to ensure operability, cost effectiveness, safety to
15 mariners, and communities alike.

16 I wish we were at a different place after
17 submitting nine sets of comments, multiple facility tours,
18 and many, many discussions. Finalizing this rule without
19 addressing feasibility and critical safety risks is just
20 simply unacceptable. The amendments must be revised to
21 require an assessment of feasibility and safety before
22 tanker capture and control or electrification is required
23 not after.

24 Throughout this entire rulemaking, we have been
25 urging staff to conduct a feasibility study with us

1 concerning the viability and safety of installing capture
2 and control and/or electrification systems for use with
3 tankers, and to assess the results of this study before
4 imposing requirements on tanker vessels. A feasibility
5 study is essential to ensure that severe safety and
6 environmental risks are avoided.

7 Additionally, the deadlines in the regulation are
8 unreasonable and too compressed giving the uncertainties
9 and concerns related to safety and feasibility. They were
10 moved up two years earlier. Finally, the regulation does
11 not provide a true alternative to compliance. The
12 proposed innovative concept provisions offer little
13 incentive for companies to make significant investments in
14 emission reductions that would provide at best only
15 temporary relief from the primary at-berth requirements.
16 The provisions disincentivize funding by stranding
17 investment and creating significant compliance risks.

18 We also believe the process continues to ignore
19 the real-world impacts on the future of the tanker
20 industry, and its future baseline emissions, and has not
21 accounted at all the actual findings of CARB's CE-CERT
22 study that tankers emit far less NOx and PM than staff
23 estimates. California law requires staff to consider
24 these things.

25 We have been consistent in our comments that the

1 proposed at-berth amendments cannot safely and responsibly
2 move forward in their current form, as applied to tankers.
3 That remains our position.

4 The safety of our members, employees, the tanker
5 vessel operators, and the communities is non-negotiable.
6 So we urge CARB to defer adoption of the reg and instead
7 direct staff to review and revise the proposed reg to
8 address the current feasibility and critical safety risks.
9 We stand ready to assist in addressing these issues, so we
10 can successfully achieve the remission reductions that
11 this rule intends.

12 Thank you.

13 BOARD CLERK SAKAZAKI: Thank you.

14 Our next speaker is Lee Kindberg. Lee, I have
15 activated your microphone. You can unmute yourself and
16 begin.

17 DR. KINDBERG: Thank you and good morning.

18 I'm Lee Kindberg, head of environment and
19 sustainability for MAERSK in North America. Thank you for
20 this opportunity to comment today.

21 MAERSK container vessels make over 500 calls per
22 year in California ports and have complied with the
23 current At-Berth Regulation since 2010. We greatly
24 appreciate your thoughtful discussions at the June meeting
25 and the Board's direction and staff's hard work to

1 continue the compliance requirements of the existing
2 regulation until January 2023.

3 The current Shore-Power Rule has successfully
4 reduced emissions. And 2020 is the first full year of
5 implementation of that current regulation. Stability in
6 requirements for this difficult year and the coming two is
7 helpful and does not increase emissions.

8 Now, this timing adjustment also allowed CARB
9 staff to address timeline inconsistencies, move past the
10 worst of the COVID-19 disruptions, and conduct a thorough
11 interim review. We are ready to work with CARB staff and
12 other stakeholders over the next two years to identify and
13 address practical issues to achieve a smooth transition.

14 Issues may include: Fleet averaging concepts
15 that have been very successful in the existing rule;
16 addressing infrastructure and alternative technology
17 availability; and looking to the future as zero-carbon
18 technologies and fuels are developed and implemented for
19 vessels.

20 So thank you again for this opportunity to
21 comment on the proposed regulatory language and thank you
22 very much to staff for their very long hard work on this
23 rule.

24 BOARD CLERK SAKAZAKI: Thank you. Our next
25 speaker is Bernie Kotlier. After Bernie, we have Heather

1 Kryczka, Morgan Caswell, and Mallory Warhurst.

2 So, Bernie, I have activated your microphone.
3 You can unmute yourself and begin.

4 Bernie Kotlier, are you there?

5 Okay. We will skip Bernie for one second.

6 SO Heather Kryczka. I have activated your
7 microphone. You can unmute yourself and begin.

8 MS. KRYCZKA: Good morning. My name is Heather
9 Kryczka and I'm with the Natural Resources Defense
10 Council. These comments are made on behalf of NRDC, the
11 Sierra Club, and San Pedro Peninsula Homeowners Coalition,
12 all members of the Impact Project Coalition.

13 Our coalition is based in Southern California and
14 includes organizations representing communities impacted
15 by the Ports of Los Angeles, Long Beach, and Hueneme. It
16 is critical that the Board pass the At-Berth Rule today to
17 clean up ship pollution at California ports. This is a
18 landmark rule that will mandate pollution reductions at
19 more ports than ever before and will expand the categories
20 of ships that are regulated now covering oil tankers and
21 ro-ro vessels for the first time.

22 First, this rule will save lives. CARB's
23 analysis shows that the rule will save hundreds of
24 Californians from premature death, hospital admissions,
25 and emergency room visits. It will reduce cancer risk for

1 millions of residents in the L.A. and Long Beach area
2 alone. And respiratory health improvements are needed
3 today more urgently than ever before.

4 The COVID-19 pandemic is demonstrating how those
5 who are exposed to poor air quality are disproportionately
6 vulnerable to health complications, further exacerbating
7 environmental injustice in port-adjacent communities.

8 Second, this rule will save money. The public
9 health benefits total over \$2.3 billion far outweighing
10 the cost to industry. The rule will also reduce
11 greenhouse gas emissions and provide benefits for the
12 climate. This rule builds on years of demonstrated
13 shore-power utilization at the Ports of L.A. and Long
14 Beach. At-berth emissions reductions can and should be
15 achieved as quickly as possible. And yet, the final rule
16 represents a compromise with industry, pushing back
17 compliance deadlines to give industry more time to phase
18 in technologies.

19 This rule must pass today, as port communities
20 cannot afford anymore delay. Finally, this rule is a
21 critical step forward, but more work remains to be done.
22 We urge CARB to work closely with community and
23 environmental justice stakeholders in the rule's
24 implementation. It will be critical to ensure that the
25 rule leads to transparent and accurate reporting and

1 effective enforcement mechanisms.

2 In addition, future action is needed to address
3 emissions from ships at anchor in California harbors.

4 Thanks for your consideration.

5 BOARD CLERK SAKAZAKI: Thank you. Our next
6 speaker is Morgan Caswell. Morgan, I have activated your
7 microphone. You can unmute yourself and begin.

8 MS. CASWELL: Good morning, Chair Mary Nichols
9 and CARB Board members. My name is Morgan Caswell and I
10 am the manager of Air Quality Practices for the Port of
11 Long Beach. We appreciate this final opportunity to
12 comment on the proposed Control Measure for Vessels At
13 Berth. Today's Board hearing is a monumental event. The
14 CARB Board will consider a rulemaking, which, if passed,
15 would be the first of its kind to control ro-ros and
16 tankers at berth and would provide the certainty needed to
17 incentivize rapid technology development to meet stringent
18 deadlines.

19 The emission reductions targeted by this rule are
20 needed to ensure progressive health benefits in our port
21 communities. Today is also the pinnacle of many years of
22 hard work performed by CARB staff. They have spent
23 hundreds, if not thousands, of hours engaging with all
24 stakeholders and adjusting their proposals based on new
25 data.

1 We have appreciated the opportunity to establish
2 close working relationships. The port strongly supports
3 further reduction of at-berth emissions to reduce criteria
4 pollutants and improve public health in near-port
5 communities.

6 We also commend CARB for the recent 15-day
7 changes, which extend the ro-ro timeline in recognition
8 that more time will be needed and allows the regulated
9 fleet to remain under the current rule until 2023. While
10 we fully support additional at-berth controls, we continue
11 to be concerned with the cost required to implement this
12 rule, the aggressive compliance timelines for tankers and
13 ro-ros, and the current lack of available and proven
14 technologies to meet the required emission reductions, all
15 moving forward at a time when the maritime industry is
16 severely impacted by an ongoing trade war and the global
17 pandemic.

18 The port strongly believes the implementation
19 timeline of 2025 for ro-ros and tankers will be extremely
20 challenging to achieve, and significant State funding will
21 be required to implement the rule. Thank you again for
22 your consideration of our comments.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Our -- let's go back to Bernie Kotliar for one
25 second. Bernie, I have activated your microphone. Are

1 you with us?

2 MR. KOTLIER: I hope so. Can you hear me?

3 CHAIR NICHOLS: We can hear you.

4 MR. KOTLIER: Okay. Thank you very much.

5 Good morning, Chair Nichols and members of the
6 Board. My name is Bernie Kotlier and I'm the Executive
7 Director of the California IBEW/NECA Labor Management
8 Cooperation Committee.

9 We strongly support the Control Measure for
10 Ocean-Going Vessels At Berth. The International
11 Brotherhood of Electrical Workers and the National
12 Electrical Contractors Association, LMCC, believe it is
13 essential that the At-Berth Rule is adopted now.

14 Thank you very much.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Mallory Warhurst. After
17 Mallory, we have a phone number ending in 332, then Cam
18 Spencer, and then Jesse Marquez.

19 So Mallory, I have activated your microphone.
20 You can unmute yourself and begin.

21 MR. WARHURST: Hi and good morning. My name is
22 Mallory Warhurst. I'm from Long Beach and I'm here today
23 to express my full support for the At-Berth Regulation.
24 I'm a student, and as I've seen growing up in learning,
25 and as I'm listening to these other testimonies, it is

1 clear that poor air quality and smog are all really common
2 things impacting communities all over Southern California.
3 And this is the case largely due to the goods movement
4 industry and especially impacts communities near large
5 ports.

6 As a young person, of course, I am extremely
7 conscious and concerned about the future of our world in
8 the context of climate change and environmental impacts.
9 But what really worries me, and angers me, and what I care
10 about is the fact that these environmental impacts are
11 happening right now and they're impacting marginalized
12 communities extremely unequally.

13 This terrible air quality, these health issues,
14 all of the things we've been hearing about, this is what's
15 going on right now. And these impacts are vastly
16 disproportionate. Being from Long Beach, I can see these
17 inequalities so clearly. West and North Long Beach
18 directly border the Port of Long Beach and Los Angeles,
19 which thousands of ships stop at every year immensely
20 impacting the nearby air and water quality.

21 West and North Long Beach are predominantly
22 communities of color, so the burden of this terrible air
23 quality and the resulting health impacts it causes are
24 beared by these communities at an extremely
25 disproportionate rate.

1 So passing this At-Berth Regulation isn't just an
2 action that supports reducing climate impacts for the
3 future generally, it's an action that specifically
4 supports marginalized communities all over Southern
5 California from facing further environmental racism and
6 injustice.

7 While I know we're in the midst of a global
8 Coronavirus pandemic, I think now more than ever we can
9 see how interconnected all of our systems are, from public
10 health, to infrastructure, to the environment, and the air
11 we breathe. All of these things influence and impact one
12 another. And that's why it's so imperative that we begin
13 to take action and build a better future right now.

14 This At-Berth Rule is a step in that right
15 direction, and that is why I fully support the rule and
16 urge the California Air Resources Board members to vote
17 yes on this measure.

18 I thank you all so much for your time.

19 BOARD CLERK SAKAZAKI: Thank you.

20 Our next speaker is a phone number ending in 322.
21 I have activated your microphone. Can you please state
22 your name for the record?

23 Hello? Phone number ending in 322, you'll need
24 to unmute yourself.

25 Okay. Let's go to our next commenter. Cam

1 Spencer. Cam, I have activated your microphone. You
2 can -- oh, sorry. One second. Phone number ending in
3 322, are you there?

4 MS. ROSE: Hi. Sorry. Yes. I just unmuted.
5 Can you hear me?

6 BOARD CLERK SAKAZAKI: We can.

7 MS. ROSE: Great. Hello. My name is Madeline
8 Rose and I'm calling in on behalf of Pacific Environment.
9 So good morning to the Chair and to the Board members. My
10 name is Madeline. I'm the Climate Campaign Director for
11 Pacific Environment. We are California's only
12 environmental nonprofit organization with consultative
13 status at the International Maritime Organization, where
14 we worked for over a decade to advocate for various
15 international measures to clean up the shipping industry's
16 pollution.

17 I'm calling in today to urge a yes vote for the
18 expanded At-Berth Measure by the CARB Board today. And
19 while I affirm, and originally planned to speak to the
20 public health benefits raised already by colleagues from
21 the Coalition for Clean Air, NRDC, and more, I just
22 thought I would speak to the concerns raised about
23 technology and feasibility so far on this call.

24 And I want to flag a couple of points. As the
25 Board well knows as a result of CARB's leadership in

1 passing the world's first at-berth standards, that China
2 has since passed national standards that mirror the CARB
3 rule and require shore-power compliance for all ports in
4 Chinese ports. It's not as stringent of a rule, but it
5 nevertheless is significantly increasing the investment in
6 shore-power technology.

7 In addition, the European Union is now working on
8 a slate of regulations that would again mirror and
9 complement the ambition of the California measure under
10 consideration. And the European Union is working to pass
11 a rule that would require 100 percent zero emissions or
12 absolute zero emissions at berth by all vessels calling at
13 all European Union ports by 2030.

14 In addition, a global coalition of government is
15 currently working at the IMO to negotiate a global
16 shore-power/at-berth standard that could help, you know,
17 increase the demand for compliance at all ports around the
18 world.

19 So all that is to say, while I fully appreciate
20 the concerns particularly raised today by California's
21 largest ports, that there -- you know, there are concerns
22 with technology and feasibility, you know, the shipping
23 industry is rapidly pursuing a transition to zero-emission
24 fuels, to zero-emission infrastructure, to zero-emission
25 retrofits, and California's At-Berth Rule is a --

1 BOARD CLERK SAKAZAKI: About thirty seconds.

2 MS. ROSE: -- step in the right direction. So I
3 just want to say that some of these concerns and the
4 technology and feasibility issues we expect to be
5 addressed. So thank you and thank you for your time.

6 BOARD CLERK SAKAZAKI: Thank you. And apologies
7 for the confusion on calling out that number.

8 Our next speaker is Cam. You can unmute yourself
9 now and begin your testimony.

10 MR. SPENCER: Good morning, Honorable CARB Board
11 members. My name is Cam Spencer with the Port of Hueneme.
12 Thank you for working with us to achieve emissions
13 reductions of more than 80 percent over the past ten years
14 with cutting edge ZEV technologies. We look to your
15 leadership to continue to foster even greater results.
16 For this purpose today, we join many of our fellow ports,
17 labor, and stakeholders to ask that this new at-berth
18 policy be driven through consensus-built data, embracing
19 science and assessing the very real economic impacts.

20 We ask that the two-year interim review of this
21 regulation include a data-driven analysis from an
22 industry-respected economist jointly chosen by you, the
23 Board, and the maritime industry together to ensure
24 certification and shared trust in that data and impacts
25 they conclude.

1 We also ask you to commit to identifying a
2 specific funding source. Our genuine desire is to clean
3 our air. And this depends on access to significant
4 funding. Projects range in the very high millions. And
5 our annual port budget cannot absorb these costs alone.
6 This is especially critical as we face so much economic
7 hardship with the pandemic and so many jobs at stake.

8 We were just informed our project proposal to
9 capture air emissions from ro-ro vessels, a technology
10 which this very reg calls for, would be technically
11 ineligible for Carl Moyer and VW mitigation funding. We
12 were further informed we are precluded from this funding
13 as we are not technically in a disadvantaged community
14 according to the CalEnviroScreen 3.0 map, even though we
15 reside in the most economically-challenged area in Ventura
16 County, facing 26 percent poverty, and are within just one
17 mile of the CalEnviroScreen map designation.

18 We respectfully request you help us secure this
19 funding with waivers and/or other potential solutions. We
20 will provide further details supporting this request in a
21 written letter to follow.

22 Thank for your consideration.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Our next speaker is Jesse Marquez. After Jesse,
25 we have Will Barrett, Richard Sinkoff, and Erin Rodriguez.

1 So Jesse, I have activated your microphone. You
2 can unmute yourself and begin.

3 MR. MARQUEZ: Good morning. My name is Jesse
4 Marquez. I'm the Founder and Executive Director of the
5 Coalition for a Safe Environment in Wilmington. I have
6 lived all my life in Wilmington where the Port of Los
7 Angeles is located and our neighbor, the Port of Long
8 Beach.

9 We are in support of the amendments to the rule
10 for the At-Berth Regulation of ships. However, we do have
11 some concerns that the rule still needs to have some
12 clarifications.

13 One of the big concerns that we have is that we
14 need CARB to establish a technology certification process,
15 which means you have to have a standardized application
16 process, a standardized review process, verification the
17 applicant owns the patents or the rights to the
18 technology. You have to have standardized test validation
19 procedures and format, a standardized approval process,
20 but it also has to be a little bit flexible, because in
21 some cases, we need the regulation to be able to approve a
22 technology for a subclass.

23 An example of that is that if we're talking about
24 a zero-emissions Class 8 drayage truck, we have trucks for
25 the past five years that can do short hauls that are all

1 electric and zero emission. However, they are still in
2 the infancy of being able to reach long distance long
3 hauls of 300 miles or more.

4 So we believe that CARB should have a method, and
5 a process, and a procedure, so that a particular truck can
6 be certified for short hauls. For example, the ICTF
7 terminal in Wilmington, and Carson, and West Long Beach is
8 less than four miles from the Port of L.A. So there are
9 approximately eight zero-emission trucks right now that
10 can service that every day and eliminate thousands of
11 trucks from going onto the freeway. So that is one
12 example.

13 A second example would be is that the rules also
14 allow for certain ship categories to be approved like
15 immediately versus on the long term. Staff has been
16 promoting that there be an emission control strategy.
17 Well, the problem with the strategy is the philosophy.

18 What we want to see is a clearly defined program
19 that must include some goals, some objectives, and
20 measurable metrics. There must be transparency in the
21 decision-making process. There must be an opportunity for
22 public review of all data developed and in the
23 certification process. And that there must be a method
24 where the public can also request an investigation if
25 there are some concerns that they have.

1 So that the public and Board members understand,
2 there are two approved technologies, electric shore power
3 and a ship emissions control technology. The AMECS system
4 developed by AEG and ACTI has been in existence over ten
5 years. It's already certified. The AMECS technology has
6 been already used on over 275 ships. It exists and should
7 now be part, a requirement, and mandatory for all ships.

8 BOARD CLERK SAKAZAKI: Thank you.

9 MR. MARQUEZ: No exemptions.

10 Thank you.

11 BOARD CLERK SAKAZAKI: Thank you.

12 Our next speaker is Will Barrett. Will, I have
13 activated your microphone. You can go ahead and begin.

14 MR. BARRETT: Thank you, Ryan. I'm Will Barrett
15 with the American Lung Association. The American Lung
16 Association has engaged with the Board and staff over the
17 past few years of multiple workshops and hearings on this
18 rule and we strongly support adoption today.

19 The initial regulatory impact assessment for the
20 rule noted, and I'll quote "Emissions from port operations
21 pose an unacceptable health risk association". And our 20
22 health partners who have engaged in this rulemaking
23 clearly agree.

24 At its core, we view your vote on this rule as a
25 stark choice. Without the rule, these unacceptable health

1 and cancer risks to port communities grow. By adopting
2 the rule, millions of Californians will see their cancer
3 risks greatly reduced. The rule will prevent hundreds of
4 premature deaths associated with ship pollution. And the
5 health benefits of the rule exceed the cost of compliance.
6 That's despite, even as noted in the presentation, the
7 full range of health benefits of this rule are not
8 captured in the economic evaluation.

9 For all of these reasons, we've expressed our
10 strong support for the rule becoming even more health
11 protective over time. While we're disappointed with the
12 extension of compliance time frames following the June
13 hearing. We remain in strong support of the rule and its
14 contributions to meeting our health protective air quality
15 standards.

16 The final proposal extends compliance time
17 frames, provides even more generous flexibility provisions
18 to industry, and sets in place a formal program review to
19 allow for adjustment as the program moves forward. We
20 urge the Board really to adopt the rule today and to
21 carefully monitor the implementation, especially around
22 the innovative concepts provisions to ensure that these
23 are truly real in excess -- in excess emission reductions.
24 And we strongly support the coordination of these concepts
25 with AB 617 community groups.

1 We believe it's time for the Board to approve
2 this rule following the extensive public comment period,
3 outreach, and input gathering that the Board and staff
4 have done to really address these unaccess -- unacceptable
5 levels of pollution facing our portside communities.

6 The time to act is now and we urge your strong
7 support and your vote on this rule today.

8 Thank you very much.

9 BOARD CLERK SAKAZAKI: Thank you.

10 Our next speaker is Richard Sinkoff. Richard, I
11 have activated your microphone. You can unmute yourself
12 and begin.

13 Richard Sinkoff, are you there?

14 You'll need to unmute yourself if you're there.

15 Okay. Let's go to our next commenter, Erin
16 Rodriguez. Erin, I have activated your microphone.

17 MS. RODRIGUEZ: Thank you. Erin Rodriguez with
18 Union of Concerned Scientists. I want to say thank you to
19 the Board and staff for all their hard work on getting the
20 rule to this point. We support the At-Berth Rule and
21 believe it is critical to reduce diesel pollution.

22 Reducing emissions from vessels at berth is
23 critical for reducing the health and well-being of
24 communities, particularly those near ports, like L.A.,
25 Long Beach, and West Oakland. We know ocean-going vessels

1 have a disproportionate impact on PM NOx. And for all
2 those reasons we urge you to adopt the rule today and
3 protect communities living near these ports.

4 Thank you.

5 BOARD CLERK SAKAZAKI: Thank you. Let's go back
6 to Richard. Are you there, Richard?

7 Okay. Our next three speakers are Janet Rogers,
8 Thomas Jelenic, and Francis Yang.

9 Janet, I have activated your microphone. You can
10 unmute yourself and begin.

11 MS. ROGERS: Hello. I'm Janet Rogers with the
12 Embarcadero Coalition of San Diego. I'm concerned about
13 the two hours for cruise ships to connect to shore power
14 after ready-to-work and the one hour to run engines before
15 disconnecting cruise ships in this role.

16 We're a high-density residential community with a
17 significant number of seniors living 800 feet from the
18 cruise ship terminal. There are 40,000 residents
19 downtown. You keep reminding us of the cancer and
20 numerous other health risks from these toxic fumes. Since
21 we're last Board -- since your last Board meeting, CARB
22 staff and the staff in the Maritime Division of the Port
23 of San Diego have provided us additional information. I
24 have given you written comments, so that you can see their
25 input.

1 Board staff clarified the ready-to-work and
2 connection process for cruise ships. Normally,
3 ready-to-work only takes 20 to 40 minutes. After
4 clearance, electricians, shore -- longshoremen and the
5 ship's engineers will coordinate the connecting to shore
6 power. The process takes approximately 15 minutes. The
7 proposed rule is for two hours after ready-to-work
8 clearance. This is excessive and needlessly exposes us to
9 toxins. When everything goes well from first line, shore
10 power connection can be completed in as little as 45
11 minutes.

12 CARB staff calculated information for us from the
13 San Diego data and found that 69 percent of cruise ships
14 connect in less than one hour, including ready-to-work.
15 Given this information, please ask staff to determine the
16 actual time taken at various ports for cruise ships to
17 connect to ground power after ready-to-work and the time
18 needed to connect to engines before disconnecting.

19 If the information coincides with the information
20 currently available, please then have CARB reconsider
21 these rules. In the 2022 interim review, change the
22 connection time after ready-to work to a half an hour from
23 two hours. That is double the time it takes.

24 In previous discussions with our port, they told
25 us that the ships only need about a half an hour to

1 disconnect. So in 2022, if that holds true, change the
2 time to run the engines before disconnecting to a half an
3 hour from one hour.

4 Thank you for working to clean our air and reduce
5 our cancer risk from toxic chemicals.

6 Thank you.

7 BOARD CLERK SAKAZAKI: Thank you. Our next
8 speaker is Thomas Jelenic. Thomas, I have activated your
9 microphone. You can unmute yourself and begin.

10 MR. JELENIC: Good morning, Chair Nichols and
11 CARB Board members. My name is Thomas Jelenic with PMSA.
12 PMSA represents ocean carriers and marine terminal
13 operators on the U.S. west coast. For the past five
14 years, PMSA has worked with CARB staff to successfully
15 implement the current At-Berth Rule, which, as you all
16 know, is the first and only rule of its kind anywhere in
17 the world.

18 Our members have spent billion of dollars
19 implementing the existing rule and today are successfully
20 complying. And between this rule and cleaner -- cleaner
21 fuels, we are reducing DPM emissions by 95 percent from
22 container and cruise vessels at berth in California.

23 Through many iterations, the proposed rule has
24 improved with time. However, there are still a number of
25 issues that need to be resolved in order for the proposed

1 revisions to the current At-Berth Rule to be successful.

2 For that reason, PMSA appreciates that the
3 existing regulated fleet will continue to operate for the
4 next two years under the existing rule's strictest
5 requirements that only just phased in and became effective
6 only eight months ago under the existing U.S. EPA waiver.

7 As an example of an issue, we appreciate CARB
8 staff's commitment to use the innovative concepts
9 provision to continue a fleet averaging approach for the
10 existing regulated fleet. Today, it is not clear what
11 mechanisms and metrics will be involved. But during the
12 next two years, PMSA will continue to work with CARB staff
13 to address this and other identified issues in the
14 proposed rule.

15 Continued collaboration will allow industry and
16 CARB to ensure that existing emission reductions are
17 preserved while maintaining flexibility for a global
18 industry.

19 Thank you for your time.

20 BOARD CLERK SAKAZAKI: Thank you.

21 Our next speaker is Francis Yang. But before
22 Francis, I want to go back to Richard Sinkoff.

23 Richard, I have activated your microphone. You
24 can unmute yourself and begin, if you're there.

25 MR. SINKOFF: Yes, good morning. Good morning,

1 Chair Nichols, and CARB Board members, and CARB staff. My
2 name is Richard Sinkoff. I'm the Director of
3 Environmental Programs and Planning at the Port of
4 Oakland. On behalf of the Port of Oakland Board of Port
5 Commissioners and Executive Director Danny Wan, I want to
6 express our appreciation for the opportunity to comment on
7 the proposed control measure.

8 We've submitted a detailed letter today. I'll
9 highlight our major points here.

10 First, the Port of Oakland is very supportive of
11 shore power. Our plug-in rates at Oakland have been
12 consistently higher than the existing regulation requires,
13 since the program's inception. The port's overall plug-in
14 rate for 2019 for the regulated fleet was 84 percent and
15 our July 2020 rate within the COVID period was also 84
16 percent. So we're holding steady and working diligently
17 towards higher plug-in rates.

18 Second, I'd like to speak to public stakeholder
19 engagement. The port sees itself as a valuable resource
20 to CARB in operational technological feasibility of the
21 At-Berth Regulation. Over the last many years, we've
22 developed expertise with data and knowledge of how the
23 shore-power regulation works. And we urge CARB to
24 continue to see the Port of Oakland, in fact, the entire
25 goods movement industry, as a valuable partner and source

1 of pragmatic insights and solutions as we moved forward
2 with this rule and other rulemaking.

3 In that vein, the Port of Oakland wishes to
4 suggest improvements to the engagement process,
5 specifically responding to comments. The port has been
6 highly involved. We submitted seven letters with an
7 eighth today, but we haven't received responses to
8 comments except for one letter, which doesn't meet for our
9 standard of rigorous meaningful engagement.

10 And then finally, regarding details of the
11 proposed control measure, the port appreciates the
12 two-year delay in containership regulation. We look
13 forward to using the two years to work with CARB staff to
14 improve the regulation, specifically adding fleet
15 averaging as an allowable innovative concept and creating
16 rolling entry points for innovative concepts, instead of a
17 single deadline of December 1st, 2021.

18 Thank you again to CARB staff for your hard work,
19 to the CARB Board for your leadership, and for the
20 opportunity today to speak and to continue to work with
21 you and your staff.

22 BOARD CLERK SAKAZAKI: Thank you.

23 Our next speaker is Francis Yang. After Francis,
24 we have David Yow, Joy Williams, and Zorik Pirveysian.

25 So Francis, I have activated your microphone.

1 You can unmute yourself and begin.

2 MR. YANG: Good morning, everyone. My name is
3 Francis Yang and I'm an organizer with the My Generation
4 Campaign.

5 We've needed this At-Berth Regulation for a very
6 long time. Although, we're happy that this rule is
7 finally being considered, millions of lives have already
8 been affected and even some are lost. We're urging you to
9 vote for this rule now, but keep in mind these emissions
10 reductions still won't kick in for another couple years.
11 That's more time that ships get to continue to pollute our
12 air. That's more time for the same frontline communities
13 to have to wait to breathe.

14 To say that the ports and shippers can't afford
15 this regulation at this specific time is ridiculous.
16 We've needed emissions reductions far before COVID, or the
17 latest trade wars, or whatever they might make up, because
18 the same people have been living in these same
19 neighborhoods this entire time.

20 The goods movement have built their empires off
21 the lungs of black and brown communities. They've
22 externalized all their costs off the health of people.
23 But it's not just about cost, right? It's also equally
24 about value. Do we really value the lives of people's
25 health and well-being more than the profit of a few?

1 The goods movement industry will constantly say
2 we're for this, we're called the green port, yada, yada,
3 yada. But in reality, all they're looking at is their
4 numbers. They're not actually caring about the people who
5 are being affected, which are the people who are dying.
6 And it's not like they're going to be paying for the
7 medical bills.

8 Again, we've needed this at-berth regulation for
9 far too long. We need this At-Berth Regulation that's
10 really going to prioritize people and not profit. So
11 CARB, please, please, please, vote on a strong At-Berth
12 Regulation. We need this.

13 Thanks so much.

14 BOARD CLERK SAKAZAKI: Thank you.

15 Our next speaker is David Yow. David, I have
16 activated your microphone. You can unmute yourself and
17 begin.

18 MR. YOW: Great. Thank you, Chair Nichols and
19 Board members. I'm David Yow with the Board of San
20 Diego -- Port of San Diego. Thank you and your staff for
21 the hard work you have poured into this over the last few
22 years. We have been pleased to have a seat at the table
23 and work with you on making this work.

24 A good regulation has always been what we want to
25 see. And COVID-19 hasn't changed any of that, but it has

1 changed what we at the port can bring to the table to get
2 the job done. To help us successfully comply some simple
3 steps would make this regulation work better as compliance
4 gets underway and protect the implementation from external
5 complications.

6 First, a solid interim evaluation will include a
7 data-driven economic assessment of how COVID's impacts are
8 hitting this economic sector, engage the recovery
9 necessary to support the new investments the regulation
10 requires. This lets you turn on the headlights, so you
11 can make sure we're still driving on the road and verifies
12 that enough economic activity has returned to support
13 necessary infrastructure investments.

14 A thorough economic assessment can give you the
15 visibility you need and help us avoid unintended
16 consequences and losing more jobs in this the downturn.

17 Interesting fact, for the Port of San Diego,
18 maritime business is responsible for only about a quarter
19 of our revenue, and that's because the vast majority comes
20 from hospitality and visitors serving waterfront
21 activities. And as you know, those have all taken the
22 worst hit in this -- in this downturn. And that's how
23 support ourselves at the port and why we've lost 35 to 40
24 percent of our revenue since the COVID pandemic hit. The
25 revenues are definitely not back to normal. This is a

1 slow recovery and a strong regulation needs to take that
2 recovery into account.

3 Quickly, a second way to shore up the
4 regulation -- pardon the pun -- is to accept measurable
5 good faith efforts demonstrated by ports as compliance
6 with the final regulation, such as formal approval of the
7 project, project funding, project entitlements. Other
8 verifiable objectives that have confirm new construction
9 phases are beginning.

10 And keep in mind, in that process, we have to go
11 through CEQA, Army Corps of Engineers permitting as we
12 implement these regulations and those can be impacted by
13 external factors way outside of our control.

14 So a final suggestion. Use your authority to
15 establish a port infrastructure fund to facilitate upfront
16 investments that we know are required for large scale
17 capital projects.

18 And thank you. Thanks for your partnership. We
19 aim to comply and just need your help to make this
20 regulation work.

21 Thanks again.

22 BOARD CLERK SAKAZAKI: Thank you.

23 Our next speaker is Joy Williams. Joy, I have
24 activated your microphone. You can unmute yourself and
25 begin.

1 MS. WILLIAMS: Good morning. I'm Joy Williams of
2 Environmental Health Coalition. EHC works in
3 freight-impacted communities, including West National City
4 which is home to a major car import operation. One out of
5 every ten imported cars on the road in the United States
6 came in on a ro-ro ship through National City.

7 The neighborhood closest to those ro-ro ships is
8 West National City, an environmental justice community
9 that ranks near the top of CalEnviroScreen overall and in
10 the top 95 percent for diesel PM. It is the poorest area
11 of a poor city with some 41 percent of families in
12 poverty. National City has the highest age-adjusted rates
13 of asthma ED visits of any city in the region, as well as
14 the highest rates for children and seniors.

15 In June, we spoke in favor of the first set of
16 15-day changes that included a 2024 compliance date for
17 ro-ros. With great reluctance, we support the second
18 15-day changes that moved the ro-ro compliance date to
19 2025.

20 Significant reductions in ro-ro cargo volumes are
21 projected for the next years, with the result that ship
22 emissions into the community in 2024 will be less than
23 they would have been otherwise. Additionally, Pasha
24 Automotive Services has committed to early reductions in
25 emissions as they begin the process of testing shore power

1 and/or bonnet technology in 2024, a commitment they are
2 willing to include in the draft CERP for San Diego's AB
3 617 portside community.

4 Given these developments, we urge you to adopt
5 the rule as staff has proposed. Thank you.

6 BOARD CLERK SAKAZAKI: Thank you.

7 Our next speaker is Zorik Pirveysian. After
8 Zorik, we have Jennifer Kropke, Regina Hsu, and Katelyn
9 Roedner Sutter.

10 So Zorik, I have activated your microphone. You
11 can unmute yourself and begin.

12 MR. PIRVEYSIAN: Good morning, Madam Chair and
13 Honorable Board members. My name is Zorik Pirveysian,
14 Planning and Rules Manager with the South Coast Air
15 Quality Management District. Thank you for the
16 opportunity to comment on the latest changes to the
17 proposed Control Measure for Ocean-Going Vessels At Berth.

18 Ocean-going vessels, OGVs, combined with harbor
19 craft will represent the largest source of NOx emissions
20 in our basin in 2023 and 2031, with at-berth emissions
21 accounting for about 30 percent of the total OGV
22 emissions. Therefore, the proposed regulations is
23 critical for maximizing the reductions from the at-berth
24 portion of OGV emissions, which is under CARB's direct
25 authority.

1 We support the adoption of the proposed At-Berth
2 Regulation and offer the following recommendations for
3 your consideration. The latest changes to the proposed
4 regulation will delay the compliance date for container
5 ships, cruise ships, and reefers by two years from 2021 to
6 2023. Although we recognize the potential economic impact
7 on the maritime industry due to the Coronavirus pandemic,
8 we're concerned with the negative impact of this proposed
9 change on NOx and diesel particulate matter emissions,
10 which is estimated to be about 0.8 tons per day for NOx
11 and 0.01 tons per day for DPM in 2021 and 2022, which are
12 both significant.

13 Instead, of a two year delay, South Coast AQMD
14 staff recommends a maximum one year delay, which will
15 start the compliance date for container ships, reefers,
16 and cruise ships on January 1st, 2022 to provide a
17 reasonable level of relief to the maritime industry, given
18 the compliance flexibilities that already exist in the
19 proposed regulation for what's called the terminal and
20 vessel incident exceptions for up to 20 percent of the
21 annual calls. We do support the compliance dates for
22 tankers and ro-ros.

23 With respect to the innovative concept provision,
24 we support the proposed extension of compliance period
25 from three to five years, as long as the benefits of the

1 approved alternative control strategies are closely
2 monitored, evaluated, and quantified based on credible and
3 transparent methodologies to ensure that the reductions
4 achieved are real, surplus, quantifiable, and enforceable.

5 The proposed regulation is a major rulemaking for
6 the South Coast Air Basin. Given the significant
7 contribution of OGV emissions in the basin air quality, we
8 strongly support the adoption of the proposed at-berth
9 regulation. Emission reductions from OGVs are absolutely
10 essential in meeting the ozone attainment deadlines in
11 2023 and 2031 in our basin, as well as providing
12 considerable public health benefits in the port
13 communities.

14 Thank you.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Jennifer Kropke. Jennifer, I
17 have activated your microphone. You can unmute yourself
18 and begin.

19 MS. KROPKE: Hi. Good morning. Madam Chair and
20 esteemed Board members, my name is Jennifer Kropke. I
21 have the pleasure and privilege of working for
22 International Brotherhood of Electrical Workers, Local
23 Union 11, and the National Electrical Contractors, Los
24 Angeles County. We represent over 12,000 electrical
25 workers and over 400 electrical contractors.

1 Thank you to staff for the multiple opportunities
2 to engage and all the work done to bring this proposed
3 rule forward during a time when our State most needs it.

4 Roll-on roll-offs, smaller container, reefer,
5 cruise ships, as well as tankers, becoming subject to
6 shore-power regulation is critical for energy and
7 infrastructure planning, as well as our air quality. It
8 sends an important signal to utilities, terminal
9 operators, as well as their customers to begin planning to
10 ultimately effectuate this goal.

11 The rule will not only clean our air, but also
12 provide good green union jobs that pay family-sustainable
13 wages in the Ports of Los Angeles and Long Beach. And I
14 want to take the time to emphasize how important and
15 critical it is during this time when we are working
16 through a pandemic. We are most appreciative and thankful
17 to staff who has put unbelievable effort into this and
18 listen to multiple opportunities for people to comment.
19 And we are appreciative of all the efforts so far.

20 We kindly request that CARB Board members move
21 forward with their bold policy goals that create good
22 green jobs in and around our ports, and provide benefits
23 to our port communities.

24 Thank you so very much for the time and
25 opportunity to comment here, as well as in all the prior

1 meetings.

2 BOARD CLERK SAKAZAKI: Thank you.

3 Our next speaker is Regina Hsu. Regina, I have
4 activated your microphone. You can unmute yourself and
5 begin.

6 MS. HSU: Thank you. Chair Nichols and members
7 of the Board, my name is Regina Hsu and I'm an attorney
8 with Earthjustice.

9 We strongly support the Air Resources Board
10 adopting the At-Berth Rule. Pollution from ocean-going
11 vessels disproportionately impact nearby port communities.
12 Residents living near ports must breathe unhealthy air
13 every single day and suffer from increased rates of
14 respiratory and cardiovascular diseases, cancer, and
15 premature death.

16 The existing rule has been effective in reducing
17 pollution, but our communities need even greater emission
18 reductions. The health disparities faced by port
19 communities are even more apparent amid this ongoing
20 public health crisis. Studies have shown that communities
21 suffering from poor air quality are at greater risk of
22 poor health outcomes from COVID-19.

23 This rule is a step towards addressing the
24 harmful pollution from ships and overburdened port
25 communities. It will require more polluting vessels,

1 including oil tankers and ro-ro vessels to plug in to
2 shore power and reduce emissions from over 2,000
3 additional vessel visits at California ports.

4 The rule will offer significant health benefits
5 preventing hundreds of premature deaths and reducing
6 potential cancer risk in over two million residents living
7 near the San Pedro Bay ports and Richmond terminal.

8 The current proposal also reflects a compromise.
9 It pushes back the earlier compliance dates proposed by
10 staff and offers industry plenty of flexibility. The
11 costs of this rule are negligible compared to the enormous
12 health benefits it will provide to port communities.

13 Importantly, industry has long opposed this
14 critical public health measure and is now using this
15 pandemic as another excuse to further delay this rule and
16 its much needed health benefits. But our communities
17 can't wait any longer. We urge the Board to stand with
18 our communities and adopt this life-saving regulation
19 today.

20 Additionally, I would just like to echo the
21 testimony made by previous commenters about the need to
22 continue to engage with community stakeholders on the
23 implementation of this rule.

24 Thank you very much for your consideration.

25 BOARD CLERK SAKAZAKI: Thank you.

1 Our next speaker is Katelyn Roedner Sutter.
2 After Katelyn, we have Roman Berenshteyn, Marvin Pineda,
3 and Carlo De La Cruz.

4 So Katelyn, I have activated your microphone.
5 You can unmute yourself and begin.

6 Katelyn, are you there?

7 MS. ROEDNER SUTTER: Thank you. Sorry about
8 that. I'm Katelyn Roedner Sutter, manager for the U.S.
9 Climate Program at Environmental Defense Fund.

10 And I'm just very pleased to add our support to
11 that of Coalition for Clean Air, American Lung
12 Association, Earthjustice, and the many others for the
13 adoption of the Vessels At-Berth Regulation. This
14 proposed regulation responds to strategies listed in the
15 AB 617 community action plans and is key to reducing local
16 air pollution as sought by those plans.

17 In the staff presentation, you know, CARB
18 highlighted the many health benefits of this proposed
19 regulation as -- as have previous commenters. The Bay
20 Area Air Quality Management District also found
21 significant local health benefit for West Oakland
22 specifically. And I won't reiterate those, but those are
23 really key to our support of this regulation.

24 I also want to underscore the importance of
25 working with the local port communities in implementing

1 this regulation, especially with the local 617 steering
2 committees. This is going to be essential for the success
3 of this program and really realizing the local health and
4 air quality benefits. So EDF asks for your support on
5 this regulation today.

6 Thank you.

7 BOARD CLERK SAKAZAKI: Thank you.

8 Our next speaker is Roman Berenshteyn. Roman, I
9 have activated your microphone. You can unmute yourself
10 and begin.

11 MR. BERENSHTEYN: Fantastic. Good morning. My
12 name is Roman Berenshteyn speaking on behalf of the Bay
13 Planning Coalition. We appreciate CARB's consideration of
14 comments we've made throughout the development of this
15 rule, as well as staff's willingness to meet with our
16 members to hear and respond to our concerns. And while
17 the changes made to the implementation schedule for
18 currently regulated fleets are positive, many
19 implementation and feasibility barriers remain. This is
20 even more true for newly regulated fleets, including
21 tankers. And we ask that CARB work with impacted
22 stakeholders to ensure the safety, feasibility, and cost
23 effectiveness of the control measures.

24 We also appreciate CARB's intent in the
25 establishment of the innovative concepts provision in

1 order to smooth the transition as regulated parties begin
2 compliance of these rules. However, even after changing
3 the term to five years, it doesn't quite provide the
4 elements needed to make it a viable compliance pathway for
5 many impacted stakeholders.

6 In addition to financial and technological
7 viability challenges, these rules also establish new
8 regulatory hurdles, particularly for those entities in the
9 San Francisco Bay region, who will have to navigate a
10 complex web of external agency approval and permitting.
11 For this reason alone, the timelines proposed in the
12 proposed rule will be difficult to meet.

13 We would hope that CARB would take additional
14 steps to ease the -- ease these burdens and recommend
15 addressing these changes in an additional regulatory
16 package prior to the adoption of the rule. But in any
17 case, as this rule is passed, we hope that CARB will work
18 to establish an interagency collaboration with BCDC and
19 other relevant agencies, and increase communications in
20 the availability of resources, such as grant and other
21 financing opportunities for impacted entities.

22 We look forward to assisting in that effort and
23 others, as these rules enter the implementation phase, and
24 thank you very much.

25 BOARD CLERK SAKAZAKI: Thank you.

1 Our next speaker is Marvin Pineda. Marvin, I
2 have activated your microphone. You can unmute yourself
3 and begin.

4 MR. PINEDA: Good morning, Chairs -- good morning
5 Chairs and members. Marvin Pineda on behalf of the
6 International Longshore and Warehouse Union representing
7 over 14 port workers in Southern California. We continue
8 to have some concerns with the regulations.

9 The last CARB meeting, the discussion of
10 technology availability and funding options were
11 discussed. There was the VW fund discussion that those
12 funds were available, also Carl Moyer funds. As some of
13 the ports have indicated, they've applied for those funds
14 and have been -- have been denied those funds.

15 The main -- one run of the reasons why is that
16 technology hasn't been approved. At the hearing, CARB
17 members also stated that the technology for bonnet
18 technology exists, but now we know it doesn't exist.

19 What we're asking for is for -- to work with
20 stakeholders. And we need CARB to identify option funding
21 opportunities, because the ones that have been identified
22 in the past have -- they don't -- ports cannot apply to
23 those.

24 CARB has not taken into consideration the past
25 elimination of port jobs, which are held by people of

1 color. What -- Latinos, African Americans. We are not
2 trying to get in the way of regulations to clean the
3 environment. As we stated in the past, ILWU is one of the
4 most progressive unions in the United States and we want
5 to see clean air. However, we want to have answers. And
6 how is it these regulations will be implemented?

7 On the interim evaluation, we thank the Board and
8 staff, because we think that there should be a -- whether
9 technologies exist, input should be taken from data
10 terminal operators, vessel operators, and then also on the
11 economic recovery.

12 We -- as we move forward after this hearing, I
13 think this hearing is very important, but we need some
14 confirmation that CARB staff will engage with us, so it
15 won't be the back and forth as has been in that last eight
16 months, where we still don't have answers to a lot of
17 questions. Two years will go by fast. And that's what we
18 ask for for a process where we continue to engage.

19 I want to thank Bonnie and Heather for their work
20 in all of this and for listening to everyone. We look
21 forward to working with everyone.

22 Thank you.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Our next speaker is Carlo De La Cruz. After
25 Carlo, we have Brian McDonald, Martha Miller, and then a

1 phone number ending in 780.

2 So Carlo, I have activated your microphone. You
3 can unmute yourself and begin.

4 MR. DE LA CRUZ: Great. Thank you. Good
5 morning, members of the Board and Chair Nichols. My name
6 is Carlo De La Cruz and I'm making comments today on
7 behalf of the Sierra Club. I'm a resident of Los Angeles
8 and I'd like to make these comments in memory of June
9 Vilaverde who worked at the Port of Long Beach for over 30
10 years before he passed from respiratory-related health
11 issues in 2019.

12 Southern California continues to have the worst
13 ozone air quality in the nation. We're beginning to know
14 summers in SoCal as smoggy summers. Even this year, SoCal
15 has not had a full week of clean air since the month of
16 April. And this month and last, nearly every day in the
17 South Coast Air Basin has violated the ozone standards for
18 healthy clean air by our federal and State standards.

19 Despite the pandemic, traffic and air pollution
20 around the South Coast have now rebounded to pre-pandemic
21 levels. Communities suffering from COVID and other
22 respiratory health conditions need regulations like at
23 berth to help clean up the air, because nothing else is
24 doing the job.

25 With due respect to the speaker from WSPA, in our

1 view, the regulation is reasonable, because the regulation
2 only asks the industries and the parties that are
3 polluting to be the responsible party to capture and
4 control those life-threatening and climate-threatening
5 emissions. It is asking for the responsible party for
6 pollutants to be responsible.

7 There is no community fund for when residents in
8 Long Beach and Los Angeles get asthma, OPD, or lung
9 cancer, like for June Vilaverde.

10 Residents need regulations like at berth to
11 protect their health. I remind the Board that the \$2.4
12 billion in health savings will not be realized without the
13 adoption of this rule. Industry has long had the same
14 critiques of this regulation claiming that it is
15 infeasible, too costly, and will disrupt the operations of
16 the supply chain to an unburdensome degree. I ask how
17 burdened has the communities around the ports been for all
18 these decades.

19 Once the regulation becomes a reality, we find
20 our their business finds a way to continue to operate and
21 continue to grow. Communities living by the ports have
22 needed relief for decades. And with COVID-19, its deadly
23 impact on polluted communities only increases the urgency
24 and the need for action on emission reductions.

25 The time to clean up the air quality in our ports

1 is now, not in 2030. This rule will save lives, save
2 money, and be a critical step to cleaning up our air and
3 transitioning to cleaner energy source -- to cleaner
4 energy solutions and reducing emissions.

5 I urge CARB to work closely with our community
6 members and environmental justice stakeholders in the
7 rules implementation as it will be critical to ensure that
8 this rule leads to transparent and accurate reporting and
9 effective enforcement mechanisms. And has been -- as has
10 been said by previous speakers, more action will need to
11 be had on the at-anchor ships that are also releasing
12 emissions out in the port harbor.

13 Thank you for your time and consideration and I
14 thank the Board for the consideration of this rule.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Brian McDonald. Brian, I
17 have activated your microphone. You can unmute yourself
18 and begin.

19 MR. McDONALD: Good morning, Chair Nichols,
20 Board, and ARB staff. My name is Brian McDonald. I am
21 representing Marathon Petroleum Corporation. Marathon
22 produces products residents and visitors in the State rely
23 on every day to make their lives better.

24 I support comments made by WSPA and thank you for
25 your time to allow me to articulate two points prior to

1 adopting the proposed regulation.

2 First, the need for a feasibility study to
3 isolate and identify serious and significant challenges to
4 the proposed technology options must be underscored.
5 Staff assumes tankers will largely comply with the rule
6 through utilization of a land-based capture system. This
7 is remarkable considering the technology has never been
8 tested on a tanker, and notable considering the one system
9 deployed at the Port of L.A. on a cargo vessel was only
10 utilized a handful of times and is not in-use today.

11 The amount of available information on the
12 operation of this technology should not provide confidence
13 to CARB it is deployable on thousands of vessel visits per
14 year.

15 Second, MPC is aware of a report prepared by the
16 University of California, Riverside which tested a tanker
17 vessel to quantify the hoteling of emissions. This report
18 illustrates a significant departure from the emissions
19 inventory utilized in this rulemaking suggesting CARB's
20 inventory is overstated by no less than 50 percent.

21 CARB should strongly consider the results of this
22 report. We realize this is one vessel out of many which
23 operate in California, but points to the significant
24 changes vessels have undertaken since the source of CARB's
25 emission factors were produced 40 years ago.

1 CARB must rely on data to inform its decisions.
2 A good emission inventory is a critical element of a good
3 regulation. This is the second significant issue
4 identified within it. The first being a misinterpretation
5 of the Mercator report findings for the tanker industry in
6 the Port of Long Beach. These two combined are inflating
7 the cost effectiveness of the cap -- of the regulation
8 while claiming reduction which are not real.

9 MPC requests the Board delay the adoption of this
10 regulation until after a robust -- robust feasibility
11 study is conducted and the emission factors used for the
12 baseline inventory have been more thoroughly analyzed and
13 updated to represent the current fleet.

14 Thank you for your time.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next commenter is Martha Miller. Martha, I
17 have activated your microphone. You can unmute yourself
18 and begin.

19 MS. MILLER: Good morning. My name is Martha
20 Miller. I'm the State Director for the California
21 Association of Port Authorities. We represent all 11
22 publicly-owned commercial seaports in the state. Thank
23 you for the opportunity to comment today on the proposed
24 At-Berth Regulation.

25 First, we would like to thank CARB Board members

1 and staff for the work you've invested in the At-Berth
2 Regulation and in particular the changes made in the
3 second 15-day notice.

4 Given the current economic disruption due to a
5 global pandemic, the worst wildfire season on record, and
6 strain on the energy grid due to heat waves, we would ask
7 that the interim evaluation include language directing
8 CARB staff to update and adjust the inventory based on the
9 economic trends and data accumulated over the next two
10 years, the inclusion of an economic analysis that utilizes
11 third-party review of the economic analysis, and a review
12 of the capacity of the grid to meet the demand of the
13 expanded regulation.

14 We are specifically concerned about how future
15 heat events would be addressed. Additionally,
16 implementation of any regulation will require financial
17 resources. We urge CARB to establish a port
18 infrastructure fund within the existing CARB incentive
19 programs to facilitate upfront investments required for
20 large scale capital improvements required by the
21 regulation.

22 Even during these unprecedented economic times
23 and the unpredictability of what recovery will look like
24 for the shipping community, CAPA members are committed to
25 the existing regulatory requirement and continuing to be

1 good environmental stewards and appreciate the changes
2 made during this process.

3 We urge you to adopt these proposed changes that
4 we also outlined in our letter submitted to the Board.

5 Thank you very much.

6 BOARD CLERK SAKAZAKI: Thank you.

7 Our next speaker is a phone number ending in 780.
8 After that phone number, we have Douglas Schneider, Yassi
9 Kavezade, Emily Spokes, and then Daniel Velazquez.

10 So phone number ending in 780, I have activated
11 your microphone. Please state your name for the record.

12 MR. FALZONE: Good morning. My name is Dominick
13 Falzone. I live in Los Angeles. I urge you to implement
14 this proposal immediately. Our planet is at risk of
15 becoming unlivable if greenhouse gases destroy our
16 atmosphere. Reduce -- requiring ships to turn off their
17 engines while they are docked in port will reduce
18 greenhouse gases.

19 Persons who live near seaports suffer physical
20 harm from pollution, such as cancer and asthma. This
21 proposed measure will improve public health by reducing
22 pollution.

23 The COVID-19 disease pandemic has been discussed
24 as a possible reason to delay this measure. If a person's
25 health has been harmed by air pollution, COVID-19 will

1 cause the more -- will cause more harm towards that person
2 if they get infected. That's another reason to implement
3 this rule as soon as possible.

4 A labor union representative -- a labor union
5 representative urged possibly delaying this rule. I'm a
6 proud involved union member and I assure you that anyone
7 who wants to delay this proposal does not speak for
8 organized labor as a whole.

9 I live in the City of Los Angeles. My city
10 government operates one of the largest seaports in the
11 world on land which belongs to the State government. As a
12 resident of Los Angeles and as a resident of California, I
13 want the California Air Resources Board to make air at the
14 Port of Los Angeles as clean as possible.

15 Thank for your help.

16 BOARD CLERK SAKAZAKI: Thank you. Can I get your
17 last name one more time so we're very clear for the
18 record.

19 MR. FALZONE: Yes. Falzone, F-a-l-z-o-n-e.

20 BOARD CLERK SAKAZAKI: Thank you so much.

21 MR. FALZONE: Thank you.

22 BOARD CLERK SAKAZAKI: Our next speaker is
23 Douglas Schneider. Douglas, I have activated your
24 microphone. You can unmute yourself and begin.

25 MR. SCHNEIDER: Thank you, Chair Nichols and

1 Members of the Board. My name is Doug Schneider and I'm
2 with the World Shipping Council, or WSC. WSC is a
3 nonprofit trade association that represents the liner
4 shipping industry which is comprised of operators of
5 container ships, roll-on, roll-off vessels, and vehicle
6 carriers. WSC and its members have worked collaboratively
7 with CARB staff for several years to revise and improve
8 the current At-Berth Rules to ensure ocean carriers are
9 not subject to requirements that fall outside of their
10 control.

11 We have actively encouraged CARB to modify the
12 structure of the rule to establish clear and appropriate
13 obligations for shoreside entities to provide the
14 infrastructure that is required to connect arriving
15 vessels.

16 We support the proposed rule's inclusion of
17 appropriate infrastructure and performance obligations on
18 ports, maritime terminal operators, and emission control
19 strategy operators. WSC also supports Board approval of
20 the staff-proposed adjustments to the 15 -- to the rule in
21 the 15-day changes. Adjusting the timeline for existing
22 vessels, which are already subject to strict at-berth
23 emissions requirements, to 1 January of 2023 will provide
24 time to get the shoreside infrastructure in place to
25 support the revised rule, to develop and implement

1 innovative, cost-effective compliance approaches, and to
2 work out many technical issues with the new rule that
3 could cause confusion or unintended consequences.

4 As other commenters have mentioned, WSC also has
5 substantial concerns with the proposed 2025 implement
6 date -- implementation date for ro-ro vessels and vehicle
7 carriers. Ro-ro vessels make infrequent and very short
8 port calls in California. Over the course of a year, a
9 single ro-ro vessel may call only two or three times and
10 for a very short time period.

11 The reality is that ro-ro vessels and the
12 terminals they call at have limited, viable at-berth
13 emission compliance options due to operational issues.
14 The existing and very limited barge-based emission capture
15 systems present -- present safety and reach issues due to
16 the significant vertical and lateral distance needed to
17 reach the vessel exhaust stacks. Shore-based emission
18 capture systems are not yet in place and obstruct cargo
19 operations and exceed the load-bearing capabilities at
20 many California ro-ro terminals. And there has not been a
21 comprehensive cost-benefit analysis based on available
22 control technologies to warrant regulation of ro-ro
23 at-berth emissions by the proposed phase-in date.

24 WSC strongly encourages CARB to delay regulation
25 of ro-ro auxiliary emissions until comprehensive and

1 favorable feasibility and cost-benefit analyses, based on
2 available function and control technologies, have been
3 completed.

4 Thank you for your time and consideration.

5 BOARD CLERK SAKAZAKI: Thank you.

6 Our next speaker is Yassi Kavezade. I have
7 activated your microphone. You can unmute yourself and
8 begin.

9 MS. KAVEZADE: Good morning. My name is Yassi
10 Kavezade and I am a resident of the Inland Empire, and an
11 organizing representative with the Sierra Club's My
12 Generation Campaign.

13 I'm here to support the At-Berth Regulation. My
14 community is located toward the end of the supply chain
15 with warehousing and trucking being toxic sources
16 developed close by homes and schools that are primarily in
17 black and brown communities. Our community demographics
18 are also reflected near the ports of Long Beach and L.A.
19 This is environmental racism. And the time has come to
20 pivot away from gas and oil towards zero emissions. This
21 regulation will support this movement on new technology
22 and new jobs in our frontline communities.

23 Implementation of this rule will be new for the
24 industry and port authorities during some of the toughest
25 economic times we face. However, we know that port

1 activity is essential and business will carry on as usual
2 in high volumes.

3 Using COVID-19 and commerce viability as a
4 barrier to this rule is yet another excuse to avoid
5 compliance for cleaning up an industry technology that has
6 barely evolved over the many decades.

7 With innovative regulations to grow zero
8 emissions, we have an opportunity to work on growing
9 commerce with health and mind. I encourage the industries
10 and port authorities on this item to take a risk leading
11 our State towards innovation and infrastructure to support
12 this rule and at-berth compliance of ships.

13 Tankers and crude-idling emissions are killing
14 communities. We cannot afford the countless asthma
15 attacks, cancers and chronic health issues any longer.
16 This rule will pivot away from dirty practices that hurt
17 our air and our climate in the long term.

18 Please adopt this rule taking implementation
19 suggestions and direction from frontline neighborhood
20 groups. These groups are the experts on the ground
21 feeling the effects of poor air quality. That's who this
22 Board serves, the health of our communities. We cannot
23 wait any longer and afford any delays from fears in the
24 industry.

25 Thank you for all that you do on this Board.

1 BOARD CLERK SAKAZAKI: Thank you.

2 Our next speaker is Emily spokes. Emily, I have
3 activated your microphone. You can unmute yourself and
4 begin.

5 MS. SPOKES: Hi, everyone. It's Emily Spokes
6 from the NELA Climate Collective. And I just wanted to
7 echo what everyone else is saying. I'm a mom and I'm a
8 stakeholder. And I am sick of staring at our terrible air
9 quality, when there is a -- there are many solutions to
10 make this better. A vote to pass this is essential. We
11 need CARB to show our citizens that you care about all of
12 our well-being - I'm sure you all have families as well -
13 and, in particular, those who suffer from environmental
14 injustices.

15 Please use your position of power to do what is
16 morally asked of you. This is particularly pertinent to
17 me today. My neighbor died just yesterday. She is the
18 ultimate case of environmental injustice. She was in the
19 hospital for six months, sent to Barlow Respiratory Care
20 to die, and that is exactly what happened. The insurance
21 companies were calling her, telling her that she was
22 keeping them -- you know, they were -- her keeping them
23 alive was a huge problem.

24 And so much of this is preventable. Just look
25 outside. When I drive down the 2 or the 134, my daughter

1 asks every day at 7:00 if it's fog or smog. And I just --
2 this just seems like such a no-brainer to me. And in such
3 a time of duress and stress for the entire world, those
4 that don't vote to pass something like this, I don't know
5 how they sleep at night.

6 Please do what is right. Please do what is
7 ethical. Please do this for my neighbor and the billions
8 of other people who are suffering every day due to
9 preventable pollution.

10 Thank you.

11 BOARD CLERK SAKAZAKI: Thank you.

12 Our last speaker today is Dan Velazquez. Daniel,
13 I have activated your microphone. You can unmute yourself
14 and begin.

15 MR. VELAZQUEZ: Oh, yes. Hello -- hello, members
16 to the Board. My name is Daniel Velazquez. I'm CEO of
17 EneRep, a Southern California company that owns a
18 state-of-the-art chemical recycling process. And while my
19 comment is not specifically about the berth policy matter,
20 I just actually want to address something that I believe
21 that it's related.

22 And this is the matter with the vessel's diesel
23 fuel. As you might know, the International Maritime
24 Organization set up new standards for the sulfur content
25 in diesel fuel. It is now already used starting January

1 2020 to -- from 3.5 to 0.5 percent of sulfur content in
2 diesel.

3 Where we are sending -- we are saying that the
4 Board has the authority to make amendments and change some
5 definitions regarding the alternative diesel fuel. The
6 current regulation or rules do not include any fuel that
7 can be obtained from plastics. Chemical recycling is a
8 process that they -- no recycling plastic waste and uses a
9 state-of-the-art process, usually pyrolysis or
10 gasification where there is no oxygen-free chamber. The
11 plastics is converted to ultra-low sulfur diesel.

12 We should take advantage and know that right now
13 with the pandemic what is being thrown away, it can be
14 turned into usable fuels. We can turn -- we can fuel our
15 vessels, the vessel that's arrived, and we can comply with
16 the International Marine[SIC] Organization.

17 So one of my proposals is to address to the Board
18 to add to the definition of alternative diesel fuels. The
19 diesel fuel can be obtained from plastic, because it is a
20 reality that the plastic -- the sulfur percent from
21 plastic is way below that the sulfur that can obtain from
22 regular fuel from the surface.

23 So this is something current regulations
24 established as alternative fuel has no petroleum base. So
25 this is something that can be done. Other states are

1 following through. They are amending legislations and we
2 can have power and fuel from waste and give it a
3 low-sulfur content to the vessel, so we can have a better
4 environment.

5 And thank you for your time for the Board, and to
6 the frontline workers that keep us protected, and everyone
7 that keep the supply chain during this pandemic.

8 Thank you.

9 BOARD CLERK SAKAZAKI: Thank you.

10 We have one more commenter signed up, a phone
11 number ending in 982. I have activated your microphone.
12 Please state your name for the record.

13 Phone number ending in 982, are you there?

14 Okay. Emily spokes has raised her hand again,
15 but she had two -- okay. So now we have a few people with
16 their hands raised

17 So let me just take a quick second to...

18 All right. Our next speaker is Tom Dow. Tom, I
19 have activated your microphone. You can unmute yourself
20 and begin.

21 MR. DOW: Thank you very much. My name is Tom
22 Dow. I'm calling in on behalf of Carnival Corporation and
23 the cruise industry. First, I'd like to thank, Chair
24 Nichols, and the Board, and the staff for working through
25 these regulations over the last several years.

1 We appreciate the two-year delay and support the
2 rule as proposed. And I just say we want to maintain
3 communication and contact with staff regarding any
4 technological advances. As most of you know, we fully
5 support and have implemented broadly shore-power
6 connection of cruise ships in California ports. We plan
7 to continue to do that, if and when, hopefully soon, we're
8 able to resume operations. Although, it's impossible to
9 predict exactly when that will happen, but we look forward
10 to it.

11 So thank you for the opportunity to comment and
12 we look forward to working with you in the future.

13 Thanks.

14 BOARD CLERK SAKAZAKI: Thank you. Emily Spokes
15 has raised her hand again, but Emily, we do not allow
16 people to speak twice in a row.

17 So we're going to a phone number with 982.

18 Again, a phone number ending in 982. I'd ask you
19 to unmute yourself. Are you there?

20 Well, Madam Chair, this concludes our list of
21 commenters, if the phone number with -- ending in 982 is
22 not here, so -- yeah, so that concludes the list of
23 commenters, so...

24 CHAIR NICHOLS: Thank you. Thanks. We will
25 close off public comment at this point then. And

1 normally, we would go to the staff right away to respond
2 to any substantive points that were raised during the
3 public comment period. But because a number of these
4 comments require a more detailed response, and because
5 this is a proceeding that is subject to CEQA, I think it
6 would be sensible to take a break and allow the staff to
7 speak with each other and organize their response, so we
8 can do this more efficiently.

9 So I'm going to ask for a half hour recess. It
10 could be considered an early lunch break. Although, we'll
11 probably have to take another break also after the
12 conclusion of this item with the -- all the staff.

13 VICE CHAIR BERG: And, Chair Nichols?

14 CHAIR NICHOLS: Yes.

15 VICE CHAIR BERG: This is Sandy Berg. We would
16 want to officially close the record so no additional
17 comments can come in over this 30-minute time and then
18 have you reopen the record once we come back.

19 CHAIR NICHOLS: I thank you for that comment,
20 Vice Chair Berg, but I'm -- I want to hear from a lawyer
21 on that one. I thought that the staff comments would be
22 considered part of the record, and therefore I wouldn't
23 close the record until after we had heard the staff
24 responses. So, Ellen --

25 VICE CHAIR BERG: I believe Ellen Peter is going

1 to come. I got my information from her. Sorry.

2 CHAIR NICHOLS: That's okay. I didn't think you
3 were freelancing here without a license, but I just want
4 to be sure.

5 CHIEF COUNSEL PETER: Okay. I -- for some
6 reason, I cannot --

7 VICE CHAIR BERG: She's having a difficult time
8 unmuting.

9 CHAIR NICHOLS: Oh. Is she in the same room with
10 you?

11 VICE CHAIR BERG: Yes, ma'am.

12 CHIEF COUNSEL PETER: Yes.

13 CHAIR NICHOLS: Okay. Well --

14 VICE CHAIR BERG: Ellen, is it correct that we
15 need to close the record?

16 CHIEF COUNSEL PETER: Yes.

17 VICE CHAIR BERG: Yes, ma'am, we need to close
18 the record.

19 CHAIR NICHOLS: Even -- even before the staff
20 response?

21 VICE CHAIR BERG: Then you will reopen --

22 CHIEF COUNSEL PETER: Yes. And then we'll re --
23 and then we'll reopen it.

24 VICE CHAIR BERG: Oh, she came on.

25 Go ahead.

1 CHIEF COUNSEL PETER: And then we'll reopen it.

2 CHAIR NICHOLS: All right. I will follow the
3 advice of my General Counsel then. We will close the
4 record at this point. We will not be taking further
5 public comment in any event. And we will reopen it when
6 we resume, which will be at -- is 11:30 good enough or do
7 you need a full half hour?

8 CHIEF COUNSEL PETER: 11:30.

9 CHAIR NICHOLS: 11:30? Okay.

10 VICE CHAIR BERG: 11:30 is good.

11 CHAIR NICHOLS: All right. We will be standing
12 down until 11:30 then. Don't -- don't go away.

13 Thank you.

14 BOARD CLERK SAKAZAKI: Thank you, Madam Chair.
15 I'm just going to remind everyone here just to turn off
16 your audio and video, while we take a break and please
17 don't leave the Zoom call.

18 Thank you.

19 (Off record: 11:06 a.m.)

20 (Thereupon a recess was taken.)

21 (On record: 11:32 a.m.)

22 AGP VIDEO: Chair Nichols, this is Billy from AGP
23 video and we are recording. As soon as you have a
24 quorum, you're good to go.

25 CHAIR NICHOLS: Okay. I see not quite a quorum

1 yet.

2 BOARD MEMBER MITCHELL: So I am back.

3 CHAIR NICHOLS: Evan, can you see everybody on
4 your screen. Can you do the count for me.

5 MR. KERSNAR: Sure. Give me one sec.

6 BOARD MEMBER SPERLING: Mary, there's lots of
7 people on it from the Board.

8 CHAIR NICHOLS: So you're not all showing up on
9 the screen. That's what I'm trying to figure you.

10 MR. KERSNAR: Yeah. Yeah, we're -- we have more
11 than a quorum.

12 CHAIR NICHOLS: Good. All right. Then let's get
13 back to work again. Is Mr. Corey ready to report back?

14 EXECUTIVE OFFICER COREY: Yes, I am, Chair. And
15 I'm going to call on Nick Rabinowitsh to give a report
16 back from our Legal Office.

17 Nick.

18 CHAIR NICHOLS: Great.

19 SENIOR ATTORNEY RABINOWITSH: Thank you, Richard.
20 Can you all hear me?

21 CHAIR NICHOLS: Yes.

22 SENIOR ATTORNEY RABINOWITSH: Okay. This is Nick
23 Rabinowitsh from CARB's Legal Office. I wanted to say
24 that we received a few additional comments touching on
25 environmental issues today. CARB staff has prepared

1 supplemental responses to these comments, which were sent
2 to the members of the Board a few minutes ago. So
3 hopefully you all have received those.

4 While the comments were along the lines of
5 comments we've previously received and responded to in the
6 primary response to comments document that posted earlier
7 this week, we did want to address a few of the points
8 specifically which we've now done in the supplemental
9 response that's before you.

10 So, we would propose to reopen the record for the
11 limited purpose of adding that supplemental response to
12 the record and also hearing if staff has any further
13 comments they'd like to provide before we again close the
14 record.

15 CHAIR NICHOLS: Okay. So we'll reopen the record
16 briefly to receive those comments and any additional
17 comments that the staff wishes to make.

18 EXECUTIVE OFFICER COREY: This is Richard. I'm
19 going to call on Bonnie Soriano for a short response and
20 then be prepared to respond to additional questions during
21 Board deliberations.

22 Bonnie.

23 TTD FREIGHT ACTIVITY BRANCH CHIEF SORIANO: Good
24 morning, Chair and Board members. This is Bonnie Soriano
25 with the California Air Resources Board.

1 And so I think we appreciate all the public
2 comments. We heard a few things that we would like to
3 respond to. And in these areas, the three that we heard
4 were the feasibility that the tanker industry referred to.
5 There was some comments on incentives and then also some
6 comments on technology readiness.

7 And so I'll just give you some real brief
8 responses to those comments. So the first is feasibility.
9 And that comment was really -- it seemed to be centered
10 around the tanker feasibility and the ro-ro feasibility.
11 Those are the two new categories that we're bringing into
12 the regulation.

13 And so we had talked to the Board about this
14 question before, I think, both times that we've come
15 before the Board previously. And so we have done
16 feasibility analysis both in our Initial Statement of
17 Reasons and we did a technology assessment in 2018.

18 But this tech -- the technology currently exists
19 for and is commercially available for the included
20 categories, the container, ro-ro, and reefer. And we've
21 seen both shore power and these capture and control
22 systems commercially available for those types of vessels.

23 Shore power has also been demonstrated for
24 tankers at one terminal in the Port of L.A./Long Beach.
25 We have also had many discussions with industry and the

1 manufacturers concerning the adaption of these
2 technologies to -- such as the capture and control systems
3 to the tanker vessels.

4 And while we agree that this is a
5 technology-forcing regulation, we have -- we believe that
6 these technologies can be adapted safely and quickly to
7 the tanker industry, because they do exist commercially
8 for other vessels types. And so we believe that we have
9 performed an extensive analysis of this technology and
10 believe that while it's technology forcing, it is feasible
11 for these new vessel types that we're bringing into the
12 regulation. So the second issue that we heard in the
13 comments were incentives.

14 And if you remember back in December, we
15 presented a slide of a number of different incentives
16 programs that would be available. It is true that each of
17 those incentive programs has their own requirements, and
18 so -- and so it depends on what technology, what areas,
19 for example, whether a region is a disadvantaged community
20 or not. And so we are committing to work with the ports.
21 The ports are being proactive and looking for funding
22 resources to include this technology for the additional
23 technology types we're adding.

24 And so we have been working with the ports. We
25 have been working with our internal incentives group, and

1 also where these funds are administered by the districts,
2 we're working with the districts. And so we're committing
3 to continue that engagement with the -- with the proactive
4 ports, and, you know, vessel operators to provide and
5 facilitate communication about those incentive programs.

6 And so the final thing is technology readiness.
7 And I think I hit that in this feasibility study. But I
8 just again wanted to highlight the fact that shore power
9 is installed at, I think, over 37 terminals at this point.
10 It's actively in use for vessel types. We believe that
11 technology is feasible for tankers. It's in demonstration
12 and use at a tanker terminal at the Port of Long Beach.

13 We also believe that the -- the systems that are
14 in use the capture-and-control systems for containers.
15 Ro-ros are very similar to containers in terms of their
16 emission profiles. And so that technology that's
17 commercially available can really be adapted very quickly
18 to the use for ro-ros. And in talking to the
19 manufacturers and the industry we believe that that
20 capture and control system can also be adapted to tankers.

21 And we acknowledge that tankers have some
22 different challenges, in terms of safety and emissions
23 profiles. And so we believe that while it's technology
24 forcing, these technologies are available and can be
25 readily adapted to these other vessel types.

1 And so those are the three areas that we really
2 heard in the comments. And so we appreciate all the
3 comments and would turn it back to the Board for any
4 questions that you have we'd be happy to answer.

5 CHAIR NICHOLS: Thank you. I think, at this
6 point, we do then close the record to further new
7 submittals again. But Board members --

8 CHIEF COUNSEL PETER: That is correct, Chair
9 Nichols. This is Ellen Peter, Chief Counsel.

10 CHAIR NICHOLS: Thank you.

11 CHIEF COUNSEL PETER: As Mr. Rabinowitsh just
12 said, the written supplemental comments to the -- were
13 sent to the Board members during the break. And they were
14 also posted to the public agenda. So people in the public
15 can see those while this discussion is going on. So I
16 just wanted to flag that one thing. It's available to the
17 Board and to the public those supplemental responses.

18 Thank you.

19 CHAIR NICHOLS: Terrific. Thank you very much,
20 Ms. Peter. So we'll now return this to a discussion at
21 the Board level before moving forward with a decision on
22 it -- on this item.

23 And the firsthand that I see raised on my screen
24 belongs to Barbara Riordan. But, Barbara, before I take
25 your hand, I wanted to actually recognize Board Member De

1 La Torre, because he has, I know, been working
2 extensively -- all the Board members taken many meetings
3 and asked a lot of questions themselves of all different
4 categories of stakeholders. But I don't think anybody has
5 put in more time on this one, in part given his
6 representation in the past as an elected official from an
7 area near the port, but also just because I know it's been
8 of great interest to him and to the community.

9 So I'm going to call on Hector first, if you
10 don't mind, Barbara.

11 BOARD MEMBER RIORDAN: No. No, go ahead.

12 CHAIR NICHOLS: Okay.

13 BOARD MEMBER DE LA TORRE: Thank you, Chair. So
14 this process for me started about three years ago. If
15 you'll recall, we were in Riverside and we had a staff
16 report on goods movement, namely the port complexes. And
17 the surprising result to me, at that time, and I think to
18 many of my colleagues on the Board was how much of an
19 impact the vessels have on emissions coming from the port
20 complexes.

21 It was -- I don't have the numbers right in front
22 of me right now, but it was in the 50 percent range of the
23 emissions coming from the ports on any number of criteria
24 pollutants. And so -- and PM2.5. So clearly, when we
25 heard that in March three years ago, we had to take action

1 on the vessels. We already had the container ships and
2 the cruise ships complying with at berth at the very early
3 stages. And today, they're at 80 percent compliance,
4 container ships and cruise ships. So we're not starting
5 from scratch.

6 When we're hearing this testimony that we're not
7 ready, it's too far away, it's not proven, et cetera. It
8 is proven. It's been proven for the last several years
9 and we are at 80 percent compliance. So we are pivoting
10 off of those successes into these new types of vessels
11 tankers, ro-ros, bulk ships, very important.

12 Of what's remaining, the tankers are by far the
13 greatest polluter of the vessels that we have left.
14 Again, in the 40, 50 percent range among vessels. So
15 vessels overall are a problem, and within the vessel
16 categories, tankers are the problem. We cannot look the
17 other way on the emissions that we're seeing, the
18 pollution that we're seeing, the impact that we're seeing
19 from oil tankers that call at California ports.

20 So I think we started in December, we had a
21 discussion in June, and today is, you know, time to nail
22 this thing down, to vote for it, and move it along.

23 I also want to take a sidenote here, specifically
24 to address the Ports of Long Beach and Los Angeles, which
25 are in my neighborhood. July saw the greatest throughput

1 of containerized traffic -- of traffic at the ports of
2 the -- at the Port of Long Beach, and the second best July
3 ever at the Port of Los Angeles. So if you'll recall, and
4 even today, we had a whole lot of complaining about the
5 impact of COVID on the economy and that is true. We all
6 are seeing it, living through it, many of us suffering
7 through it.

8 But clearly, at the ports, their activity levels
9 are back to normal, certainly at those two ports again.
10 I'm not talking about all the ports in general. I don't
11 know how the others are doing. But clearly, at the Port
12 of Long Beach and Los Angeles, they are rolling. And I'm
13 not saying that this is going to continue, you know,
14 consistently for the next several months or years, but
15 it's -- that's a sign that things are going very, very
16 well at those ports, that the traffic is growing.

17 Interestingly, in the middle of this month, July,
18 when the Port of Long Beach was setting this all-time
19 record, which they would know, because they keep track
20 day-to-day of their activity, they tabled a very weak
21 container fee that they had approved back in March, and
22 they tabled it without a vote. So they took the vote in
23 March to have a \$10 container fee. And then in July, they
24 tabled it because of the economic uncertainty, even as
25 they knew that they were setting records, that they were

1 having very high volumes -- they may not have known they
2 were going to set a record. But they knew they had very
3 high volumes in the month of July. And that to me is a
4 complete lack of commitment to what they call their Clean
5 Air Action Plan.

6 If we're going to do all the things we're talking
7 about on this item and what we're going to talk about on
8 the next item with the trucks, that container fee has to
9 be part of the solution. And so I am very, very
10 frustrated with the Ports of L.A. and Long Beach on where
11 they're at. And I think they fail to recognize a very
12 simple fact, they are land-locked, much like all of our
13 port complexes. We heard about National City and the
14 issues there. For all of the ports in California, you
15 have neighbors that are breathing in -- as one of the
16 witnesses said, that are breathing in the emissions from
17 your economic activity.

18 And if you think that you're going to continue to
19 pollute your neighbors and not be accountable for it,
20 that's just not going to happen. The path for you, and we
21 have to do it because we're the clean air agency. We're
22 accountable to the federal government for the Clean Air
23 Act, you can -- you have two options. You have dirty
24 stagnation or clean growth. That's it. There is no dirty
25 growth going forward.

1 So we're going to be working on this item, on the
2 truck issues, on other goods movement issues in the coming
3 years. We have a multi-pronged approach going forward.
4 But I just want the Ports of L.A. and Long Beach to
5 realize, and the other ports in general, that you have
6 neighbors. You have obligations. It isn't just about
7 throughput. It is about doing this as cleanly as
8 possible. And we're going to continue to set that mark
9 for what we expect from you. And all of the tools at your
10 disposal, just like all of the tools at our disposal must
11 be used. Thank you, Chair.

12 CHAIR NICHOLS: Thank you.

13 Now, we'll go back in order. I have Barbara
14 Riordan, Judy Mitchell, and John Gioia. I think I will
15 take your comments as a motion to approve.

16 (Laughter.)

17 BOARD MEMBER DE LA TORRE: Yes. That was a
18 motion. I got excited.

19 (Laughter.)

20 CHAIR NICHOLS: Okay.

21 BOARD MEMBER RIORDAN: He got excited. And,
22 Madam Chair, I'll second his motion.

23 CHAIR NICHOLS: Thank you, Mrs. Riordan.

24 BOARD MEMBER RIORDAN: What I had wanted to do
25 was to thank the staff for this effort of theirs and the

1 reports that they have briefed me with. I really
2 appreciate their, you know, comprehension -- comprehensive
3 view of a -- you know, not an easy issue to resolve
4 necessarily. So I want to say thank you for that and to
5 commend them, and also to note in the resolution it's on,
6 I think, page eight towards the end, our implementation of
7 this. The staff is going to be very much involved in
8 reporting back to our Board. And I think this is very
9 helpful.

10 It will give us an idea of how things are going
11 and to know how successful we are in this effort. And if
12 we need to make any adjustments, we can do so at the time
13 of the staff presentation. So I'm very comfortable with
14 the program as it is designed.

15 And also, there is another part of our resolution
16 which keeps the communities involved if there are any
17 other projects that are used, they will be involved with
18 that review, and it provides transparency for our
19 communities that are there near the ports.

20 So congratulations, staff. And I think it was an
21 excellent presentation.

22 CHAIR NICHOLS: Thank you.

23 Mrs. Mitchell.

24 BOARD MEMBER MITCHELL: Thank you, Madam Chair.

25 I'll start by saying I'm very supportive of the

1 resolution and this measure. I also want to commend staff
2 for working with the stakeholders on it and reaching
3 compromises where we could. And it seems that we have
4 come to a good solution for most entities.

5 There was one question I had about this. It
6 seemed to me that I heard this statement made in the
7 course of this morning, and that is that innovative
8 concepts could include fleet averaging. Did I hear that
9 correctly? That's a question for staff.

10 TRANSPORTATION AND TOXICS DIVISION CHIEF ARIAS:
11 Chair Nichols, this is Heather. If I can respond
12 to that?

13 CHAIR NICHOLS: Yes, please.

14 TRANSPORTATION AND TOXICS DIVISION CHIEF ARIAS:
15 Heather Arias, Transportation and Toxics Division
16 Chief. Yes, Ms. Mitchell, there is the opportunity for
17 stakeholders to come in and apply under the innovative
18 concept to utilize fleet averaging.

19 BOARD MEMBER MITCHELL: So that would be an
20 avenue for oil tankers and ro-ros, if they wanted to go
21 down that path?

22 TRANSPORTATION AND TOXICS DIVISION CHIEF ARIAS:
23 Correct. They can apply and we will go through
24 the process that's established in the reg.

25 BOARD MEMBER MITCHELL: I'm also aware that at a

1 very -- I think the last meeting of our South Coast Air
2 Quality Management Air District Board, we put on the table
3 incentive monies for engine retrofits for vessels, and
4 those could be used for oil tankers.

5 And let me ask, would an engine retrofit reduce
6 emissions that would be able to help those tankers comply
7 with the law -- with the new reg?

8 CHAIR NICHOLS: Heather, do you want to --

9 BOARD MEMBER MITCHELL: For Heather, I guess.

10 TTD FREIGHT ACTIVITY BRANCH CHIEF SORIANO: Yeah,
11 this is Bonnie Soriano. I'll take that one. So the
12 question to that is certainly. I mean, we -- the
13 regulation is not prescriptive in how the -- how the
14 reductions are made. I mean, we talked about shore power
15 and these capture control systems. But certainly systems
16 that are on the vessels, such as after treatment of the
17 auxiliary or their boilers would -- would be an -- once
18 they were approved, would be a feasible mechanism to
19 reduce emissions. So, yes, onboard technologies would be
20 compliant under the regulation.

21 BOARD MEMBER MITCHELL: Thank you. It just seems
22 to me that there are a number of avenues for all of the
23 vessels to meet the requirements of the new regulation.

24 And I do want to say that one of our AB 617
25 communities, the West Long Beach Wilmington community is

1 right in the heart of the port area and suffers extremely
2 from port emissions. So this change in the rules that we
3 presently have, I think is going to be very welcome for
4 them and provide immediate benefits and reductions in
5 emissions that cause the health impacts that they all
6 suffer from.

7 So I'm very supportive of the -- of the rule and
8 thank our staff for working through all the -- all the
9 nuances and changes that they have made to make it a good
10 solution. Thank you.

11 CHAIR NICHOLS: Great. Next is John Gioia.

12 BOARD MEMBER GIOIA: Thanks. This is a really
13 important rule, and I'm glad we're finalizing it and
14 moving forward with this today. I won't repeat what
15 others have said, which is the importance of getting
16 tangible emissions and health benefits in the port
17 community. I represent an area that -- Richmond. I live
18 near the Port of Richmond. There's both an oil terminal
19 as well as ro-ro ships and other break bulk ships. So we
20 understand in Richmond the importance of getting these
21 types of emission savings.

22 And I want to acknowledge I know that the staff
23 worked hard with stakeholders, and the communities, with
24 industry to really come up with a rule that is feasible.
25 And I wanted to address that issue for a second, because I

1 know there was mention made by one of the speakers that
2 there's concern about a technology.

3 And I wanted to draw attention to one of the reso
4 -- one of the provisions in our resolution, which says,
5 "The Board directs the staff to assess the progress made
6 in deploying control technologies for use with tanker and
7 roll-on, roll-off vessels including assessing data and
8 information received from external stakeholders to review
9 the potential feasibility of control technologies for use
10 with bulk vessels, general cargo vessels, and vessels at
11 anchor and to publish the findings in a report..." - it's
12 a public report - "...by December 1st, 2022 as specified
13 by the regulation".

14 So I think it's important to recognize and
15 acknowledge that there will be ongoing analysis of
16 feasibility and there will be a public report issued
17 really in about two years from now. And that will also
18 provide an opportunity for this Board to review progress
19 along the way and ensure that these dates are feasible
20 dates in terms of technology.

21 So when speakers say, well, you know, we're
22 concerned about that. We don't think technol -- that
23 feasibility has been analyzed. As the CARB staff has
24 pointed out, there has been analysis of feasibility. But
25 I think just as importantly, there's going to be a

1 progress report on that.

2 And so I may ask staff -- Richard Corey or staff
3 to talk more about what that process would look like for
4 that feasibility report.

5 And then second, we did provide an alternative
6 pathway, at least with regard to the tankers. And, you
7 know, we know that communities want the reductions as soon
8 as possible. And to the extent that there may be equal
9 reductions in a community that is -- and a control
10 technology that is implemented as an alternative pathway
11 that's not otherwise required, there's an opportunity for
12 that and there's a five-year compliance period for that.
13 And in addition, the staff will be working with
14 communities.

15 The other resolution which I just wanted to draw
16 attention to, which is, "The Board directs staff to engage
17 the local community group or local AB 617 community
18 steering committee regarding an applicant's proposed
19 project to ensure these adjacent communities are informed
20 and involved in any proposed innovative concepts public
21 comment period prior to an applicant's approval". So
22 we're ensuring that the community is involved in
23 understanding what these innovative concepts are to ensure
24 that we're getting equal reductions.

25 So all-in-all, all -- all regulations do push the

1 envelope. They -- and we know that all of the regulated
2 industries here have stepped up in the past, that they are
3 capable of being innovative, making the investment, and
4 making these improvements.

5 And I want to add an additional voice to Hector's
6 voice on container fee. Yeah, it is totally appropriate
7 to assess container fees to reduce emissions on those
8 communities surrounding ports. And frankly, those fees
9 are really small in comparison to the value of products
10 and goods that are being transported. And it seems to me
11 that the residents around -- the residents of West
12 Oakland, or L.A., or Long Beach, or San Diego, or Richmond
13 around ports shouldn't pay the price for supplying the
14 United States with consumer goods that come in through our
15 ports. And that, yes, to the extent there may be some
16 small increases in a product, they will be so small,
17 that -- and it's a fair distribution I think of
18 responsibility that folks who receive a consumer product
19 in some inland State shouldn't do so at the benefit of the
20 air quality of those communities around facilities. And
21 it's -- so it's a fair -- around ports. So I think that's
22 a fair approach.

23 In a perfect world, we would have some federal
24 strategy on this, so that all ports on the west coast have
25 the same container fee. And I know there's been a lot of

1 effort in that regard. At a minimum, all ports in
2 California treated the same. We should all look at how we
3 can advocate here in California for a federal container
4 fee, so it treats all ports equally, and they're on an
5 equal playing field.

6 CHAIR NICHOLS: Thank you. I would note that the
7 ports spoke up in favor of more funding from the State to
8 pay for these changes. And it would seem like they should
9 be also moving forward, especially the Southern California
10 ports that adopted a fee. Although, it was a very low one
11 and then seem to be even delayed on implementing that. So
12 that seems to be a very worthwhile conversation to
13 continue.

14 Ms. Takvorian

15 BOARD MEMBER TAKVORIAN: Thank you, Chair. I --
16 let me just say, I was going to comment on that as well.
17 And I would support that there be a statewide or portwide
18 type of fee that could go forward, both on containers as
19 well as automobiles. And that, to my knowledge, hasn't
20 been considered by the Port of San Diego, and would be
21 something that could be welcome, as I know that they had
22 testified that they were looking for additional resources
23 and support. So I would like to reinforce that idea with
24 my colleagues.

25 I wanted to thank the staff for all the work that

1 you've done and the stakeholders that have participated
2 for all these many years. I appreciate the staff's
3 clarification on the incentives and appreciate their
4 willingness to work with the ports and to give them some
5 technical assistance on the incentives that are most
6 appropriate for each of the -- each of the ports.

7 I also appreciate staff's clarification on
8 feasibility. This has been maybe the most frequent
9 comment that's been made. I feel like staff have done
10 repeated and very professional evaluations in regards to
11 feasibility. And that, again, it's technology forcing,
12 but we do need to move forward. And I'm very appreciative
13 of the work they've done.

14 I think we've all said, this is an environmental
15 justice regulation. Most of the communities surrounding
16 the ports are disadvantaged communities. And in large
17 part, the pollution is caused by the ocean-going vehicles.

18 So I do also support the addition in the 15-day
19 changes on the innovative technology consultation with 617
20 stakeholder groups, as well as other community groups. I
21 think it's a good addition. I think we're going to need
22 to be vigilant, so that we ensure that those organizations
23 and those groups are, in fact, consulted in a meaningful
24 way and early in the process, and where there aren't 617
25 stakeholder groups, there should definitely be the

1 analysis of what community organizations or advisory
2 committees are most appropriate. And I hope that there
3 will be consultation with CARB and our environmental
4 justice group on that.

5 I think it's really appropriate obviously to
6 expand this to both tanker vessels, as well as auto
7 carriers, and ro-ros. I just want to say again, I know I
8 said it before, but ro-ros are only six percent of the
9 emissions statewide. But in San Diego, they generate more
10 diesel PM, SOx, NOx than all the container, bulk, general
11 cargo, and cruise ship combined, and about half of all the
12 greenhouse gases.

13 And so I think it's very appropriate that we're
14 responding to some of the concerns that have been raised
15 by ILWU and others to move the compliance date back to
16 2025, but I'm glad we're standing firm there.

17 So those are my comments. And again, thanks to
18 everyone for working on this rule and bringing it forward
19 now.

20 CHAIR NICHOLS: Thank you.

21 Dr. Sherriffs.

22 Alex?

23 BOARD MEMBER SHERRIFFS: Thank you. You know,
24 one, thanks to everybody who testified. And especially,
25 you know, as we think about health effects, the reminder

1 we had from young people who will bear the burden of
2 exposure for their entire life and potentially
3 contributing to disease for their entire life. And
4 likewise, testimony from older community members reminding
5 us of the importance of these air quality impacts on their
6 preexisting disease state. And as we're learning more and
7 more about how this can interact so negatively with COVID.

8 So really appreciate all of the testimony, and
9 particularly that testimony reminding us about the health
10 effects of different -- different ages.

11 I certainly want to share Diane and John's
12 comments about supporting CARB's commitment -- our
13 commitment to engage and facilitate input from communities
14 on the innovative compliance options. And I think that
15 has the potential also of coming up with some innovations
16 that may not otherwise have been thought of. But that's a
17 critical piece of our work going forward.

18 And my last comment is in -- is regarding
19 feasibility. And again, one of the comments that we had
20 reminds us that, in fact, we're operating in a global
21 context. We seem to be providing leadership in much of
22 this. But by the same token, we're not the only ones
23 worrying about this, and that any nation with a port is
24 interested and concerned. And so that partly the issue of
25 feasibility -- well, what other countries are doing is

1 going to help drive this. And I think we see over and
2 over it's going to drive technology and it's also going to
3 mean that it will be less expensive to place these
4 innovations to work for us all and work for cleaner air.

5 So thank you.

6 CHAIR NICHOLS: Thank you.

7 Mr. Fletcher.

8 BOARD MEMBER FLETCHER: Thank you. Thank you,
9 Chair Nichols. And I want to thank everyone who has been
10 a part of this. I know it's been a long road, a lot of
11 time and effort to arrive at this point today and
12 appreciate everyone who called in.

13 Look, change is difficult and change is hard.
14 And, you know, if these things were convenient, then we
15 wouldn't be in a position of having to require them to be
16 done. And if folks could figure out a way off of making
17 money off of investing in clean air in their entities,
18 then they would do that. But the reality is we have to
19 drive these changes, because we have the obligation as a
20 part of a functioning economy to ensure that the economic
21 engine that drives that is not disproportionately
22 impacting negatively communities.

23 And I think the points that have been brought
24 about the role that the ports play in benefiting
25 economically the entire country but the disproportionate

1 nation -- nature that is borne on these portside
2 communities, and the very real health impacts that have
3 very real public health costs that we all end up
4 shouldering forced us to be in a position to try and drive
5 change.

6 And so, you know, some of the concerns expressed,
7 I think there's some legitimate ones we can work through.
8 I think the interim reports and feasibility will be very
9 enlightening about how much technology was forced and what
10 change occurred. Maybe we come out of the interim reports
11 and we see we could move faster and maybe we could speed
12 thing up. That is always an option. An option of
13 evaluating things moving forward is not just to
14 potentially delay things. It could potentially show us
15 that we could get there sooner.

16 And so I'm encouraged by that. I do have one --
17 one question for -- for staff as it relates to the ports,
18 because I do appreciate their effort and willingness to be
19 a part of it. And I'm just curious if in our annual
20 reports back if that could include an update from each of
21 the ports in California on their compliance efforts, their
22 work around securing federal permits, the -- you know, the
23 types of situations we're in, so that we can, one, compare
24 progress between ports, but then, two, kind of know where
25 we might need to go in an effort to help.

1 And so I'm just curious in the annual report if
2 that can include a port-by-port breakdown of compliance
3 efforts.

4 CHAIR NICHOLS: I think we can give that one to
5 Mr. Corey.

6 EXECUTIVE OFFICER COREY: The will be a quick
7 one. The answer will be yes. So basically, the status of
8 implementation and plans for implementation obviously next
9 year will be very early in the process. But absolutely in
10 terms of how are ports moving forward with respect to
11 implementation (inaudible), yes.

12 BOARD MEMBER FLETCHER: Got it. Thank you for
13 that.

14 And also, I just want to comment briefly on the
15 innovative concepts. I think we've arrived at a point
16 that provides some flexibility and some avenues. We'll be
17 very interested to see the compliance and the impacts
18 associated with those. It was quite perplexing in the
19 comments to hear the entity that demanded the innovative
20 concept, and then demanded the number of years be
21 extended, talk about its complete worthless nature.

22 I'll be interested, as we move forward, to see.
23 My guess would be as an industry, no doubt on principle,
24 they will not be utilizing the innovative concepts, given
25 their extreme concerns with something that they demanded

1 be included.

2 But again, change is very difficult and very
3 hard. And we tend to privatize the profit and socialize
4 the cost associated with the things that we do. And I
5 think that we have to take these actions, because I
6 certainly represent a district and people that are very
7 impacted by these issues. And so there's always
8 challenges. There's always opportunities, but there comes
9 a point where we have to advocate on the side of finding a
10 basic issue of fairness.

11 And I'm pleased to support this rule today and
12 really want to commend everyone who's worked so tirelessly
13 hard for so many years to arrive at this point.

14 Thank you.

15 CHAIR NICHOLS: Thank you.

16 Dr. Balmes.

17 BOARD MEMBER BALMES: Thank you, Chair Nichols,
18 and I'll be quick, because many of the comments that I
19 will make are really endorsements of other Board members'
20 comments.

21 I just want to start off as the public health
22 member of the Board of saying unequivocally, diesel
23 emissions are bad for health and we should be trying to
24 get rid of diesel emissions wherever possible. And, you
25 know, if that involves technology-enforcing regulations, I

1 think so be it. It's the way we should move.

2 And absolutely agree with my other Board members
3 who have said this is an environmental justice issue, par
4 excellence, because portside communities are almost
5 always, you know, disadvantaged communities of color and
6 lower socioeconomic status who bear a disproportionate
7 exposure to other types of pollution, and they don't need
8 additional diesel emissions as well.

9 And I agree with Supervisor Fletcher about the
10 innovative concepts. I think, you know, we -- we provided
11 a way for ports to deal with the issue of overall
12 pollution by this innovative concepts approach. And, you
13 know, I would like to see it be implemented in an
14 effective way. And I think staff has done a good job at
15 trying to ensure that. And I especially like that staff,
16 you know, took Board recommendation to add a consultation
17 with community groups component.

18 As, you know, Chair of the AB 617 Consultation
19 Group, I -- it's absolutely important that we -- if
20 innovate concepts are being proposed, that AB 617
21 community steering groups be involved in that discussion
22 early. And where there are ports where there's not an AB
23 617 community steering committee that, you know, there
24 also be an effort to work with community groups.

25 And I think finally I'd like to say, I agree, we

1 have an interim report process to evaluate feasibility and
2 economic costs. This is a process. The regulation is
3 going to be implemented over a number of years. It's not
4 like all of a sudden there's doom and gloom in terms of
5 the economic costs. So I strongly support the regulation.

6 CHAIR NICHOLS: Great. Well, with that, I see no
7 other hands raised. And I think we are ready to, as has
8 been frequently suggested by the people who testified
9 today, ready to move on and take a vote on this item. So
10 I will ask the Clerk to please call the roll.

11 BOARD CLERK SAKAZAKI: Thank you, Madam Chair.
12 Dr. Balmes?

13 BOARD MEMBER BALMES: Yes.

14 BOARD CLERK SAKAZAKI: Mr. De La Torre?

15 BOARD MEMBER DE LA TORRE: Aye.

16 BOARD CLERK SAKAZAKI: Mr. Eisenhut?

17 BOARD MEMBER EISENHUT: Aye.

18 BOARD CLERK SAKAZAKI: Supervisor Fletcher?

19 BOARD MEMBER FLETCHER: Fletcher, aye.

20 BOARD CLERK SAKAZAKI: Senator Florez?

21 BOARD MEMBER FLOREZ: Aye.

22 BOARD CLERK SAKAZAKI: Supervisor Gioia?

23 BOARD MEMBER GIOIA: Yes.

24 BOARD CLERK SAKAZAKI: Ms. Mitchell?

25 BOARD MEMBER MITCHELL: Aye.

1 BOARD CLERK SAKAZAKI: Mrs. Riordan?

2 BOARD MEMBER RIORDAN: Aye.

3 BOARD CLERK SAKAZAKI: Supervisor Serna?

4 BOARD MEMBER SERNA: Aye.

5 BOARD CLERK SAKAZAKI: Dr. Sherriffs?

6 BOARD MEMBER SHERRIFFS: Yes.

7 BOARD CLERK SAKAZAKI: Professor Sperling?

8 BOARD MEMBER SPERLING: Aye.

9 BOARD CLERK SAKAZAKI: Ms. Takvorian?

10 BOARD MEMBER TAKVORIAN: Yes, enthusiastically.

11 BOARD CLERK SAKAZAKI: Vice Chair Berg?

12 VICE CHAIR BERG: Aye, and enthusiastically too.

13 (Laughter.)

14 BOARD CLERK SAKAZAKI: Chair Nichols?

15 CHAIR NICHOLS: Aye.

16 BOARD CLERK SAKAZAKI: Madam Chair, the motion
17 passes.

18 CHAIR NICHOLS: It does indeed. And thanks to
19 everybody for a terrific job.

20 And at this point, I think we need to call a
21 break just to reassemble the before we move on to the next
22 item. So I think if folks are amenable, we should do
23 another half hour break so people can actually go get
24 lunch. In which case, we would resume at 12:45 and then
25 be prepared for a long session talking about how to reduce

1 NOx from heavy-duty engines and other vehicles.

2 So let's adjourn now. Keep your Zoom tuned in,
3 Board members please, and staff, and we will reassemble at
4 12:45.

5 Thanks.

6 (Off record: 12:14 a.m.)

7 (Thereupon a lunch break was taken.)
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1 A F T E R N O O N S E S S I O N

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

3 AGP VIDEO: Madam Chair, this is Billy from AGP
4 Video. Our devices are recording. As soon as you have a
5 quorum, you are ready to go.

6 CHAIR NICHOLS: Okay. I think we might as well
7 get started then. The last item on today's agenda is
8 number 20-8-2. And it is the proposed Heavy-Duty Engine
9 and Vehicle Omnibus Regulation with associated amendments.

10 And again, if you wish to comment on this item,
11 please click the raise hand button or dial star nine and
12 we'll call on you when we get to the comment part of the
13 agenda.

14 I'm seeing that I can't start my video because
15 the host has stopped it.

16 AGP VIDEO: Ma'am, we do see your video on.

17 CHAIR NICHOLS: Oh, good. Okay. Great. Then
18 that was just a mistake in the -- another little Zoom
19 glitch.

20 Heavy-duty vehicles are one of the most
21 significant sources of air pollution in California and are
22 the largest source of oxides of nitrogen that are within
23 CARB's regulatory authority. In June, we approved the
24 Advanced Clean Truck, or ACT, Regulation, which mandates
25 sales percentages for heavy-duty zero-emission truck sales

1 in California. The proposed heavy-duty omnibus amendments
2 are intended to work together with the Advanced Clean
3 Truck Regulation to reduce emissions from heavy-duty
4 vehicles operated across different sectors of our economy.
5 The ACT Regulation ensures that manufacturers will be
6 dedicating themselves to making a percentage of their new
7 heavy-duty vehicles zero-emission vehicles, primarily in
8 applications that are best suited for electric or --
9 electric drive, including fuel cell and battery vehicles.

10 While this proposed omnibus amendment will ensure
11 that the remaining conventionally-fueled vehicles are as
12 clean as possible, both will be required to be -- maintain
13 the -- maintain those emissions levels while they're in
14 use. So with the zero-emission vehicles, they stay where
15 they are over time, but we know that diesel and gasoline
16 engines deteriorate over time. Emissions also increase
17 over time and this regulation is designed to deal with
18 that problem.

19 The lower NOx emission standards within this
20 omnibus amendment constitute the largest single nitrogen
21 oxide control measure in CARB's current State
22 Implementation Strategy. So moving ahead with this
23 regulation is absolutely critical to meeting our
24 obligations under the Clean Air Act.

25 These amendments are intended to ensure that

1 future on-road heavy-duty engines and their control
2 systems utilize the most advanced technologies available
3 to minimize tailpipe emissions, while maintaining that
4 performance over longer periods of time. Mr. Corey, would
5 you please introduce this item?

6 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.
7 Heavy-duty trucks are an essential part of the goods
8 movement sector in California and nationwide as you noted.
9 Based on recent estimates, heavy-duty trucks contribute to
10 roughly 30 percent of the statewide inventory of nitrogen
11 oxides in a quarter of the diesel particulate matter
12 emission inventory. And given the significance of
13 heavy-duty truck emissions, CARB has been actively
14 regulating the emissions from this sector since 1973. The
15 last time that CARB changed the heavy-duty emission
16 standards was almost two decades ago for the 2007 and
17 later model year engines.

18 In developing the proposed heavy-duty
19 regulations, staff is focused on a holistic approach for
20 controlling heavy-duty truck emissions, including:
21 proposed changes to the oxide of nitrogen and particulate
22 matter emission standards; a new certification test cycle;
23 extended useful life and warranty periods; in-use testing
24 methods; durability demonstration procedures; the use of
25 emission credits; emission warranty information reporting;

1 and hybrid powertrain certification procedures.

2 The proposal contains numerous elements crucial
3 to controlling real-world emissions, and as such has
4 become known as the Heavy-Duty Omnibus Rulemaking. Staff
5 believes that the proposed amendments will reduce the
6 baseline NOx emissions from the sector by 90 percent and
7 ensure emissions remain low as the vehicles operate
8 through their useful lives. Staff's proposal will help
9 ensure that real-world on-road truck emissions remain on
10 par with the levels measured in the laboratory at the time
11 of certification.

12 The proposed amendments also include a provision
13 to incentivize the production of heavy-duty zero-emission
14 vehicles. This provision will encourage manufacturers to
15 meet the Advanced Clean Truck Regulation requirements and
16 give them extra credit if they do so early.

17 Finally, longer useful life and warranty periods
18 would require more durable parts and help expedite truck
19 repairs. Failed emission-related components are a leading
20 cause of high-emitting trucks operating in commercial
21 transportation corridors, impacting the air quality of
22 many disadvantaged communities located along those
23 transportation corridors. I'll now ask Kim Heroy-Rogalski
24 of the Mobile Source Control Division to give the staff
25 presentation.

1 Kim.

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

4 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

5 CHIEF HEROY-ROGALSKI: Thank you, Mr. Corey. And good
6 afternoon, Chair Nichols and members of the Board.

7 Today, Dr. Paul Adnani and I will be describing
8 for you the proposed Heavy-Duty Low NOx Omnibus
9 Regulation, which is designed to reduce NOx emissions from
10 heavy-duty on-road vehicles. Because of its very
11 significant NOx reductions, this rule is crucial not just
12 for the State Implementation Plan, or SIP, but also for
13 protecting public health from particulate and ozone health
14 impacts as quickly as possible.

15 We'll also describe proposed minor amendments to
16 the Phase 2 Greenhouse Gas Regulation.

17 So slide, please?

18 Did it -- did the slide advance?

19 --o0o--

20 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

21 CHIEF HEROY-ROGALSKI: Okay. There we go. Let's start
22 with an outline of our presentation. First, I will
23 provide background information on the need for reducing
24 NOx emissions from on-road heavy-duty vehicles. Next,
25 I'll summarize the existing requirements governing

1 heavy-duty truck engine emissions. I'll talk about some
2 of the ways they're currently falling short of their full
3 potential. Then I'll hand it off to Paul, who will
4 present staff's proposed requirements.

5 Staff's proposal includes a significant overhaul
6 of existing requirements, including stringent new NOx
7 standards and tighter certification in in-use
8 requirements. Next, Paul will pass it back to me to talk
9 about compliance costs and the very significant projected
10 emissions and health benefits. And finally, I'll wrap it
11 up with staff's recommendations.

12 --o0o--

13 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
14 CHIEF HEROY-ROGALSKI: So, first, let me start with a
15 reminder of the air quality challenges California faces
16 and the importance of cutting heavy-duty truck emissions
17 further. California has made significant progress in
18 improving air quality over the last decade, but we still
19 have the worst air quality in the nation. As shown in the
20 map shaded in red, the South Coast and San Joaquin Valley
21 air basins are the nation's only two regions classified as
22 extreme nonattainment for the 2008 ozone standard.

23 In the South Coast, an estimated 80 percent
24 additional NOx reductions from 2012 levels are needed to
25 meet the current ozone standard. And ozone attainment

1 will become an even greater challenge when the more
2 stringent 2015 ozone standards take effect.

3 Much of this state, including the San Joaquin
4 Valley, still struggles to attain the health-based fine
5 particulate matter, or PM2.5, standards as well.

6 --o0o--

7 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
8 CHIEF HEROY-ROGALSKI: As can be seen in this chart of
9 South Coast NOx emissions. Although NOx emissions are
10 dropping due to existing programs. Further significant
11 reductions are still needed to attain the ozone standard
12 by the required year of 2031.

13 The black line on the chart shows how low
14 emissions must drop to attain the ozone standard in the
15 South Coast. On-road heavy-duty vehicles shown in the
16 chart in green, are significant contributors to the NOx
17 emissions inventory and they are the largest source
18 category within CARB's authority. It's clear that further
19 NOx reductions are needed from heavy-duty trucks.

20 The Omnibus Regulation you are considering today
21 is the most significant NOx measure that has come before
22 this Board in more than a decade, although, as I'll
23 describe later, the costs associated with the Omnibus
24 Regulation are significant, and its new requirements will
25 be challenging for affected manufacturers, omnibus'

1 emissions and public health benefits are enormous, and
2 California will not meet its SIP without this regulation.

3 --o0o--

4 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
5 CHIEF HEROY-ROGALSKI: Okay. The omnibus regulation is a
6 manufacturer-based rule that will apply to California
7 certified trucks, those trucks that are bought new in
8 California. But, of course, those are not the only trucks
9 that drive in California. Federal certified trucks
10 account for almost 40 percent of all heavy-duty vehicle
11 miles traveled on our roads.

12 Thus, California must rely on U.S. EPA to tighten
13 emission standards for these federal trucks. EPA
14 announced their intent to do just that via their Cleaner
15 Trucks Initiative in November of 2018. And they published
16 an Advanced Notice of Proposed Rule in January of this
17 year.

18 EPA plans to release a Notice of Proposed
19 Rulemaking next year. It's important to note that EPA
20 must abide by Clean Air Act requirements to provide
21 manufacturers four years lead time on proposing new
22 emission standards. As such, no federal action on
23 heavy-duty engine standards is anticipated before the 2027
24 model year.

25 CARB and EPA technical staff have been

1 coordinating closely for many years with the goal of
2 establishing a harmonized program for 2027 and subsequent
3 model years, and our hope is that EPA would largely align
4 with the Omnibus Regulation when they propose their
5 Cleaner Trucks Initiative next year.

6 --o0o--

7 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
8 CHIEF HEROY-ROGALSKI: So as the Board will remember, just
9 two months ago, you approved the Advanced Clean Truck
10 Regulation, which requires manufacturers of heavy-duty
11 vehicles to manufacture and sell heavy-duty zero-emission
12 vehicles in California. Now, because the Omnibus
13 Regulation affects many of these same vehicles and
14 manufacturers as the ACT Regulation in approximately the
15 same time frame, the Omnibus team worked closely were the
16 ACT team to NOx that two regulations complement one
17 another.

18 ACT will push adoption of advanced zero-emission
19 technologies, while Omnibus will ensure the remaining
20 combustion vehicles sold are as clean as possible.

21 In order to encourage manufacturers in the
22 development, production, and distribution of heavy-duty
23 zero-emission technologies and help ensure the success of
24 the ACT Regulation, the proposed Omnibus Regulation
25 includes an ability to generate credits by making

1 heavy-duty ZEVs in the early years of the ACT regulation.

2 These credits would have a limited lifetime and
3 are meant to assist manufacturers as they invest in both
4 zero-emission and cleaner combustion technologies.

5 --o0o--

6 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
7 CHIEF HEROY-ROGALSKI: Now, I'll discuss the current
8 heavy-duty engine requirements. And I'll point out some
9 of the areas where improvement is needed.

10 --o0o--

11 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
12 CHIEF HEROY-ROGALSKI: Okay. This slide lists the current
13 major requirements manufacturers must meet to legally
14 certify and sell heavy-duty engines in California.
15 Staff's proposal would amend and improve everyone of these
16 elements. At time of certification, manufacturers must
17 demonstrate that their engine can meet emission standards
18 over a period of time called the regulatory useful life.

19 To do this, manufacturers must age their engines
20 according to durability demonstration requirements. And
21 then show the engines meet the standards over certain
22 defined certification test cycles.

23 The averaging banking and trading, or ABT credit
24 program, provides manufacturers with compliance
25 flexibility, allowing them to make some engines higher

1 emitting than the standard, as long as they make others
2 lower emitting to compensate.

3 Under the Heavy-Duty In-Use Testing, or HDIUT,
4 Program, manufacturers must instrument some of their
5 customer's vehicles, measure the emissions during
6 real-world operation to check if engines are staying as
7 low emitting as they're supposed to be.

8 Manufacturers must also stand behind their
9 products and they're required to offer a warranty for all
10 emission-related parts for a certain period.

11 Finally, manufacturers must report warranty
12 information to CARB, so we can be appraised of
13 emission-related warranty claim rates. Manufacturers must
14 take corrective action if warranty fail rates exceed
15 certain thresholds.

16 --o0o--

17 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
18 CHIEF HEROY-ROGALSKI: Okay. So now, I'll discuss the
19 current heavy-duty engine standards and the technologies
20 used in new trucks today to meet those standards.

21 Currently, heavy-duty engines are required to
22 meet a 0.2 gram per brake horsepower-hour NOx standard and
23 a 0.01 gram per brake horsepower-hour PM emission standard
24 on two certification cycles. First, the Federal Test
25 Procedure, or FTP, and next the Ramped Modal Cycle or RMC.

1 California has also established optional low NOx
2 certification standards that are 50 to 90 percent more
3 stringent than the current required standard. Last year,
4 over a dozen natural gas and LPG engines certified to
5 those optional NOx standards.

6 California also has a NOx idling standard of 30
7 grams per hour that manufacturers can meet in order to
8 avoid automatic engine shut-down requirements.

9 Okay. As shown here in the diagram that just
10 appeared, today's diesel engines are equipped with
11 aftertreatment systems that consist of a diesel oxidation
12 catalyst, or DOC - and it's used to reduce hydrocarbon
13 emissions - and a diesel particulate filter, or DPF, that
14 captures toxic diesel particulate matter. This is
15 followed with a selective catalytic reduction, or SCR
16 catalyst, that uses ammonia derived from diesel exhaust
17 fluid, or DEF, as a reductant to reduce NOx emissions.

18 For Otto-cycle engines, three-way catalysts,
19 similar to those used in light-duty vehicles, are used to
20 control NOx, hydrocarbons, and carbon monoxide.

21 --o0o--

22 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
23 CHIEF HEROY-ROGALSKI: Okay. So to legally sell
24 heavy-duty engines, California and U.S. EPA require
25 manufacturers to certify their engines on the FTP and RMC

1 test cycles. The FTP test cycle represents transient
2 medium load operation. The RMC simulates steady-state
3 engine operation. However, these two test cycles do not
4 account for sustained low load operations nor do they
5 ensure that the aftertreatment system stays warm enough to
6 function.

7 Since the 2010 model year, diesel engines have
8 come with SCR aftertreatment systems. Now, SCR is very
9 effective at reducing NOx at elevated exhaust
10 temperatures. It works great. However, vehicle operation
11 at lower loads results in lower exhaust temperatures,
12 rendering the SCR system essentially inoperative. Such
13 low load operation tends to occur near congested
14 transportation corridors that are often located near
15 communities already impacted with poor air quality.

16 Thus, there is a need for a new low load
17 certification cycle, what we're calling the LLC, to ensure
18 that diesel engine manufacturers properly design their
19 engine and aftertreatment systems to control NOx even
20 during sustained operation at low engine loads.

21 --o0o--

22 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
23 CHIEF HEROY-ROGALSKI: Okay. So at time of certification,
24 manufacturers are required to demonstrate that their
25 engine and aftertreatment emission control system will

1 last and meet the emission standards for the full useful
2 life. Since 2010, on-road heavy-duty diesel engines have
3 used a durability program that represents only partial
4 useful life aging. Typically, manufacturers have been
5 aging out to only about a third of their useful life and
6 then extrapolating the rest of the way.

7 Recent investigations have revealed real-world
8 component deterioration is not captured under current
9 engine aging programs, which, in fact, has led to the
10 recall of hundreds of thousands of heavy-duty trucks with
11 degraded aftertreatment systems.

12 There's clearly a need to revise the durability
13 demonstration program, so that aging better represents how
14 emission control components deteriorate in the field.

15 --o0o--

16 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
17 CHIEF HEROY-ROGALSKI: Let me just take a sip here.

18 Okay. So the heavy-duty in-use programs were
19 developed in response to excessive emissions that were
20 discovered in the 1990s for engines operating at high
21 speed and load conditions typical of highway driving. The
22 manufacturers had calibrated their engines so that at
23 sustained highway cruise speed, fuel economy would
24 improve, but at the expense of higher NOx emissions.

25 As part of a settlement agreement among U.S. EPA,

1 CARB, and the engine manufacturers, manufacturers were
2 required to instrument customer-owned vehicles with
3 Portable Emission Measurement Systems, or PEMS, like has
4 been done for the truck shown on this slide.

5 The emission performance of vehicles is then
6 assessed using the not-to-exceed, or NTE, test method,
7 which I'll talk about a little more on the next slide.

8 --o0o--

9 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
10 CHIEF HEROY-ROGALSKI: Okay. So as I mentioned, the NTE
11 test method was originally developed to prevent cheating
12 during freeway type operation. And as a result, the NTE
13 method does not assess most other operating conditions,
14 including low load operation. In fact, a CARB analysis of
15 the HDIUT program data submitted for model years 2010 to
16 2014 revealed that only 4.9 percent of the test data was
17 even valid for evaluation with the NTE method. The rest
18 of the data was exempted or excluded for various reasons.

19 Now, even despite the many data exclusions
20 characteristic of today's NTE method, CARB's in-use
21 compliance staff here in El Monte has been able to use it
22 to find many problems and take enforcement action.
23 Although CARB's own heavy-duty in-use compliance testing
24 program only began in 2016, it has already resulted in
25 corrective action on over 80 certified engine families

1 involving 800,000 engines.

2 --o0o--

3 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

4 CHIEF HEROY-ROGALSKI: So this table shows the current
5 values for useful life in the yellow column and then
6 warranty periods in the two green columns. And they're
7 shown in miles, years, and hours. The heaviest vehicles,
8 Class 8 diesel vehicles with weight rating over 33,000
9 pounds, are shown in the top row.

10 The heavy-duty warranty values, recently amended
11 in June 2018, will take effect with model year to 2022.
12 And they'e shown in the column on the far right. The June
13 2018 amendments represent the first step in requiring
14 warranty periods to better reflect actual heavy-duty
15 vehicle usage. So, for example, beginning in '22 -- 2022,
16 Class 8s will have a warranty mileage period of 350,000
17 miles, which is approximately 80 percent of their current
18 useful life mileage period of 435,000 miles.

19 Under the Step 1 amendments, the warranty miles
20 for heavy-duty diesels were Lengthened. The years were
21 unchanged and the hours periods were removed.

22 --o0o--

23 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

24 CHIEF HEROY-ROGALSKI: So there were a lot of numbers
25 there, and so we have a chart here. This bar chart

1 illustrates the significant discrepancy between the
2 current regulatory useful life, shown in blue, and the
3 real-world longevity of heavy-duty engines shown in
4 yellow. CARB staff analyzed data on the average mileage
5 at which heavy-duty diesel engines get rebuilt, as well as
6 when heavy-duty Otto-cycle engines get replaced. As
7 shown, the rebuild and replacement mileages range from two
8 to almost three times the current regulatory useful life
9 mileage requirement. It is evident from this chart that
10 longer useful lives are necessary to ensure emission
11 levels remain in check while vehicles are in service.

12 --o0o--

13 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
14 CHIEF HEROY-ROGALSKI: Okay. So turning to the EWIR, or
15 Emission Warranty Information Reporting Program, its goal
16 is to ensure that defective emission components are
17 expeditiously identified and remedied through corrective
18 actions like recall or extended warranty.

19 Manufacturers are required to submit warranty and
20 failure rate information to CARB on a quarterly basis,
21 once the warranty claims rate for a component reaches one
22 percent or 25 warranty claims, whichever is greater.

23 If fail rates exceed the corrective action
24 threshold of four percent, or 50 failures, whichever is
25 greater, corrective action is required to remedy the

1 issue. And just as a note, historically CARB has had
2 difficulty requiring manufacturers to take the needed
3 corrective action.

4 --o0o--

5 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
6 CHIEF HEROY-ROGALSKI: Now, before I hand this over to
7 Paul Adnani, I'd like to note that my team at CARB has
8 been working on this package and its technical
9 underpinnings for a long time, since at least 2013.

10 Early in 2019, to give industry some additional
11 lead time, we released a detailed white paper laying out
12 staff's assessment of the technology and the standards
13 that we thought would be feasible for model year 2024.

14 So it's really exciting for me that we're at a
15 point now of proposing this to the Board. And let me pass
16 it to Paul Adnani to describe staff's proposed
17 requirements.

18 Paul.

19 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

20 Thank you, Kim.

21 --o0o--

22 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

23 Staff's proposal includes significant
24 improvements to several elements of the current heavy-duty
25 engine certification and in-use requirements. To make it

1 easier to track which element staff is describing in the
2 remainder of the presentation, we've color coded the
3 elements related to the certification process green.
4 These are requirements that must be met before an engine
5 can be legally sold. In-use requirements that take effect
6 after a vehicle is sold are shaded in beige.

7 Each element also has its own color coded
8 outline. For example, emission standards are shown in the
9 green box surrounded in red.

10 Now, let's focus on the various elements that
11 belong to the certification process shaded in green.
12 Staff is proposing very stringent NOx and reduced PM
13 emission standards on several certification test cycles,
14 including the addition of a new test cycle.

15 In addition, staff is proposing an enhanced
16 durability demonstration procedures, modified credit
17 provisions, and increase in the useful life period, and a
18 new test method for certifying hybrid powertrains.

19 Moving over to the beige shaded in-use programs,
20 staff is also proposing lengthening the manufacturer
21 covered warranty period and improving warranty corrective
22 action, as well as making major changes to in-use
23 compliance testing.

24 The Omnibus Regulation's comprehensive overhaul
25 of heavy-duty test programs is intended to ensure that

1 future truck engines are extremely low emitting when new
2 and throughout their regulated useful life.

3 --o0o--

4 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: This
5 slide shows the engines and vehicles that would be
6 impacted by the staff's proposal. The proposed
7 requirements apply to on-road medium-duty and heavy-duty
8 diesel and Otto-cycle engines. For California,
9 medium-duty engines are used in vehicles weighing between
10 10,000 to 14,000 pounds. Heavy-duty engines are used in
11 vehicles weighing greater than 14,000 pounds.

12 The proposed heavy-duty omnibus requirements
13 would apply to 2024 and subsequent model year engines.

14 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: The
15 proposed NOx standards would be implemented in two steps.
16 The first step would apply to '24 to '26 model year
17 engines, as shown here. For diesel engines, the proposed
18 NOx standards for '24 to '26 would reduce the current FTP
19 standards by 75 percent from the current standard of 0.2
20 to 0.05 grams per brake horsepower-hour. The proposal
21 would also include other standards as shown here.

22 Otto-cycle engines shown in the last column,
23 would also be subject to the same FTP standards applicable
24 to diesel engines. In addition, not shown on this and
25 subsequent slides, staff is also proposing a PM standard

1 of 0.005 grams per brake horsepower-hour starting with the
2 '24 model year. That is 50 percent below the current
3 standard.

4 Current engines largely meet the standard, which
5 is intended to maintain current use of robust diesel
6 particulate filters and prevent backsliding from using
7 more porous and less effective filters.

8 --o0o--

9 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: In
10 addition to the mandatory NOx standards I just described,
11 staff is also proposing optional 50-state directed engine
12 emission standards for '24 through '26 model years. The
13 proposed optional 50-state directed NOx standard would be
14 0.10 grams per brake horsepower-hour on the FTP and RMC,
15 which is 50 percent below today's standard, but double the
16 proposed mandatory California-only standard shown on the
17 previous slide.

18 Manufacturers that opt in to this program would
19 be required to certify all of their engine products sold
20 nationally to the proposed requirements. This would
21 provide flexibility to produce a lower cost engine since
22 the standards would be less stringent than the
23 California-only requirement and the costs would be spread
24 over more engines. This option could potentially provide
25 California with greater emission benefits, since federally

1 certified trucks operating on California roads would
2 comply with a lower emission standard.

3 --o0o--

4 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

5 Under staff's proposal, the standards would step
6 down in 2027, as shown in this table for diesel engines
7 for use in vehicles below 33,000 pounds. The FTP RMC
8 standard would be 0.02 grams per brake horsepower-hour.
9 That is 90 percent below today's current standard. The
10 new low load cycle, the NOx idling standard, and the FTP
11 NOx standard for all heavy-duty Otto-cycle engines would
12 also be significantly reduced.

13 For the heaviest class of engines --

14 Next slide please.

15 --o0o--

16 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: For
17 the heaviest class of engines, it's important to
18 understand the relationship between mileage and the
19 emission standard. As Kim mentioned earlier, the current
20 useful life is inadequate, so the proposal includes two
21 sets of standards. For 27 and subsequent model years, the
22 first set of standards correspond to an intermediate life
23 of 435,000 miles, and the second at the end of the
24 proposed longer useful life.

25 The NOx standard at today's useful life would be

1 0.02, which is 90 percent below today's standard. To
2 account for the expected deterioration that occurs as
3 engines and aftertreatment systems age, the standard at
4 the new longer useful life would be higher.

5 For 2031, the useful life would be extended to
6 800,000 miles, again with an allowable increase in the
7 FTP, RMC, and the low load cycle. We do not believe it's
8 necessary to provide an increase for the idling standard.
9 The proposed 800,000 mile useful life proposal is
10 consistent with the rebuild data we're seeing.

11 --o0o--

12 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: As
13 Kim mentioned earlier, we currently have optional low NOx
14 standards in place below the existing 0.2 FTP standard.
15 Because staff's proposal would drop the mandatory
16 standard, staff believes it's appropriate to revise the
17 optional standards as shown here.

18 Optional NOx standards are intended to encourage
19 manufacturers to further develop technologies that would
20 reduce NOx emissions. Engines certified under the
21 optional low NOx standards would be eligible for incentive
22 funding to help offset any potential increase in the
23 purchase price of the engines.

24 As shown here, manufacturers can certify as low
25 as 0.01 in the '27 model year.

1 For Otto-cycle engines, the optional standards
2 would be the same as for diesel, but without the LLC
3 requirements. Engines certifying to the optional
4 standards would also need to meet all other proposed
5 requirements applicable for the model year.

6 --o0o--

7 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: In
8 the last five slides I've summarized the proposed omnibus
9 standards. Now, I'd like to give you a brief summary of
10 why staff is confident these standards are technically
11 feasible. CARB, in partnership with local and federal air
12 agencies and the heavy-duty engine industry, has been
13 sponsoring a comprehensive program at Southwest Research
14 Institute for the past seven years, demonstrating the
15 capabilities to significantly reduce heavy-duty NOx
16 emissions.

17 The program had three stages and the objectives
18 were to demonstrate low NOx levels of 0.02 without
19 impacting GHG emissions. Southwest Research used two
20 engines, a 2014 model year Volvo engine and a 2017 model
21 year Cummins engine.

22 In stage three, they evaluated a number of
23 advanced aftertreatment and hardware technologies, and
24 demonstrated, for example, 0.025 NOx on the FTP. The
25 strategy included engine calibration, cylinder

1 deactivation, a split SCR system as well as other SCR
2 dosing management strategies. In addition to
3 demonstrating lower NOx technologies, they also developed
4 a low load test cycle previously mentioned.

5 Staff acknowledges that the Southwest Research
6 Institute demonstration program did not quite reach the
7 target of 0.02 NOx. However, between now and 2027, staff
8 believes manufacturers can use their own technical
9 expertise to build on Southwest Research Institute's
10 achievements and take advantage of other technologies that
11 have yet to be fully developed and demonstrated.

12 --o0o--

13 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

14 Related work done by manufacturers and suppliers
15 also supports the technical feasibility of the proposed
16 standards. For example, modeling conducted by the
17 Manufacturers of Emission Controls Association, or MECA,
18 concluded that 0.014 to 0.016 NOx on the FTP is achievable
19 via engine calibration, cylinder deactivation, and a split
20 SCR system. There are also a number of strategies not yet
21 fully Demonstrated, but with the potential to further
22 reduce NOx emissions.

23 Such systems currently under evaluation by
24 manufacturers and suppliers include dynamic cylinder
25 deactivation, mild hybrids with 48-volt electrification,

1 advanced turbochargers, and opposed piston engines.

2 At the end of this presentation, project
3 manufacturer Chris Sharp with Southwest Research Institute
4 will speak further regarding the demonstration program and
5 the potential for further NOx reductions.

6 --o0o--

7 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: Now,
8 I will be covering changes proposed for in-use testing.
9 As mentioned previously, the current NTE in-use test
10 method exempts nearly all of the vehicle operational
11 conditions experienced by actual heavy-duty vehicles, and
12 therefore does not accurately assess the true NOx
13 emissions performance of heavy-duty vehicles.

14 For many years, Europe has been using a moving
15 average window or MAW test method, which covers much more
16 in-use operation. In fact, European in-use heavy-duty
17 truck emissions are much better controlled than U.S.
18 engines due to using this method. The omnibus proposal
19 would replace the NTE method with the moving average
20 window method starting with the 2024 and subsequent model
21 years.

22 Recognizing that it's harder to control NOx
23 emissions during lower load operation and manufacturers'
24 concerns that random high emission spikes could put them
25 in jeopardy of failing the test, the omnibus proposal

1 improves upon the European approach by dividing engine
2 operation into three separate bins, one for idle, one for
3 low load, and one for medium/high load. The moving
4 average window method smooths out transit engine operation
5 and emissions performance data, minimizing the impact of
6 emission spikes.

7 The sum of emissions for each pollutant in each
8 of the three bins are then compared to the emission
9 thresholds to determine compliance.

10 Heavy-duty auto cycle engines would only be
11 subject to the FTP standard. So all operations will be
12 placed into one bin and compared to the FTP emission
13 threshold.

14 --o0o--

15 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: The
16 durability demonstration proposal includes a comprehensive
17 process using standardized cycles to age both the engine
18 and aftertreatment system in a manner representative of
19 on-the-road operations out to full useful life. Staff
20 believes these more rigorous durability requirements will
21 encourage manufacturers to make their parts more durable
22 and to more carefully specify needed maintenance.

23 Manufacturers could also take advantage of an
24 innovative option in which accelerated aftertreatment
25 aging procedures would be coupled with submittal of

1 on-board NOx sensor data.

2 When the omnibus proposal takes effect under the
3 existing on-board diagnostic, or OBD, requirements, new
4 trucks will be required to store NOx sensor data. The
5 omnibus proposal would give manufacturers the ability to
6 collect, and submit some of this data in exchange for
7 shorter durability demonstration requirements.

8 --o0o--

9 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

10 Shown here are the proposed lengthened useful
11 life and warranty phase-in periods. The yellow columns
12 show the proposal for the useful life phase-in for model
13 years '27 and '31. Based on extensive data analyzed by
14 staff, the proposed periods are representative of the
15 service lives of today's heavy-duty vehicles.

16 The gradual phasing occurring in '27 and '31
17 would allow time for manufacturers to account for any
18 changes they would need in their overall product
19 development process.

20 The green columns show the proposed phase-in
21 lengthened warranty periods in '27 and '31. Overall,
22 these warranty periods represent about 80 percent of the
23 proposed useful life.

24 --o0o--

25 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

1 Looking specifically at the warranty for Class 8
2 engines and vehicles, this chart shows how the progression
3 of the lengthened warranty periods would look. The green
4 bar at a hundred thousand miles shows the current warranty
5 provisions, while the red bar shows the 350,000 miles
6 warranty adopted under the June 2018 Step 1 warranty
7 amendments that will be effective beginning with the '22
8 model year. The proposed two-step warranty amendments are
9 represented by the purple and blue bars.

10 --o0o--

11 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: In
12 addition to the lengthened warranty periods I just
13 described, the omnibus proposal would strengthen the
14 warranty and useful life regulations in other ways. In
15 2018, as part of the Step 1 warranty amendments, the Board
16 lengthened the allowed maintenance intervals, essentially
17 requiring emissions-related parts to last longer before a
18 manufacturer can specify that the part needs to be
19 repaired or replaced.

20 Staff's proposal would expand the applicability
21 of the current heavy-duty diesel minimum maintenance
22 intervals to now include the California certified engine
23 families that are used exclusively in hybrid vehicles,
24 heavy-duty hybrid vehicles that are equipped with
25 optionally California-certified hybrid vehicle powertrain

1 systems, as well as the engines that are fueled by
2 gasoline and alternative fuels.

3 The proposal would also expand the useful life
4 and warranty applicability to include the heavy-duty
5 hybrid vehicles. Further, the proposal would remove the
6 existing California vehicle registration requirement for
7 the warranty coverage.

8 This would help ensure that heavy-duty vehicles
9 with California-certified engines that are later sold and
10 registered outside of California, but that may travel back
11 within the state in their normal operations, continue to
12 remain in compliance with the California emission
13 requirements.

14 --o0o--

15 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

16 Related to the -- to the warranty, we are also
17 strengthening the emission warranty information and
18 reporting program. Under the amendments, the need for
19 corrective action would be based solely on failure rates.
20 This would help reduce excess emissions from defective
21 parts more expeditiously.

22 In addition, warranty reporting and corrective
23 action thresholds would be lower to account for small
24 volume engine families. Finally, staff has found that
25 some manufacturers continue to use known defective parts

1 for several model years. Under the proposed amendments
2 this would no longer be allowed. This would help ensure
3 that manufacturers continue to improve their products and
4 address known issues.

5 --o0o--

6 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

7 Next, I will go over the proposed changes to the
8 averaging, banking, and trading credit program, which, as
9 Kim described earlier, provides flexibility for
10 manufacturers.

11 ABT was first established in the 1990s. In the
12 early years, California and EPA maintained separate pool
13 of credits. In 2004, the two ABT programs were merged
14 together to form a national pool of credits. The Omnibus
15 Rulemaking will effectively reestablish the California ABT
16 program with the 2022 and subsequent model year engines.

17 Key program changes include a five-year life for
18 credits. And credit multipliers to incentivize pull-ahead
19 compliance with future standards.

20 Additionally, under the proposal in the early
21 years, heavy-duty zero-emission products sold in
22 California, would qualify for engine NOx credits, but not
23 credit multipliers. This is to encourage manufacturers to
24 make heavy-duty ZEVs and comply with the ACT Regulation.

25 In later years, heavy-duty zero-emission NOx

1 credits would no longer be needed in order to ensure that
2 the omnibus standards reduce emissions from diesel engines
3 as intended.

4 --o0o--

5 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: This
6 slide presents two examples for credit calculations for
7 typical zero-emission and natural gas Class 8 heavy-duty
8 trucks. A '22 or '23 model year compliant heavy-duty
9 zero-emission vehicle could generate up to 0.44 megagrams
10 of NOx credits. At '22 or '23 model year clean combustion
11 engine, such as the current natural gas engines meeting
12 the proposed 2031 requirements, could generate
13 significantly more credits than the zero-emission vehicle
14 up to 1.6 megagrams of NOx credits.

15 This large credit value is primarily due to the
16 2.5 credit multiplier. The 1.6 megagrams of credits would
17 be sufficient to offset 14 higher emitting diesel trucks
18 in '24 model year. A natural gas manufacturer generating
19 such credits could use the credits themselves or sell them
20 to another party.

21 --o0o--

22 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: I
23 will now describe the proposed optional hybrid powertrain
24 certification test procedure. This procedure would give
25 manufacturers an alternative optional pathway to certify

1 hybrid systems, which could be very important since some
2 manufacturers are considering meeting the proposed '24 NOx
3 standards through use of hybrid technology.

4 The proposed hybrid powertrain procedures align
5 with the existing U.S. EPA procedures created for
6 greenhouse gas standards.

7 Under the proposal, the conventional combustion
8 engine and the hybrid components would be certified
9 together as a complete system. This means manufacturers
10 could assist and take credit for both fuel economy and
11 emission benefits of hybrid powertrains. Manufacturers
12 electing to use this test procedure would be required to
13 comply with all certification requirements that are placed
14 on heavy-duty engines. The procedure would provide a
15 flexible, efficient, and cost effective certification
16 pathway for hybrid powertrains.

17 --o0o--

18 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI:

19 Since CARB adopted the California Phase 2
20 Greenhouse Gas Standards and began implementing the
21 trailer requirements for the 2020 model year, staff has
22 become aware of the need for some minor amendments
23 involving medium-duty vehicle, reporting requirements,
24 performance label specifications, and trailer-specific
25 requirements.

1 Another minor amendments involves auxiliary power
2 units where we're proposing to align California and
3 federal requirements.

4 Finally, we're proposing minor amendments to
5 clarify medium-duty engine requirements.

6 --o0o--

7 MSCD STAFF AIR POLLUTION SPECIALIST ADNANI: Now,
8 I will turn it back -- turn it back over to Kim to discuss
9 the estimated emissions and health benefits from the
10 proposed requirements, as well as the cost of the proposed
11 regulation.

12 Kim.

13 --o0o--

14 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
15 CHIEF HEROY-ROGALSKI: Thanks, Paul.

16 All right. This slide shows the NOx emission
17 benefits from the proposed requirements. And just to put
18 it in context, this Omnibus Rule is the largest NOx
19 reduction measure the Board has considered since adopting
20 the Truck and Bus Rule in 2008.

21 So statewide, Omnibus would achieve more than 23
22 tons per day benefits in 2031 and over 75 tons per day in
23 2050. The South Coast would see emission reductions of
24 seven tons per day in 2031 and higher benefits in later
25 years as more compliant trucks are purchased.

1 Similarly, the San Joaquin Valley would see
2 emission reductions of 5.7 tons per day NOx in 2031 and
3 even more benefits in later years. The proposed
4 regulation is an important SIP measure that is critical
5 for the attainment of federal ozone standards by 2031.
6 This measure alone was estimated to contribute 30 percent
7 of the total NOx reductions statewide from California SIP
8 measures. But even more crucial than its SIP impact, are
9 the public health benefits the omnibus proposal would
10 provide.

11 --o0o--

12 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
13 CHIEF HEROY-ROGALSKI: So those emission benefits that I
14 just discussed, they translate into significant public
15 health benefits. Half the particulate matter in the San
16 Joaquin Valley, for example, starts as NOx emissions from
17 mobile sources and the omnibus proposal would dramatically
18 cut those emissions. This table shows the estimated
19 health benefits associated with the reduction in secondary
20 nitrate PM formation as a result of staff's proposal.
21 This package would prevent nearly 4,000 premature deaths.
22 When monetized, the regulation's health benefits would
23 translate into a benefit valued at \$36.8 billion.

24 --o0o--

25 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

1 CHIEF HEROY-ROGALSKI: The cost of the regulation is also
2 significant. And specifically, the cost would include
3 technology costs to meet the standards, in-use amendments,
4 lengthened warranty, durability amendments, EWIR
5 amendments, and increased operation costs due to more
6 diesel exhaust fluid.

7 The total cost of the regulation between 2022 and
8 2050 is estimated to be four and a half billion dollars.
9 The cost of the omnibus requirements would likely increase
10 the purchase price of engines and vehicles. And as an
11 example, the table here presents the estimated cost for
12 engines purchased in the 30 -- 2031 model year, the year
13 that the regulation would be fully phased in.

14 When the omnibus package is fully implemented,
15 the average impact is estimated to be about \$6,000 per
16 vehicle. And that corresponds to less than a six percent
17 increase compared to baseline costs.

18 The total cost effectiveness of the regulation is
19 estimated to be \$5.45 per pound NOx, and that's well
20 within the range of previously adopted CARB measures.

21 So although these costs are significant, it's
22 important to remember that the monetary value of the
23 benefits would be over eight times greater than the
24 expected costs.

25 --o0o--

1 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

2 CHIEF HEROY-ROGALSKI: Since staff released the omnibus
3 proposal in late June, we've been meeting with numerous
4 affected stakeholders concerning the proposal. And based
5 on those discussions and additional analysis by staff, we
6 now have some minor changes we plan to propose as 15-day
7 changes.

8 --o0o--

9 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH

10 CHIEF HEROY-ROGALSKI: First, the 15-day changes include a
11 temporary exemption for heavy-haul engines with a sales
12 cap through the 2026 model year. Since heavy-haul engines
13 are just a tiny fraction of the overall heavy-duty market,
14 we prefer that manufacturers focus their engineering
15 resources on the more numerous engine families.

16 Second, we intend to propose a slight
17 modification to the low load cycle to allow it to work
18 better for alternative fueled engines.

19 Third, we plan to allow zero-emission powertrain
20 manufacturers, rather than vehicle manufacturers, to
21 generate NOx credits. We would propose to sunset the
22 ability to generate credits with heavy-duty ZEVs as of
23 2026 rather than 2030. And that's to ensure that the
24 omnibus requirements achieve the emission reductions from
25 diesel engines as intended.

1 Fourth, just as we are locking in OBD or on-board
2 diagnostics thresholds for diesel engines, we plan to
3 propose to apply this OBD flexibility to include 2022 and
4 2023 model year Otto cycle engines as well.

5 Fifth, based on concerns from manufacturers
6 regarding having enough lead time to do the design,
7 validation, and durability demonstration work, to meet the
8 2024 model year standards, we plan to propose a shorter
9 durability demonstration option for 2024 to 2026 model
10 year engines, in exchange for manufacturers submitting
11 additional NOx sensor data.

12 And finally, we plan to propose some other minor
13 clarifying amendments.

14 --o0o--

15 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
16 CHIEF HEROY-ROGALSKI: So now, let me conclude with CARB
17 staff's recommendation.

18 --o0o--

19 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
20 CHIEF HEROY-ROGALSKI: The CARB staff recommends the Board
21 approve Resolution 20-8-2 with the proposed 15-day
22 changes. This regulation is comprehensive, cost
23 effective, technically feasible, and it provides
24 substantial air quality and health benefits.

25 So thank you. This concludes my presentation,

1 but we actually have another related speaker here. So I
2 would like to introduce Chris Sharp from the Southwest
3 Research Institute. I've worked with Chris for many
4 years. He is a staff engineer in their Diesel Engine and
5 Emissions Research and Development Department. And he's
6 been at Southwest for 28 years working on many programs
7 related to integrating advanced aftertreatment systems on
8 diesel and natural gas engines.

9 And Chris has done projects not just for
10 regulatory agencies like CARB and EPA, but also for
11 industry clients. He has been leading this project for
12 CARB at Southwest Research Institute since 2014. So let
13 me hand it off now to Chris.

14 (Thereupon an overhead presentation was
15 presented as follows.)

16 MR. SHARP: Thank you, Kim.

17 And let start off first -- hopefully everybody is
18 hearing this. Let me start off first by thanking the
19 Board for the opportunity to present the results of our
20 ongoing efforts here under the low NOx technology
21 demonstration.

22 So we'll go to the next slide, please.

23 --o0o--

24 MR. SHARP: Just a little bit of background about
25 Southwest Research Institute itself for those of you that

1 may not be fully aware of us. We are, in fact, one of the
2 largest, independent, not-for-profit R&D organizations in
3 the U.S. We've been around since 1947. And we're focused
4 in the area of applied research and development. So
5 really taking technology and helping folks bring that
6 technology to market.

7 And since we're independent and basically
8 contract research based, we've been partnering with, you
9 know, folks in industry, and government, and R&D labs
10 during that time. And more specific to this area, we've
11 been involved in this kind of emissions R&D and technology
12 demonstration for more than 40 years, including both
13 industry clients with new product introductions or
14 regulatory demonstration efforts like the one that we'll
15 be talking about today.

16 If I could have the next slide.

17 --o0o--

18 MR. SHARP: So putting the current effort in --
19 in context, we'll be talking today about the results of
20 the Stage 3 program effort, what we call Stage 3. But
21 that is really a part of the ongoing effort that we've had
22 going since 2014. So what you're seeing today in results
23 is really the culmination of about six years of
24 development effort. And the work doesn't really stop
25 there either. We are continuing also to support EPA in

1 their development efforts under the Cleaner Trucks
2 Initiative, and as well we're beginning to move this stuff
3 into the on-road segment in some of our continuing work.
4 So the work doesn't stop and we'll keep working in this
5 area further.

6 Next slide, please.

7 --o0o--

8 MR. SHARP: So zooming in on the Stage 3 program
9 a little bit. Let's take a look at the configuration of
10 technology that we've put together for to meet our
11 targets. It starts with a production 2017 Cummins X15
12 engine. And the target for the program was to try to come
13 up with a package that gets that to a target of 0.02 grams
14 per horsepower-hour on the FTP and RMC regulatory cycles
15 and to reach the lowest feasible low load and low load
16 cycle and in-use NOx emissions that we could, while at the
17 same time having no adverse impact on greenhouse gas
18 emissions and CO2 emissions, or perhaps even seeing if we
19 could pull some benefit out of that.

20 To reach those targets, even though the X15
21 engine has quite a bit of technology already on it, we
22 knew that we'd need some additional technology levers.
23 And so as part of the program, we evaluated a variety of
24 additional technology options and ultimately down-selected
25 cylinder deactivation as our primary added engine

1 technology lever to help us reach the targets.

2 So that advanced engine was then married to an
3 advanced aftertreatment system. After an extensive
4 screening process, we down-selected a package that
5 involves a dual SCR dual dosing kind of a setup. So we
6 have a close-coupled light off SCR catalyst with heated
7 DEF dosing. And that is then married to a downstream
8 system that has a more traditional arrangement of a DPF
9 followed by SCR.

10 I should point out that the DPF that we have is a
11 combined coded DPF that replaces the functions normally
12 done by the diesel oxidation catalyst, or DOC, and DPF
13 arrangement in this particular setup.

14 So that is the technology package that we put
15 together. And although a lot -- a number of these
16 technologies are really new to the heavy-duty space, I
17 should point out that a number of them are in production
18 in other markets. So, for instance, you will find
19 cylinder deactivation on passenger cars, and you'll find
20 dual SCR being introduced in production in Europe in some
21 passenger car areas.

22 So many of these technologies are, in fact,
23 reaching production now. That said, I don't want to
24 minimize the fact that it's still going to be quite a bit
25 of work to get all of this technology developed and into

1 the heavy-duty space.

2 Next slide, please.

3 --o0o--

4 MR. SHARP: So just a quick -- a couple of quick
5 looks at what the actual hardware looks like, more than
6 diagrams. So there's our engine on the left. You can see
7 the cylinder head that's in the middle there featuring the
8 cylinder deactivation technology, which is shown in a
9 little bit more detail below, so we can deactivate any, or
10 all, or none of the cylinders. And on the right is a
11 picture of the advanced aftertreatment system with its two
12 components both the upstream and downstream. This picture
13 is showing them here without insulation, so you can see
14 the components, but normally that system would feature a
15 bunch of insulation covering it all up to preserve
16 additional heat. So that's a quick look at the technology
17 package and real hardware.

18 If I could have the next slide.

19 --o0o--

20 MR. SHARP: So the hardware package can only do
21 so much. And what we really need to make it work are
22 controls. So the controls and the software are really at
23 the heart of making this hardware achieve the targets that
24 we wanted to achieve. And that works on both the engine
25 side and the aftertreatment side.

1 So we've done a lot of work to modify the
2 existing engine calibration in concert with the new
3 hardware. We've been given full access to do that by the
4 engine manufacturer. And we appreciate the support from
5 Cummins in that.

6 And we've essentially made these modifications in
7 order to help increase temperature and reduce engine-out
8 NOx when the aftertreatment is cold in an effort to get
9 the aftertreatment warm, so it can be fully functional at
10 high efficiency. In some cases, you're seeing an example
11 here in cold start, we're adding 50 or even 100 degrees C
12 to the exhaust temperature.

13 But because of the calibration and the technology
14 package, we're able to do that with only a minimal impact
15 in CO2 over our test cycles. That package is then married
16 to advanced aftertreatment controls. We are looking at
17 very high NOx-reduction targets from the aftertreatment in
18 excess of 99 and a half percent and needing to maintain
19 that over time and in the field. And so we need a very
20 flexible aftertreatment control to go with that. We've
21 implemented a model based control structure.

22 And I'm not going to go into the details. It
23 looks fairly complicated there, but it is a
24 production-oriented structure that we're actually also
25 implementing for some OEMs looking forward here. And that

1 enables us to meet the high precision requirements that we
2 have, as well as being very flexible, so that it can
3 continue to function over a wide variety of real-world
4 conditions with elements like feedback control and
5 long-term trim algorithms.

6 Next slide, please.

7 --o0o--

8 MR. SHARP: So with all that package put
9 together, that's what we're targeting here. But as has
10 been mentioned by several other speakers, we need this to
11 work over the life of the vehicle, so it's not enough for
12 it to work when its new. It's got to be durable. And
13 to -- in order to demonstrate that, we've got, you know,
14 to age these systems, and the aging is a critical
15 component of the program.

16 Our aging target for this program is at 435,000
17 miles. And we recognize that CARB is actually looking at
18 some longer durability requirements. But when this
19 program was scoped and the system was designed, our target
20 was 435,000 miles.

21 Now we could just do thermal aging, and that's
22 the traditional approach to aging aftertreatment. And we
23 do that for calibration and controls development, but
24 that's not going to give us a properly robust
25 demonstration. So in the final aging process, we've used

1 a much more rigorous protocol, an accelerated program --
2 protocol that was developed at Southwest Research
3 Institute and is actually looking -- being looked at right
4 now as part of future compliance procedures. And that
5 protocol in -- wraps in really all the stuff that happens
6 to an aftertreatment system over its lifetime, so thermal
7 aging, chemical aging, physical aging, much more
8 representative of real-world aging, the real exotherms,
9 oil exposure, and the poisons there are sulfur, ash, all
10 those other compounds and things that will happen to an
11 aftertreatment system.

12 And with the protocol that we've developed, we
13 can do that about ten times faster than you would normally
14 have to do running around, so we can fit a reasonable time
15 frame. And it's these parts that we've used for the final
16 demonstration.

17 So if I could have the next slide.

18 --o0o--

19 MR. SHARP: So marrying all that stuff together,
20 here's a quick summary of the results from the emission
21 performance testing on the FTP, the low load cycle, and
22 the RMC. You can see the baseline engines for compare --
23 engine emissions for comparison here in the blue bars.
24 That's our original engine. And then the low-NOx engine
25 is shown on all the other bars, looking at both the

1 development-aged system, but really let's focus in on the
2 final-aged system on our demonstration.

3 So if we take a look at the zero hour in red and
4 then the final aged in yellow, you can see that
5 ultimately, we began at the program with a little bit of
6 margin to our targets. But as the system aged, we saw
7 some performance degradation. And so at the end of our
8 aging experiment here, a thousand-hour test point, on the
9 FTP we're at 0.025, which is a little bit above that 0.02
10 target. On the LLC, we're right at the 0.05 target that
11 we had starting off from 0.02. That's a little more
12 degradation, but we expected that because of the lower
13 temperature requirement. And finally, on the RMC again,
14 we started with some margin, but it wasn't quite enough.
15 We're at about a 0.022.

16 Nevertheless, that 1,000-hour point still
17 represents an 85 percent reduction in tailpipe NOx on
18 regulatory cycles from the original engine. When we look
19 at the low load cycle though, remember that this is an
20 area that current engines don't really control very well.
21 So the base engine was about 1 gram per horsepower-hour.
22 And so even with that 0.05 we're still a factor of 20
23 lower in emissions on the low load cycle. And that's
24 critical, because this is the kind of stuff that's going
25 to be happening in urban environments where we really need

1 the most reduction right now.

2 That's being accomplished at the same time while
3 we have a technology package that is essentially
4 greenhouse gas neutral compared to base engine. So we
5 have the same CO2 emissions as the base engine, with the
6 exception that we do have about a one percent increase in
7 CO2 on the low load cycle. Although, that's at fairly low
8 loads and fuel consumptions to being with. And, of
9 course, we're comparing to a spot where the engine has
10 very poor NOx control to begin with.

11 Our idling emissions for this test article on the
12 CARB idle test are between 0.1 and 0.3 grams an hour. So
13 that's considerably below the proposed 5 gram per hour
14 number. That was tested at the end-of-life year as well.

15 I should make one other note to point out that
16 part of the compliance determination here would be that we
17 also need to normally adjust our emissions to account for
18 intermittent events like DPF regeneration in desulfation.

19 We are still working on finalizing those numbers,
20 but the preliminary indication from the data is that those
21 values will be in the neighborhood of 0.002 to 0.03, and
22 that would be an additive factor. So for instance, if we
23 look at the RMC emissions at 0.022, with that factor added
24 in, you would be looking at a final compliance value of
25 0.024. So I did want to point that out, since that's

1 still something that we're finalizing right now.

2 Again, you can see that we started below 0.02,
3 but with the degradation NOx somewhat above it. So if I
4 could have the next slide, we'll take a look at that a
5 little bit more detail.

6 --o0o--

7 MR. SHARP: Here is the aftertreatment
8 performance. And again, I want to focus on the zero-hour
9 and the thousand-hour data sets here. You can see that we
10 generally started with the degreened aftertreatment system
11 at around 99 and a half percent conversion across the
12 Board, sometimes even a little bit better on the RMC.

13 But by the end of useful life, we've lost about
14 maybe 0.3 percent -- a little over 0.3 percent conversion
15 and a little bit more than that, about one and a half
16 percent conversion on the low load cycle. Now, we did
17 expect some degradation. And so initially, we had built
18 in some margin in our targets for about 0.2 percent on the
19 FTP and RMC and about one percent on the low load cycle.

20 But you can see that the degradation was just a
21 little bit more than that. And so I think it highlights
22 really the critical importance of system robustness and
23 durability in trying to meet these kinds of standard. And
24 it brings up the question, are there areas where we could
25 improve this a little bit further having taken this being

1 our really first shot at it.

2 So if I could have the next slide, we'll discuss
3 those a little bit.

4 --o0o--

5 MR. SHARP: We do see some areas where there
6 could be some further improvement in the technology
7 looking back at the development that we've been doing.
8 So, for instance, we could move to a more traditional
9 diesel oxidation catalyst and DPF architecture. It turned
10 out we didn't need the lower thermal inertia as much in
11 the downstream system. We believe this would be more
12 robust and probably provide a little better CO2 emissions.
13 We could have some improvements in mixing, even though
14 it's already very good.

15 Some small volume changes. We did provide a
16 little bit of guidance to our catalyst suppliers and areas
17 that they could improve catalyst formulations. And they
18 never stopped working on those, so, you know, our
19 technology that we evaluated s already about three years
20 old.

21 And finally, we could do some added improvements
22 and controls, all of this with a target to reduce that
23 aging impact by about half. And I should point out that
24 many of these things we're already planning on
25 incorporating into some of the work that we'll be doing

1 with EPA under Cleaner Trucks Initiative. So we're
2 already going to be looking at these and looking at just
3 how much improvement we can get out of this.

4 Next slide, please.

5 --o0o--

6 MR. SHARP: Speaking a little bit about in-use
7 emissions, so changing gears a little bit, we showed a lot
8 of regulatory cycle activity, but I wanted to highlight
9 some emission results on a field cycle. So here's an
10 example field cycle result. This is actually a real
11 vehicle route that was run on a Class 8 truck. It turns
12 out to be a freight route coming over the Cajon Pass and
13 coming into the South Coast area.

14 And it was actually a route provided by the
15 Engine Manufacturers Association based on data that was
16 recorded on a real truck by West Virginia University. So
17 we translated that to a lab cycle and ran it over our test
18 article here that was calibrated on the regulatory cycles.

19 And if you take a look at the engine-out NOx in
20 blue versus if you squint really hard, you can kind of see
21 that tailpipe next down at the bottom, you can see that
22 even on this field route, we're still getting something in
23 the neighborhood of 99 -- nearly 99 and a half percent NOx
24 reduction. So this is working not just on a lab cycle --
25 a lab cycle but on a field-related cycle as well.

1 If I could have the next slide.

2 --o0o--

3 MR. SHARP: And taking a looking at this
4 evaluating it using the new proposed in-use metric with
5 the three-bin analysis, you can see the proposed
6 thresholds for this engine in blue, and the red bars show
7 you where we're landing on this. So in the case of all
8 three of those bins, we are, in fact, below the proposed
9 thresholds for this particular field cycle.

10 So that's a good sign that we can take those
11 laboratory results and translate them into effective
12 emissions control out in the real world.

13 So if I could have the next slide.

14 --o0o--

15 MR. SHARP: I'm just going to conclude with a
16 little bit of acknowledgement of our many program
17 partners, our funding partners at CARB, South Coast, EPA,
18 MECA, other locations, the MECA members and industry
19 providing us hardware, Cummins for the engine and all
20 their support, Eaton, and all of our other partner
21 companies, as well as our stakeholder advisory groups and
22 many other folks. This has been a very large partnership
23 and we want to thank all of our partners for doing that.

24 And with that, I'll conclude. The last slide is
25 just a quick contact information.

1 --o0o--

2 MR. SHARP: I'll if there's any questions and
3 I'll pass the floor back over to Chair Nichols.

4 Thank you.

5 CHAIR NICHOLS: Okay. Thank you very much.
6 Appreciate that addition to the staff presentation. It's
7 really helpful to be able to see all that detail about
8 what you have been able to actually achieve with real
9 engines

10 Before we turn to the people who have signed up
11 to speak, and I see that there are 52 hands, I want to
12 remind people that we're going to impose a two-minute
13 limit instead, of the three. I announced that earlier,
14 but in case people weren't listening at that point. And I
15 also want to ask you within the next five minutes if you
16 think you're going to speak, to please sign up right away,
17 put your hand up and follow the instructions, so we can
18 manage the flow of the rest of our day better.

19 And with that, I think I will turn it over to Mr.
20 -- who's clerking this time? Is it Ryan again?

21 BOARD CLERK SAKAZAKI: I am, Madam Chair.

22 CHAIR NICHOLS: Yeah. Okay. Great. Sorry.
23 Just want sure. We can begin the public hearing process
24 then.

25 BOARD CLERK SAKAZAKI: Perfect. Thank you, Madam

1 Chair. As you mentioned, we have about 50 people signed
2 up to speak. And if you wish to speak, please push the
3 raise hand button or if you're on the phone, dial star
4 nine now. As Madam Chair said, in about five, minutes
5 we'll be looking to cut that off. So please -- please
6 raise your hand. And also, please do not lower and then
7 re-raise your hand, because then that will put you to the
8 bottom of the list, and we won't be sure if you spoke --
9 signed up after the cutoff.

10 So with that, the first three speakers Erik
11 White, Coralie Copper and Steve Flint.

12 So Erik, I have activated your microphone. You
13 can go ahead and unmute yourself and begin.

14 MR. WHITE: Thank you. Good afternoon, Madam
15 Chair and members of the Board. I'm Erik White, Air
16 Pollution Control Officer for Placer County. However, I
17 speak to you today in my capacity as Co-Chair of the
18 Mobile Sources and Fuels Committee of the National
19 Association of Clean Air Agencies. NACAA strongly
20 supports CARB's proposed Heavy-Duty Omnibus Regulation and
21 approval of this action by the Board today.

22 And we applaud CARB for, once again, leading the
23 way on important programs to reduce emissions from mobile
24 sources. NACAA recognizes the critical need of this --
25 for this action in California. We also recognize that

1 there is a clear and profound need for significant NOx
2 reductions in heavy-duty trucks and engines nationwide.

3 More than one-third of the U.S. population lives
4 in areas of the country designated non-attainment for the
5 health based NAAQS for ozone, particulate matter, or both.
6 And many others live in areas just on the cusp of
7 non-attainment.

8 In the absence of a more stringent national
9 highway heavy-duty NOx standard, these areas will find
10 themselves unable to address emissions from one of the
11 largest sources, likely delaying their attainment or
12 driving them into non-attainment.

13 As such, NACAA strongly supports swift
14 establishment of a single national highway heavy-duty
15 truck and engine program that mirrors today's proposal,
16 including at least a 90 percent reduction in NOx from
17 current in-use levels as soon as possible and other
18 components that ensure such reductions are realized over a
19 vehicle's full useful life.

20 The recent delay in federal action on the Cleaner
21 Trucks Initiative makes prompt approval and implementation
22 of CARB's regulation even more important. With the timing
23 of federal standards now uncertain, many states are likely
24 to consider adopting CARB's regulation under Section 177
25 of the Clean Air Act.

1 Considering this, we request that CARB continue
2 to work in close collaboration with EPA to achieve a
3 single national program that preserves all the features
4 and benefits of the California program in order to
5 maximize them nationwide.

6 Once again, NACAA strongly supports staff's
7 proposal and urges that the Board approve this program
8 today.

9 Thank you.

10 BOARD CLERK SAKAZAKI: Thank you.

11 CHAIR NICHOLS: Thank you, Erik. I just have to
12 comment that I remember I believe the first time I saw you
13 testify, it was at the staff table when we were working on
14 a much earlier iteration of our heavy-duty regulation. So
15 it's good to have you back.

16 Sorry for the interruption.

17 BOARD CLERK SAKAZAKI: No worries.

18 Next speaker is Coralie Cooper. Coralie, I've
19 activated your microphone. You can unmute yourself and
20 begin.

21 I see you have unmuted yourself, but we can't
22 hear you.

23 MS. COOPER: Can you hear me now?

24 CHAIR NICHOLS: It's pretty quiet.

25 MS. COOPER: I'm speaking.

1 BOARD CLERK SAKAZAKI: Coralie, I'm going to ask
2 you to try and fiddle with your audio settings for a
3 little bit and we'll come back to you, if that's okay?

4 MS. COOPER: Sure.

5 BOARD CLERK SAKAZAKI: Okay. So our next speaker
6 is Steve Flint. Steve, I have activated your microphone.
7 You can unmute yourself and begin.

8 MR. FLINT: Thanks. I'm Steve Flint, Director of
9 Division of Air Resources for the New York State
10 Department of Environmental Conservation. I testify today
11 in support of the proposed Low NOx Heavy-Duty Omnibus
12 Regulation.

13 The New York City metropolitan area includes over
14 20 million people across three states. The area has
15 historically been and remains non-attainment for ozone.
16 While we continue to pursue reductions from nearly all
17 local sources and address transport from upwind sources,
18 heavy-duty highway vehicles remain as a major segment of
19 NOx in the region. To be succinct, we need NOx reductions
20 from trucks.

21 Disadvantaged communities bear the brunt of the
22 emissions, particularly in the vicinity of major
23 transportation infrastructure and terminals. The changes
24 incorporated in the Omnibus Rule will provide significant
25 improvement, not just regional NOx reductions, but

1 improvements that can have positive local impacts.

2 As we implement programs to electrify our medium-
3 and heavy-duty fleet, it is also vital that we ensure
4 those vehicles that are not electrified be as clean as
5 possible. It's been nearly 20 years since heavy-duty
6 engines last saw a tightening of emission standards. In
7 that time period, virtually every other segment of the
8 inventory has undergone new standards.

9 Today's proposal contains critical technical
10 elements. The 90 percent reduction in-use emissions is a
11 product of new tailpipe standards, and certification
12 changes that better reflect actual in-use emissions,
13 specifically low and no load operation, which is a
14 critical component of urban operation of heavy-duty
15 engines.

16 We believe that a strong 50-state solution is --
17 to this problem is the most appropriate overall approach
18 for everyone, including the engine manufacturers, and are
19 gratified that EPA is working on a companion regulation.
20 We are concerned, however, that the federal program is
21 currently lagging well behind California and the
22 condition -- the potential exists for it to not afford the
23 degree of reductions we need.

24 It is therefore likely that New York will be
25 closely evaluating all aspects of this rulemaking as we

1 assess whether it's appropriate for us -- for our adoption
2 pursuant to 177.

3 Thank you for the opportunity to testify.

4 BOARD CLERK SAKAZAKI: Thank you.

5 Our next three speakers are Peg Hanna, Tracy
6 Babbidge, and Kelly Crawford.

7 So, Peg, I have activated your microphone. You
8 can unmute yourself and begin.

9 MS. HANNA: Thank you. Good afternoon, Madam
10 Chair and members of the Board. Thank you for allowing me
11 to provide New Jersey DEP's perspective and wholehearted
12 support for this rule. My remarks are driven by the fact
13 that all of New Jersey is a nonattainment for ozone NAAQS,
14 despite us having some of the most stringent control
15 measures in the country.

16 The largest source sector contributing to NOx
17 emissions in New Jersey continues to be mobile sources at
18 70 percent. New Jersey's non-attainment is partially due
19 to transport, which is why it's critical for rules such as
20 this one to move forward. Regional modeling, in fact, has
21 shown that mobile source emissions are one of the highest
22 contributors to ozone exceedance days in our region.

23 New Jersey has also gone to a court to address
24 interstate transport of pollutants with a recent victory
25 that requires EPA to fully address transport from certain

1 upwind states for the 2008 ozone NAAQS.

2 Our efforts in New Jersey are a compliment to
3 CARB's unique ability to set stringent, well-justified
4 standards necessary to protect the environment and human
5 health. CARB's intensive research and data gathering on a
6 multitude of technology-forcing transportation
7 regulations, including the one we're discussing today, are
8 paving the way for states like New Jersey to reach
9 attainment.

10 But that doesn't mean we're sitting back waiting
11 for California to do everything. Over the years, in New
12 Jersey, we've invested hundreds of millions of dollars
13 from DERA, CEMAC, Volkswagen, and our corporate business
14 tax to reduce emissions from the existing diesel fleet
15 operating throughout New Jersey.

16 This July, New Jersey filed a lawsuit against
17 Manheim Remarketing, the nation's largest vehicle auction
18 company, alleging that it violated laws by facilitating
19 the sale of hundreds of tampered vehicles in the state.

20 Further, we have one of the strongest anti-idling
21 programs in the country founded by education and outreach,
22 as well as strong enforcement. A comprehensive energy
23 master plan released earlier this year aims to achieve a
24 hundred percent clean energy production and a hundred
25 percent clean transportation by 2050.

1 Ensuring that trucks sold in the interim are as
2 clean as possible is an essential interim step to that
3 goal, hence our support for this rule.

4 Thank you for the opportunity to provide comments

5 BOARD CLERK SAKAZAKI: Thank you.

6 Our next speaker is Tracy Babbidge. I have
7 activated your microphone. You can go ahead and begin.

8 Tracy, are you there?

9 MS. BABBIDGE: I think -- can you hear me?

10 CHAIR NICHOLS: We can now.

11 MS. BABBIDGE: Good afternoon, Chick Nichols and
12 members of the Board. My name is Tracy Babbidge and I'm
13 the Air Bureau Chief at the Connecticut Department of
14 Energy and Environmental Protection.

15 In June, our Commissioner Katie Dykes testified
16 in support of Air Resources Board Advanced Clean Trucks
17 rule, and I'm here today to lend my voice in support of
18 ARB's Low NOx Rule. While electrification of the
19 heavy-duty vehicle sector is critical to achieving our
20 long-term climate goals, we recognize that diesel
21 technology will be with us for a long time, and these
22 engines should be held to the most stringent environmental
23 standards that are readily achievable and cost effective.

24 Connecticut strongly supports the proposed
25 standard that will result in a 90 percent reduction in NOx

1 emissions, including emissions related to idling, which
2 can account for upwards of 40 percent of each vehicle
3 emission's profile. These reductions are critical as the
4 transportation sector is responsible for approximately 70
5 percent of smog-forming air pollution.

6 Connecticut, like California, have struggled with
7 a persistent ozone problem for over 40 years. During this
8 time, NOx and PM emissions from mobile sources, including
9 heavy-duty trucks, have contributed to increased ozone
10 levels associated with adverse health impacts, including
11 respiratory and cardiovascular disease.

12 Two cities in Connecticut, New Haven and
13 Hartford, currently rank 11th and 13th nationally as
14 locations that are the most challenging places to live for
15 individuals with asthma.

16 These standards could be incredibly important to
17 us, as many low-income communities in Connecticut are
18 located near major trucking routes and are populations
19 that are particularly vulnerable to the harmful impacts of
20 diesel emissions.

21 Many comments today may advocate for a national
22 standard, but our -- our citizens --

23 BOARD CLERK SAKAZAKI: Twenty seconds.

24 MS. BABBIDGE: -- should not have to wait for a
25 lagging federal government. EPA's process to day has been

1 unconscionably slow. Given Connecticut's non-attainment
2 challenge and the contribution of the heavy-duty vehicle
3 sector, we're obligated to seriously review and consider
4 adopting through Section 177 of the Clean Air Act any
5 measures that will reduce precursor emissions that protect
6 public health in Connecticut.

7 Thank you for the opportunity to present
8 testimony today.

9 BOARD CLERK SAKAZAKI: Thank you.

10 I'm going to try Coralie Cooper again. Let me
11 see. I have activated your microphone. You can unmute
12 yourself and begin.

13 MS. COOPER: Okay. Can you hear me now?

14 BOARD CLERK SAKAZAKI: We can.

15 MS. COOPER: Oh, great. Thank you. Okay. Good
16 afternoon. My name is Coralie Cooper and I'm Deputy
17 Director of the Northeast States for Coordinated Air Use
18 Management. NESCAUM is the association of air pollution
19 control agencies in the six New England states, New York
20 and New Jersey.

21 NESCAUM strongly supports CARB's proposed
22 Heavy-Duty Engine and Vehicle Omnibus Regulation and the
23 Board's approval of the regulation. Heavy-duty vehicles
24 are a major source of nitrogen oxides, or NOx emissions,
25 that contribute to unhealthy levels, ground-level ozone,

1 and secondary fine particulate matter in our region.

2 Areas in the northeast exceed federal air quality
3 standards for ozone, affecting the health and welfare of
4 tens of millions of people. Heavy-duty vehicle emissions
5 are also an unaddressed environmental justice problem that
6 disproportionately impacts disadvantaged communities.

7 States are implementing a suite of measures to
8 reduce truck emissions, and in addition are taking
9 multi-state action. In July, governors from 15 states,
10 plus the District of Columbia, signed a memorandum of
11 understanding to accelerate truck and bus electrification.
12 The transformation to zero-emitting trucks will take time
13 and conventional heavy-duty vehicles will be in the fleet
14 for many years.

15 Thus, the Omnibus Regulation is all the more
16 important. It will spur the market for low NOx
17 technologies and provide options to reduce emissions from
18 the existing fleet. NESCAUM strongly supports the omnibus
19 elements, including new engine emission standards, a new
20 in-use test, extended useful life and warranty, and other
21 requirements.

22 To provide the northeast states with --

23 BOARD CLERK SAKAZAKI: About 30 seconds.

24 MS. COOPER: -- information on heavy-duty truck
25 activity, we began a data logging project. Preliminary

1 results show that four combination tractors spent 10 to 35
2 percent of the time at low load. And NOx emissions at low
3 load comprise 15 to 60 percent of total NOx emissions.
4 These results underscore the need to establish a low load
5 certification cycle and NOx emissions standards.

6 Finally, we thank California for its leadership
7 and pioneering efforts to protect the environment and
8 public health from motor vehicle pollution.

9 Thank you.

10 BOARD CLERK SAKAZAKI: Thank you.

11 Our next speaker is Kelly Crawford. After Kelly,
12 we have George Aburn, Gail Good, and Kathy Taylor.

13 So Kelly, I have activated your microphone. You
14 can unmute yourself and begin.

15 MS. CRAWFORD: Thank you. Good afternoon, Madam
16 Chair and members of the Board. My name is Kelly
17 Crawford. I am the Associate Director for the Air Quality
18 Division at the District of Columbia Department of Energy
19 and Environment.

20 I'm speaking today in strong support of the Air
21 Resource Board staff's proposal to adopt more stringent
22 oxides of nitrogen limits for heavy-duty vehicles and
23 further augment testing and warranties. The District, and
24 indeed the entire nation, have long benefited from
25 California's work to improve air quality and reduce

1 transportation sector NOx emissions and will continue to
2 do so under this proposal.

3 The non-attainment area, of which the District is
4 in, continues to monitor ozone levels exceeding the 70
5 parts per billion ozone NAAQS and is likely that further
6 controls will be necessary for our region to attain and
7 eventually maintain the health-based ozone standards.

8 Modeling conducted by the Ozone Transport
9 Commission, of which the District is a member, has found
10 that on-road diesel emissions are the second largest
11 anthropogenic contributor to ozone levels exceedance days
12 making up almost 20 percent of the anthropogenic
13 contribution to ozone non-attainment issues.

14 CARB's proposal is both necessary as a
15 determination of what a national program can achieve and a
16 program that can be adopted by jurisdictions in regions
17 that still battle ozone pollution, such as those in the
18 ozone transport region. These types of efforts especially
19 impactful for residents who already bear a
20 disproportionate air quality burden or who have
21 preexisting health conditions like asthma that are
22 exacerbated by poor air quality, including ground level
23 ozone.

24 Improved air quality is an important facet of
25 achieving environmental justice in the District and across

1 the nation. CARB's proposal to achieve a 90 percent
2 reduction in NOx emissions from heavy-duty vehicles is
3 both necessary and reflective of what is achievable, as
4 shown from the extensive research done by the Southwest
5 Research Institute.

6 CARB's proposal is rely on a new load -- new load
7 cycle for testing that includes more time spent at low
8 load and more extended idling is a crucial step forward.
9 The District has a relatively low percentage of highways
10 in its road network and traffic is often slow and
11 congested in the entire region, so heavy-duty trucks spend
12 more time in low load conditions in our communities.
13 Thus, a testing regime that ensure emission controls
14 function properly in low load conditions is necessary.

15 CARB's proposal to extend the useful life of
16 these vehicle --

17 BOARD CLERK SAKAZAKI: Thank you.

18 MS. CRAWFORD: -- and extend warranties is also
19 an important step to make this effort successful.
20 Heavy-duty vehicles continue to travel for a long period
21 of time and extending warranties will make both --

22 BOARD CLERK SAKAZAKI: Sorry, your time is up.

23 MS. CRAWFORD: Sorry.

24 BOARD CLERK SAKAZAKI: Thank you.

25 MS. CRAWFORD: Thank you.

1 BOARD CLERK SAKAZAKI: Our next speaker is George
2 Aburn. George, I have activated your microphone. You can
3 begin your testimony.

4 MR. ABURN: Can you hear me?

5 BOARD CLERK SAKAZAKI: We can.

6 MR. ABURN: Thank you. Madam Chair and Board
7 members, thank you very much for providing the opportunity
8 to comment today. My name is Tad Aburn. I'm the Air
9 Director in Maryland. I'm responsible for our air
10 pollution and climate change programs.

11 We strongly support CARB moving ahead with the
12 proposed rule. We will also be one of the states that
13 joins California in pushing very strongly for an equally
14 stringent federal national rule. We're a very small state
15 and we're surrounded by states that have historically not
16 been 177 states. And so a national rule will be critical
17 to us.

18 I will not repeat things I've heard from other
19 commenters, but ditto on the health benefits. Ditto on
20 the significance of this sector and our inventory, perhaps
21 the last -- the last big sector that's controllable.
22 Ditto on the environmental justice issues. So we share
23 all those.

24 Maryland has historically been a very difficult
25 state with ozone. In 2008, EPA designated Baltimore as

1 the worst ozone area outside of California and Texas. And
2 we're a really interesting case study, because that's
3 changed. Ozone levels are much lower. I now have three
4 marginal areas and they're all approaching attainment of
5 the 2016 ozone standard. We're a great case study in how
6 regional NOx reduction programs work. It's because of
7 those programs that we've had this kind of success.

8 We have worked with our University of Maryland on
9 research for the past 30 years looking at ozone transport
10 and NOx, and there's really no doubt that additional NOx
11 reductions would work. The keyword is regional. We're a
12 very small state. So we need reductions --

13 BOARD CLERK SAKAZAKI: You have twenty seconds.

14 MR. ABURN: -- not only in Maryland but we need
15 an upwind state like Virginia, Pennsylvania, and West
16 Virginia.

17 Is my time finished?

18 BOARD CLERK SAKAZAKI: About five seconds.

19 MR. ABURN: Five seconds. Well, in closing, I'd
20 like to thank the Board for letting us have the
21 opportunity to comment and we strongly support California
22 moving ahead with this proposed rule.

23 Thank you.

24 BOARD CLERK SAKAZAKI: Thank you.

25 Our next speaker is Gail Good. I have activated

1 your microphone. You can unmute yourself and begin.

2 MS. GOOD: Thank you very much. Good afternoon,
3 Chair Nichols and members of the Board. My name is Gail
4 Good. I'm the Director for the Air Management Program
5 with the Department of Natural Resources in the state of
6 Wisconsin. Thank you for this opportunity to provide
7 comments in support of the California Air Resources
8 Board's proposed Heavy-Duty Engine Vehicle Omnibus
9 Regulation.

10 For states like Wisconsin with significant
11 persistent lakeshore ozone issues, it is critical that
12 reductions in NOx be made to help address this issue. The
13 on-road mobile sector is the largest contributor of
14 nitrogen oxide emissions in Wisconsin.

15 According to the 2017 National Emissions
16 Inventory, the on-road mobile sector accounted for 38
17 percent of the NOx inventory in Wisconsin, with nearly
18 half of those emissions coming from heavy-duty vehicles.

19 Attainment of the ozone National Ambient Air
20 Quality Standard in Wisconsin is simply not realistic
21 without additional reductions from this sector. Wisconsin
22 has enacted many permanent and enforceable control measure
23 programs to reduce the NOx emissions that contribute to
24 ozone formation, including NAAQS reasonably available
25 control technology, as well as EPA's transport rules.

1 Additionally, Wisconsin operates one of the most
2 well controlled utility systems in the country. Many
3 facilities operated by Wisconsin Utilities binding
4 agreements to operate their Selective catalytic reduction
5 controls and to utilize low NOx combustion systems.

6 Highway heavy-duty NOx controls have simply not
7 kept pace with other reductions states Wisconsin have made
8 to make progress toward attainment of the ozone NAAQS. In
9 Wisconsin, we look to the promised Cleaner Trucks
10 Initiative to reduce highway heavy-duty emissions of NOx
11 and provided comments on the Advance Notice of Proposed
12 Rulemaking earlier this year. A federal rule to implement
13 this initiative is critical to address emissions from a
14 sector over which Wisconsin and many others can exercise
15 limited authority.

16 It was disappointing to learn that the planned
17 proposal for this summer is delayed. This delay in
18 federal action makes prompt approval and implementation of
19 the CARB HD Omnibus Rule even more important so states can
20 benefit from accelerated nitrogen oxide reductions.

21 Thank you so much for the opportunity to testify
22 today on this important issue.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Just a quick announcement. The commenter list
25 has been pretty stable for the past couples minutes, so

1 I'm going to say that the list is now cutoff.

2 So our next speaker is Kathy Taylor. After
3 Kathy, we have Eric Feeley, Francisco Vega, and Tung Le.

4 So Kathy, I have activated your microphone. You
5 can unmute yourself and begin.

6 MS. TAYLOR: My name is Kathy Taylor and I serve
7 as manager of the Air Quality Program at the Washington
8 State Department of Ecology.

9 And first, I want to commend CARB for its efforts
10 to tackle the issue of diesel exhaust emissions and for
11 recognizing both the potential that reducing emissions
12 from heavy-duty vehicles holds and the need to work with
13 manufacture's, equipment suppliers, and fleet operators to
14 cut these emissions.

15 CARB's pioneering work to reduce transportation
16 emissions, including the Heavy-Duty Engine and Vehicle
17 Omnibus Regulation considered today, provides critical
18 leadership in improving air quality, not just in
19 California, but also in Washington State and nationally.

20 NOx emissions contribute substantial to ozone and
21 particulate matter pollution. And this regulation aims to
22 drastically reduce these emissions and would be the first
23 update to heavy-duty truck emissions rules in nearly --
24 nearly 20 years.

25 Since the last update, equipment manufacturers

1 have developed new cost-effective technologies to reduce
2 emissions of NOx by over 90 percent without strong federal
3 leadership to require the use of these technologies. It's
4 up to California and the Section 177 states to ensure new
5 trucks utilize these readily available technologies.

6 Last month, Washington Governor Jay Inslee joined
7 California and 13 other states in signing an agreement to
8 accelerate the adoption of zero-emission choices for
9 medium- and heavy-duty vehicles, but the effort will take
10 time.

11 In the meantime, manufacturers continue to make
12 and sell diesel trucks with 20-year old emission
13 technologies. This regulation will help significantly
14 reduce emissions from those trucks. We and our partners
15 are devoting significant amounts of time and money to
16 reduce NOx emissions and ozone, not just for attainment,
17 but to also address disproportionate impacts in
18 communities with environmental justice concerns.

19 Excuse me.

20 Through the Diesel Emissions Reduction Act, or
21 DERA, and similar programs, we have successfully replaced
22 hundreds of school buses, transit buses, port's trucks,
23 and retrofitted thousands of diesel engines with cleaner
24 options, but we have a long way to go. Diesel trucks
25 still account for nearly 21 percent of our overall

1 transportation emissions and the bulk of our NOx
2 emissions.

3 The State of Washington strongly supports the
4 regulation you're considering today. This effort
5 represents a tremendous opportunity for California, for
6 Washington state, and for our nation to achieve and
7 maintain clean healthy air quality.

8 Thank you for your leadership on this issue.

9 BOARD CLERK SAKAZAKI: Thank you.

10 Our next speaker is Eric Feeley. Eric, I have
11 activated your microphone. You can unmute yourself and
12 begin.

13 MR. FEELEY: Good afternoon, Chair Nichols and
14 members of the Board. For the record, my name is Eric
15 Feeley, Air Quality Planner and Clean Diesel Program
16 Coordinator for Oregon Department of Environmental
17 Quality.

18 Oregon DEQ is strongly in favor of updating
19 engine standards to reflect our current understanding of
20 real-world emissions originating from the heavy-duty
21 on-road sector. Heavy-duty vehicles are one of the
22 largest contributors of nitrogen oxide emissions.
23 Reducing emissions from diesel engines continues to be a
24 priority for Oregon.

25 Oregon is one of 15 states and the District of

1 Columbia that have signed on to a memorandum of
2 understanding expressing our commitment to accelerate the
3 zero-emission vehicle market for medium- and heavy-duty
4 vehicles. Not only will this action reduce diesel
5 emissions by reducing the demand for diesel vehicles, it
6 will also bring about substantial greenhouse gas
7 reductions.

8 In addition, House Bill 2007, which passed during
9 the 2019 Oregon legislative session, will phase out
10 certain older model on-road medium- and heavy-duty
11 diesel-powered trucks registered in the Portland region
12 over the next ten years.

13 Finally, Oregon is incorporating the possibility
14 of adopting California's Heavy-Duty Engine and Vehicle
15 Omnibus Regulation as part of its statewide transportation
16 strategy, which is a statewide multi-agency effort to
17 address transportation emissions.

18 Oregon DEQ believes that certain elements of the
19 proposed standards would be of great benefit to
20 Oregonians. These include reducing allowable PM emissions
21 by 50 percent, which will prevent backsliding from
22 currently certified levels, and creating a new
23 certification low load cycle, which will help reduce the
24 source of approximately 50 percent of current NOx
25 emissions from the sector.

1 Vulnerable oregon -- oregonians live near
2 roadways that experience heavy truck traffic operating in
3 the low load cycle. Attempts to reduce emissions from
4 that portion of the duty cycle would directly benefit
5 those vulnerable communities. In addition, if PM
6 emissions are allowed to climb from their current
7 certified levels, this would have a disproportionate
8 impact on those vulnerable communities as well, since
9 diesel PM is associated with a variety of cancer and
10 non-cancer health effects.

11 Oregon DEQ believes that proposed rules would
12 result in real health and environmental benefits, and
13 therefore we recommend that CARB take action now --

14 BOARD CLERK SAKAZAKI: Thank you.

15 MR. FEELEY: -- and pass the Heavy-Duty Low NOx
16 Omnibus Rule as proposed.

17 Thank you.

18 BOARD CLERK SAKAZAKI: Thank you.

19 Our next speaker is Francisco Vega.

20 I have activated your microphone. You can go
21 ahead and begin.

22 MR. VEGA: Can you hear me?

23 BOARD CLERK SAKAZAKI: We can.

24 MR. VEGA: Oh, perfect.

25 Thank you, Chair Nichols and members of the

1 Board. Francisco Vega, Director of the Washoe County Air
2 Quality Division for the record.

3 Washoe County Nevada is currently at the limit
4 for the 2015 Ozone National Ambient Air Quality Standards.
5 On-road motor vehicles, including heavy-duty trucks,
6 represent the largest source of emissions that contribute
7 to the formation of ozone in Washoe County.

8 Freight and good movement by heavy-duty trucks is
9 a major factor in Northern Nevada's economy. Washoe
10 County is home to many warehouses and distribution centers
11 that generate heavy-duty truck trips. Just east of Washoe
12 County is the Tahoe-Reno Industrial Center, the world's
13 largest industrial center, which also generates heavy-duty
14 truck traffic.

15 In addition, Interstate 80 is the primary
16 transportation corridor for goods moving east from the
17 Port of Oakland generating even more heavy-duty truck
18 trips through Washoe County. Any action taken to comply
19 with the health protective Ozone National Ambient Air
20 Quality Standards a now and in the future must include
21 reductions in emissions from the transportation sector
22 including heavy-duty vehicles.

23 As such, the Washoe County Air Quality Management
24 Division supports the new more stringent standards across
25 all duty cycles being proposed in the Heavy-Duty Omnibus

1 Regulations.

2 Thank you for this opportunity.

3 BOARD CLERK SAKAZAKI: Thank you.

4 Our next speaker is Tung Le. I have activated
5 your microphone. You can go ahead and begin.

6 MR. LE: Good afternoon, Chair Nichols and
7 members of the Board. My name is Tung Le. I am the
8 Executive Director of the California Air Pollution Control
9 Officers Association, or CAPCOA. Thank you for this
10 opportunity to express our support of The Heavy-Duty NOx
11 Omnibus. NOx emission reductions from this sector are
12 critical for many regions of the state to attain and
13 maintain ambient air quality standards, and are especially
14 needed in South Coast and the San Joaquin Valley as the
15 state's main traffic corridors run through these
16 districts. This is especially true in disadvantaged and
17 low-income communities, including AB 617 communities,
18 since they may be greatly affected by trucking emissions.

19 CAPCOA appreciates staff's work in developing a
20 standard that significantly reduces NOx emissions by 90
21 percent from today's in-use levels as soon as is
22 technologically feasible.

23 We're also appreciative of CARB's inclusion of
24 measures that address engine and equipment durability,
25 which includes warranty provisions that reflect real-world

1 usage, improved certification provisions, and allows for
2 engines to meet NOx standards under all duty cycles,
3 including low load operation.

4 CAPCOA believes CARB's proposal is a sensible and
5 enforceable approach, which will help to ensure much
6 needed emissions reductions are realized. Air districts
7 rely on successful implementation of mobile source
8 programs like the Omnibus to ensure SIP goals are met.
9 Should NOx emission reductions from heavy-duty vehicles
10 not be realized, it may send District attainment
11 trajectories off course, requiring identification of
12 alternative control measures and the need to find
13 additional and more costly to achieve emissions reductions
14 from stationary sources.

15 For all these reasons, I again express CAPCOA's
16 support of the omnibus, encourage CARB to continue working
17 towards additional NOx reductions, especially in the near
18 term, and we ask the Board to adopt the omnibus.

19 Thank you.

20 BOARD CLERK SAKAZAKI: Thank you.

21 Our next three speakers are Rasto Brezny, Kevin
22 Brown, and Mike Geller.

23 So, Rasto, I have activated your microphone. You
24 can unmute yourself and begin.

25 Rasto, I've see you've unmuted yourself, but we

1 can't hear you.

2 Okay. Rasto, if you can use the call-in number
3 and access code on the screen now, you can call in.

4 DR. BREZNY: Can you hear me now?

5 BOARD CLERK SAKAZAKI: Oh, we can hear you now.

6 DR. BREZNY: Okay. Great. Sorry about that.

7 Good afternoon, Chair Nichols and members of the
8 Board. I'm Rasto Brezny, the Executive Director for the
9 Manufacturers of Emission Controls Association.

10 From clean combustion to electrification, MECA
11 members are delivering all the technology solutions for
12 clean mobility. This has been a monumental effort over
13 the past seven years to demonstrate that the proposed
14 standards that we support are feasible. I commend your
15 staff for their hard work and dedication in sharing
16 regulatory direction and technical information throughout
17 this process.

18 Our modeling confirmed by Southwest Testing has
19 shown that the 2024 limits can be met by modest upgrades
20 of today's technology, including better engine and urea
21 dosing calibration and freshening emission controls on
22 today's trucks.

23 Phasing in the more stringent NOx standards in
24 2027 will give the industry time to gain experience with
25 the new low load cycle and compliance programs. Known

1 technologies, such as cylinder deactivation, dual dosing,
2 close coupled catalyst designs, and hybrid powertrains
3 will allow heavy-duty engines to meet higher NOx standards
4 and future greenhouse gas requirements.

5 Technology innovation is a fluid process. In
6 fact, what we have demonstrated to date already represents
7 technologies that are several years old. Over the next
8 four to seven years, suppliers will work with their OEM
9 customers to implement technology onto trucks. Over the
10 next year, MECA will support EPA staff in their testing
11 for the national heavy-duty trucks standards that will
12 build on what we have learned from Southwest Research's
13 program.

14 Suppliers are already designing approaches to
15 achieve even lower NOx emissions and reported thus far
16 through the use of optimized catalysts for longer use
17 life, contained in more thermally-efficient packaging with
18 improved ammonia delivery for better SCR performance,
19 combined with advanced engine technology, such as dynamic
20 cylinder deactivation and advanced turbochargers, that
21 will help to achieve lower NOx and better fuel economy.

22 Thank you for this opportunity to comment on this
23 important regulation.

24 BOARD CLERK SAKAZAKI: Thank you.

25 Our next speaker is Kevin Brown. Kevin, I have

1 activated your microphone. You can unmute yourself and
2 begin.

3 MR. BROWN: Chair Nichols and members of the
4 Board. I'm Kevin Brown with MECA. I'd like to comment on
5 the role of this rule in delivering real-world emissions
6 reductions under the most challenging low speed and low
7 load in-use conditions. The new low load cycle will
8 ensure that the time of certification emission control
9 technologies are functioning at low loads and exhaust
10 temperatures before engines are deployed on the road,
11 while the new moving average windows data analysis in the
12 proposed compliance program will ensure continued low
13 NOx use emissions under all duty cycles.

14 As the Southwest testing has demonstrated, the
15 same technologies that delivered 0.02 grams per brake
16 horsepower-hour NOx emissions over the FTP cycle delivered
17 even greater reductions under the in-use low load
18 conditions where it counts the most in urban areas,
19 freight corridors, and disadvantaged communities.

20 We believe that the proposed two-step warranty
21 and durability provisions for 2027 and 2031 have struck a
22 reasonable balance between stringency and phase-in time to
23 ensure future trucks continue to be durable. We do
24 request the Board to direct staff to convene an industry
25 stakeholder working group to oversee a project for the

1 purpose of gathering data on field age engine and
2 aftertreatment components to facilities better industry
3 understanding of the impacts of the proposed longer
4 durability and warranty periods.

5 This will help the component suppliers and
6 vehicle manufacturers gather greater insights from
7 field-aged parts with the goal of further improving
8 durability.

9 MECA has estimated that the incremental direct
10 hardware costs of the technologies demonstrated at
11 Southwest to meet the 2027 NOx limits and the longer
12 durability and warranty requirements in 2031 at \$3,100 to
13 \$4,800 across all weight classes. These values are very
14 close to what CARB has reported in the ISOR. We expect
15 these costs will come down over time based on established
16 industry experience and we are confident that by 2027
17 suppliers and their OEM customers are likely to find even
18 lower cost pathways to meet these standards.

19 Thank you for this opportunity to comment.

20 BOARD CLERK SAKAZAKI: Thank you. Our next
21 speaker is Mike Geller. I have activated your microphone.
22 You can unmute yourself and begin.

23 MR. GELLER: Good afternoon Chair Nichols and
24 members of the Board. My name is Mike Geller and I am
25 MECA's Deputy Director. MECA supports the omnibus's

1 regulatory flexibility offered in the first phase of
2 implementation until 2026 to allow the industry to gain
3 experience and prepare for the second phase of
4 requirements that begin in 2027.

5 MECA supports a nationwide technology advancing
6 standard for heavy-duty engines, like the voluntary
7 50-state approach being proposed. However, based on our
8 members' testing, we believe an optional 50-state limit of
9 0.1 gram per brake horsepower-hour in 2024 could be set
10 lower. Your staff's analysis of current certification
11 data has found that several engines meet this limit along
12 with 2024 greenhouse gas targets. Technology screening
13 from stage 1 of the Southwest research program showed that
14 several pathways, based on traditional aftertreatment with
15 calibration and modest thermal management, achieved NOx
16 emissions down to the 0.05 gram level.

17 We support the use of compliance multipliers for
18 ultra low NOx engines ahead of implementation dates, but
19 we are concerned with the current proposal's allowance of
20 credits for electric trucks which are already mandated by
21 ACT.

22 Therefore, we support staff's 15-day changes that
23 sunset NOx credits issued for electric trucks by 2026,
24 which provides flexibilities to OEMs that introduce
25 cleaner diesel trucks in the state as early as possible

1 while limiting potential excess NOx emissions. We
2 estimate this will avoid 15,000 or so Class 8 heavy-duty
3 diesel trucks at double the 0.02 emission limit.

4 In conclusion, MECA strongly supports the
5 omnibus. And we believe that the emission limits and
6 implementation timeline of the proposals are achievable
7 based on the extensive technology demonstration program.
8 There are multiple pathways to achieve the 2027 standards,
9 and the proposal's flexibilities and phase in of
10 requirements will allow industry to transition to the
11 lowest standards from 2024 through 2031.

12 We look forward to working with CARB and EPA to
13 adopt a national set of truck standards. Thank you for
14 your time and I'm happy to answer any questions you might
15 have.

16 BOARD CLERK SAKAZAKI: Thank you. Our next
17 speaker -- our next three speakers are Jed Mandel, Karen
18 Jakpor, and Meredith Alexander.

19 So Jed, I have activated your microphone. You
20 can unmute yourself and begin.

21 MR. MANDEL: Thank you. And now for a somewhat
22 different perspective. I'm Jed Mandel, President of the
23 Truck and Engine Manufacturers Association.

24 We have submitted extensive, detailed,
25 data-driven, and science-based technical comments on the

1 rule, supported by the work of third-party independent
2 experts in opposition to the proposal. I'm happy to
3 answer any questions that you might have about our
4 comments or our opposition.

5 In short, the rule is not technically sound or
6 cost effective and the rule fails to provide the legally
7 mandated minimum lead time. If implemented, the rule will
8 not achieve its air quality goals and will harm
9 California's economy.

10 We know that California has an ozone problem and
11 that NOx emissions from trucks are a contributing factor.
12 We believe that further NOx reductions can and should be
13 had. Indeed, we proposed a cost effective way forward to
14 do just that. Unfortunately, the staff rejected our
15 proposal.

16 The Board should not adopt the staff's
17 recommendation. We stand ready to work with you and the
18 staff to implement a credible program. For all of the
19 reasons set forth in our comments, the staff's proposal is
20 not it.

21 I very much welcome any questions you might have.

22 BOARD CLERK SAKAZAKI: Thank you.

23 Our next speaker is Karen Jakpor. Karen, I have
24 activated your microphone. You can unmute yourself and
25 begin.

1 DR. JAKPOR: Unmute. Okay. Hello. Can you hear
2 me?

3 BOARD CLERK SAKAZAKI: We can.

4 DR. JAKPOR: Okay. Great. My name is Dr. Karen
5 Jakpor and I'm from Riverside, California. I'm a
6 physician volunteer with the American Lung Association.
7 Thank you for the opportunity to speak to you today in
8 support of the Low NOx Truck Rule.

9 I have the perspective of both a physician and a
10 patient, because I've been hospitalized or in the ER for
11 asthma more times than I can count. I became active in
12 the fight for clean air after I lost my clinical career
13 due to asthma. I've been very concerned about the heavy
14 impact of the growth of warehouses, and increased diesel
15 truck traffic, and harmful diesel pollution due to the
16 logistics industry, especially right here in Inland,
17 California.

18 My friends sometimes call me a barometer or a
19 canary in the coal mine when my breathing directly
20 reflects the current air quality. Recently, we had
21 dangerously high ozone levels during this heat wave,
22 including a couple purple air days, days where the air is
23 very unhealthful for all, and I really felt it.

24 I'm an obstetrician-gynecologist, so I'd like to
25 point out that air pollution impacts pregnant women and

1 babies. A very important study looking at 32 million U.S.
2 births, led by Dr. Bruce Becker, was published in JAMA
3 Network Open in June showing that women exposed to high
4 temperatures and/or air pollution are more likely to have
5 premature, underweight, or stillborn babies. And the
6 risks of exposure to air pollution were greatest for Black
7 or Hispanic mothers.

8 The Low NOx Truck Rule represents half of the
9 pollution reductions needed to achieve our clean air
10 goals. So I urge you to vote to adopt the rule today to
11 ensure that we get there. Thank you very much.

12 BOARD CLERK SAKAZAKI: Thank you. Our next
13 speaker is Meredith Alexander. After Meredith, we have
14 Steve Berry, Susy Boyd, and Janet -- Janet Dietzkamei.

15 So, Meredith, I have activated your microphone.
16 You can unmute yourself and begin.

17 MS. ALEXANDER: Hi. Good afternoon, Chair
18 Nichols and members of the Board. Thank you for this
19 opportunity to provide comments today. I'm Meredith
20 Alexander on behalf of CALSTART.

21 CALSTART, with more than 250 member
22 organizations, is dedicated to the growth of a clean
23 transportation industry, clean air for all, and reversing
24 climate change. Today, we're asking the Board to support
25 the proposed Omnibus Regulation, because of how critical

1 this issue is for addressing the state's air quality
2 needs.

3 The data is clear that California cannot meet
4 federal timelines for health-based air quality standards
5 without major actions such as this one. Knowing that two
6 major basins are in extreme non-attainment, combined with
7 the fact that more than 60 percent of transportation NOx
8 emissions come from medium- and heavy-duty vehicles speaks
9 to the necessity of these regulations, and this segment's
10 impact on quality is growing with increase in eCommerce.

11 At the same time, not all of our member companies
12 agree with the proposed regulation. And we know this
13 measure will create challenges for certain manufacturers.
14 But given our mission to reduce air pollution and
15 greenhouse gases while creating jobs, we've made the
16 determination to support this regulation today.

17 We also think it's very relevant that
18 zero-emission trucks, while we hold great hope for the
19 future, will not achieve scale quickly enough to have the
20 immediate impact on air quality that's really needed. And
21 we see studies and engine tests coming from a few of our
22 members, and some of which we've been directly involved in
23 supporting staff's assertion that these engine standards
24 are achievable by 2027.

25 So we acknowledge the challenges and potential

1 unknown costs facing the industry to meet the
2 length-of-warranty provisions and the emissions
3 requirements in all real-world operating conditions. But
4 given our failure to meet health-based standards for
5 millions of Californians for multiple decades, and given
6 the disproportionate burden of air pollution borne by
7 disadvantaged communities, as well as the opportunity for
8 California-based companies to innovate and provide
9 solutions, we support CARB staff's proposed regulation
10 before you today.

11 Thank you for your time.

12 BOARD CLERK SAKAZAKI: Thank you.

13 Our next speaker is Steve Berry. Steve, I have
14 activated your microphone. You can unmute yourself and
15 begin.

16 MR. BERRY: I will pass. Thank you, Ryan.

17 BOARD CLERK SAKAZAKI: Thank you.

18 Our next speaker is Susy Boyd. Susy, I have
19 activated your microphone. You can unmute yourself and
20 begin.

21 Susy, are you there?

22 Okay. Susy, we'll skip you for just a second.
23 Our next speaker is Janet Dietzkamei. I have activated
24 your microphone. You can unmute yourself and begin.

25 MS. DIETZKAMEI: Good afternoon, Chairman --

1 Chair Nichols and the Board members. I am Janet
2 Dietzkamei. I am a Fresno City resident in the San
3 Joaquin Valley. My husband and I moved to Fresno in 2003.
4 Three years later, I had my first asthma attack. I --
5 five days after I was exposed to the causative pollutant,
6 I was in the emergency room with respiratory infections
7 requiring heavy antibiotic medicate -- treatment.

8 I live near a growing business park and I live
9 near a freeway, neither of which existed when we bought
10 our home. Mobile sources in the San Joaquin Valley
11 contribute to 80 percent of pollutants. All methods to
12 reduce the pollutants in the San Joaquin Valley are
13 critical for not only those of us with respiratory
14 diseases but to all of the residents.

15 Having asthma is expensive. I have to get MERV
16 13 HVAC filters. I have air purifiers in my home. I
17 never leave my home. Filters for the air purifiers have
18 to be purchased all the time. But I'm lucky, some in this
19 valley have no air conditioning and no way to protect
20 themselves from the pollutants.

21 This Omnibus Regulation is a positive. It will
22 get us to -- further to get -- have improved air for all
23 of us, but especially for those who are unable to escape
24 the air, particularly the fire pollutants that we suffered
25 for the few days here.

1 So please support this Omnibus Regulation.

2 Thank you.

3 BOARD CLERK SAKAZAKI: Thank you.

4 All right. Let's move back to Susy Boyd. Sorry
5 about that, Susy. You can begin now.

6 MS. BOYD: Hi. Good afternoon, members of CARB.
7 I'm Susy Boyd, Public Policy Coordinator with Mojave
8 Desert Land Trust in Joshua Tree, California. We are n
9 support of the CARB Heavy-Duty Omnibus amendment.
10 Wildfires have grown in both frequency and intensity
11 across the desert. A compendium of peer-reviewed research
12 has shown a strong link between nitrous oxide emissions
13 and expansion of invasive plant species, which have
14 dominated the desert landscape.

15 The desert ecosystem is not well adapted to fire,
16 because large and intense fires were historically rare in
17 the absence of non-native vegetation. Two recent
18 wildfires have directly impacted hundreds of acres of
19 pristine Joshua Tree and Desert Tortoise habitat owned and
20 managed by MDLT. Our lands have experienced extremely low
21 post-fire recovery rates.

22 By addressing these harmful emissions, we're
23 taking the first step in diminishing the source of more
24 frequent wildfires, the rapid expansion of non-native
25 vegetation. Please support the CARB Heavy-Duty Omnibus

1 Amendment and thank you for the opportunity to share our
2 viewpoint.

3 BOARD CLERK SAKAZAKI: Thank you.

4 Our next three speakers are Yasmine Agelidis,
5 Ivette Torres, and Laurie Holmes.

6 So, Yasmine, I have activated your microphone.
7 You can unmute yourself and begin.

8 MS. AGELIDIS: Good morning, Chair Nichols and
9 members of the Board. My name is Yasmine Agelidis. And
10 today, I'm speaking on behalf of Earthjustice and the Los
11 Angeles County Electric Truck and Bus Coalition.

12 First and foremost, our organizations are
13 committed to shifting all trucks to zero emissions as soon
14 as possible. At the same time, we need to make sure that
15 any new combustion trucks meet the lowest feasible NOx
16 levels, until the transition to zero emissions is
17 complete.

18 The proposed Low NOx Rule will reduce NOx
19 emissions from on-road heavy-duty trucks by 90 percent and
20 California meet its obligations under the State
21 Implementation Plan. For that reason, we ask that the
22 Board adopt this rule, but with two critical
23 modifications. First, the rule should not offer
24 zero-emission vehicle credits or ZEV credits to
25 manufacturers.

1 The Advanced Clean Truck Rule already gives
2 manufacturers credits for selling zero-emission trucks
3 that exceed the ACT's requirements in a given year by
4 allowing those credits to be rolled forward to ease
5 compliance in future years. The Low NOx Rule proposes to
6 let manufacturers use these same credits to ease NOx
7 reduction requirements without putting any additional
8 zero-emission trucks on the road. This is double counting
9 and we cannot afford to delay these NOx reductions.

10 Second, we ask that CARB remove the option for
11 manufacturers to certify to a less stringent 50-state 0.1
12 gram NOx standard. Importantly, the technology for
13 meeting a 0.05 gram NOx standard is already available. So
14 this options simply provides a concession to industry
15 where one is not needed.

16 Instead, California has a special opportunity to
17 once again lead by setting a low NOx standard that others
18 states and the federal government can look toward when
19 adopting their own emission standards.

20 We appreciate CARB's commitment to cleaning the
21 air and we ask that the agency move forward by adopting
22 this regulation with these two modifications as soon as
23 possible.

24 Thank you very much.

25 BOARD CLERK SAKAZAKI: Thank you.

1 Our next speaker is Ivette Torres. Ivette, I
2 have activated your microphone. You can unmute yourself
3 and begin.

4 Ivette, oh, I don't see you any more. Okay.
5 We'll move to our next speaker Laurie Holmes. After
6 Laurie, we have Michael Pimentel, Dawn Fenton, and Paul
7 Black.

8 So Laurie, I have activated your microphone. You
9 can unmute yourself and begin.

10 MS. HOLMES: Hi. Good afternoon. I'm Laurie
11 Holmes, Senior Director of Environmental Policy at the
12 Motor and Equipment Manufacturers Association, MEMA. We
13 represent more than 1,000 motor vehicle supplier companies
14 and we are the largest sector of manufacturing jobs in the
15 U.S.

16 MEMA supports the omnibus rulemaking and proposed
17 heavy-duty NOx standards of 0.05 grams starting in model
18 year 2024 and the 0.02 grams starting in model year 2027.
19 These standards have been proven feasible and will promote
20 the best available, cost effective emissions reductions
21 technologies.

22 MEMA also supports the concept of an optional
23 50-state program, but urges CARB to set the FTP standard
24 of at least 0.08 grams for the optional 50-state program,
25 a slightly more stringent standard than the proposed 0.1

1 gram could encourage initiating the best in-class
2 technologies in 2024 to work toward the 2027 goal of 0.02.

3 MEMA does also have concerns with the ABT
4 program, as other comment -- commenters suggested,
5 allowing vehicle manufacturers to generate credits for the
6 Heavy-Duty NOx Program with the same heavy-duty ZEVs that
7 are being used to comply with the ACT Rule.

8 The ABT program structured in this way will
9 greatly disincentivize deploying the best available
10 emissions control technology and could allow a significant
11 portion of heavy-duty diesel engines on the road to have
12 60 percent higher NOx emissions without any increase to
13 heavy-duty ZEV production than what is already required by
14 the ACT.

15 We appreciate the 15-day change that limits these
16 credits as CARB staff mentioned earlier. MEMA supports
17 the phased-in approach for the extended useful life and
18 emissions warranty and we recommend that CARB fund a study
19 to help suppliers with this challenge.

20 Thank you for your time today and consideration
21 of these comments.

22 BOARD CLERK SAKAZAKI: Thank you. Before we move
23 to our next speaker, let's go back to Ivette Torres.
24 Ivette, I have activated your microphone. You can now go
25 ahead and begin.

1 MS. TORRES: Hello, Board members. My name is
2 Ivette Torres. I am with the Center for Community Action
3 and Environmental Justice. I want to begin by thanking
4 you all for taking the first step in the right direction
5 in protecting frontline communities by approving the
6 Advanced Clean Trucks Regulation earlier this year. We
7 have seen time and time again the tremendous health
8 impacts heavy-duty trucks have had on our communities from
9 high numbers of hospitalizations due to asthma and other
10 chronic respiratory illnesses.

11 Just this past month, the South Coast region
12 experienced a tremendous heat wave, and as a result, we
13 had extremely unhealthy air quality 30 days in a row. NOx
14 emissions from heavy-duty trucks need to decline by 80
15 percent to meet the South Coast 2008 ozone standards in
16 2031.

17 The proposed heavy-duty engine and vehicle
18 Omnibus Regulation will set standards that will help with
19 reducing these unhealthy air quality dates for the sake of
20 our communities' health. For that reason, we need the
21 standards to begin sooner rather than later. This great
22 rule should not be at the cost of environmental justice
23 communities. The ZEV credits to manufacturers will not
24 help with accelerating ZEV production, rather give
25 polluters the opportunity to continue to impact frontline

1 communities' respiratory health.

2 As we heard in earlier testimony at the At-Berth
3 Rule, even with COVID-19 crisis, the good movements has
4 not stopped or decreased. We need CARB's regulations to
5 work together to protect the health of our community first
6 and foremost.

7 With that, we thank CARB for moving towards a
8 low-emission and hopefully zero-emission future sooner
9 than later, and support the proposed Heavy-Duty Engine and
10 Vehicle Omnibus Regulation.

11 Thank you.

12 BOARD CLERK SAKAZAKI: Thank you.

13 Our next speaker is Michael Pimentel. Michael, I
14 have activated your microphone. You can unmute yourself
15 and begin.

16 MR. PIMENTEL: All right. Thank you, Ryan. And
17 thank you, Madam Chair and members. Michael Pimentel,
18 Deputy Executive Director for the California Transit
19 Association representing 85 transit agencies in our state.

20 In December 2018, this Board adopted the
21 Innovative Clean Transit Regulation representing the
22 culmination of four years of multi-lateral negotiations
23 with industry stakeholders. The regulatory process was
24 long, but it's duration reflected our commitment to
25 getting the timelines for transitioning to 100 percent

1 zero-emission bus technologies exactly right to prevent
2 undue impacts on transit operations.

3 Now, unfortunately, certain provisions of the
4 Heavy-Duty Omnibus Regulation before you today would
5 inadvertently undermine those thoughtful transition
6 timelines. If the regulation is adopted today without
7 amendments, Cummins, the sole manufacturer of diesel
8 transit bus engines, will exit the California market for
9 them in 2024.

10 That decision would short-circuit the timelines
11 we agreed to in the ICT eliminating the availability of a
12 technology that in the near term is essential to transit's
13 viability. And to be clear, those timelines contemplated
14 a role for ICEs in transit operations as a short-term
15 bridge to cleaner technologies.

16 I'm urging you to today to simply honor the ICT's
17 timelines and to direct staff to amend the Omnibus
18 Regulation to narrowly exempt diesel engines used in
19 transit from the emissions standards set to go into effect
20 in 2024. This would recognize that a zero-emission bus
21 rule is already in place and that transit agencies are
22 developing plans to comply with it.

23 In fact, some are even intending to comply with
24 it early. We believe firmly that a narrow exemption is
25 the cleanest way of ensuring that the Omnibus Regulation

1 doesn't compromise the ICT. However, if that is not
2 acceptable, we are ready to engage on other options, for
3 example, authorizing the Executive Officer to approve the
4 purchase of diesel transit bus engines in 2024 that meet
5 the relevant U.S. EPA standards.

6 Now, I'll close my remarks today by stating that
7 while there were a variety of technological and practical
8 limitations to ZEV deployments that require some near-term
9 reliance on ICEs --

10 BOARD CLERK SAKAZAKI: Thank you.

11 MR. PIMENTEL: -- funding availability remains a
12 key barrier to our transition. If ARB has resources --

13 BOARD CLERK SAKAZAKI: Your time --

14 MR. PIMENTEL: -- it could couple with an
15 exemption, it would certainly help transit agencies buy
16 the cleanest technologies available.

17 Thank you for your time and your consideration.

18 BOARD CLERK SAKAZAKI: Thank you.

19 Our next speaker is Dawn Fenton. Dawn, I have
20 activated your microphone. You can unmute yourself and
21 begin.

22 MS. FENTON: Can you hear me?

23 BOARD CLERK SAKAZAKI: We can.

24 MS. FENTON: Okay. Great. Thank you. My name
25 is Dawn Fenton, Vice President of Government Relations and

1 Public Affairs for Volvo Group North America.

2 The Volvo Group supports California's effort to
3 achieve its air quality and greenhouse gas goals through
4 the adoption of advanced technology vehicles. Despite
5 this significant budget cuts required due to the pandemic,
6 Volvo continues to invest hundreds of millions of dollars
7 in the development of ZEVs, because we believe this is
8 critical for both our planet's survival and for the
9 sustainability of our business.

10 For this reason, I ask the Board to take a more
11 holistic view of the implications of its decisions,
12 because from a Volvo group perspective, both this
13 regulation and the Advanced Clean Truck Regulation
14 together will actually reduce the chances that California
15 will be able to realize its air quality and climate change
16 goals.

17 It is impossible to adequately elucidate the
18 risks posed by these regulations in a quick two-minute
19 statement, but let me ask you to consider the following
20 three points before you vote today.

21 First, if 60 percent of truck vehicle miles
22 traveled in California come from out-of-state vehicles,
23 subject to federal regulation, how will a California-only
24 regulation bring sufficient reductions to achieve the
25 State's emission reduction targets.

1 Second, if a significant pre-buy of trucks in
2 2022 and '23 occurs in response to the State's current
3 Truck and Bus Regulation and the high cost and risk of
4 this technology-forcing regulation in 2024, how will lower
5 NOx trucks get into the marketplace, especially in light
6 of the SB 1 useful life provisions?

7 And three, if a significant pre-buy and no-buy
8 situation develops in response to the proposed NOx
9 regulation, won't CARB be undercutting its own Advanced
10 Clean Truck Regulation, which is based on truck scales
11 beginning in 2024?

12 The NOx regulation being considered today will
13 unintentionally hurt California air quality, as well as
14 California based fleets and truck dealers. As a result,
15 we ask the Board to defer action on a California-only NOx
16 standard and instead focus on policies that help support
17 ZEV vehicle adoption in the immediate term while
18 working --

19 BOARD CLERK SAKAZAKI: Thank you.

20 MS. FENTON: -- towards an achievable new
21 national NOx emissions standard.

22 Thank you.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Our next speaker is Paul Black. After Paul, we
25 have Wayne Nastri, Dave Cooke, and Norman Tuitavuki.

1 So Paul, I have activated your microphone. You
2 can unmute yourself and begin.

3 MR. BLACK: Thank you. Good afternoon, Chair
4 Nichols and Board members. My name is Paul Black
5 commenting on behalf of Breathe LA, an environmental
6 health non-profit organization.

7 Breathe LA encourages the Board to strengthen and
8 adopt a Low NOx Omnibus Truck Rule. As we know, negative
9 health impacts of diesel particulate matter are
10 staggering, and diesel exhaust contributes to Southern
11 California's nation worst air quality.

12 Given the dangerous health impacts of diesel and
13 the extremely poor air quality, CARB must adopt a Low NOx
14 Omnibus Truck Rule that has a meaningful emissions
15 reduction as soon as possible.

16 Following the adoption of the historic Advanced
17 Clean Trucks Rule that offers a long-term plan to
18 transition to zero-emissions trucks, CARB should implement
19 a plan for short-term emissions reductions.

20 Furthermore, approximately one-third of NOx
21 emissions in California are attributable to on-road
22 heavy-duty trucks. Replacing these trucks with clean
23 trucks as quickly as possible should be a priority in a
24 Low NOx Omnibus Truck Rule.

25 We encourage CARB to change the existing 0.2 NOx

1 standard to 0.02 as soon as possible. A more stringent
2 NOx emissions standard in the near term will put
3 California in a better position to meet our climate goals
4 in the future. A Low NOx Omnibus Truck Rule will continue
5 California's vital leadership in prioritizing public
6 health and fighting air pollution.

7 Thank you for your time.

8 BOARD CLERK SAKAZAKI: Thank you.

9 Our next speaker is Wayne Nastri. Wayne, I have
10 activated your microphone. You can unmute yourself and
11 begin.

12 MR. NASTRI: Thank you. Good afternoon, Madam
13 Chair and Honorable Board members. My name is Wayne
14 Nastri. I'm the Executive Officer for the South Coast
15 AQMD. Thanks for the opportunity to comment on the
16 proposed Omnibus Regulation.

17 As you heard in the presentation, we face an
18 urgent need to drastically reduce NOx emissions in the
19 near term to meet federal ozone standards. Heavy-duty
20 trucks are the top source of NOx in our region and it's
21 important that CARB implement all reasonable measures to
22 reduce these emissions as expeditiously as possible.

23 We support adoption of the proposed regulation.
24 However, we have some concerns and these are further
25 detailed in our written comment letter. But briefly, let

1 me say that we believe...(sound went out)....low load
2 cycle standards and the 50-state directed engine standard
3 option should be further tightened. CARB should also
4 consider adopting more stringent optional low NOx
5 standards sooner. And heavy-duty zero-emission credits
6 should be limited to early compliance or surplus vehicle
7 sales beyond those already required.

8 We understand that even if the above steps are
9 taken, the Omnibus Rule would not be enough for us to meet
10 the ozone standards. I would still request though that
11 CARB adopt this regulation with revisions as suggested
12 earlier, as every ton of NOx reduced still helps us meet
13 our public health goals.

14 We also ask that CARB develop a comprehensive
15 plan as soon as possible showing how NOx emissions will
16 eventually be reduced from mobile sources in a way that
17 does get us to attainment. Thank you for your
18 consideration.

19 BOARD CLERK SAKAZAKI: Thank you.

20 Our next speaker is Dave Cooke. Dave, I have
21 activated your microphone. You can unmute yourself and
22 begin.

23 MR. COOKE: Great. Thanks for the opportunity to
24 speak with you today. My name is Dave Cooke, Senior
25 Vehicles Analyst with the Union of Concerned Scientists.

1 UCS supports this significant policy and the
2 staff's substantial work developing it. However, there
3 are three clear ways it can be further strengthened.
4 First and foremost, the rule doesn't reflect the
5 deployment of electric trucks under the Advanced Clean
6 Trucks standard.

7 Under the current proposal, the baseline
8 requirements of ACT are going to generate credits that are
9 then used to let diesel trucks off the hook and pollute
10 more. This is unacceptable. The simplest fix for this is
11 to adjust the stringency of the rule. CARB has shown how
12 clean diesel trucks can get and ACT requires a minimum
13 level -- a minimum volume of electrification.

14 The stringency of the Omnibus Rule should reflect
15 that. UCS has calculated that the stringency of the rule
16 should be 0.045 gram NOx standard in 2024, 0.013 for
17 light- and medium heavy-duty trucks in 2027, and 0.027 for
18 heavy heavy-duty trucks in 2027, in order to account for
19 electric trucks from the ACT requirements.

20 These stronger standards will result in 15
21 percent lower emissions than the proposed rule and
22 incentivize the adoption of zero-emission trucks beyond
23 the bare minimum requirements of the ACT, helping to
24 transition the industry to a zero-emission future ahead of
25 schedule.

1 If CARB does not adjust the stringency, it must
2 minimize the excess zero-emission credit usage that would
3 erode the benefits of this rule by granting zero-emission
4 credits only to sales volumes in excess of ACT
5 requirements.

6 Secondly, CARB should eliminate the 50-state
7 voluntary program, because the technology to meet a 0.05
8 standard has proven to be nationally deployable and is
9 already -- already adequately incentivized under federal
10 rules and Section 177 State adoption.

11 And finally, CARB should reexamine the basis for
12 its weakening of the 2027 standard due to deterioration,
13 which appears to be greater than deterioration
14 extrapolated from the southwest work and could lead to
15 unnecessarily high levels of in-use emissions.

16 Thanks.

17 BOARD CLERK SAKAZAKI: Thank you.

18 Our next speaker is Norman Tuitavuki. After
19 Norman, we have Chet France, Mike Tunnell and Andy
20 Schwartz. So Norman, I have activated your microphone.
21 You can unmute yourself and begin.

22 MR. TUITAVUKI: Madam Chair, thank you for
23 allowing me to address this Board. My name is Norman
24 Tuitavuki. I am the Deputy Chief Operating Officer for
25 Monterey-Salinas Transit. MST is the sole public transit

1 provider for Monterey County. We provide more than four
2 million passenger trips annually, while traveling almost
3 five million miles with a fleet of various types of sizes
4 that includes batter electric buses.

5 If this regulation is adopted without some type
6 of regulatory relief, an exemption for public transit
7 operators, many California transit agencies will be forced
8 to take drastic negative actions that have the opposite
9 effect this proposed regulation intends.

10 One of the largest engine manufacturers in the
11 world has indicated they would leave California and no
12 longer provide diesel engines for transit buses beginning
13 2024 without some type of relief. And therefore, we would
14 be forced to maintain and operate diesel-powered buses
15 well beyond their intended useful life during our
16 transition to zero emissions.

17 Instead of spawning invasion, this regulation is
18 forcing one manufacturer to leave the California transit
19 bus market altogether.

20 We support the transition to zero-emission buses,
21 but we see a near-term role for diesel-powered buses in
22 our fleet as we transition. Our draft zero-emissions
23 transition plan relies on diesel transit buses, and other
24 properties have pending procurements for diesel-powered
25 buses well beyond 2024.

1 Where do we go? What do we do? Without a clear
2 understanding of the financial affect this regulation will
3 have on our bus procurements included in our
4 zero-emissions transition plan, it is troubling for me and
5 others, to say the least. We seek regulatory relief. We
6 need an exemption. We need a bridge to zero emissions.
7 Projections show that our local economies will not return
8 to pre-pandemic levels beyond 2024 -- or by 2024.

9 We don't know what post-pandemic looks like, but
10 we do know that the future is bleak. Funding levels for
11 transit agencies are going to be affected. Now is
12 certainly not the time to impose regulations that
13 negatively affect our citizens, our communities, and our
14 ongoing plans to transition to zero emissions.

15 Please give us the relief that we seek. We
16 request this respectfully.

17 Thank you.

18 BOARD CLERK SAKAZAKI: Thank you.

19 Our next speaker is Chet France. Chet, I have
20 activated your microphone. You can unmute yourself and
21 begin.

22 MR. FRANCE: My name is Chet France and I'm
23 representing the Environmental Defense Fund, which has
24 600,000 members in California. EDF supports the proposed
25 Omnibus rulemaking.

1 To meet the health based ozone standards in the
2 South Coast and Central Valley significant reductions in
3 NOx emissions from heavy-duty trucks are greatly needed.
4 It is urgent to achieve NOx pollution reductions to
5 protect communities near truck routes. Pollution from
6 heavy-duty trucks disproportionately harms communities of
7 color and disadvantaged populations, who are more likely
8 to live near heavy truck traffic.

9 The ARB staff has provided a compelling
10 assessment that the proposed NOx standards and supporting
11 compliance requirements are feasible. EDF asks the Board
12 to adopt the staff proposal, including the more protective
13 standards, the new low load test cycle, warranty, and
14 useful life extensions, and improved in-use tests. Taken
15 together, these provisions are essential to assuring NOx
16 emissions remain low for the truck's useful life.

17 EDF requests the Board make just one change to
18 the proposed regulation. And that is to eliminate the
19 provision that allows trucks to claim NOx credits based on
20 zero-emission trucks sold in compliance with the separate
21 ACT Rule. The provision will allow thousands of new
22 diesel trucks to heed the NOx emission standards. It is
23 essentially double counting. As a result, the credits
24 will result in fewer emission reductions from the Low NOx
25 Rule.

1 The NOx standards are feasible without the use of
2 NOx credits. And the credit provisions do not provide
3 ample incentive for manufacturers to sell significantly
4 more zero-emission trucks than required by the ACT Rule.

5 EDF respect -- respectfully asks you to approve
6 these important proposed clean air protections with the
7 one important change regarding credits. Your action would
8 deliver the maximum NOx emission reductions and health
9 improvements possible, especially for those most
10 vulnerable and those living near heavy truck traffic.

11 Thank you.

12 BOARD CLERK SAKAZAKI: Thank you.

13 Our next speaker is Mike Tunnell. Mike, I have
14 activated your microphone. You can unmute yourself and
15 begin.

16 MR. TUNNELL: Good afternoon, Chair Nichols and
17 members of the Board. My name is Mike Tunnell with the
18 American Trucking Association.

19 The recent wildfires and pandemic highlight the
20 importance of the vehicles we are discussing today.
21 Whether it's protecting lives and property or supplying
22 food and medicine to our communities, these vehicles
23 provide critical services. That is why ensuring
24 dependability should be a priority -- should be a major
25 focus of this rulemaking.

1 Testing two engines in a laboratory does not
2 ensure dependability. The combination of a shortened lead
3 time and the closing of a labs in testing facilities due
4 to COVID will result in a very complex product being
5 rushed to market without time for adequate testing and
6 troubleshooting.

7 As a result, product quality to the end user will
8 suffer, apprehension will prevail, and the desired results
9 will not be achieved. Instead, like many other, including
10 the Truck Dealers Alliance, we are asking you to refocus
11 this effort on a collaborative national approach targeting
12 2027.

13 We agree with EMA that there is a reason Congress
14 mandated four years of lead time to develop these complex
15 products. We oppose the 50-state option, because it
16 ensures neither uniformity of standards nor a level
17 playing field. Not to mention it runs afoul of the State
18 right provisions contained in Section 177 of the Clean Air
19 Act.

20 In summary, we ask you to work with EPA and
21 industry stakeholders on the development of a national
22 program to achieve the most effective means of reducing
23 truck emissions without harming California trucking
24 businesses and services.

25 Thank you for the opportunity to speak today.

1 BOARD CLERK SAKAZAKI: Thank you.

2 Our next speaker is Andy Schwartz. After Andy,
3 we have Avi Mersky, Katrina Au, and Kevin Maggay.

4 So, Andy, I have activated your microphone. You
5 can unmute yourself and begin.

6 MR. SCHWARTZ: Good afternoon, Chair Nichols, and
7 members of the board. My name is Andy Schwartz speaking
8 on behalf of Tesla.

9 As a mission-driven company committed to
10 accelerating the transition to sustainable energy, Tesla
11 strongly supports a stringent NOx standard. Because this
12 regulation is part of a suite of aligned policies, it's
13 important that it recognize the existence of and be
14 harmonized with these related initiatives.

15 In the case of this proposed rule, Tesla has
16 identified some disconnects in this regard. The most
17 fundamental example of this is the stringency of the
18 standard itself, which does not reflect the anticipated
19 availability of zero-emission vehicles, or ZEVs.

20 This is a striking omission, given the efforts of
21 ARB and other State agencies to drive the manufacture and
22 adoption of these vehicles. We ask that this be amended
23 by increasing the stringency accordingly. This omission
24 has led to calls to reduce the role of ZEVs, including the
25 proposal to move the sunset date for using NOx credits

1 generated by these vehicles to 2026.

2 Tesla opposes this change. ZEVs represent the
3 best NOx mitigation approach, because they eliminate
4 direct tailpipe emissions, in the case of electric
5 vehicles, leverage efforts to decarbonize the energy
6 system to further reduce emissions from the transportation
7 sector.

8 Marginalizing ZEVs in the program runs the risk
9 of sending the wrong signal. As we look to federal NOx
10 reform, attention will be paid to California and it's
11 important that ZEVs be clearly recognized for the role
12 they can play in reducing NOx.

13 To address dilution concerns, other levels should
14 be looked to rather than limiting the role of ZEVs.
15 First, the provisions that allow the transfer of legacy
16 credits from the federal NOx program should be eliminated.
17 The regulation should not reward past deployments of the
18 expense of incentivizing new technologies.

19 Second, we are very concerned about the high
20 value ascribed to natural gas and hybrid powertrains. As
21 shown by the staff proposal, by virtue of the credit
22 multipliers in the rule, it essentially values these
23 vehicle types over ZEVs, which is clearly out of step with
24 their relative emission impacts. It's also inconsistent
25 with the ACT, which included measures that limited the use

1 of credits generated by hybrid vehicles.

2 Third, Tesla asks the rule be modified to emulate
3 the ACT, whereby credits from a given weight class can
4 only be used to address deficits in that or a lower weight
5 class. This ensures the emission benefits always be equal
6 or greater than what is being offset.

7 I want to thank ARB and ARB staff for the
8 extensive work on this critically important regulation and
9 appreciate the opportunity to provide these comments this
10 afternoon.

11 BOARD CLERK SAKAZAKI: Thank you.

12 Our next speaker is Avi Mersky. Avi, I have
13 activated your microphone. You can unmute yourself and
14 begin.

15 MR. MERSKY: Thank you. I'm Avi Mersky and I'm
16 speaking on behalf of the American Council for an
17 Energy-Efficient Economy.

18 ACEEE welcomes the opportunity to comment CARB's
19 proposed Heavy-Duty Engine and Vehicle Omnibus Regulation
20 and associated amendments. The proposed regulation pushes
21 forward strong NOx and PM standards for heavy-duty vehicle
22 and engines starting the model year 2024, as well as
23 provides much needed clarification updates to Phase 2
24 heavy-duty vehicles and engine GHG standards.

25 The proposed regulation would provide significant

1 and clear benefits to public health. It is estimated to
2 prevent 3,900 premature deaths, over 1,300
3 hospitalizations and 1,800 ER visits. This would lead to
4 \$37 billion in expected benefits through 2050 with under
5 five billion in expected costs.

6 ACEEE strongly supports CARB in their intention
7 to reduce NOx and prevent increases in PM emissions for
8 heavy-duty vehicles without decreasing the achievability
9 of greenhouse gas emission reductions targets.

10 ACEEE notes that CARB has found that these
11 proposed measures will not impact GHG emissions or the
12 achievability of GHG regulations and targets. ACEEE
13 supports CARB in these conclusions. ACEEE finds many of
14 the proposed provisions to be both advisable and necessary
15 measures to protect public health.

16 ACEEE does, however, believe that CARB should
17 consider evaluating more Stringent PM emission limits, as
18 manufacturers have already proven themselves able to meet
19 higher standards by certifying and releasing products that
20 meet emission levels below the proposed standards.

21 ACEEE supports CARB in the revision of the Phase
22 2 GHG standards to make it clear that many sections apply
23 to trailers, as well as trucks, and CARB's proposal to
24 limit the lifetime of NOx credits.

25 ACEEE supports CARB in the proposal to grant ZEV

1 emission credits through now model year 2026. ACEEE,
2 however, also recommends that CARB not grant any extension
3 to these credits beyond that date.

4 BOARD CLERK SAKAZAKI: Thank you.

5 MR. MERSKY: Our detailed comments can be seen in
6 our submitted written comments. If CARB has any
7 questions, please do not hesitate to contact us.

8 Thank you.

9 BOARD CLERK SAKAZAKI: Thank you.

10 Our next speaker is Katrina Au. Katrina, I have
11 activated your microphone. You can unmute yourself and
12 begin.

13 MS. AU: Good afternoon. My name is Katrina Au
14 and I'm associate counsel at Agility Fuel Solutions. On
15 behalf of Agility and other stakeholders, we are concerned
16 that as proposed, the Omnibus Regulation will not drive
17 early adoption of low-NOx trucks and will not result in
18 near-term emission reductions.

19 Instead, the regulation will ultimately place
20 more conventional diesel trucks on our roads. We request
21 that CARB amend the regulations so that low-NOx trucks do
22 not lose eligibility for State vehicle incentive programs
23 if they receive early sales credits.

24 By way of background, Agility is the leading
25 global provider of highly engineered and cost effective

1 clean fuel solutions for medium- and heavy-duty commercial
2 vehicles. Agility is at the forefront of low-NOx
3 technology. In fact, Agility recently applied for a low
4 NOx certification from CARB for its 6-liter RNG/CNG
5 system, which will be certified at 0.0062 grams, possibly
6 the lowest NOx engine ever certified.

7 It is incumbent on CARB to promote early adoption
8 of these technologies. In the Omnibus regulation, low-NOx
9 trucks should not lose eligibility for State vehicle
10 incentives or other incentive programs if they receive
11 early sales credits. As proposed, in order to receive
12 early credits with an in quote big multiplier,
13 manufacturers should, must sacrifice their low-NOx engines
14 access to other market incentive programs.

15 The Omnibus Regulation should be amended to be
16 fuel neutral, so that low-NOx trucks are treated the same
17 as zero-emission vehicles. Without this change and given
18 that full adoption of zero-emission vehicles will take a
19 decade or more, what is CARB doing about clean air in the
20 next seven years.

21 In closing, the Omnibus Regulation will do
22 nothing to achieve near-term air quality improvements and
23 immediate public health benefits.

24 Notably, no fleets or manufacturers are in
25 support of the proposed regulation. Agility requests that

1 CARB amend the regulation so that near-term emissions
2 reductions are achieved now and well before 2027.

3 Thank you.

4 BOARD CLERK SAKAZAKI: Thank you.

5 Our next speaker is Kevin Maggay. After Kevin,
6 we have Jesse Marquez, Shayda Azamian, and Bill Magavern.

7 Kevin, I have activated your microphone and you
8 can unmute yourself and begin.

9 MR. MAGGAY: Thank you, Ryan, and thank you for
10 pronouncing my name correctly.

11 Good afternoon, Chair Nichols, Board. My name is
12 Kevin Maggay. I'm with SoCalGas. As proposed, the
13 Omnibus Regulation will not drive any early adoption of
14 low-NOx trucks and will not result in any significant
15 near-term emission reductions, largely because the credit
16 program is not expected to work.

17 If you look at Attachment B of your packet, under
18 Table 2V, there's a note there, and I'll read it, quote,
19 "The baseline ISOR analysis does not assume any use of the
20 early compliance credit multipliers prior to 2027 model
21 year, i.e., no manufacturers are assumed to produce any
22 engines meeting the proposed Omnibus 2024, '27, '31
23 standards early in order to earn omnibus compliance
24 credits", end quote.

25 If the credits aren't going to work to get early

1 turnover, as staff predicts, the regulation will
2 ultimately place more conventional diesel trucks on the
3 road. As a reminder, these trucks will likely stay on the
4 road for the next 15 to 20 years, if not longer.

5 And also, if you look at the emission benefits
6 table in the presentation, first off, it ignores 2023 and
7 2024 attainment dates completely, which is troubling. But
8 also your staff's own analysis shows that most of the
9 emission reductions happen after 2031.

10 They ACT presentation in June on slide 16 tells
11 the same story. There will be very little reductions
12 prior to 2031. So what does that mean for attainment in
13 '23, '24 and 30 -- and as far as '31, if benefits of both
14 of these rules happen after that? More importantly, what
15 does that mean for community health for the rest of this
16 decade?

17 Based on recent Board discussions, we had hoped
18 that the Omnibus Regulation was going to achieve
19 near-term -- significant near-term reductions, but that's
20 not the case and it leaves me asking what efforts will
21 reduce truck emissions this decade and what efforts will
22 reduce health impacts from truck emissions this decade.
23 We would like to see some consideration for near-term
24 reductions from trucks. The credit program, as analyzed
25 by your staff, does not do this.

1 Thank you.

2 BOARD CLERK SAKAZAKI: Thank you.

3 Our next speaker is Jesse Marquez. Jesse, I have
4 activated your microphone. You can unmute yourself and
5 begin.

6 MR. MARQUEZ: Madam Chairman and Board members,
7 thank you for this opportunity. I'm Jesse Marquez. I've
8 lived all my life in the City of Los Angeles harbor
9 community of Wilmington, where the Port of Los Angeles is
10 located.

11 What is important to understand is that what does
12 a community go through when they're near a port and major
13 freight transportation corridors? Every day, 30 to 35
14 thousand diesel trucks pass through Wilmington to
15 distribute freight products throughout the southwest and
16 throughout the United States. It is predicted in the next
17 15 to 20 years, it will pass 100,000 truck trips a day.

18 So it is critical that we do pass this Omnibus --
19 the omni-rule right now, so that we can begin to reduce
20 the emissions that my community and our neighboring
21 freight transportation and warehouse distribution
22 communities are also facing.

23 Right now, there are zero-emission trucks for
24 probably 90 percent of all truck categories out there
25 today for the transportation of freight and products.

1 One thing to also -- to be aware of is that some
2 of these trucks, which are the Class 8 drayage trucks,
3 there are zero emission. In fact, there's eight right now
4 that are fully capable of doing all short hauls in less
5 than 100 miles. In the meantime, the battery technology
6 and energy technology is being developed, so that they can
7 travel 300 miles plus, but we do not want to be able to
8 prevent a Class 8 zero-emission truck from being adopted
9 today for short hauls. We need to reduce emissions now.
10 And by allowing a method for the short hauls to be adopted
11 is critical for that.

12 We also believe that because of the technology
13 that exists today, that 75 to 80 percent of all trucks can
14 be converted by the year 2025, and that pushing that time
15 frame past that, you know, is not acceptable when you live
16 in a freight community.

17 Thank you.

18 BOARD CLERK SAKAZAKI: Thank you.

19 Our next speaker is Shayda. I have activated
20 your microphone. You can unmute yourself and begin.

21 MS. AZAMIAN: Good afternoon. I'm Shayda Azamian
22 from the Leadership Counsel for Justice and
23 Accountability. We work directly with residents in the
24 East Coachella and San Joaquin valleys.

25 I firstly would like to extend sincere thanks to

1 CARB staff who have worked several years to develop this
2 momentous rule. We think CARB for working boldly to
3 tackle such a significant and dangerous source of NOx
4 emissions and we support the adoption of this rule with
5 modifications.

6 We submitted a comment letter with other
7 advocates requesting the removal of the credit banking
8 system, and the 50-state certification standard, which we
9 recognize are well intended in effect, but do not ensure
10 aggressive compliance with low NOx technology throughout
11 all phases of the rule.

12 Of special concern is the inclusion of early
13 compliance multipliers in the credit banking system, which
14 we project will again benefit so-called low NOx, but
15 really very polluting natural gas operations early on. We
16 project that these early compliance credit multipliers
17 will be used to support highly polluting natural gas
18 technology that already exists and will not accelerate the
19 use of cleaner technologies as is the clear intent of this
20 rule.

21 In the San Joaquin Valley, so-called low NOx
22 natural gases are the cause of obscene air pollution in
23 California's rural and CalEnviroScreen identified
24 disadvantaged communities. One such natural gas,
25 biomethane, created by treating cow waste, not only

1 produces a foul cloud of pollution, enveloping entire
2 communities, but essentially turns methane into NOx, VOCs,
3 and more methane, which are key ingredients to the extreme
4 levels of smog and particulate matter we see in the
5 valley.

6 Knowing this, the levels of biomethane production
7 we're seeing in the valley is obscene and unjust. We
8 presented to CARB on numerous occasions that the
9 production and consumption of natural gas is not low NOx
10 and is far from clean.

11 Rather, any inclusion of incentives for natural
12 gas-burning engines considerably compromises the health of
13 communities where we're natural gas is produced, and
14 thwarts the leaps CARB is seeking to make towards a clean
15 energy, clean air future.

16 Any flexibility in the rule that incentivizes the
17 continued development of natural gas engines and
18 technology undermines the goals of such a bold rule and
19 must be resolved.

20 On behalf of the communities we work with --

21 BOARD CLERK SAKAZAKI: Thank you.

22 MS. AZAMIAN: -- who are exhausted, feel unheard,
23 and are dying, I'll remind the Board and staff of your
24 responsibility in rulemaking to phase out lethal polluting
25 operations and fuels.

1 Thank you for your immense effort on this rule
2 and we look forward to seeing the reductions resulting
3 from this rule in the San Joaquin Valley.

4 BOARD CLERK SAKAZAKI: Thank you.

5 Our next speaker is Bill Magavern.

6 After Bill, we have Chris Shimoda, Ben Granholm,
7 and John Shears.

8 Bill, I have activated your microphone. You can
9 go ahead and begin.

10 MR. MAGAVERN: Thank you very much. Bill
11 Magavern with the Coalition for Clean Air. And at this
12 time when our lungs are under attack from smoke, and smog,
13 and soot, and respiratory infections, the Board now is
14 poised to have its biggest day in over a decade for
15 reducing the toxic diesel exhaust that is choking our
16 communities. Following on the heels of just having
17 approved the Ships At-Berth Rule, we now urge you to
18 approve this Low-NOx Truck Omnibus Rule.

19 It's clear, through the research that you have
20 had presented to you today, that the standards that the
21 staff have proposed are feasible. And, in fact, we think
22 that your staff, and the associated research partners,
23 have done an excellent job of demonstrating that.

24 These NOx reductions are desperately needed. And
25 the health benefits are tremendous, almost 4,000 lives,

1 saved almost \$37 billion saved. So we do support the
2 various provisions in the rule. A couple comments that if
3 you do adopt credits for zero-emission trucks, then we
4 suggest that those sunset, as the staff have proposed,
5 after 2026. And if you do adopt a 50-state option, we
6 agree with MECA that the standard could be set tighter.
7 We note that there are 0.02 trucks already in existence
8 meeting the CARB optional standard.

9 And finally, looking ahead in cleaning up trucks,
10 there's still work to be done in the next year or so on
11 going to zero-emission fleets, zero-emission TRUs, and
12 also the implementation of the expect -- Inspection and
13 Maintenance Rule called for by last year's Senate Bill
14 210.

15 Thank you.

16 BOARD CLERK SAKAZAKI: Thank you.

17 Our next speaker is Chris Shimoda. Chris, I have
18 activated your microphone. You can unmute yourself and
19 begin.

20 MR. SHIMODA: Thank you, Chair Nichols and
21 members of the Board. Chris Shimoda with the California
22 Trucking Association.

23 First, I'd like to associate myself with the
24 earlier testimony from the American Trucking Associations.
25 And given the number of commenters today, I'll be brief.

1 Our position on the new low-NOx standard has been
2 consistent since the South Coast AQMD petitioned the U.S.
3 EPA for such a standard in 2016. We support a uniform
4 national low-NOx standard.

5 As the staff presentation noted, California-only
6 standards will achieve less emission reductions in
7 California than a national approach, while also hurting
8 the competitiveness of California-based truckers,
9 California-based truck dealers, and the one-third of the
10 State's economy that we support.

11 So we urge CARB to continue your work with U.S.
12 EPA and other stakeholders to avoid California-only
13 standards.

14 Thank you.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Ben Granholm. Ben, I have
17 activated your microphone. You can go ahead and begin.

18 MR. GRANHOLM: Thank you. Good afternoon, Madam
19 Chair and Board. My name is Ben Granholm with the Western
20 Propane Gas Association. Thank you for the opportunity to
21 provide comment today.

22 Unfortunately, as proposed, the Omnibus
23 Regulation will not drive early adoption of low-NOx trucks
24 and will not result in near-term emission reductions.
25 Instead, the regulation will ultimately place more

1 conventional diesel trucks on our roads.

2 The propane industry has voluntarily stepped up
3 to manufacture low-NOx engines. Today, we have two
4 manufacturers producing low-NOx engines and new
5 manufacturers coming on line with the promise of even more
6 engines as early as 2021.

7 Our industry has enough renewable propane
8 available today to displace ten percent of our
9 transportation market. We also have a sustainability
10 commitment to provide a hundred percent renewable propane
11 to the transportation market by 2024.

12 Despite our advancements with renewable propane
13 and increased offerings of low-NOx engines, CARB is
14 sending a signal to the market not to innovate, but
15 instead to continue with the status quo.

16 California faces particularly extreme ozone
17 attainment challenges in the South Coast and San Joaquin
18 Air Basins. The first major ozone deadline under the
19 federal Clean Air Act is January 1st, 2023, and yet the --
20 and yet, the regulation focuses on the 2031 ozone
21 standard, as if the first deadline is non-existent.

22 CARB has failed to model or quantify how much
23 near-term NOx emission reductions the regulation will
24 deliver, even though CARB has stated it will incentivize
25 early production of low-NOx engines prior to 2024 or 2027.

1 Unless, California starts requiring the purchase
2 of low-NOx trucks today, we will miss our near-term State
3 and federal attainment goals, fall short of our 2031 State
4 and federal attainment goals, and fall short of the
5 Governor's public goal of removing diesel trucks from
6 California roads by 2030.

7 So what is CARB doing about clean air in the next
8 seven years? The Western Propane Gas Association
9 appreciates your work in the area, and hopes the Board
10 will amend the regulation, so that near-term emission
11 reductions are achieved now and well before 2027.

12 Thank you.

13 BOARD CLERK SAKAZAKI: Thank you.

14 Our next speaker is John Shears. After John, we
15 have Samir Sheikh, Will Barrett, and Ryan Kenny.

16 John, I have activated your microphone. You can
17 go ahead unmute yourself and begin.

18 MR. SHEARS: Good afternoon, Chair Nichols and
19 members of the Board. This is John Shears with CEERT, the
20 Center for Energy Efficiency and Renewable Technologies.

21 CEERT applauds CARB staff for their extensive and
22 excellent work in developing their proposed Heavy-Duty
23 Engine and Vehicle Omnibus Regulation. With a few
24 recommended adjustments, we strongly support the Board
25 adopting staff's June 23rd proposal.

1 CEERT believes that under the California
2 averaging, banking, and trading provision zero-emission
3 truck credits should only be allowed to count towards NOx
4 fleet averaging through the year 2023 with credits
5 expiring at the end of 2026.

6 We are also concerned about the signal that
7 inclusion of a voluntary 0.1 gram 50-state NOx standard
8 potentially sends, painting the devil on the wall, as it
9 were, regarding any final targets the U.S. EPA might adopt
10 under the -- its Cleaner Trucks Initiative.

11 The adoption of a 0.1 gram national standard
12 would ironically undermine the urgent NOx reduction needs
13 from trucking and for which original -- the original
14 petitioners of the South Coast and Central Valley air
15 districts requested the U.S. EPA's assistance in order to
16 meet their SIP requirements.

17 Given that Southwest Research Institute's
18 research indicates that with recalibration of 2014
19 engines, it's possible to achieve 0.05 grams per brake
20 horsepower-hour, we recommend either tightening the
21 emissions target or eliminating that voluntary standard.

22 While representing critically important steps,
23 the collective set of rules, together with ACT rules, will
24 likely still not be enough to fill the shortfall in
25 emissions reductions needed to fully achieve SIP and

1 climate goals. More work on this remains.

2 We ask the Board to please adopt, with
3 strengthening amendments, the staff's June 3rd -- 23rd
4 proposal for the Heavy-Duty Engine and Vehicle Omnibus
5 Regulation.

6 Thank you.

7 BOARD CLERK SAKAZAKI: Thank you.

8 Our next speaker is Samir. Samir, I have
9 activated your microphone. You can unmute yourself and
10 begin.

11 MR. SHEIKH: Thank you. Good afternoon, Chair
12 Nichols, Honorable members of the Board. My name is Samir
13 Sheikh, and I'm the Air Pollution Control Officer with San
14 Joaquin Valley Air Pollution Control District. Thank you
15 so much for the opportunity to comment on this important
16 item.

17 Overall, the Valley Air District supports CARB
18 adoption of new heavy-duty on-road standards and other
19 measures to help in reducing emissions from heavy-duty
20 trucks. We appreciate staff's efforts on this highly
21 complex package and your commitment to assisting our
22 region and State achieve cleaner air. And today's
23 recommendations will go a long way in helping -- helping
24 us meet our goals.

25 As you're well aware, the San Joaquin Valley

1 faces one of the most difficult air quality challenges in
2 the nation. Our communities face substantial
3 socioeconomic disadvantages. It is impossible for our
4 region to meet clean air standards without the
5 implementation of transformative measures across all
6 sectors, including development and deployment of zero- and
7 near zero-emissions technologies for mobile sources that
8 make up the majority of the emissions in the San Joaquin
9 Valley.

10 To set some additional context, the District and
11 CARB's recently adopted 2018 PM2.5 plan includes a number
12 of new measures to further reduce emissions from
13 stationary and mobile sources in the very short time frame
14 of 2024 and 2025. And as called for in the plan, it is
15 clearly going to take an all-in approach to continue to
16 make progress and meet -- and reach our air quality goals.

17 One of the most important sector of emissions in
18 our region and throughout California is heavy-duty
19 trucking. And our new PM plan is clear in calling for
20 significant new reductions through aggressive State
21 commitments to significantly reduce emissions from trucks.
22 This commitment includes a new California truck standard
23 combined with an aggressive strategy to replace nearly
24 33,000 additional heavy-duty trucks, primarily with near
25 zero-emissions technology, with these important reductions

1 happening by the near term federal deadline of 2024.

2 We're concerned that the current proposal falls
3 short of the State's commitments to reduce air pollution
4 in valley communities in that short time frame. While we
5 support the proposed establishment of new standards that
6 will no doubt help the San Joaquin Valley, our comment
7 letter does include some recommendations for your
8 consideration, in the spirit of accelerating of emissions
9 reductions, including advancing key dates for regulatory
10 and optional standards, increase the incentive-funding
11 opportunities, and considering additional approaches for
12 establishing effective regulatory incentives. In short,
13 we need reductions sooner.

14 Towards that end, in considering the proposed
15 package, we respectfully request that CARB also make a
16 commitment and set a target date for considering
17 additional measures for achieving the near-term --

18 BOARD CLERK SAKAZAKI: Thank you.

19 MR. SHEIKH: -- fleet turnover and reductions
20 needed to meet our goals.

21 We appreciate staff's hard work and effort, and
22 thank you for your time and consideration.

23 BOARD CLERK SAKAZAKI: Thank you.

24 Our next speaker is Will Barrett. Will, I have
25 activated your microphone. You can unmute yourself and

1 begin.

2 Will, I see you unmuted yourself, but we can't
3 hear you.

4 Okay, Will, so we're going to skip ahead to the
5 next commenter. We'll come back to you, Will.

6 So our next speaker is Ryan Kenny. After Ryan,
7 we have Patricio Portillo, Thomas Lawson, and Tiffany
8 Roberts.

9 Ryan, I have activated your microphone. You can
10 unmute yourself and begin.

11 MR. KENNY: Thank you very much. Good afternoon,
12 Chair Nichols, members of the Board. My name is Ryan
13 Kenny with Clean Energy. We are one of 20 who signed on
14 to a coalition letter from the industry -- the low-NOx
15 industry that does not support the regulation as it has
16 been proposed.

17 The proposed regulation will not drive early
18 adoption of low-NOx trucks. And we feel that the focus
19 not on the near term will actually drive more conventional
20 diesel to be adopted by fleets.

21 What is concerning to the industry is that the
22 language in the regulation, and the PowerPoint
23 presentation today, and also even the fact sheet that was
24 produced for this regulation does not provide any mention
25 of near-term emission reductions, even though the first

1 federal attainment deadline is in 2023. It's really
2 focused on 2031.

3 Federal attainment, of course, is vital for
4 near-term emission reductions. We even noticed on slide
5 three today that it mentions 12 million Californians
6 breathe unhealthy air. And, of course, that's -- the only
7 solution provided with this regulation is years from now.
8 So we're not trying to say us over ZEVs -- low NOx over
9 ZEVs. We're saying include us too. Let's have near-term
10 emission reductions included in this proposal.

11 I'll also mention the process. The low-NOx
12 industry was not approached before this went into print,
13 only after. So there are a lot of issues that need to
14 still be worked out that remain outstanding as of today.

15 Concluding, we don't believe this regulation will
16 achieve near-term air quality improvements and immediate
17 health -- public health benefits. The industry is not in
18 sport. And we request amendments to the regulation, so
19 near-term emissions reductions are achieved now and well
20 before the year 2027.

21 Thank you.

22 BOARD CLERK SAKAZAKI: Thank you.

23 Let's turn it back to Will Barrett. Will, are
24 you there?

25 Okay. We still can't hear you. So if you can

1 dial in that call-in number and access code, we'll get you
2 on the phone. So we'll turn now to Patricio Portillo.
3 Patricio, I have activated your microphone. You can go
4 ahead and begin.

5 MR. PORTILLO: Thank you ARB staff and Board for
6 your years of work to develop this important rule. My
7 name is Patricio Portillo and I'm a Transportation Analyst
8 for the Natural Resources Defense Council.

9 The Omnibus Rule is vital to zero-out emissions
10 from heavy-duty vehicles and I strongly urge the Board to
11 adopt staff's proposal with two amendments. First,
12 prevent double counting ZEVs manufacture for compliance
13 with the ACT Rule. As staff proposed, moving up the
14 sunset date for ZEV credits the before model year 2027
15 will help, but no new credits should be awarded after
16 model year 2023 to avoid crediting for compliance with the
17 ACT Rule, which starts in 2024. My written comments
18 elaborate on this further.

19 Second, the Board should direct staff to remove
20 the 50-state option, allowing manufacturers to certify to
21 a weaker national standard. I appreciate staff's intent
22 to cut emissions from out-of-state vehicles, however, this
23 option is problematic for several reasons.

24 First, the emission level was shown to be easily
25 met using traditional control approaches. A core purpose

1 of the Omnibus Rule is to develop advanced emission
2 reduction technology, which this weaker standard fails to
3 accomplish.

4 Further, staff noted that it was unlikely
5 manufacturers would certify to the 50-state standard.
6 Consequently, this option risks signaling that California
7 is comfortable with a weak and national standard without
8 seeing any actual reductions.

9 Lastly, staff's analysis showed convincingly that
10 more stringent standards are feasible and cost effective.
11 California cannot afford to settle for weak standards, nor
12 can the states following this rulemaking.

13 In closing, while the ultimate goal is to make
14 all trucks zero emission and policies like the ACT and the
15 Clean Fleet Rule will help get us there, fossil fuel
16 engines will continue to be sold over the next several
17 decades. This Omnibus Rule is a vital complement to
18 reduce and zero-out pollution from Heavy-duty vehicles.

19 I urge the Board to vote yes on the rule and
20 direct staff to address double counting ZEVs and remove
21 the 50-state option.

22 Thank you.

23 BOARD CLERK SAKAZAKI: Thank you. Our next
24 speaker is Thomas Lawson. Thomas, I have activated your
25 microphone. You can unmute yourself and begin.

1 MR. LAWSON: Good afternoon. Thank you for the
2 opportunity to address the Board. I'm Thomas Lawson with
3 the California Natural Gas Vehicle Coalition. I wanted to
4 talk a little bit about some of the concerns that our
5 industry has with the rule.

6 You know, I, you know, at the last Board meeting
7 committed to taking a deeper dive into this regulation
8 with the members of my association and we did that. We're
9 still not convinced, base on conversations that we've had,
10 that the rule does the thing that I think is something
11 that all of us want which are reductions in air quality.
12 The ones you can get right now, we're still not seeing
13 that happening.

14 I think the bigger concern that is our
15 articulated is, you know, what are fleets supposed to do
16 today or tomorrow. And if we have a clean fleet making
17 that purchase decision next week or day after tomorrow on
18 what they're going to do and how much of their investment
19 they're going to get a return on for a clean vehicle, have
20 we incentivized them enough, either monetarily or
21 non-monetarily to make a clean purchase today?

22 And as the staff presentation noted, a lot of
23 these reductions don't materialize till 2031, which is a
24 long time from now to wait for some reductions.

25 I think the last thing we want to -- I want to

1 bring up is the way that this regulation is designed, it
2 makes fleets pick between Carl Moyer and this program.
3 You cannot use both programs. We think that's an issue.
4 We still believe that Carl Moyer is a good program. We
5 still believe that there are definitely improvements
6 necessary to make that work better for fleets to use with
7 the air districts.

8 And so we're still looking forward to modernizing
9 that program at some point and allowing it to reach its
10 full potential. But having a regulation that makes you
11 choose between one or the other, we don't think is an
12 actual -- you know, strengthens the Carl Moyer program.
13 And that's something that we should take a look at.

14 Thank you for the opportunity the comments. We
15 appreciate the time.

16 BOARD CLERK SAKAZAKI: Thank you.

17 Our next speaker is Tiffany Roberts. After
18 Tiffany, we have Damian Breen, Jofil Borja, and Paola.

19 So, Tiffany, I have activated your microphone.
20 You can unmute yourself and begin.

21 MS. ROBERTS: Good afternoon, Madam Chair and
22 Board members. My name is Tiffany Roberts. I'm the VP of
23 regulatory affairs for Western States Petroleum
24 Association.

25 Let me first say that WSPA believes regulations

1 in the transportation space should technology and fuel
2 neutral. The State should create an even playing field,
3 so that all technologies are allowed to compete to meet
4 the needs of the state, especially the goals of achieving
5 the targeted NOx and greenhouse gas emission reductions.

6 We believe CARB should ensure a place for low NOx
7 engines. But the approach we're seeing here to the
8 rulemaking should be comprehensive and it shouldn't be
9 done in a piecemeal fashion. We're concerned that the
10 current rulemaking approach has bifurcated consideration
11 of this rule from the Advanced Clean Trucks Rule.

12 Doing that limits consideration of the role for
13 all technologies and fuels. That's because, the analysis
14 of all technologies and fuels should have been conducted
15 comprehensively to really understand what the potential
16 opportunities are, both from an emissions and cost
17 perspective.

18 Not having that comprehensive analysis likely
19 impedes opportunities for quicker emission reductions in
20 nonattainment areas and throughout the state. I also want
21 to note that just a couple of weeks ago, CARB released the
22 beta version of its Mobile Emissions Toolkit for Analysis,
23 also known as the META tool. And that includes many of
24 the technical details and CARB assumptions that would have
25 been very helpful to have evaluated as part of this

1 rulemaking as well as the ACT Rule.

2 CARB requested comments back on the tool next
3 Friday, so September 4th. Again, it would have been great
4 to have the tool before the adoption of the ACT and the
5 omnibus that we're hearing today. But now that tool
6 comings too late allow to for really useful and meaningful
7 input.

8 It's exactly the reverse of how rulemaking should
9 progress. There should be technical analysis that leads
10 to public workshops, that leads to a proposed rule, and
11 then to a hearing. But the effort was reversed. We, in
12 general, just want to recommend that CARB take a step
13 back, take a more comprehensive, technology, fuel-neutral
14 approach with greater stakeholder engagement on key
15 technical issues --

16 BOARD CLERK SAKAZAKI: Thank you.

17 MS. ROBERTS: -- before rules are formulated.
18 Thank you.

19 BOARD CLERK SAKAZAKI: Thank you.

20 Our next speakers is Damian Breen. Damian, I
21 have activated your microphone. You can unmute yourself
22 and begin.

23

24 MR. BREEN: Thank you. Good afternoon, Chair
25 Nichols and members of the Air Resources Board. My name

1 is Damian Breen and I'm a Deputy Air Pollution Control
2 Officer at the Bay Area Air District.

3 MR. BREEN: I wanted to start today by commending
4 both the Board and staff on your continued commitment to
5 improving air quality a here in California, even as our
6 federal government continues to move in the wrong
7 direction on multiple fronts. And while the Bay Area Air
8 District very much supports the goals of this regulation,
9 we do have some suggestion relative to the timing of the
10 various phases of implementation.

11 To start with, you've heard from our sister
12 agencies and others today regarding the technical
13 feasibility of the implementation of a much stringent
14 low-NOx standard in the pre-2024 time frame. We agree
15 with their assessment standard and which to see these
16 standards implemented as soon as possible, but for
17 slightly different reasons.

18 In the Bay Area, diesel particulate matter from
19 heavy-duty trucks disproportionately impacts low income
20 communities and communities of color. Additionally,
21 studies have shown that these communities are those that
22 are most vulnerable to the effects of climate change. The
23 Bay Area Air District believes that the best way to dress
24 emissions from trucks is to aggressively pursue the
25 deployment of zero-emissions vehicles.

1 In the staff proposal for the rule today, your
2 staff recognizes that this regulation's first the
3 deployment of zero-emissions trucks as an alternative
4 compliance pathway for industry. Also, zero-emissions
5 vehicles are a key component of the strategy we are
6 pursuing to reduce health impacts in our AB 617
7 communities.

8 In fact, the AB 617 plan adopted by this Board,
9 for the West Oakland community requires significant
10 emissions reductions from drayage and on-road trucks as
11 early as 2025 in order to meet community health goals.
12 Therefore, it makes little sense to us that you're
13 delaying the implementation of more aggressive standards
14 for trucks that will support the deployment of cleaner
15 equipment in communities like West Oakland. And we would
16 request that you consider imposing lower NOx standards in
17 the pre-2024 time frame.

18 Thank you for your attention and I'm happy to
19 answer any questions you might have.

20 BOARD CLERK SAKAZAKI: Thank you.

21 Our next speaker is Jofil Borja. I have
22 activated your microphone. You can unmute yourself and
23 begin.

24 MR. BORJA: Good afternoon, Chair and Board
25 members. My name is Jofil Borja and I represent

1 Sacramento Regional Transit, the largest public
2 transportation provider in the capital region. Thank you
3 again - it's been a long day - for the opportunity to
4 address you all today and the ongoing partnership with
5 transit agencies across the state, as we all work very
6 diligently in providing essential services that are
7 critically needed during this pandemic, while also
8 realizing the importance of environmental goals in the
9 years to come.

10 In fact, Sac RT was among many agencies that
11 helped negotiate and craft the final rule of ICT. We're
12 requesting that CARB allow transit agencies to follow the
13 timelines for transitioning to ZEVs, included in the ICT
14 regulations as mentioned before. We ask the Board to
15 recognize that while this is a monumental historic
16 transition, there are very many challenging factors at
17 risk in implementing this.

18 Our staff at Sac RT move more than just people
19 every day. Transit agencies statewide have become social
20 service lifelines carrying frontline employees, health
21 care workers, and important individuals to help us recover
22 through the pandemic. We're also public employers helping
23 the economy recover through infrastructure and
24 manufacturing investments.

25 So in short, we stand in solidarity with public

1 transportation in California, ask that you do recognize
2 the modest relief we're seeking in an exemption for this
3 regulation for transit agencies. And this would allow us
4 to follow the transition scheduled outline in the ICT
5 while maintaining the flexibility options contemplated by
6 that regulation.

7 Thank you so much for your time and wish you all
8 good health and good fortune.

9 Thank you.

10 BOARD CLERK SAKAZAKI: Thank you.

11 Our next speaker is Paola. After Paola, we have
12 Keith Martin, Todd Campbell, and Melina Kennedy.

13 So Paola, I have activated your microphone. You
14 can unmute yourself and begin.

15 MS. LOERA: Hello to Chair Nichols, the Board,
16 and good afternoon to everyone. My name is Paola Loera
17 and I am a 2020 Loveridge Fellow at UC Riverside working
18 with the American Lung Association this summer.

19 The Low-NOx Truck Rule is of particular interest
20 to me and I am happy to provide a few comments today to
21 the Board where Professor Loveridge served for so many
22 years.

23 In the spring of 2019, I conducted research in
24 the Inland Empire. I wanted to understand the challenges
25 facing communities and how their health was impacted by

1 their immediate environment. I directed a series of
2 interviews with city council members as well as workers
3 and inhabitants in communities surrounding warehouses.
4 Through our discussions, I found the biggest offenders to
5 be truck traffic and the development of warehouses near
6 marginalized populations of color.

7 One resident and warehouse worker stated, "I live
8 and work in the warehouses. I see the smog. I try and
9 keep my kids inside, but I have to go provide".

10 Unfortunately, too many people are forced to
11 think about how environmental factors affect their daily
12 lives, especially when they're hospitalized for a
13 lung-related disease or suffer from an unexplained chronic
14 illness.

15 With all this in mind, I would like to turn now
16 to the Heavy-Duty Low-NOx rule the reason for today's
17 gathering. The amendments will provide an immense benefit
18 to disadvantaged communities who are disproportionately
19 affected by diesel truck pollution and air toxins
20 created -- included. Thirty-six billion in avoided health
21 costs and 3,900 premature deaths avoided between 2022 and
22 2050.

23 It was through my research I realized that dire
24 necessity to achieve environmental equity and drastically
25 change pollution levels now. As the current wildfires

1 ravage Northern California, the intense smoke saturates
2 the air. Now, imagine that same feeling being experienced
3 by communities who are forced to breathe the smog from
4 diesel engines all day every day.

5 The Low-NOx Truck Rule is a critical opportunity
6 to ensure my family, friends, classmates and everyone
7 affected by truck pollution have hope for cleaner air and
8 a healthier future.

9 I urge you to adopt the rule today. Thank you.

10 BOARD CLERK SAKAZAKI: Thank you.

11 Our next speaker is Keith Martin. Keith, I have
12 activated your microphone. You can unmute yourself and
13 begin.

14 MR. MARTIN: Good afternoon, Chair Nichols and
15 Board members. My name is Keith Martin. I am the Transit
16 Manager of the Yuba-Sutter Transit Authority located just
17 north of Sacramento County.

18 Our fleet of 51 revenue vehicles currently
19 includes 35 heavy-duty diesel-powered low floor fixed
20 routes over the road south commuter buses.

21 Under the Innovative Clean Transit regulation, we
22 are classified as a small transit agency, which means that
23 we will be required to begin purchasing zero-emission
24 buses as of January 2026.

25 Our sole operating and maintenance facilities is

1 a converted Seven-Up bottling plant on a three and a half
2 acre site in Marysville that is land locked between a
3 State highway and a major rail line.

4 We just -- we have just 49 designated bus parking
5 spaces for our 51 bus fleet and we have joint use
6 agreement with the youth center next door for employee
7 parking.

8 Anticipating the ICT regulation --

9 VICE CHAIR BERG: Is that okay. Can he wait
10 seven more?

11 MR. MARTIN: -- to determine the ZEB capacity of
12 our facility that found that we can operate no more than
13 12 zero-emission buses without massive expense to
14 dramatically upgrade the power grid near our site. And
15 even with those improvements, the extra space required for
16 ZEBs would reduce the capacity of our facility to well
17 below our current fleet size.

18 As a result, the Yuba-Sutter Transit board of
19 directors has endorsed an ICT-compliance plan that is
20 based on the construction of an all new facility designed
21 from the ground up to allow us to operate as a 100 percent
22 ZEB fleet, while providing capacity for fleet growth in
23 the future. With our consultant WSP, we are midway
24 through a comprehensive project scope for that future
25 facility and complete a site evaluation and selection

1 process.

2 Given the scope and cost of that effort, we plan
3 to occupy our new facility by no later than 2030 in time
4 to start taking delivery on ZEBs. (Inaudible) ZEB
5 technology, but if we -- if the current regulation is
6 implemented as proposed, the only certified California
7 (inaudible) will not be available. We'll have to either
8 advance our projects earlier than in the cycle (inaudible)
9 to continue to operate them throughout the five-years
10 (inaudible) useful life.

11 In closing, I'm asking for your consideration to
12 (inaudible) and the proposed regulations (inaudible)
13 options, but my agency would like us to make the case for
14 ICT compliance without unforeseen (inaudible) operational
15 impact.

16 Thank you for your consideration.

17 BOARD CLERK SAKAZAKI: Thank you.

18 Our next speaker is Todd Campbell. Todd, I have
19 activated your microphone. You can unmute yourself and
20 begin.

21 MR. CAMPBELL: Can you hear me?

22 BOARD CLERK SAKAZAKI: We can.

23 MR. CAMPBELL: Great.

24 Good afternoon, Madam Chair and members of the
25 Board. Thank you for the opportunity to weigh in on this

1 important issue.

2 Heavy-duty trucks on California's roads today are
3 the number one source of pollution for many regions.
4 Trucks are also the largest source of emissions under
5 CARB's authority. Moreover, heavy-duty truck pollution
6 substantially impacts marginalized communities that are
7 adjacent to ports, airports, warehouses, railways, and
8 freeways.

9 Local or regional efforts to tackle truck
10 emissions have sadly been delayed with public agencies
11 citing COVID and trade disputes with China. Meanwhile,
12 both the South Coast and the San Joaquin facing looming
13 federal air quality deadlines that must be met by 2023.

14 At the June Board hearing, our industry was
15 assured that the Omnibus Rule would accelerate ultra
16 low-NOx trucks that meet a 0.02 gram standard in the near
17 term. Unfortunately, we disagree.

18 The proposed regulation does not and will not
19 accomplish near-term emissions reductions as drafted. In
20 fact, staff's projected NOx emissions from this regulation
21 delivers literally zero NOx tons per day between now and
22 2023, despite an ozone deadline for regional air
23 districts.

24 In 2024, both the South Coast and the San Joaquin
25 Valley will each achieve a paltry 0.1 tons per day, which

1 may explain why staff chose to highlight the benefits of
2 the rule in 2031.

3 Ladies and gentlemen, we cannot wait another 11
4 years to achieve meaningful reductions from the largest
5 emission source under your authority. We certainly cannot
6 afford a pre-buy/no-buy scenario as outlined by the EMA.
7 We can and should do better. Our disadvantaged
8 communities stand in the balance. That is why I'm asking
9 the Board to direct staff to include low-NOx trucks that
10 meet a 0.02 gram NOx standard as a key component of the
11 Advanced Clean Fleets Regulation.

12 Staff has announced that they will hold public
13 hearings in September. Like the ACT, the Omnibus will
14 need support to get these trucks on California's roads
15 today.

16 Thank you.

17 BOARD CLERK SAKAZAKI: Thank you.

18 Our next speaker is Melina Kennedy. After
19 Melina, we have Will Barrett, Steve Ernest, and Ben Shade.

20 So Melina, I have activated your microphone. You
21 can unmute yourself and begin.

22 MS. KENNEDY: Okay. Thank you. Chairwoman
23 Nichols and members of the Board, thank you for the
24 opportunity to provide comments today. My name is Melina
25 Kennedy and I'm the Vice President of Product Compliance

1 and Regulatory Affairs at Cummins. As a global power
2 leader, Cummins is investing significantly in
3 technologies, ranging from cleaner and more efficient
4 diesel and natural gas, hybrids, battery electric, and
5 fuel-cell electric powertrains, as well as hydrogen
6 technologies.

7 We understand the unique air quality issues
8 California faces and we too are committed to improving the
9 environment, while also delivering for our customers. To
10 enable mutual success in these goals, we are recommending
11 changes to the Heavy-Duty Omnibus Regulation outlined in
12 detail in our written comments.

13 Cummins has participated in industry discussions
14 with CARB to explore the possibility of voluntary
15 emission-wide NOx reductions. Despite good faith efforts
16 by many, an agreement could not be reached, and as such
17 Cummins plans to work toward meeting the proposed 2024.
18 0.05 gram NOx standard, which, at this point in time, will
19 be extremely challenging.

20 To eliminate regulatory uncertainty, we believe
21 the 0.1 gram 50-state option in the proposal could be
22 removed. Second, the incredibly short lead time for 2024
23 demands much more screen-lined pre-certification
24 requirements for anyone to deliver on time.

25 CARB's proposed durability and deterioration

1 factor testing far exceed the time available in the
2 manufacturer's product development schedule and should be
3 revised.

4 Third, we ask CARB not to finalize the proposed
5 changes to emissions warranty reporting, corrective
6 actions, warranty periods and useful life periods.
7 Changing those requirements at the same time as
8 introducing new technology will increase prices further
9 and likely impact the adoption of those technologies in
10 the market.

11 We ask the Board to instead direct staff to
12 conduct a comprehensive study to assess the cost and
13 market implications of these potential changes and compare
14 those to the impacts of other alternatives that achieve
15 the same objectives.

16 Cummins is committing to work with CARB to that
17 end. We thank you for your time and your work, and this is
18 just a summary of some of our suggested changes.

19 Thank you.

20 BOARD CLERK SAKAZAKI: Thank you. Our next
21 speaker is Will Barrett. Will, I have activated your
22 microphone.

23 MR. BARRETT: Thank you, Ryan. Can you hear me?

24 BOARD CLERK SAKAZAKI: We can.

25 MR. BARRETT: Perfect. So I'm Will Barrett with

1 the American Lung Association. The Lung Association is
2 among 20 health and medical organizations who wrote in
3 strong support of your adoption of the Low-NOx Omnibus
4 Rule today.

5 This rule is estimated to save thousands of lives
6 and avoid a staggering \$36 billion in health costs by
7 relying on two key pillars, technologically feasible
8 standards that achieve a 90 percent reduction in ozone and
9 particle-forming NOx, and ensuring real-world benefits
10 through low load cycle requirements when communities are
11 most impacted by trucks, as well as extended useful life
12 and warranty requirements.

13 Both sides of the equation must work to ensure
14 public health protections are realized during the long
15 life of these vehicles on our roads. We believe that all
16 trucks certified or accredited under the rule must meet
17 the tighter emission standards and the more protective
18 durability and warranty requirements.

19 While we appreciate the focus on early action and
20 deployment of advanced technologies, we also appreciate
21 that the staff are recommending tightening the
22 zero-emission credit provisions, and believe that those
23 should be limited in duration and they should be in excess
24 of the ACT requirements.

25 Overall, we ask that the Board maintain a strong

1 oversight over the broader credit market to ensure that
2 emission reductions remain on track and are not affected
3 by excess credit generation or double counting that could
4 weaken or delay cleanup throughout the trucking fleet.

5 On the national compliance option, we know that
6 the Board has identified a very real challenge involved
7 with out-of-state trucking, and responded with this
8 option. We don't argue with the effort to address
9 out-of-state trucks at all, but we do believe that the
10 proposed level of the national option far exceeds what is
11 technologically feasible in 2024 and 2027, and should be
12 carefully considered.

13 Finally, we're very encouraged by other states
14 engagement in the rule and the hearing today. This speaks
15 to the need for both a strong California program that
16 states can opt into and a strong national standard that
17 harmonizes to the really incredibly well researched and
18 technologically feasible levels being discussed today.

19 With that, I'll say thank you very much to the
20 staff for your work and dedication to this critical issue
21 and urge you to adopt the rule today to protect public
22 health.

23 Thank you very much.

24 BOARD CLERK SAKAZAKI: Thank you. Our last two
25 speakers are Steven Ernest and Ben Shade. So Steven, I

1 have activated your microphone. You can unmute yourself
2 and begin.

3 MR. ERNEST: Good afternoon, Chairman Nichols and
4 members of the CARB Board. My name is Steve Ernest. I'm
5 the Vice President of Engineering and Business Development
6 at Jacobs Vehicle Systems in Connecticut. I'm
7 representing Jacobs here today. We appreciate the
8 opportunity to make comments on the proposed Omnibus
9 Regulation, so thank you for your time and consideration.

10 Jacobs Vehicle Systems is the world's leading
11 producer of vehicle retarding and valve actuation
12 technologies. We have supplied engine retarding and
13 emissions control products to medium- and heavy-duty
14 engines and vehicle OEMs worldwide for nearly 60 years.

15 As CARB has pointed out in its proposal, many
16 technologies have continued to develop after U.S. EPA's
17 Heavy-Duty Phase 2 Greenhouse Gas standards were finalized
18 in 2016. These technologies have been tested as part of
19 CARB's low NOx demonstration program with Southwest
20 Research and can (inaudible) CO2 and NOx simultaneously.

21 One of the main technologies identified in this
22 demonstration program is cylinder deactivation. This is
23 one of the emission systems that Jacobs has been
24 developing for the heavy-duty market and was demonstrated
25 to help the engine and aftertreatment achieve NOx

1 reductions at light loads with some areas actually
2 decreasing fuel usage.

3 We expect that these innovative technologies will
4 continue to improve as they are implemented as part of a
5 comprehensive Heavy-Duty NOx Omnibus Program. Jacobs has
6 a long history of developing and producing valve training
7 technologies and products including complex, highly
8 integrated systems to make vehicles more efficient and
9 lower their emissions.

10 Our engineers have been working in partnership
11 with engine companies, and industry consultants develop
12 multiple variants of variable valve actuation systems
13 beyond engine braking for nearly 30 years. The cam,
14 rocker, and valve system of the diesel engine has been
15 largely the same since the engine was developed over a
16 hundred years ago. We believe that the time has come to
17 implement and adopt these new valve train technologies,
18 adding variability to one of the last fixed parameters on
19 the engine.

20 Development of these important technologies has
21 required significant resources, substantial lead time, and
22 multiple stages of product development, and we're looking
23 forward to seeing these implemented.

24 Thank you for your time.

25 BOARD CLERK SAKAZAKI: Thank you. Our last

1 speaker is Ben Shade. Ben, I have activated your
2 microphone. You can unmute yourself and begin.

3 MR. SHADE: Good afternoon, Madam Chair and other
4 Board members. Thank you for the opportunity to speak
5 today. I'm Ben Shade, the Chief Emissions Research
6 Scientist of AVL Test Systems with locations in both
7 Michigan and California with global headquarters in Graz,
8 Austria. AVL is the world's largest independent company
9 for development, simulation, and testing of powertrains
10 for passenger cars, trucks, and large engines.

11 We at AVL are extremely proud to have been
12 selected as the primary instrumentation supplier for the
13 new ARB Laboratory being constructed in Riverside, as we
14 speak, as part of the new Southern California
15 headquarters. AVL is providing chassis dynamometers and
16 engine dynamometers, along with gaseous and particulate
17 emissions measurement instrumentation for both light-duty
18 and heavy-duty laboratories, portable emissions
19 measurement system, or PEMS, that we've heard a little
20 about today, test automation, data management for this
21 state-of-the-art facility.

22 We support ARB's efficiency goals, not only in
23 energy consumption but in test efficiency through
24 integrated streamlining processes. AVL continues its
25 commitment to measurement science building systems that

1 are a critical piece of the engine and vehicle development
2 and certification processes, that support the goals of
3 ARB's Low-NOx Omnibus Program.

4 We continue to develop technology to meet the
5 stringent standards and testing requirements set forth by
6 both ARB and EPA. We believe that emissions control
7 technology can inform regulation, which in turn directs
8 measurement science, which in turn improves emissions
9 control technology. It's an innovation process that can
10 go the other way too. An example of this is the Low-NOx
11 Omnibus that we are here discussing today.

12 The laboratory instruments and processes that we
13 have developed over the past 20 years allow for confident
14 and repeatable measurements to be made at the 0.02 gram
15 per brake horsepower-hour level. This enables ARB to
16 monitor engine emissions progress in the new laboratories
17 in Riverside and ultimately satisfy this Low-NOx Omnibus
18 Regulation.

19 And as with the challenges presented in previous
20 regulatory requirements, such as real-world in-use
21 testing, we continue to innovate our PEMS products with
22 the goal of ultimately demonstrating real-world engine
23 emissions compliance at these proposed low NOx levels.

24 Thank you.

25 BOARD CLERK SAKAZAKI: Thank you.

1 We have one more commenter, Sean Edgar, who
2 signed up and just emailed me saying he thought he was --
3 here raised his hand a couple hours ago. So I'm going to
4 take you on good faith, Sean, and allow you to speak. So
5 I have activated your microphone and you can unmute
6 yourself and begin.

7 Sean, are you there?

8 Okay. So --

9 MR. EDGAR: Hi. Can you hear me know?

10 BOARD CLERK SAKAZAKI: We can hear you now.

11 MR. EDGAR: Hi. Good afternoon, Chair Nichols,
12 and Board members. The San Joaquin Air District just
13 highlighted a major problem with today's proposal. The
14 package before you falls short of what the San Joaquin
15 Valley needs and fails to allow clean low NOx natural gas
16 fleets from being all-in to deliver near-term emissions
17 reductions.

18 Your staff estimates around 300,000 diesel truck
19 and bus vehicles are required to be replaced by the 2023
20 deadline. And reducing diesel now is what is needed. The
21 ZEVs called for by the ACT Regulation are not available in
22 large numbers now and infrastructure is lacking to support
23 them.

24 The waste industry has already transitioned away
25 from diesel for nearly half of the statewide fleet. Your

1 staff estimates that 70 percent of that fleet is powered
2 by low carbon renewable natural gas. Despite our patient
3 and persistent pursuit of a clear pathway to continue to
4 add low NOx, low carbon, and renewable natural gas fueled
5 trucks, this package does not encourage or incentivize
6 that clean air choice for fleet owners. Near-term
7 emission reduction opportunities are lost, unless you take
8 action to ensure appropriate credits at the manufacturer
9 level in this package and for fleet owners deploying low
10 NOx in advance of the ACT purchase requirements.

11 The clarity that my waste fleet owners need today
12 is whether this Board has interest in supporting
13 near-term, low-NOx truck purchase, given the past
14 stripping way of financial incentives, and the passes of
15 ACT, which singles out the waste industry for a full
16 transition to zero-emission vehicles.

17 What happens between now and that full transition
18 is influenced by today's action and the direction you take
19 on the purchase requirements in the ACT in future months.
20 Help us and help the San Joaquin Valley and others by
21 giving credit for RNG low NOx in this and future
22 regulations.

23 I'll note that the engine manufacturers and UPS
24 have also advocated for this approach. And we welcome
25 this opportunity in this package to get this fixed, as

1 well as we encourage in the future ACT regulation --

2 BOARD CLERK SAKAZAKI: Thank you.

3 MR. EDGAR: -- for some direction to be given to
4 provide for a credit formula for fleets that deploy --

5 BOARD CLERK SAKAZAKI: Thank you.

6 MR. EDGAR: -- low-NOx vehicles now.

7 Thank you.

8 BOARD CLERK SAKAZAKI: Thank you.

9 And I apologize for the technical glitches you
10 experienced. Madam Chair and Madam Vice Chair, we have
11 concluded our list of commenters for this item.

12 CHAIR NICHOLS: Thank you Ryan and thanks to all
13 who testified. We will close the record at this point,
14 but we will resume conversation among the Board members
15 after a ten-minute break for the sake of the court
16 reporter and everybody else.

17 So I would like to have us all back in the
18 room -- let's see, it's 4:07, according to my clock here.
19 All right. Let's make it -- let's give ourselves a break
20 until 4:20 then and we'll take up the discussion of this
21 rule.

22 Thanks to all.

23 (Off record: 4:07 p.m.)

24 (Thereupon a recess was taken.)

25 (On record: 4:22 p.m.)

1 CHAIR NICHOLS: I'm ready.

2 AGP VIDEO: All right give us one second Chair
3 Nichols.

4 Okay. We have our devices recording. The floor
5 is yours, ma'am.

6 CHAIR NICHOLS: Okay. Terrific. Well, this is a
7 long, complicated rule that has been worked on, as we
8 heard before, for many years. And listening to the range
9 of the testimony, I could have sworn we were talking about
10 a number of different rules than the ones that I think are
11 actually in front of us.

12 So the first thing I would like to do before
13 calling on the Board members is to give the staff just a
14 few minutes to try to sort of pull together what they've
15 heard today and to at least give them a chance to frame
16 the discussion a bit, and then I'll begin calling on the
17 Board members. I already see Dan Sperling, Phil Serna,
18 Sandy Berg. And I'm sure there will be others.

19 So let's -- let's turn to the staff. And I
20 believe that the leader on this effort at the -- at the
21 Division level is Jack Kitowski. So maybe, Jack, if you
22 want to start us off.

23 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

24 Thank you, Chair Nichols. I do have to stay Mike
25 Carter is really the lead on this item so much more than

1 I, but I am happy to kick this off.

2 Yeah, I would like to respond with a few of the
3 issues that came up. We're happy to address any of them,
4 of course. But some of the ones that we saw that came up
5 sort of repeatedly, the credits, the role of this
6 regulation as it relates to near-term reductions versus
7 long-term reductions, 50-state option, and transit were
8 some of those key ones. I'm going to kick this off and
9 then and hand it off to others. So I'll start off with
10 the credits.

11 The credit portion was really two parts that we
12 heard. I mean, one was credits related to ZEVs and the
13 other was credits related in this regulation to natural
14 gas.

15 Regarding ZEVs, kind of the expressed concern was
16 that are the ZEV credits going to undercut the NOx
17 reductions that we're getting from this regulation, and we
18 share that concern. I mean, we definitely did not --
19 would not want that to happen. And so as part of the
20 15-day recommended changes, we did suggest cutting off the
21 ZEV credits in 2026. And at that level, the impact of the
22 ZEV credits is less than one percent of the NOx reductions
23 from this rule. We thought that was an appropriate
24 balance to move forward.

25 So to be clear, in addition to cutting it off, we

1 have also limited the ZEV credits to a one-to-one ratio
2 throughout -- throughout that time period.

3 Now, for natural gas, we heard comments
4 throughout the day that the credits were too low, not --
5 you know, not -- they -- we were -- they were not
6 providing enough benefit and then we heard that they were
7 too high. I will say, as we said during the Advanced
8 Clean Truck Regulation when we came in front of you, that
9 we would be providing credits for natural gas, low-NOx
10 engines within this rule, a combustion rule providing
11 combustion credits.

12 So you see -- so the credits we are providing --
13 or we're proposing in this rule are much more lucrative,
14 much more generous for the natural gas than they are for
15 the ZEV. They -- whereas, the ZEV cutoff in 2026, the
16 natural gas credits, or the low-NOx credits, go on
17 indefinitely. And whereas, the ZEV credits are a
18 one-to-one, the low-NOx credits can -- low NOx can get
19 credits of up to two and a half times to one.

20 So the net result of that is that a single
21 natural gas vehicle can provide enough credit to offset up
22 to 14 dirtier diesel engines. Now, that's pretty
23 generous, but we thought that was an appropriate level of
24 enticement to try to get those vehicles in early. Now,
25 whether that's enough, whether that is -- provides the

1 right market pull, you know, that really is -- does end up
2 being up to the market and we don't -- we don't -- you
3 know, we don't really have an impact on that per se, but
4 we've sort of done all we could within a regulatory
5 structure.

6 Before I hand it off, I did want to make one
7 comment. There was some misinformation that was said on
8 some of the comment periods -- some of the commenters
9 throughout the period today, where some of the commenters
10 have said that we treat ZEVs differently with regard to
11 incentives in the Omnibus Rule. We do not. They're
12 treated exactly the same. If a vehicle is eligible for
13 incentives, whether it's natural gas or whether it's
14 zero-emission is not impacted by -- you know, one or the
15 other is not impacted as a result of this rule. They're
16 treated equally in that regard.

17 So I hope that helps. At this point, I'm going
18 to turn it over to Kim to cover a couple of other issues
19 that have come up.

20 MSCD MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH
21 CHIEF HEROY-ROGALSKI: Thank you. Thank you, Jack.

22 Yeah, I just wanted to mention one issue that we
23 heard from another -- a number of commenters, largely
24 natural gas advocates, who were concerned that this rule
25 doesn't do enough in the years before 2027.

1 And I did just want to kind of step back and look
2 at what the intent of this rule is. This is a
3 manufacturer rule. It's a next generation of NOx
4 standards. And really, whenever you adopt a new emissions
5 standard like that, you're going to see large benefits out
6 into the long term, but only small benefits in the years
7 as it first starts to take effect, because it only affects
8 new vehicles as they enter the fleet.

9 However, this, of course -- this rule needs to be
10 viewed in the context of everything that the Board is
11 doing. This clearly is not the only thing that we are
12 doing to address emissions. And even just looking at
13 heavy-duty trucks, the Board is in the midst of
14 implementing the very large significant Truck and Bus
15 Rule, which is going to provide enormous benefits between
16 now and 2027, as older trucks are phased out of the fleet.

17 We also have -- over the past decade, have had
18 very significant incentive programs. Those are getting
19 impacted a little bit by COVID, but they have handed out
20 huge amounts of money, including over a billion dollars to
21 support natural gas transportation.

22 And then finally, one other large program that my
23 group here is working on and it will probably be the next
24 big rulemaking that we bring before the Board, is the
25 Heavy-Duty Inspection and Maintenance Program that Bill

1 Magavern mentioned. And that is a near-term measure.
2 That is something that would reduce emissions immediately
3 upon being implemented.

4 For now, I think Mike Carter wanted to talk a bit
5 about some of the concerns we heard about the warranty
6 proposal.

7 CHAIR NICHOLS: Okay. And Mike has been called
8 out as having been the leader of this effort over the
9 whole seven-year period. And I'm aware that it's also a
10 significant anniversary for him and ARB. I believe it's
11 36 years, Mike, is that correct?

12 MSCD ASSISTANT DIVISION CHIEF CARTER: Yeah, but
13 who's counting.

14 (Laughter.)

15 CHAIR NICHOLS: Yes. Well, some people think
16 that I've been here since the Board began, which is far
17 from true, but you have definitely been around, so...

18 MSCD ASSISTANT DIVISION CHIEF CARTER: Yeah.
19 Actually, 36 years to the day, August 27th.

20 VICE CHAIR BERG: Bravo.

21 CHAIR NICHOLS: Congratulations.

22 (Applause.)

23 CHAIR NICHOLS: Okay. Go ahead.

24 MSCD ASSISTANT DIVISION CHIEF CARTER: Okay.

25 Well, thank you very much. I appreciate that. So I think

1 one of the other issues that was brought up by industry,
2 Cummins in particular, and I think MECA and others, was
3 the warranty implications after 2027, and what the costs
4 associated with those would be.

5 We're pretty confident in our cost estimates and
6 what we believe is doable in our estimates, that kind of a
7 thing. But on the other hand, we also recognize just the
8 unknown from the industry and from the manufacturers. And
9 So they suggested -- a couple people suggested that
10 perhaps we engage in some sort of a cost study -- a deeper
11 dive cost study. And this would give the information --
12 more information for the industry to assess what those
13 costs would be. It would also help the industry plan for
14 the warranty costs and warranty associated with it, that
15 kind of a thing.

16 And from the staff's perspective, we're perfectly
17 open to some sort of a joint study, cooperative study in
18 the next year or so, so we can do a deeper dive. We will
19 learn from it and so will the industry. So just from the
20 staff's perspective, we're certainly fine with that.

21 We're not -- just to make it clear, there was
22 also a suggestion of delaying the warranty requirements.
23 We're not in favor of that at all. But again, we are
24 certainly in favor of doing some sort of a cost study,
25 joint study with them.

1 I think another issue that came up from industry,
2 as well as from the enviro -- enviro groups was the
3 50-state option that is currently in the staff proposal.
4 Originally, when we were developing this reg, we put that
5 option in there, because we weren't sure how many
6 manufacturers would be able to comply with the California
7 2024 standard, so -- all on -- and all the other
8 requirements. And so the thought was, at the time, well,
9 if we had a standard in there, even though it was twice
10 the California standard, if it was -- if -- if it was used
11 on a nationwide basis, we would at least get emissions
12 benefits in California, because as we also heard, a lot of
13 the trucks traveled from out of state into California, so
14 there would be a benefit.

15 Having said that, however, I think we heard today
16 from several, from industry, as I said from the enviro
17 groups, recommending against the 50-state option and
18 taking it out altogether, given that manufacturers -- at
19 least two manufacturers, Cummins and PACCAR, do plan to
20 comply with our 2024 standards and do plan to have product
21 in California for 2024 to meet our requirements. So with
22 that said, if the Board decides -- directs staff to take
23 that option out as part of a 15-day process, the staff
24 does not have any concerns with that.

25 So with that, I think there was one other

1 significant issue, and that had to do, I think, with the
2 transit agencies and the concerns that they raised. And I
3 believe Steve Cliff was going to address that, is that
4 right, Steve?

5 DEPUTY EXECUTIVE OFFICER CLIFF: Yes, that's
6 right. Thanks, Mike. And congratulations on 36 years.

7 So we learned recently, as you heard from the
8 transit agencies, that the manufacturer of the engine that
9 they most use has indicated that they're not planning to
10 make an engine that meets the standard, given that there's
11 a relatively small market for that engine. And so we
12 heard this from the transit agencies. We actually just
13 met with them day before yesterday and had some follow-up
14 conversations with them yesterday.

15 I just want to say how much I appreciate having
16 the opportunity to talk to them and work through some of
17 these details. And I understand they are asking for an
18 exemption to purchase diesel buses in lieu of -- that
19 would meet the national standard, in lieu of a lower NOx
20 diesel alternative.

21 Staff really has challenges with that. While I
22 understand that fueling is going to be difficult for them,
23 it's very hard for us to say it would be appropriate to
24 have a diesel replacement that meets the federal standard
25 and not our lower NOx standard, when we know that there is

1 a replacement technology, as you've heard from our friends
2 in the natural gas industry, that is drop-in, and that
3 meets the particular need of the transit agencies.

4 So I recognize it's not possible for all of them
5 to use that particular engine. As I said, they don't
6 already have the fueling infrastructure, so that's a
7 challenge. It's still, nevertheless, a technology that is
8 existing and -- and it -- and it would, you know, we
9 believe, meet the standard for those years.

10 Instead, they also asked for sort of two other
11 possibilities. One is some support for transition that
12 might help them transition early from diesel to zero
13 emissions. And staff is certainly open to exploring that,
14 especially within the context of existing funds that we
15 have access to, that we believe could help, you know, get
16 those types of reductions.

17 And they also ask for some sort of discretion
18 from the Executive Officer and we're open to exploring
19 that. I think that type of discretion would be helpful,
20 because it allows us to do the sort of analysis that's
21 necessary on a case-by-case basis to determine whether
22 it's actually appropriate to provide an exemption, rather
23 than just a blanket exemption. And then our hope is
24 through say additional funding, that we could get them,
25 you know, to either completely eliminate the need for an

1 exemption or to drastically reduce that need through
2 ongoing work.

3 So we're very open to that. And it sounded like,
4 from listening to the Transit Association, they were open
5 to ongoing discussions. So we think, based on some
6 preliminary analysis that we've done and some initial
7 discussions that we've had over the last 24 hours, that we
8 could continue to do that work, and propose something,
9 either in a 15-day change as part of this rule or as part
10 of a different rule, if that's not the appropriate place.

11 CHAIR NICHOLS: Well, okay, I guess, at this
12 point then, the time has come to point out that the record
13 on this agenda item is closed, but that a 15-day notice of
14 public availability will be issues. And, at that time,
15 then the record will be reopened and the public may submit
16 written comments during that comment period on the
17 proposed changes, which will then be considered as part of
18 the Final Statement of Reasons for the regulation.

19 So again, we're not receiving anymore written or
20 oral comments today or subsequent to today, but once the
21 15-day notice is out, then there will be an opportunity
22 for people to comment further. And then the Executive
23 Officer will be able to either move forward with adoption
24 or present the regulation to the Board for further
25 consideration, if that is warranted. So that's the

1 process going forward.

2 I think, at this point, it's time to let the
3 Board members either ask questions or make any comments
4 that they may have. So I'll start off with our resident
5 automotive engineer, Dan Sperling.

6 BOARD MEMBER SPERLING: Thank -- Thank you very
7 much. I do want to say this has been an extraordinary
8 seven-year effort by the staff. This is -- this may be
9 the most complicated rule we ever did. It's certainly on
10 a -- you know, a handful of the most complicated. Maybe
11 Cap-and-Trade, but this is right up there. There's so
12 many pieces to it.

13 And I want to say also what we've seen an
14 extraordinarily effort by the engineers in the industry
15 and the engineers at Southwest Research Institute, the
16 progress -- the incredible progress that they've made. I
17 mean, we would not have been seriously moving forward on
18 this initiative, even a few years ago, but we've -- the
19 technology has gone forward. And now we can look at a
20 0.02 standard where it does not have a reduction in
21 emissions and a total cost of ownership basis. It's --
22 it's pretty close to, you know, the previous technology.

23 So this is a really -- this is a really big deal
24 what we're doing and it's a really important
25 accomplishment that the staff should think -- should be

1 appreciating, and that the industry as well.

2 I do note that while this is hugely important, as
3 a few people have noted, it's still missing almost half of
4 the diesel emissions in California, because of trucks
5 coming in. And so the part of what we're talking about is
6 why this is also important is this motivates the Feds to
7 move forward more quickly with their Low-NOx Rule with
8 this administration or the next administration, but -- and
9 on top of that, we heard from all the states, so that many
10 of the states can actually adopt our standard and -- and
11 also put pressure on EPA to move forward. So that's my
12 preamble.

13 So I have two really big issues. And, you know,
14 I love the staff. They've done a fabulous job, but there
15 are two things where I just completely disagree with and
16 passionate -- passionately so.

17 One of them -- let me start with the transit
18 issue. Let me characterize it a little differently than
19 the staff have. Number one, a year ago, we just adopted a
20 regulation requiring buses to become electric far sooner
21 than any other vehicles in the state, in the country. In
22 fact, by 2028/2029, all new buses purchased are going to
23 be electric.

24 Number two -- so that's kind of one pre-condition
25 here. I know you can tell where I'm going with this.

1 Number two is we don't -- we're not appreciating here what
2 desperate condition the transit industry is in. And when
3 I say industry, this is government. This is -- these are
4 government agencies providing a public service mostly to
5 our disadvantaged communities. And this transit industry,
6 it was in bad shape a couple years ago. It's in desperate
7 shape now.

8 If you just look at -- talk to any of the transit
9 operators, like I was just read -- seeing Muni in San
10 Francisco, they had 80 routes. They've reduced 60 of
11 those routes. They're hoping, if they get lots of money
12 from the Feds, or from -- manna from Heaven or something,
13 that they can restore maybe 20 of those.

14 These are routes that are serving disadvantaged
15 communities. So here we are imposing a set of
16 requirements on a -- on a sector of our society serving
17 our disadvantaged community that's in desperate financial
18 shape, and they're already on a fast track to
19 electrification. So all we're talking about is four or
20 five years, you know, 2024 to 2028/2029. Let's just
21 exempt them. We don't do this often. I know no one likes
22 to use that word. But if there's any time ever where we
23 would exempt a group, this is it, so...

24 And then -- oh, and then, of course, it's because
25 of the Cummins. And so that's going to relate to a second

1 issue area. But Cummins is saying that, you know, this
2 NOx rule, while they're support -- very supportive of it,
3 it doesn't make sense for them to build an engine for a
4 small -- a very small market. And they are the key
5 supplier of these buses.

6 So you put all this together and it just seems
7 like a no-brainer to me to be exempting transit operators
8 from this rule. It will have a trivial, trivial -- if you
9 calculate the numbers, the amount of NOx is like
10 vanishingly small in terms of the impacts we're talking
11 about.

12 All right. That's my number one issue. I don't
13 know if you want to discuss that, because I have one other
14 big issue that I feel passionate about.

15 CHAIR NICHOLS: Let's hear all your passions for
16 now and then we can have a broader discussion.

17 BOARD MEMBER SPERLING: Okay.

18 CHAIR NICHOLS: I think that's going to be
19 easier.

20 BOARD MEMBER SPERLING: Okay. I'll -- in
21 between, I just want to note, there are a couple of issues
22 that I hope that the -- that I want the staff and Board to
23 address, but I'll leave it to others. One is the
24 multiplier credits for hybrids. I didn't really look into
25 that. It doesn't seem to make a lot of sense to me, but

1 I'm open to hear about that.

2 I think the 50-state rule, I mean, we might as --
3 I don't know that we have to get rid of it formally, but
4 it's -- it looks like no one -- no company is going to do
5 it, so it doesn't really matter, I think at this point,
6 what we do with it.

7 And then that -- you know, Tesla brought up the
8 issue about credits being transferred from the federal
9 pool to California. And I asked staff about it and they
10 said they didn't think there were any credits there.
11 That -- you know, I think we need to confirm that. You
12 know, if -- because that could be something we should pay
13 attention to.

14 So anyway, those are not my issues.

15 My other big issue is one that, well, has been
16 addressed here quite a bit, and it's the role of
17 electric -- of ZEVs in this rule. So I believe very
18 strongly that electric trucks and fuel cell electric
19 trucks should be fully included in this NOx rule.

20 This is how we do all of our emission standards
21 for cars and trucks. We say -- we give the manufacturer a
22 performance standard and they can meet it however they
23 want, even like -- and you say, well, there's already a
24 ACT, but we do that with cars. We have the ZEV mandate
25 for cars, but yet the electric cars meet -- are still used

1 to meet the greenhouse gas standards.

2 So it's not like this is a precedent. In fact,
3 this is setting a precedent for doing it differently than
4 we've ever done it before. So what I'm going to propose
5 as part of the 15-day changes is that I think that the --
6 ZEVs should be included at least until 2030. So the way
7 the staff had it was 2028 and then they're proposing a
8 2026. I think that's exactly the wrong direction. It
9 should be at least 2030 and I'd even say beyond that, but
10 I haven't actually cranked the numbers to really feel
11 comfortable with that, but at least till 2030. And I'm
12 going to go through this and explain why exactly I'm
13 arguing this.

14 So first of all, I mean, the premise of this is
15 what are we committed to? We're committed to
16 electrification of trucks. That is our primary goal here.
17 And we should be thinking -- and this is a really hard
18 goal, and we need to be thinking about exactly how are we
19 going to accomplish it, you know, whether it's incentives.
20 We don't have much money for incentives, but, you know,
21 incentives is part of it. But this is -- this is a
22 regulatory incentive for the manufacturers to sell more
23 electric trucks, because then they would get credit for
24 the Low-NOx Rule.

25 So I would point -- so I'm going to do -- show

1 the number -- I'm going to go through the numbers really
2 quickly in just a second. But I want to say that if you
3 include the trucks -- the electric trucks, yes, there's a
4 very small -- I'm going to show it. It's a very, very
5 small hit in the short term, but it's soon swamped to
6 offset by the growing number of electric trucks out there.
7 And so the NOx loss is really very minor.

8 Okay. So using staff numbers here, let's look at
9 the South Coast. South Coast had 300 tons of NOx in 20 --
10 has it today, 2020. It's going to be about 200 in ten
11 years. And most of that is from the, you know, 2007-2010
12 emission standards on trucks. Okay. So we're going to
13 have 200 tons per day in 2031 with existing NOx rules. So
14 now what happens? So what -- the Low-NOx Rule that we're
15 talking about, that we're -- that we're going to be
16 adopting shortly would reduce it an extra seven tons, so
17 it would go from 200 down by seven tons.

18 If we included the ZEVs in that performance
19 standard, then it would add 0.2 tons per day. 0.2. This
20 is 0.1 percent of the NOx emissions in 2030. That's
21 one-tenth of one percent. That would be the effect, if we
22 had ZEVs all the way through 2030.

23 So -- and it would probably -- actually, that's a
24 worst case scenario. It would probably be -- it probably
25 wouldn't even be that, because what we're likely to see is

1 diesel truck sales falling, you know, in 2024, 2025 as
2 we've heard a lot. And so that's going to actually reduce
3 the amount of both low-NOx impacts and it's going to
4 reduce the number of electric trucks, because the electric
5 trucks are tied to how many trucks sales there are. You
6 know, they're a percentage of the total sales.

7 So the point -- oh, and what we're talk -- so
8 that's just NOx. Greenhouse gas benefits are much,
9 much -- even much, much larger, because we're going from
10 diesel to electric. So we're gaining large greenhouse gas
11 benefits, losing almost no NOx, and what we're doing is
12 sending a signal about what's important, and that is
13 electrification of the trucks.

14 So I really think very strongly -- I feel very
15 strongly about this that electric trucks -- this is --
16 we've always done it this way. It sends the right signal.
17 It's consistent with our overall goal, and -- and the --
18 and the benefits, you know, soon become very large, if --
19 if we provide this extra incentive. We don't know how
20 much -- we really don't know what effect it's going to
21 have on the manufacturers. I've tried it out on some of
22 them. They say, you know, they're not really sure, but it
23 does send a clear signal that they -- you know, to support
24 them in terms of electrification.

25 CHAIR NICHOLS: Okay. I think we will hear from

1 others, but then we can turn to staff and have them
2 respond to your comment.

3 Phil Serna.

4 BOARD MEMBER SERNA: Thank you, Chair. First, I
5 want to start by saying thank you to our staff. They've
6 been working on this about as long as I've been a Board
7 member now. And in particular, I want to extend specific
8 thanks to Jack, Mike, Kim and Paul for getting us to this
9 point where we're being asked, in somewhat of a very
10 historical context, this combined with the previous agenda
11 item, I think -- and I know this is just serendipity, but
12 you started this meeting Madam Chair, you know,
13 acknowledging the fact that you've asked me to lead an
14 effort, rightly so, to really articulate for our agency
15 what our roles and responsibilities are when it comes to
16 advancing racial equity and social justice.

17 And I will argue all day long that it's because
18 of the actions that we are taking today, the
19 deliberations -- the very specific ones that were taken
20 today when it comes to control measures for at-berth
21 ocean-going vessels along with -- (sound went out)

22 CHAIR NICHOLS: Oops, you're frozen.

23 BOARD MEMBER SERNA: -- this rule as well,
24 because (inaudible) -- that are going to affect
25 disadvantaged communities and communities of color as the

1 most -- communities of color the most here in the State of
2 California.

3 And so I think just by way of, you know, pointing
4 that out, it's really important to me that the public,
5 especially those that took the time and waited patiently
6 to testify today, most notably the environmental justice
7 community, understand that this Board -- certainly this
8 Board member take very seriously(sound went out)

9 CHAIR NICHOLS: Hmm. We're having an internet
10 problem.

11 BOARD MEMBER SERNA: -- text in which we're being
12 asked to deliberate (inaudible) that had to do with the
13 ZEV credit. So I appreciate the explanation.

14 And I also -- I also want to say that with
15 regards to Professor Sperling's very passionate comments
16 about transit and an exemption for transit, as a transit
17 director as well for Sacramento Regional Transit - we
18 actually heard from a representative this afternoon - I'm
19 open to that. But I think the proposal, or at least the
20 idea that Mr. Cliff suggested in terms of giving the
21 Executive Officer some discretion, might be an appropriate
22 way to address that, because I think it gives -- it gives
23 the transit agencies some latitude to really express with
24 that would mean to them.

25 Not every -- not every transit agency in the

1 state of California is the same. We know that. I do
2 agree with Professor Sperling that all the transit
3 agencies though in the State of California are struggling,
4 and they were struggling - I can attest to that directly -
5 even before the pandemic.

6 So I think the idea of exploring some
7 administrative discretion when it comes to an exemption
8 for transit is a good idea. But I am certainly prepared
9 to support generally the recommendation today.

10 Thank you.

11 CHAIR NICHOLS: Thank you.

12 Okay. Sandy Berg.

13 VICE CHAIR BERG: Okay. Thank you.

14 Well, first of all, it is -- staff has really
15 assisted me in coming up to speed on this regulation.
16 There were so many moving parts. And speaking with many
17 stakeholders, I do find myself technically at a loss at
18 times being able to reconcile some of the very apparent
19 disagreements between what this rule will do and what it
20 won't. So I'm going to really focus on a few areas.

21 I do want to say I fully support transit and
22 providing a very clear signal, however, to staff that we
23 want to empower them to put a hundred percent of their
24 focus and resources to go for electrification, and -- and
25 not put them in a situation where they are now looking for

1 an interim technology and trying to go for
2 electrification.

3 So whatever our solution is for that, I do want
4 to be very clear in order to support it that we are
5 telling staff to find a resolution to allow transit
6 agencies to focus a hundred percent, all of their
7 resources as limited as they are, or whatever resources we
8 find, to electrification.

9 I'm -- I am supportive of taking out the 50-state
10 option. I was going through my notes. I didn't see
11 anybody express strong support for the 50-state option.
12 And so I'm fine with that, if that's what my fellow Board
13 members want to do.

14 I am concerned with the time frame for 2027 with
15 new technology and a big bump up in warranty. And so I'm
16 supportive of the industry and staff suggestion to undergo
17 a cost study, which would include understanding that
18 interaction between parts manufacturers and the people
19 that put all the parts together to create systems. These
20 are all parts of a warranty issue. But I really want to
21 know that both industry and staff are going to go into
22 that study with an open mind to the outcome. And if it
23 shows that we were -- had it right, then industry is going
24 to get behind it. But staff if it shows that we missed
25 the mark that we're going to come back and do something

1 about it.

2 So I think it's only wise to go into such a study
3 if all parties are truly committed to going through that
4 process and honoring the outcome.

5 Then I -- I am concerned how we're messaging. We
6 do need these near-term reductions. I feel very
7 conflicted that they're not as large as we need. And yet,
8 I hear from the 617 communities that they really want
9 ZEVs. And so I think it's very incumbent on us as an
10 agency to inform people why this is a good technology
11 choice for the bridge. And so I'm hoping that, you know,
12 staff can continue to interact with our communities to let
13 them know the benefits of low NOx, if -- because as we
14 have heard throughout both the staff presentation and
15 throughout the testimony, that this is a bridge technology
16 that we have.

17 So that's going to bring me to my final. And you
18 will now know that there's very interesting discussion at
19 the -- my household, because I don't agree with Professor
20 Sperling's passion on the ZEVs. And it's really because
21 this technology is a bridge and we do need to be sending a
22 very strong market signal, and it isn't the same as
23 light-duty. In light-duty, we do do the crediting exactly
24 like Professor Sperling indicated, but we aren't demanding
25 that consumers buy these products. We are much lighter on

1 our touch on that side.

2 This is accelerated. This is holistic. And if
3 we're saying we truly need this bridge, then I think we
4 have to have a strong market signal. And from our
5 testimony, we're already hearing from some of the major
6 suppliers that they're very concerned as if this is strong
7 enough. So I would support staff's 15-day change.

8 And that doesn't say that I don't -- I absolutely
9 support Professor Sperling's position that we do know
10 where we're going, and ZEVs are extremely important, and
11 that is where we're going to land. We just have a
12 philosophical difference about how quite to get there.

13 (Laughter.)

14 VICE CHAIR BERG: Thank you.

15 CHAIR NICHOLS: I'm sure that makes for lively
16 dinner table conversation.

17 Okay. Dr. Balmes.

18 John?

19 BOARD MEMBER BALMES: Sorry. I didn't think I
20 was next. So --

21 CHAIR NICHOLS: I may have been -- I thought you
22 were.

23 BOARD MEMBER BALMES: I'll take it. So I want to
24 reiterate what I said with the regard to the At-Berth Rule
25 that diesel emissions are bad for health and that we've

1 got to get rid of diesel. And so I'm supportive of this
2 Omnibus Rule in that regard.

3 But since we still need to have some diesel
4 vehicles for the short-term, they have to be as clean as
5 possible. I want to thank the staff, like my fellow Board
6 members, for a tremendous amount of work over many years.
7 I also want to thank all the people that testified. And
8 this is one of those rules where I heard as much against
9 as for. And I learned early on in my Board time that if
10 both sides, both the regulated community and the enviros
11 are upset with us, we're probably kind of in the right
12 place.

13 I want to support both members of the
14 Berg/Sperling household in trying to do something for the
15 transit agencies. I agree wholeheartedly with Dr.
16 Sperling that this is not the time to put more economic
17 pressure on the transit agencies. I fear for the
18 survivability of public transit in California. So I think
19 we need to come up with an accommodation. Whether we can
20 leave it in the hands of our able Executive Officer,
21 that's sort of a little bit beyond me at this point. I'm
22 certainly open to that, because he usually makes good
23 decisions and I trust him.

24 And the other thing I wanted to mention is the
25 50-state standard, I could lose that, so I'm agreeing with

1 Vice Chair Berg in that regard. You know, I just don't
2 feel that it's necessarily going to give us that much
3 benefit. I understand the staff's desire to make sure
4 that trucks coming from other states are cleaner than they
5 currently are, but I would say that hoping to harmonize
6 with U.S. EPA would sort of be a better way to do that.

7 And all the various state representatives who
8 testified, and I really was pleased with that kind of
9 state support, they didn't seem like they were pushing for
10 the 50-state standard. They were pushing for us to have a
11 strong standard that they might adopt. Maybe I
12 misunderstood. But those are my comments.

13 CHAIR NICHOLS: Okay. Thanks.

14 Judy Mitchell.

15 BOARD MEMBER MITCHELL: I know I'm not next.
16 Hector was in front of my, but I'm happy to go.

17 CHAIR NICHOLS: Well, my screen dropped Hector,
18 so I apologize, Hector. I guess you got to be first the
19 first time, so we'll put you back in the queue.

20 BOARD MEMBER DE LA TORRE: No, Judy can go ahead.

21 BOARD MEMBER MITCHELL: Okay. I'm happy to go
22 ahead and speak. I will say that this rule is very badly
23 needed.

24 Let me get my video on.

25 It's so badly needed, because we need NOx

1 reductions and we have at least two air districts in the
2 State, San Joaquin and South Coast, that are
3 non-attainment. We still have the dirtiest air in the
4 nation. And to a large degree, that pollution is caused
5 by the mobile sources. In South Coast, of course, we want
6 NOx reductions. And San Joaquin Valley wants both NOx and
7 PM2.5 reductions. And I believe we also have other --
8 some areas across our districts that need NOx reductions
9 and welcome this -- this particular rule.

10 I also wanted to draw your attention to slide
11 four, which showed the critical need for reducing NOx from
12 heavy-duty trucks in order to reach our SIP attainment and
13 contrast that with slide 38, I believe, which says exactly
14 what we will get in San Joaquin Valley and then in South
15 Coast from this rule. It isn't enough, but I will take
16 every bit that I can get and I think San Joaquin Valley
17 would too.

18 What I do think would help is to get reductions
19 that are near term. And San Joaquin Valley, the Bay Area,
20 and South Coast would all like to see this rule advanced
21 somewhat. It has been put on the table to advance it by
22 two years to 2022 and 2023, and then work -- work with the
23 existing structure with that advancement. And that was
24 proposed earlier by staff in Appendix D, I believe,
25 scenario number one.

1 I know that people will complain about that,
2 because the fear is that, at least for diesel engines,
3 they're not ready for that. They haven't reached that.
4 But we know we have the technology in natural gas. We
5 have certified 0.02 grams per brake horsepower in the
6 12-liter trucks. And that's the reason I would advocate
7 for that. And it will be very soon that we will have 0.02
8 in diesel trucks.

9 For quite a few years, Barbara Riordan and I have
10 joined meek -- MECA in Sacramento and listened to their
11 presentations on what they are doing to reduce NOx
12 emissions in trucks. And they, along with the Southwest
13 Research Institute, have done incredible things. And I am
14 so thankful to them for working on this, because we do
15 know that we're going to have diesel trucks around into
16 the future. They're not going to go away that quickly.
17 We have to deal with that as well. It's just that for
18 some of our areas in California that are nonattainment, a
19 near-term approach is absolutely necessary.

20 As for the 50-state standard, I would either
21 strengthen it or omit it. I would urge, of course, our
22 staff to keep working with the federal government on a low
23 NOx national standard. South Coast, along with CARB and
24 other -- a number of other partners, filed our petition
25 back in 2016 for a low NOx national standard. We need to

1 get there and hopefully we can get there in the next year
2 or so.

3 As for the transit agencies, I am supportive of
4 the suggestion that we put discretion in the hands of our
5 Executive Officer to determine that on a case-by-case
6 basis. We know that some of the problems with the transit
7 is that they don't have the infrastructure for CNG or for
8 whichever new technology they want to go do, but it's
9 probably mostly a problem with CNG. And there are a lot
10 rural transit agencies that would need some help in
11 transitioning. So I would be supportive of putting
12 discretion in our Executive Officer to decide that.

13 As for the ZEV credit, I would eliminate the ZEV
14 credit. And I think, you know, we need all the help we
15 can get to -- to -- for our near-term reductions. And I
16 think, although it's minimal, it's not incredible, as Dan
17 pointed out with his calculations, but it does send a
18 signal that would incentivize the industry.

19 Let's see, what else did I have?

20 I want to point out that -- because it helps
21 bring it kind of home as to what we're dealing with, by
22 2031, this rule will give South Coast a reduction of seven
23 tons per day of NOx. I welcome that. But I want you to
24 know that what we have to do, we have to reduce our NOx
25 emissions by 108 tons per day.

1 When Dan pointed out on that chart that we get to
2 200, we're still 200 too many. And so we need -- we need
3 to be working on this. And this is in the responsibility
4 of this agency to help get reductions with heavy-duty NOx
5 emissions. We all bear that responsibility and we bear it
6 for the whole state. One thing I would also advise, and
7 it could possibly be put in 15-day changes, is that we
8 address near-term low-NOx engines, trucks in the Fleet
9 Rule. I think that would be another point that we should
10 be thinking about, because that could also help us reach
11 attainment.

12 And finally, I would just say, and I'm willing to
13 discuss all of this and we're comp -- we'll reach
14 compromise on any of it, but I would like to ask our
15 staff, and I don't know that -- this probably wouldn't be
16 in any 15-day rule change, but it is a general request to
17 ask our staff to develop a comprehensive plan to show how
18 CARB will reduce NOx emissions and PM emissions from
19 mobile sources in the heavy-duty sector to get our
20 districts to attainment by the federal deadlines. How are
21 we going to do that. When I see I'm only getting seven
22 tons per day out of this regulation, I hope to get more
23 out of the ICT, and the ACT, and the fleet rules. But I
24 would like to have us take a look at that and how do we
25 actually get to attainment by the federal deadlines with

1 the programs that we're putting in place?

2 So that's what I have to say for now. Thank you.

3 CHAIR NICHOLS: Okay. Judy. I do believe, and
4 Mr. Corey can jump in here, that the staff is, in fact,
5 working on a comprehensive NOx and PM reduction strategy
6 for what we have control over in the mobile source sector,
7 which is due to be presented to the Board this fall,
8 isn't -- is that correct?

9 EXECUTIVE OFFICER COREY: That's correct, Chair.
10 On the San Joaquin plan, which includes many of the
11 statewide mobile source measures, we're back in front of
12 the Board in October, so two months from now. And then
13 towards the latter part of the year, the broader mobile
14 source plan, which will also include an update statewide
15 on South Coast.

16 CHAIR NICHOLS: And on South Coast as well.
17 Okay. So just to know that we're not -- not ignoring that
18 responsibility or letting it lag. But as you point out,
19 it's -- it's the big thing and it's also the toughest
20 thing.

21 Hector, I'm going to call on you next, because
22 you did have your hand up, and then John Gioia, and then
23 Alex Sheriffs.

24 BOARD MEMBER DE LA TORRE: Thank you, Chair.

25 When we took up the ACT a couple months back, we

1 talked about it as being the first of a package of three,
2 and it turns out it's a package of four. I forget about
3 transportation refrigeration.

4 But ACT was the first, this is the second, next
5 year, we're going to do the Fleet Rule and transportation
6 refrigeration. So it's -- to me, it's all one package
7 that addresses trucking in California. And I think that's
8 very, very important for us to keep in mind, and as many
9 of my colleagues have mentioned, how these pieces fit
10 together, or in some cases, they don't. So I'll preface
11 it with that.

12 There's a lot of little things in this one as
13 many of my Colleagues have brought up. I'll start with
14 one that seems to have a lot of consensus, which is let's
15 get rid of the 50-state rule. I mean, there's no reason
16 to include it. I'm uncomfortable with it to begin with.
17 There seems to be some doubt as to whether people will
18 take it up, so let's just get rid of it.

19 I -- also, I agree with Vice Chair Berg on the
20 ZEV credits. Someone else mentioned getting rid of them
21 altogether. I would be supportive of that. But if not,
22 then I'm supportive of staff's 2026 limitation on the ZEV
23 credits. But my preference would be to just get rid of
24 them. We took care of that in ACT. Let's -- let's
25 minimize the credit regime that we do here.

1 In that -- to that note, the issue of legacy
2 federal NOx credits was brought up. It was unclear
3 whether they exist or not, whether they -- I think we need
4 to be explicit that they will not be included in this
5 regulation, that they will not be usable under this
6 regulation. I think we need to stick to what we have in
7 front of us and direct it all very, very clearly.

8 There was an issue raised about credits having to
9 be for the same size vehicle or smaller. I think that
10 makes a lot of sense, in other words, not compiling a
11 bunch of credits for medium-size, and then all of a
12 sudden, you're able to mitigate for a heavy-duty -- you
13 know, a heavier duty vehicle. I think, you know,
14 like-for-like or having credits for the larger ones being
15 able to go down the ladder, but not up in how we manage
16 those credits. That makes a lot of sense.

17 On the transit issue, I support giving our staff
18 and Richard the flexibility to manage it on a case-by-case
19 basis, figure out, you know, what they need under those --
20 under whatever circumstances they may be facing in their
21 particular. I hate to have a broad-brush solution. We
22 know they're in trouble. We know there's all these
23 issues, but I think it should be a case-by-case basis. I
24 don't want to have some blanket authority -- some blanket
25 exemption or blanket authority for having diesel. The

1 whole point of this exercise is to reduce diesel not
2 expand it.

3 Also, related to transit, I support giving
4 direction to Richard and staff to look at redirecting
5 settlement funds from Volkswagen or other settlements that
6 may or may not be happening and directing those to transit
7 to help them in that transition that Professor Sperling
8 brought up. I think, you know, we've got to shake some
9 trees.

10 On the money side of things, we just had some
11 good news yesterday with the results from the auction last
12 week. And so that GGRF money is looking like it will be
13 there for HVIP in this fiscal year, not before the
14 Legislature leaves, but in the first quarter next year.
15 There should be a plan in place and there should be
16 dollars there. So we will have some HVIP money that will
17 be available for heavy-duty and all of these programs that
18 we're piecing together here.

19 I do believe that the natural gas vehicles
20 should -- you know, the credit regime that's there for
21 ultra low NOx natural gas or other ultra low NOx that
22 comply early, it makes a lot of sense. I'm supportive of
23 that. We said we would do that back in June with the ACT,
24 so I think we need to keep faith with that commitment, and
25 also, that they be allowed to qualify for incentive -- any

1 incentives they're qualified for now and not make any
2 changes one way or the other. Not open up the incentives,
3 but not shut them down, either for those. I think, Vice
4 Chair Berg mentioned that as well.

5 One kind of minor thing for those 0.02 engines
6 that exist today, if we could have some kind of expedited
7 approval - I mean, obviously, we've already tested them or
8 they've been tested. They've been approved, et cetera -
9 to not make them go through a whole new process to comply
10 here. If they're -- if they qualify as 0.02, then we
11 should allow them to comply here without having to start
12 all over again and, you know, get on a dyno and do
13 whatever it is that they have to do all over again.

14 So my final comment is about diesel. South Coast
15 has done four MATES studies. And I don't remember what
16 MATES stands for, but it's a risk analysis of pollution.
17 And --

18 BOARD MEMBER MITCHELL: Multiple Air Toxics.

19 BOARD MEMBER DE LA TORRE: Multiple Air Toxics --

20 BOARD MEMBER MITCHELL: Multiple Air Toxics
21 Emissions. I have to always remember it too.

22 (Laughter.)

23 BOARD MEMBER DE LA TORRE: Yeah. Well, I -- I've
24 been following MATES since the first one, about 20 years
25 ago. They're up to the fourth version and they're about

1 to release this fall the fifth version. But as of the
2 most recent version, version four, 68 percent of the toxic
3 risk from air pollution comes from diesel. We have to
4 focus on diesel in myriad ways, and this is a step in that
5 direction.

6 And so I'm supportive overall. I've checked off
7 all these little pieces to it. But hopefully, at the end
8 of this, staff can put all these pieces together in the
9 15-day and wrap it up, so that we can move on.

10 Thank you.

11 CHAIR NICHOLS: Okay. John Gioia next.

12 BOARD MEMBER GIOIA: Thanks. The advantage of
13 speaking later is I don't have to repeat what many others
14 have said, but let me just -- just briefly acknowledge all
15 of the hard work of staff to put together this very
16 complicated rule, which I essentially support with a
17 couple of just -- of comments.

18 My sense is that, you know, we all agree that
19 this is -- it is really important to take action as
20 quickly as possible to achieve the savings that are better
21 for our communities. So I'll just cover two issues.

22 The most important issue to me is the transit
23 issue that was raised. Also being in local government, we
24 understand these are public agencies. They serve, as in
25 the area that I represent, lower income communities.

1 They're the only way to get to work for many people. At
2 the same time, the diesel buses that go through those
3 communities pollute and impact the health of the residents
4 of those communities. So it's a balance.

5 So I'd like -- I agree with the idea of having
6 our -- of having Richard have discretion to solve the
7 issue that was raised by transit agencies. And I think
8 all are going to have issues, some more than others. It
9 will be a question of degrees. I've just received another
10 email from AC Transit today that they are having to
11 temporarily stop certain routes. I get these notices
12 frequently. The adjustment of routes, the pandemic has
13 just devastated local transit.

14 So I'd be interested to hear from Richard about
15 how he would -- what he's looking at as an idea to
16 exercise that discretion. I don't think that having a
17 pure exemption is the right way to go. Although it's an
18 interesting idea, I'd rather see the issue solved by some
19 type of case-by-case basis. But I'm not sure how that
20 works, so I'm interested to hear some thoughts from
21 Richard. And just on the other point, I'm fine with
22 getting rid of the 50-state rule, so -- but I'm
23 interested, Richard, to hear from you how that discretion
24 would work and whether you need more input on that.

25 CHAIR NICHOLS: So I'm going to ask him respond

1 after Alex, and then I'll sort of put forth the list of
2 things that I think we need him to address before we move
3 to a vote. Oh, and I guess we've got Nathan Fletcher's
4 hand up too. So let's -- let's quickly go through those.

5 Alex, congratulations on being confirmed as a
6 member of the San Joaquin Board.

7 BOARD MEMBER SHERRIFFS: At Senate Rules or did
8 the Senate act?

9 CHAIR NICHOLS: Yes. Yeah.

10 BOARD MEMBER SHERRIFFS: The Senate acted.

11 CHAIR NICHOLS: I just heard it happened today.

12 BOARD MEMBER SHERRIFFS: Oh, well, I'll take a
13 bow. Thank you.

14 Great. Great.

15 CHAIR NICHOLS: Well deserved.

16 BOARD MEMBER SHERRIFFS: Great to be with you all
17 for another -- another four years. Thank you.

18 Very, very complicated. Great job, staff. Seven
19 years. So this is about, gosh, almost 20 percent of Mike
20 Carter's life with CARB.

21 (Laughter.)

22 BOARD MEMBER SHERRIFFS: Good job. You know, I
23 would just reiterate, you know, transit, you know, we --
24 we worked with them in terms of the Innovative Clean
25 Transit. We don't need to be having them change course.

1 And I also have a lot of confidence in Richard Corey's
2 ability to be discrete.

3 The 50-state rule has been mentioned. It either
4 should be tightened or dropped and probably just dropped.
5 But it also highlights the importance of collaboration at
6 the national level. And I heard people from the trucking
7 industry and also manufacturers voice support for a strong
8 federal rule. And so, good, we can all work together on
9 this, but we need to work together on this.

10 The short-term issues, thank you, Ms. Mitchell,
11 for your comments about that, because that's certainly is
12 very important. It was highlighted in Mr. Sheikh's
13 comments. And this -- this rule is -- is not the place
14 where we're going to get very much. But again, it, I
15 think, highlights for all of the Board we're not doing it
16 here, but we need to make a commitment that we are doing
17 it in other places. We are going to do it in the Advanced
18 Clean Fleets Rule.

19 A reminder that South Coast and the San Joaquin
20 Valley have similar challenges, but also very different
21 challenges. And agricultural emissions are a very large
22 component of -- and opportunity for the Central Valley.
23 And I was reminded in the Governor's revised budget, one
24 of the four priorities for cap-and-trade spending was in
25 terms of FARMER Program, in terms of replacing dirtier

1 tractors, tier 0, tier 1, with cleaner equipment. And it
2 turns out this is a highly cost effective way of achieving
3 some immediate near-term reductions. So we need to be
4 aware what of that and vigorously supporting it.

5 So those are my comments. Thank you.

6 CHAIR NICHOLS: Okay. Nathan Fletcher and Diane
7 Takvorian.

8 BOARD MEMBER FLETCHER: Thank you. I'll be very
9 brief. As Mr. Gioia said, when you go last, a lot of
10 things have been said. I just want to give a slightly
11 different perspective as a transit -- as the Chair of a
12 transit agency. I support transit completely and I
13 support doing whatever we can to support our transit
14 agencies. Our job is very difficult and I know that on a
15 daily basis.

16 I think flexibility to the Executive Officer is
17 good. But I just -- I want to point out, out of the close
18 to a thousand vehicles we have in our fleet, there are
19 only a handful of diesel left and they will be gone in the
20 next two months. So we will have no diesel vehicles in
21 our fleet before the end of the year.

22 And so I do want to incentivize transit. And I
23 realize not every agency has been able to get in the same
24 position or made the same investment. But as we do that,
25 I want to make sure we don't discourage or punish the

1 folks who moved early to really low NOx through the
2 limited resources and challenges we face. And so I would
3 hope that flexibility -- we want to get to ZEV as an
4 agency. And we want to have -- we're doing ZEV, and we
5 have electric buses, and we're trying to build out the
6 infrastructure and do more. And so I just -- just want to
7 raise that point.

8 Agree with what's been said on the 50-state
9 strategy. We're not a 50-state agency. I think we can
10 lead the way, and hopefully 49 states will adopt the
11 approach that California takes and then we'll have a
12 50-state strategy. And that would be my approach to a
13 50-state strategy.

14 And then concur with the approach on the credits.
15 You know, I think it's important that we get more of these
16 out on the street sooner.

17 And so that is it. Thank you

18 CHAIR NICHOLS: Thank you.

19 Ms. Takvorian, you are the last.

20 BOARD MEMBER TAKVORIAN: Thank you. I'll be
21 really brief. I just wanted to echo what a lot of my
22 colleagues have said and thank staff. I think it's pretty
23 stunning, if not -- and I don't know if we really talked
24 about this too much that the number of -- it's like almost
25 4,000 avoided premature deaths is a pretty stunning

1 outcome for this rule. So I just want to keep that in
2 mind. And we know that it's really impacting
3 environmental justice communities. So I -- bravo. I
4 think it's really well done.

5 I agree with dropping the 50-state rule. I agree
6 with dropping -- eliminating the ZEV credits. I agree
7 with Richard, on - I hope Richard agrees with this -
8 finding a case-by-case basis. And what I wanted to hear,
9 Richard, when you're responding is how to move -- how to
10 help those transit agencies move more quickly to ZEV. And
11 perhaps those are the ones that should be prioritized in
12 someday. So I would love to hear your thoughts about.

13 That's it for me. Thank you.

14 CHAIR NICHOLS: Okay. I just want to say one
15 thing, by the way, on behalf of myself I guess, as well as
16 the staff, but all the people who said that they wanted
17 ARB to work with the federal government on a national
18 standard, I believe we, and the districts, have done
19 everything we could to move them in the direction of
20 addressing this issue, starting with a petition years ago
21 and cultivating the relationships at the staff level for
22 as long as the staff were allowed to work on this issue,
23 that is the federal agency staff. And I am deeply hopeful
24 that things will change after November.

25 But I just want to say, we couldn't agree more

1 about the need for a 50-state standard -- a real 50-state
2 standard. In the meantime, the have effort to sort of
3 leverage that into the California rule clearly has not
4 accomplished anything, either for the manufacturers or for
5 the rest of us. So I think we have absolute consensus on
6 dropping that provision and making that part of the
7 resolution going forward.

8 We do need, Richard, to talk about what he would
9 do with his discretion, because it's true that some
10 agencies have done a lot with ZEVs and others have done
11 next to nothing. Some of that was due to circumstances
12 that was not within their control. Some districts just
13 had boards or staff that were more willing to divert
14 whatever resources they had in that direction. We do have
15 a rule now that has a mandate in it for ZEVs. So we need
16 to talk about that.

17 And then we need to talk about this sort of messy
18 issue of the credits. Having advocated for credits for
19 everybody for longer, we now have several Board members
20 who have proposed that we get rid of all credits for ZEVs
21 right away. So let's have a little bit more discussion
22 about what we're doing with that piece of it. And then I
23 think otherwise, we're all pretty much ready to move on
24 this issue.

25 So, Mr. Corey.

1 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

2 And Board Member Takvorian ended on a key point
3 that was embedded in a number of folks' comments, a number
4 Board members' comments, which was look for -- and I want
5 to start this way, because it's part of the response, look
6 at the option to redirect some settlement dollars, not the
7 hope for future funding. This is talking about dollars
8 that are available already. And I think there was a
9 reference to VW. That's the first place I'm going to look
10 in terms of there were already transit dollars in there,
11 the ability to shift some of those funds.

12 But to get to kind of the core point that was
13 embedded in really what all you said in terms of
14 sensitivity, one, the transition that transit agencies are
15 going through unprecedented times, and the important
16 public service that they perform, and the fact that
17 through the experience last year, or when the Innovative
18 Clean Transit Regulation was passed, we developed a
19 relationship. In fact, Mike Pimentel testified today,
20 still on the line. I have a high degree of confidence in
21 our ability to work with the Association and individual
22 mem -- individual agencies.

23 So the approach would be to, one, there's
24 underlying facts in terms of where they individually,
25 transit agencies, are positioned, which is a key approach

1 in terms of informing how to go forward. Some are already
2 all natural gas. Some have a mix of a high percentage of
3 electric buses. Some are still pretty heavily into
4 diesel. It's what are their current transition plans?
5 How has the pandemic impacted them? How would the 2024 to
6 2026 window that we're really talking about potentially
7 impacted, in terms of their plans? Everyone of these
8 agencies are asking themselves that question right now.
9 What are the number of buses they would anticipate needing
10 to replace during that window? Can we expedite that
11 trans -- for those that are most pinched, can we expedite
12 that transition to electrification by using these
13 additional funds?

14 So to me, those are some fundamental principle --
15 principles of a conversation that we would be having with
16 the Association and individual transit agencies to inform
17 how to structure what we're defining as this discretion,
18 which is also informed by dollars. And I think we're to
19 direct some of those redirected funds.

20 So that's -- that would be the starting point,
21 clearly is founded, and based, and built on the follow-up
22 conversations that were taken very seriously from this
23 hearing and we'll get to work right afterward. Next week,
24 we'll get to work with following up with these guys.
25 We'll take a weekend off and then get working on this.

1 But I wouldn't say it if I didn't have a high
2 degree of confidence that we can work through it. And the
3 fact of the matter is, if it's not moving forward
4 effectively, you're going to be the first to hear about
5 it, both from them and from me. But I think we can find a
6 path.

7 CHAIR NICHOLS: Okay. And then on this issue of
8 the credits for ZEV. This was, I know, is highly --
9 highly worked over, I guess, would be the right way to put
10 it, in terms of what are we -- is there a message here,
11 who's benefiting, who's not benefiting by having ZEV
12 credits included in the rule at all? I will ask either --
13 Richard, you can do this if you want or we can have Steve
14 or Jack address that question.

15 CHAIR NICHOLS: I'm going to go to Steve on this
16 one -- or start with Steve and you can pull appropriate
17 staff in, if you would, Steve.

18 CHAIR NICHOLS: Okay.

19 DEPUTY EXECUTIVE OFFICER CLIFF: Happy to. And
20 I'll -- I will have staff try and address this -- these
21 issues a little more specifically. But, you know,
22 fundamentally we're trying to strike a balance here,
23 where, you know, of course, we are in favor of zero
24 emissions. You know, we've been clear about that. We
25 have mandates on manufacturers.

1 What this -- what these credits would do is allow
2 some flexibility in the near term. But what we heard a
3 lot from the environmental community and from -- from the
4 manufacturers of emissions control equipment is that, you
5 know, that flexibility essentially gives additional
6 credits for actions that are already mandated.

7 And so the balance that we're trying to strike is
8 one of additionality, trying to ensure that, you know, the
9 Advanced Clean Trucks Regulation is truly getting
10 additional reductions relative to this regulation, and
11 that this is getting additional reductions relative to
12 that. And, you know, some flexibility in the near term
13 is, we believe, appropriate.

14 And so initially we suggested credits should be
15 issued longer. Subsequently, we, after more
16 conversations, decided that it was more appropriate to
17 expire those earlier. But fundamentally, the way I see
18 this is we're trying to create kind of a level playing
19 field here. To the extent that we're mandating
20 manufacturers to make zero-emission trucks, we want those
21 diesel trucks to also get cleaner. And that it's -- that
22 it isn't a good idea to make it that much easier for
23 diesel, such that, you know, it makes it harder for zero
24 emission.

25 So by limiting the crediting it effectively makes

1 it harder for diesel, which we're not -- you know, that's
2 not the outcome that we're trying to achieve, but we also
3 don't want to make it so much easier that it effectively
4 makes it harder for zero emissions.

5 CHAIR NICHOLS: Well, but I think the point is we
6 do want to make it harder for diesel, in the sense that we
7 want to transition away from diesel to zero as quickly as
8 possible. I mean, that's -- that's the one policy that
9 everybody is in agreement on. So in a sense, these
10 credits are a way of making it a little easier for the
11 manufacturers to meet the stringent targets that we've set
12 to make sure that whatever diesels they are selling in
13 California are going to be as clean as possible.

14 If we are undermining that by the ZEV credits,
15 then we may be quote sending a signal that we like ZEV,
16 but all we're doing is making it less likely that the ZEV
17 vehicles are going to meet their targets.

18 DEPUTY EXECUTIVE OFFICER CLIFF: Right. And I
19 think -- no, I think --

20 CHAIR NICHOLS: So I think I'm about to side with
21 Judy on eliminating the credits is what I'm saying. I
22 think -- I think she's made a good case.

23 DEPUTY EXECUTIVE OFFICER CLIFF: And maybe I can
24 just add, Chair Nichols, that one -- one thing that we are
25 a bit concerned about is even though this is

1 technologically feasible, we want to ensure that we sort
2 of encourage manufacturers to stay in the market. And so
3 having that flexibility early on, it gives, you know, some
4 added incentive that the -- that the manufacturers that
5 are out there today stay in the market.

6 I'll not that the Advanced Clean Trucks
7 Regulation requires manufacturers to sell zero-emission
8 trucks at a proportion of the -- the emitting trucks that
9 they sell. So if manufacturers, for example, were to
10 drastically reduce the sales that they have of what
11 potentially could be cleaner, or eliminate them
12 altogether, then we actually wouldn't also get those --
13 those zero-emission trucks. So that's the balance we're
14 trying to strike. And I have --

15 CHAIR NICHOLS: Right. We would keep the older
16 dirtier ones out on the roads --

17 DEPUTY EXECUTIVE OFFICER CLIFF: Right.

18 CHAIR NICHOLS: -- even longer than they already
19 are.

20 DEPUTY EXECUTIVE OFFICER CLIFF: Thank you.

21 CHAIR NICHOLS: I got it. All right.

22 Well, those were the issues that we had, I think.
23 Sandy raised the warranty study. I think that sounds like
24 that's in the works or will be in the works when this rule
25 passes and we'll accomplish what we needed to accomplish.

1 So the only other question I guess is would we
2 advance the date here to 2022/2023 knowing that there
3 might not also -- this -- this might also present a
4 problem, in terms of compliance with the diesels, but
5 would perhaps give another little shove to natural gas.

6 On that one, I've been struck, I guess, and
7 concerned by the statements that I've heard about the fact
8 that despite all the complaints that we've gotten from the
9 natural gas vehicle folks, and they are -- you know,
10 they're -- they're complaining loudly and suing us at the
11 same time, that there have been -- there has been money
12 put on the table, not only in the past, but, you know,
13 very recently, where there have been incentives offered to
14 fleets that could buy that where there was a natural gas
15 vehicle potentially available, and money has been left on
16 the table. That those -- those subscriptions have not all
17 been fulfilled.

18 And so I guess I'd like to hear a little bit more
19 about why -- why that is and why it wouldn't be possible,
20 even though somewhat risky, to -- to go along with the
21 requests that we're getting from the air districts to move
22 the deadline up?

23 DEPUTY EXECUTIVE OFFICER CLIFF: Maybe Jack or
24 Mike could answer that.

25 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

1 Yeah, I can -- I can -- I can jump in, at least
2 with some factual information, so that we're all on the
3 same page there, as you said.

4 CHAIR NICHOLS: Yeah.

5 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

6 And within Volkswagen, we did have a solicitation
7 that opened in December of last year and closed in March.
8 So it was open about three months. Thirty million dollars
9 we made available for natural gas engines, you know,
10 heavy-duty natural gas. So of the \$30 million, we got six
11 million in applications, so \$24 million left on the table
12 by natural gas.

13 By comparison, we did -- you know, we've heard a
14 lot of comments kind of thrown out there that
15 zero-emission technology is just not ready or it's not
16 available now in the heavy-duty sector or in a lot
17 classes. We put -- the South Coast put out a solicitation
18 for us on Volkswagen last week for \$27 million for Class
19 8 - that's the heavy heavy-duty vehicles - Class 8 zero
20 emission. And within one week they were oversubscribed.
21 So they -- they sold tout the entire \$27 million and
22 they're now on a waiting list for that.

23 So we are seeing the industry respond. There may
24 be quite a number of reasons. And part of them quite
25 honestly is, you know, the Board very clearly, from the

1 scoping plan and the SIP, is sending a clear signal that
2 the future is zero emission and that's where we need to
3 go.

4 And so industry is seeing that. And the
5 proactive industries want the zero-emission vehicle. They
6 see that the -- that is a natural technology. I'm sure
7 there are a number of other reasons. I don't think I
8 really need to, you know, guess what those are, but -- and
9 I think that's -- that's probably a large part of it.

10 CHAIR NICHOLS: Well, that's -- I think that's
11 very helpful. So what do you say to the suggestion that
12 we ought to be able to go even faster?

13 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

14 Well, I think the challenge with going faster,
15 we've got thousands of pages of technical documents, which
16 supported why we landed where we landed. And it -- to us,
17 it clearly means diesel could not make the 2022 or 2023
18 time frame. And so moving to -- moving to that -- the
19 standards we put out there in the 2022 time frame would
20 mean -- would mean cutting out diesel engines in that
21 quick time frame, which would mean natural gas or nothing.
22 We did not -- our analysis did not go through that
23 scenario in terms cost of infrastructure, cost to fleets,
24 the change in business plans. I mean, there's -- there's
25 a very significant change in business operation that ends

1 up resulting, that was not factored into any of this
2 analysis.

3 CHAIR NICHOLS: Well, and I guess to say the
4 obvious, but despite what some people might think, we
5 don't actually regulate to put people out of business. We
6 try to adopt regulations that are technology forcing, but
7 feasible. So I think that would be the philosophy that
8 was in effect here. And I think that's probably where we
9 need to land.

10 All right. Well, I think it's now time to
11 actually put ourselves on the -- on a vote here. And I'm
12 going to propose that we amend -- that we vote on a
13 resolution which adds or eliminates the 50 percent
14 provision and which delegates to the Executive Officer the
15 discretion to propose a way to work with transit agencies
16 to give additional time and flexibility in recognition of
17 their unique difficulties, as well as of the fact that
18 they are under a mandate to switch to -- to advanced
19 technology vehicles on a rapid time frame.

20 With that, with those two amendments, do I hear
21 any objection to putting this forward, or maybe in
22 another --

23 BOARD MEMBER SERNA: Mary?

24 CHAIR NICHOLS: -- can we have a resolution
25 Yes.

1 BOARD MEMBER SERNA: Madam Chair, this is member
2 Serna. I'll second that motion.

3 CHAIR NICHOLS: Okay.

4 BOARD MEMBER BALMES: And Mary?

5 CHAIR NICHOLS: Yes.

6 BOARD MEMBER BALMES: Just one correction. I
7 think you said 50 percent when you meant to 50 state.

8 CHAIR NICHOLS: Fifty state. Yeah, sorry, if I
9 said percent. I didn't mean that. Thank you for that
10 comment.

11 BOARD MEMBER BALMES: It's been a long day.

12 BOARD MEMBER MITCHELL: Would that mean that you
13 would leave the credit or --

14 CHAIR NICHOLS: I'm sorry I didn't -- I couldn't
15 hear that.

16 BOARD MEMBER MITCHELL: Will we vote the ZEV
17 credit?

18 CHAIR NICHOLS: We'll leave it as it is. The
19 proposal is to leave it as it -- is to leave it as the
20 staff has proposed.

21 BOARD MEMBER DE LA TORRE: That's the 2026?

22 BOARD MEMBER MITCHELL: Yeah, with the limitation
23 on time, correct?

24 CHAIR NICHOLS: Correct. Yes.

25 Other questions, comments?

1 Okay. Then hearing none. We can have the Board
2 Clerk call the roll.

3 BOARD CLERK SAKAZAKI: Thank you, Madam Chair.
4 Dr. Balmes?

5 BOARD MEMBER BALMES: Yes.

6 BOARD CLERK SAKAZAKI: Mr. De La Torre?

7 BOARD MEMBER DE LA TORRE: Yes.

8 BOARD CLERK SAKAZAKI: Mr. Eisenhower?

9 BOARD MEMBER EISENHUT: Yes.

10 BOARD CLERK SAKAZAKI: Supervisor Fletcher?

11 BOARD MEMBER FLETCHER: Fletcher, aye.

12 BOARD CLERK SAKAZAKI: Senator Florez?

13 BOARD MEMBER FLOREZ: Aye.

14 BOARD CLERK SAKAZAKI: Supervisor Gioia?

15 BOARD MEMBER GIOIA: Yes.

16 BOARD CLERK SAKAZAKI: Ms. Mitchell?

17 BOARD MEMBER MITCHELL: Yes.

18 BOARD CLERK SAKAZAKI: Mrs. Riordan?

19 BOARD MEMBER RIORDAN: Aye.

20 BOARD CLERK SAKAZAKI: Supervisor Serna?

21 BOARD MEMBER SERNA: Aye.

22 BOARD CLERK SAKAZAKI: Dr. Sherriffs?

23 BOARD MEMBER SHERRIFFS: Yes.

24 BOARD CLERK SAKAZAKI: Professor Sperling?

25 BOARD MEMBER SPERLING: Aye, but I still disagree

1 about the ZEV credits.

2 (Laughter.)

3 CHAIR NICHOLS: Duly noted.

4 (Laughter.)

5 BOARD CLERK SAKAZAKI: Ms. Takvorian?

6 BOARD MEMBER TAKVORIAN: Aye. And I think we
7 should have gotten rid of them, but okay, you and Dan --
8 Dan, you and I are balancing it out.

9 (Laughter.)

10 BOARD CLERK SAKAZAKI: Vice Chair Berg?

11 VICE CHAIR BERG: Yes.

12 BOARD CLERK SAKAZAKI: Chair Nichols?

13 CHAIR NICHOLS: Yes.

14 BOARD CLERK SAKAZAKI: Madam Chair, the motion
15 passes.

16 CHAIR NICHOLS: Thank you. Considering how tough
17 this rule was and how long it's been worked on, it was
18 actually not so difficult to get to a resolution at the
19 end.

20 But I really -- I very much appreciate and
21 respect the views of those Board members who had serious
22 disagreements with some elements of this. And I'm hoping
23 that if not in this rule, that as we go forward, given the
24 fact that this is a package of rules, as Mr. De La Torre
25 pointed out, that we will find a way to accomm --

1 accommodate those concerns and make them real, because
2 they're totally valid. It's just a question of which
3 rule, and where, and how we're going to go about
4 accomplishing those goals.

5 So perhaps perfection has alluded us, but at
6 least we've reached consensus. And I think that's a --
7 that's a good thing. So thanks to all. This item is our
8 last item of the day, but we also have a public comment
9 period, if anybody has signed up to speak to us on some
10 matter that was not part of our agenda for today. Is
11 there -- is there any public comment, Ryan?

12 BOARD CLERK SAKAZAKI: Yes, Chair Nichols. It
13 looks like we have three people currently with their hand
14 up.

15 CHAIR NICHOLS: Okay.

16 BOARD CLERK SAKAZAKI: If you need -- if you do
17 wish to provide open comment, please raise your hand or
18 dial star nine now and we will call on you.

19 The first commenter Steve Ernest. Steven, I have
20 activated your microphone. You can unmute yourself and
21 begin.

22 Steve, are you there?

23 Okay. We'll skip Steven for the time being.

24 The next commenter is Sean Edgar. Sean, I've
25 activated your microphone. You can unmute yourself and

1 begin.

2 MR. EDGAR: Thank you, Ryan. Can you hear me?

3 BOARD CLERK SAKAZAKI: We can.

4 MR. EDGAR: Great. Chair Nichols and Board
5 members, if the Board wants to compel the full transition
6 to electric trucks, then the onus is on you, the Board, to
7 be at the forefront of installing infrastructure and
8 ensuring the energy grid can reliably displace the
9 billions of gallons of diesel fuel that are used each year
10 in local trucking.

11 This is a problem that will not solve itself and
12 cannot be solely put on the backs of municipal and private
13 fleets that are targeted by the ACT Regulation, for
14 example city and county owned trucks and trash trucks.

15 If electric trucks are to be made mandatory, then
16 CARB needs to lead a Manhattan Project of sorts. Let me
17 explain why.

18 First, State funding from the PUC SB 350 pot of
19 funds and private capital resources are not adequate to
20 absorb the upfront costs from the June 2020 Board approved
21 ACT Regulation. Your staff forecasted a \$9.6 billion
22 investment needed to build the charging system and use --
23 used some pretty optimistic assumptions that fuel cost
24 savings can offset that infrastructure cost. However, I
25 see no explanation of the source of funds to get the

1 parking stalls wired before the ZEV arrives.

2 Second, electricity supplies are inadequate for
3 meeting our daily needs, let alone plugging in thousands
4 of new ZEVs under the ACT Regulation in real time, with
5 Public Safety Power Shutoffs and rolling blackouts.
6 Without your direct involvement in a Manhattan-style
7 project to fix the power grid, it is doubtful that new
8 capacity to displace a lot of diesel fuel is possible.

9 Finally, key industries like the waste haulers
10 have already dug keep in decarbonizing heavy trucking and
11 don't have the financial wherewithal to borrow fast enough
12 to build the plug even when electric trash trucks are
13 route ready.

14 I'll just close by saying as a young man and Cal
15 graduate, I had to good fortune to work at Lawrence
16 Livermore National Labs. I had an opportunity to meet Dr.
17 Edward Teller who was involved in the original Manhattan
18 Project. And that's the type of project that you're going
19 to need to get the best minds. If you did not see former
20 Governor Davis over the weekend interviewed, he talked
21 about bringing the best minds together 20 years later to
22 try and solve a problem that hasn't been solved over the
23 last 20 years.

24 And just briefly, I'll touch on transit, because
25 I'm grate -- grateful that you have a lot of discussion

1 and sympathy for the transit industry. I'll just point
2 out that the latest Congressional research study printed
3 in February of this year, indicates that public transit
4 agencies receive 36 percent of their capital budget from
5 funds and really upon zero percent of their farebox to
6 meet their capital needs. If you distinguish that to
7 providers of essential public service, like the waste
8 industry, we rely on a hundred percent of the rates that
9 come in to -- that are publicly controlled to fund what we
10 do, and zero federal support.

11 So we heed your help and appreciate your
12 Manhattan style project.

13 Thank you.

14 CHAIR NICHOLS: Thank you.

15 BOARD CLERK SAKAZAKI: Thank you.

16 Our next speaker is Veronica Aguirre -- Aguirre.
17 I apologize. Veronica, you can begin your comment.

18 MS. AGUIRRE: Hello and good evening. My name is
19 Veronica Aguirre. I am -- I'm call -- I'm calling today
20 because I wanted to bring to your attention the community
21 in which I live in is called Avenal.

22 The community of Avenal has been, for the last
23 five years issuing reports in regards to the large
24 landfill that is right next to their community, hundreds
25 of feet from homes, hundreds of feet from low-income

1 houses, hundreds of feet from medical clinics, and
2 schools. And every day people in my community have to
3 wake up to the stench of rotten garbage that gets dumped
4 many there. Medical waste, dead animals, and garbage from
5 all different other communities come to our -- to our
6 community to dump.

7 And I wanted to bring your attention that our
8 community members have put over a hundred reports in the
9 last five years in the Kings IVAN system and have -- and
10 the last year have also been not only putting reports of
11 violations with -- that have to do with odor, concern for
12 air quality, calling the air district. And there -- they
13 haven't got any ground.

14 They -- they've also turned in a petition of over
15 1,200 community members voicing their concern that
16 something needs to be done. And still to this day, this
17 got turned in in January, and to this day they still have
18 not received any type of solution or anything back. And I
19 just wanted to take the time to ask that if you could
20 please reach out and find -- and help this community.
21 It's a community of 15,000 people. A majority of them are
22 all farm workers. Many of them do not speak English and
23 they're not able in -- to -- or they haven't been able to
24 be -- to properly express their concerns to the community.

25 And I just wanted to take the time to bring this

1 to your attention. And I hope that you, as the Board --
2 the Air -- the California Air Resources Board can -- can
3 look into this and help with some direction on finding a
4 solution and finding peace within a community that this --
5 they will no longer have to deal with these types of odors
6 or any concern for their health, you know, so many cases
7 of asthma. And they really could use some type -- some
8 type of attention, some type of outreach, some type of
9 help.

10 Thank you very much.

11 CHAIR NICHOLS: Thank you. I'm going to ask our
12 Office of Legal Counsel to be in touch with you. I don't
13 know whether anybody is on the line at the moment who is
14 particularly familiar with this community, but we
15 certainly are familiar with issues relating to landfills.
16 So I'll ask Ellen Peter to be in touch with you after this
17 meeting.

18 MS. JENSEN: Yes, Chair Nichols. Ellen Peter has
19 left the meeting so we will have her contact her after the
20 meeting.

21 CHAIR NICHOLS: Okay. Okay. Thank you.

22 BOARD CLERK SAKAZAKI: Okay. So our last speaker
23 is a phone number ending in 528. I have activated your
24 speaker. Please state your name for the record and then
25 you can begin.

1 MR. ROSENBERGER: This is Laura Rosenberger.

2 I heard that the CPUC was talking about putting
3 in these OT -- put these OTC plants back in operation.
4 One is a natural gas fired plant that heats up the water.
5 And in the past three years ago released lots and lots of
6 hydrogen sulfide gas. It was like a stenchy odor. No, it
7 didn't release the gas, but bacteria -- it changed the
8 flora of the bay and the bacteria released the hydrogen
9 sulfide gas.

10 And hydrogen sulfide, some of the health problems
11 is linked to include nasal bleeding, lung and respiratory
12 problems, inflammatory problems, cardiovascular morbidity.
13 There's been a steady of -- they think -- they believe the
14 hydrogen sulfide is what would cause the 40 percent rise
15 in cardiovascular morbidity in the region of the
16 (inaudible) oil and gas condensation fields.

17 So there's also cognitive problems they've found
18 linked to hydrogen sulfide. If you want the references,
19 I'll show you the references to the article. Increased
20 inflammatory response. And I wonder if that's still
21 happening. If they're going to turn their plant back on,
22 that would be a problem. I wonder if the other OTC plants
23 are creating similar problems, also like toxic algal
24 blooms would be likely from all the heat that they're
25 releasing.

1 And are the emissions still the same? Like, two
2 years ago, I saw there was like 170.8 tons per year of
3 total organic gases. And you see the -- like hexane
4 among -- hexane formaldehyde, acetaldehyde, xylene,
5 toluene. Is it pretty much the same this year? I didn't
6 look it up again. And 416.4 tons of carbon monoxide. Did
7 they improve their plant lately or is it still the same
8 way? Oh, and the NOx is like 154.7 tons per year. That
9 was a couple years ago in the toxic release inventory.

10 What do you think is happening today?

11 CHAIR NICHOLS: What community are you calling
12 from or about? Is this Southern California

13 MS. ROSENBERGER: Oh, this is Moss Landing I'm
14 calling about.

15 CHAIR NICHOLS: So Moss Landing. Okay.

16 MR. ROSENBERGER: The energy plant.

17 CHAIR NICHOLS: Uh-huh. I'm just trying to
18 figure out who might have the actual answer to your
19 question, so I could be of some help, even though in this
20 comment period, we're not really able to take action as --
21 at the Board level. I'm -- I think we'll see if after the
22 meeting we can get some information to you.

23 MR. ROSENBERGER: North of Monterey it is.
24 Between Santa Cruz and Monterey.

25 CHAIR NICHOLS: Right. Right. Okay.

1 BOARD CLERK SAKAZAKI: Okay. Thank you.

2 MS. ROSENBERG: Well, I'm not --

3 BOARD CLERK SAKAZAKI: Oops, is she not done?
4 Apologies.

5 So Madam Chair, that concludes our list of open
6 commenters for this -- for the meeting.

7 CHAIR NICHOLS: Okay. Do any Board members have
8 any final comments that they would like to make before we
9 adjourn?

10 BOARD MEMBER GIOIA: Yes.

11 CHAIR NICHOLS: Okay.

12 BOARD MEMBER GIOIA: I can't tell are you calling
13 on me? I wasn't sure.

14 CHAIR NICHOLS: I'm calling on anybody who
15 wishes --

16 BOARD MEMBER GIOIA: Oh, okay.

17 CHAIR NICHOLS: -- to be recognized before we --
18 before we end, yes.

19 BOARD MEMBER GIOIA: Sure. I'll just say one
20 thing briefly. I did want to say one item, especially
21 since we were taking action on reducing diesel. So we
22 actually had something historic happen in Contra Costa
23 County over the last few weeks. Two of the four oil
24 refineries in our county Phillips 66 and Marathon
25 announced that they were -- would be stopping the

1 production of crude. One has already stopped production.
2 They've idled their facility, the Marathon facility. And
3 Phillips will continue, but both will be coming to our
4 county planning department to basically apply to convert
5 the crude refinery into renewable fuel facilities.

6 And they will -- both have said that they intend
7 to construct the world's largest renewable fuel
8 facilities. They're both about the same size. I think
9 the Low Carbon Fuel Standard and a lot of the policies of
10 our state really helped provide a signa to move in that
11 direction, and that -- and the decreased consumption
12 during the pandemic just sort of quickened that process.

13 So I just wanted to say I think we truly are in
14 transformative times to have 50 percent of the refineries
15 in our county, that's two of four, get out of the crude
16 processing business and move to renewable diesel and
17 renewable fuels I think is significant. So I just wanted
18 to note that. And we're sort of at the forefront of that
19 in Contra Costa County.

20 CHAIR NICHOLS: Indeed. Congratulations.

21 BOARD MEMBER DE LA TORRE: And Chair Nichols, if
22 I can pile on. World Energy in Paramount, my neighbor
23 city, is doing the same thing.

24 BOARD MEMBER GIOIA: Oh.

25 BOARD MEMBER DE LA TORRE: They're already

1 producing jet fuel, renewable jet fuel, for United and I
2 think American out of L.A. and San Francisco. And they
3 are also going to be -- they're -- they've converted that
4 part of the refinery. They're going to convert the rest
5 of it to renewable diesel. So there's some really
6 positive moves in this direction. The best thing is it
7 keeps those jobs for those workers, but they're producing
8 better fuels, better GHGs, et cetera, et cetera.

9 CHAIR NICHOLS: That is one of the few bright
10 spots of the transformation that's going on. I think the
11 virus has pushed it over the edge perhaps, but these are
12 not decisions that they were making overnight. These are
13 decisions that they worked on for a long time, I'm sure,
14 so...

15 BOARD MEMBER MITCHELL: So, Madam Chair, if I
16 might make a statement.

17 CHAIR NICHOLS: Yes.

18 BOARD MEMBER MITCHELL: I understand from some of
19 our people at the staff -- and this goes to the VW
20 incentive monies that were not fully subscribed.

21 CHAIR NICHOLS: Um-hmm.

22 BOARD MEMBER MITCHELL: I do understand from our
23 staff that there were some conditions attached to the
24 incentives, which were problematic for some of the
25 potential subscribers.

1 CHAIR NICHOLS: Um-hmm.

2 BOARD MEMBER MITCHEL: And that our Carl Moyer
3 funds are always fully subscribed, oversubscribed.

4 CHAIR NICHOLS: Oh, yes.

5 BOARD MEMBER MITCHELL: And so there were some
6 issues with that. It might be something that our staff
7 would -- our CARB staff would like to discuss or could
8 discuss with the local air district staff to talk about
9 what those conditions were and how that might be avoided
10 in the future.

11 CHAIR NICHOLS: Absolutely. If you'd like to --
12 well, I'll ask Mr. Corey if he would follow up with you on
13 that. But I think that deserves to be looked into for
14 sure.

15 Okay. I think that's it. We are come to the --
16 past 6:00 o'clock.

17 BOARD MEMBER DE LA TORRE: Yeah. Chair, one more
18 thing. Can you --

19 CHAIR NICHOLS: Yeah.

20 BOARD MEMBER DE LA TORRE: Can you plug the AB
21 617 meetings September 10th.

22 CHAIR NICHOLS: Yeah. I know they're set.
23 They're coming up, September the 10th community meetings.
24 Has everybody got that on their calendar?

25 BOARD MEMBER MITCHELL: Yes.

1 VICE CHAIR BERG: Yes.

2 CHAIR NICHOLS: Okay.

3 BOARD MEMBER TAKVORIAN: See you then.

4 CHAIR NICHOLS: Very good. We'll see you all in
5 a couple weeks. Good night.

6 VICE CHAIR BERG: Good night.

7 CHAIR NICHOLS: Thank you. Good day's work.
8 Good day's work. Bye.

9 (Thereupon the Air Resources Board meeting
10 adjourned at 6:07 p.m.)
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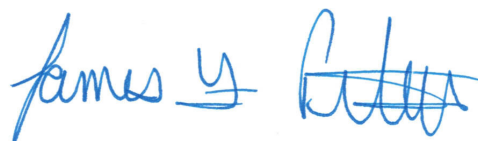
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I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

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 10th day of September, 2020.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063