

VIDEOCONFERENCE MEETING  
STATE OF CALIFORNIA  
AIR RESOURCES BOARD

ZOOM PLATFORM

THURSDAY, FEBRUARY 24, 2022  
9:03 A.M.

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

APPEARANCES

BOARD MEMBERS:

Liane Randolph, Chair

Sandra Berg, Vice Chair

John Balmes, MD

Hector De La Torre

John Eisenhut

Senator Dean Florez

Assembly Member Eduardo Garcia

Davina Hurt

Gideon Kracov

Senator Connie Leyva

Tania Pacheco-Werner, PhD

Barbara Riordan

Dan Sperling, PhD

Diane Takvorian

Supervisor Nora Vargas

STAFF:

Richard Corey, Executive Officer

Edie Chang, Deputy Executive Officer, Planning, Freight,  
and Toxics

Chanell Fletcher, Deputy Executive Officer, Environmental  
Justice

Annette Hebert, Deputy Executive Officer, Southern  
California Headquarters and Mobile Source Compliance

APPEARANCES CONTINUED

STAFF:

Edna Murphy, Deputy Executive Officer, Internal Operations

Rajinder Sahota, Deputy Executive Officer, Climate Change and Research

Craig Segall, Deputy Executive Officer, Mobile Sources and Incentives

Ellen Peter, Chief Counsel

Cari Anderson, Branch Chief, Freight Transport Branch, Transportation and Toxics Division (TTD)

Heather Arias, Division Chief, TTD

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

Analisa Bevan, Zero-Emission Infrastructure Specialist, Mobile Source Control Division

Matthew Botill, Division Chief, Industrial Strategies Division (ISD)

Rich Boyd, Assistant Division Chief, TTD

Rhead Enion, Senior Attorney, Legal Office

Rebecca Fancher, Staff Air Pollution Specialist, CEQA Unit, Legal Office

Ariel Fideldy, Manager, South Coast Air Quality Section, AQPSD

Trideep Ghosh, Air Pollution Specialist, Freight Incentives Section, TTD

Jason Gray, Chief, Climate Change Program Evaluation Branch, ISD

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

APPEARANCES CONTINUED

STAFF:

Austin Hicks, Air Pollution Specialist, South Coast Air Quality Planning Section, AQPSD

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

Shelby Livingston, Manager, Program Operation Section, ISD

Gabriel Monroe, Senior Attorney, Legal Office

Adam Moreno, Staff Air Pollution Specialist, Program Operation Section, ISD

Cory Parmer, Manager, Off-Road Diesel Analysis Section, AQPSD

Heather Quiros, Assistant Division Chief, Enforcement Division

Jordan Ramalingam, Air Pollution Specialist, Fuels Evaluation Section, ISD

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

Daniel Whitney, Senior Attorney, Legal Office

Lea Yamashita, Staff Air Pollution Specialist, Freight Operations Section, TTD

Fang Yan, Manager, On-Road Model Development Section, AQPSD

Alex Yiu, Staff Air Pollution Specialist, Program Operation Section, ISD

ALSO PRESENT:

Yasmine Agelidis, Earthjustice

Sarah Aird, Californians for Pesticide Reform

Martha Dina Argüello, Physicians for Social Responsibility

APPEARANCES CONTINUED

ALSO PRESENT:

David Asti, Southern California Edison

Shayda Azamian, Leadership Counsel for Justice and  
Accountability

Diane Bailey, Menlo Spark

Daniel Barad, Sierra Club California

Jason Barbose, Union of Concerned Scientists

William Barrett, American Lung Association

Michael Boccadoro, West Coast Advisors

Teresa Bui, Pacific Environment

Sydney Chamberlin, The Nature Conservancy

Jessica Craven

Danny Cullenward, Independent Emissions Market Advisory  
Committee

Sarah Deslauriers, California Association of Sanitation  
Agencies

Catherine Dodd, Families Advocating for Chemical and  
Toxics Safety

Harvey Eder, Public Solar Power Coalition

Evan Edgar, California Compost Coalition

Sean Edgar, Western States Trucking Association (WSTA),  
Clean Fleets

Jonathan Evans, Center for Biological Diversity

Juan Flores, Center for Race, Poverty and the Environment

Catherine Garoupa White, PhD, Central Valley Air Quality  
Coalition (CVAQ)

APPEARANCES CONTINUED

ALSO PRESENT:

Kevin Hamilton, Central California Asthma Collaborative

Matt Holmes, Little Manila Rising

Gary Hughes, Biofuelwatch

Greg Hurner, Sportfishing Association of California

Stephen Jepsen, Southern California Alliance of Publicly  
Owned Treatment Works

Tom Jordan, San Joaquin Valley Air Pollution Control  
District

Tom Kabat

Ryan Kenny, Clean Energy

Kathleen Kilpatrick, Safe Ag Safe Schools, Campaign for  
Organic and Regenerative Agriculture

Julia Levin, Bioenergy Association of California

Leah Louis-Prescott, RMI

Evelyn Loya, SoCalGas

Bill Magavern, Coalition for Clean Air

Paul Mason, Pacific Forest Trust

David Moller, Climate Reality Project

Sarah Moore, City of Berkeley

Ray Pingle, Sierra Club California

Cynthia Pinto-Cabrera, Central Valley Air Quality  
Coalition

Sarah Rees, PhD, South Coast Air Quality Management  
District

Mark Rose, National Parks Conservation Association

APPEARANCES CONTINUED

ALSO PRESENT:

Laura Rosenberger Haider

David Rothbart, Los Angeles County Sanitation District

Mariela Ruacho, American Lung Association

Jane Sellen, Californians for Pesticide Reform

Mikhael Skvarla, California Council for Environmental and  
Economic Balance

Joseph Sullivan, International Brotherhood of Electrical  
Workers, Local 11, National Electrical Contractors  
Association of Los Angeles

Tom Tietz, California Nevada Cement Association

Alison Torres, Eastern Municipal Water District

Pauline Torres, Center for Race, Poverty and the  
Environment

Igor Tregub

Sam Wilson, Union of Concerned Scientists

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PROCEEDINGS

1  
2 CHAIR RANDOLPH: All right. Good morning. The  
3 February 24th, 2022 publish meeting of the California Air  
4 Resources Board will come to order.

5 Board Clerk, will you please call the roll.

6 BOARD CLERK ESTABROOK: Dr. Balmes?

7 BOARD MEMBER BALMES: Here.

8 BOARD CLERK ESTABROOK: Mr. De La Torre?

9 Mr. Eisenhut?

10 BOARD MEMBER EISENHUT: Here.

11 BOARD CLERK ESTABROOK: Senator Florez?

12 BOARD MEMBER FLOREZ: Here.

13 BOARD CLERK ESTABROOK: Assembly Member Garcia?

14 Ms. Hurt?

15 BOARD MEMBER HURT: Present.

16 BOARD CLERK ESTABROOK: Mr. Kracov?

17 Senator Leyva?

18 Dr. Pacheco-Werner?

19 BOARD MEMBER PACHECO-WERNER: Here,

20 BOARD CLERK ESTABROOK: Mrs. Riordan?

21 BOARD MEMBER RIORDAN: Here.

22 BOARD CLERK ESTABROOK: Supervisor Serna?

23 Professor Sperling?

24 BOARD MEMBER SPERLING: Here.

25 BOARD CLERK ESTABROOK: Ms. Takvorian?

1 BOARD MEMBER TAKVORIAN: Here.

2 BOARD CLERK ESTABROOK: Supervisor Vargas?

3 BOARD MEMBER VARGAS: Here.

4 BOARD CLERK ESTABROOK: Vice Chair Berg?

5 VICE CHAIR BERG: Here.

6 BOARD CLERK ESTABROOK: Chair Randolph?

7 CHAIR RANDOLPH: Here.

8 BOARD CLERK ESTABROOK: Madam Chair, we have a  
9 quorum.

10 CHAIR RANDOLPH: Thank you.

11 I'd like to begin with a few housekeeping items.  
12 In accordance with Assembly Bill 361, as extended by  
13 Governor Newsom's Executive Order N-1-22. We are  
14 conducting today's meeting remotely using Zoom with public  
15 participation options available both by phone and in Zoom.

16 A closed captioning feature is available for  
17 those of you joining us in the Zoom environment. In order  
18 to turn on the subtitles, please look for a button labeled  
19 "CC" at the bottom of the Zoom window, as shown in the  
20 example on the screen now.

21 I would like to take this opportunity to remind  
22 everyone to speak clearly and from a quiet location,  
23 whether you are joining us in Zoom or calling in by phone.

24 Interpretation services will be provided today in  
25 Spanish. If you are joining us using Zoom, there is a

1 button labeled, "Interpretation", on the Zoom screen.  
2 Click on that interpretation button and select Spanish to  
3 hear the meeting in Spanish.

4 (Interpreter translated in Spanish)

5 CHAIR RANDOLPH: I will now ask the Board Clerk  
6 to provide more details on today's procedures.

7 BOARD CLERK ESTABROOK: Thank you, Chair.

8 Good morning, everyone. My name is Katie  
9 Estabrook and I am one of the Board Clerks. I will  
10 provide some information on how public participation will  
11 be organized for today's meeting. If you wish to make a  
12 verbal comment on one of the Board items or during the  
13 open comment period, you must be joining using Zoom  
14 webinar or calling in by phone.

15 If you are currently watching the webcast on  
16 CAL-SPAN, but you do wish to comment, please register for  
17 the Zoom webinar or call in. Information for both can be  
18 found on the public agenda for today's meeting. To make a  
19 verbal comment, we will be using the raise hand feature in  
20 Zoom. If you wish to speak on a Board item, please  
21 virtually raise your hand, as soon as the item has begun  
22 to let us know you wish to speak. To do this, if you are  
23 using a computer or tablet, there is a raise button. If  
24 you are calling in on the phone, dial star nine to raise  
25 your hand. Even if you previously indicated which item

1 you wish to speak on when you registered for the meeting.  
2 You must raise your hand at the beginning of the item, so  
3 that you can be added to the queue and so that your chance  
4 to speak will not be skipped.

5           If you will be giving your verbal comment in  
6 Spanish and require an interpreter's assistance, please  
7 indicate so at the beginning of your testimony and our  
8 translator will assist you. During your comment, please  
9 pause after each sentence to allow for the interpret to  
10 translate your comment into English. When the comment  
11 period starts, the order of commenters will be determined  
12 by who raises their hand first. I will call each  
13 commenter by name and will activate each commenters audio  
14 when it is their turn to speak. For those calling in, I  
15 will identify you by the last three digits of your phone  
16 number.

17           We will not show a list of commenters, however I  
18 will be announcing the next three or so commenters in the  
19 queue, so you are ready to testify and know who is coming  
20 up next. Please note that you will not appear by video  
21 during your testimony.

22           I would also like to remind everyone to please  
23 state your name for the record before you speak. This is  
24 important in the remote meeting setting and is especially  
25 important for those calling in by phone to testify on an

1 item.

2           There will be a time limit for each commenter.  
3 The normal time limit is three minutes, though this could  
4 change based on the Chair's discretion. During public  
5 testimony, you will see a timer on the screen. For those  
6 calling in by phone, we will run the timer and let you  
7 know when your 30 seconds -- when you have 30 seconds left  
8 and when your time is up. If you require Spanish  
9 interpretation for your comment, your time will be  
10 doubled.

11           If you wish to submit written comments today,  
12 please visit CARB's send us your comments page or look at  
13 the public agenda on our webpage for links to send these  
14 documents electronically. Comments will be accepted on  
15 each item until the Chair closes that item.

16           If you experience any technical difficulties,  
17 please call (805)772-2715 and an IT person will assist  
18 you. This number is also posted on the public agenda.

19           Thank you I'll turn it back to you, Chair.

20           CHAIR RANDOLPH: Thank you. I just want to note  
21 for your planning purposes, we will be hearing Item number  
22 22-3-4, an overview of the Community Air Grants Program  
23 and the 2021 awardees tomorrow morning, and that will  
24 begin at 8:30 a.m.

25           Okay. The first item on today's agenda is item

1 number 22-3-1, proposed 2021 amendments to area  
2 designations for State ambient air quality standards. If  
3 you wish to comment on this item, please click the  
4 raise-hand button or dial star nine now. We will call on  
5 you when we get to the public comment portion of this  
6 item.

7 Mr. Corey, would you please summarize the item.

8 EXECUTIVE OFFICER COREY: Yes. Thank you, Chair.

9 State law requires CARB to annually review and  
10 update the area designations for State ambient air quality  
11 standards as appropriate. Today, based on a review of  
12 2018 through 2020 air quality data, staff is proposing  
13 amendments to existing area designations for nitrogen  
14 dioxide, NO<sub>2</sub>, suspended particulate matter, PM<sub>10</sub>, and fine  
15 particular matter, PM<sub>2.5</sub>.

16 For NO<sub>2</sub>, staff recommends the Board redesignate  
17 the California 60 near-road portion of the San Bernardino,  
18 Riverside, and Los Angeles counties in South Coast Air  
19 Basin as attainment. For PM<sub>10</sub>, staff is recommending that  
20 the Board redesignate Mendocino County in the North Coast  
21 Air Basin as attainment. And finally, for the PM<sub>2.5</sub>,  
22 staff recommends the Board redesignate Santa Barbara  
23 County in the South Coast -- or rather South Central Coast  
24 Air Basin as attainment.

25 So in summary, these changes reflect the current



1 air quality data in these areas, and staff recommends  
2 approval of the proposed changes to the State area  
3 designations. That's concludes my remarks.

4 CHAIR RANDOLPH: Okay. Thank you.

5 We will now hear from the public who raised their  
6 hand to speak on this item. Will the Board Clerk please  
7 call the commenters.

8 BOARD CLERK ESTABROOK: There are no commenters  
9 with their hands raised to speak on this item.

10 CHAIR RANDOLPH: Okay. I will now close the  
11 record on this item. Have all the members of the Board  
12 haven't -- had an opportunity to review the resolution,  
13 and do I have a motion and a second to adopt Resolution  
14 number 22-4?

15 VICE CHAIR BERG: Madam Chair, so moved.

16 BOARD MEMBER BALMES: I'll second.

17 CHAIR RANDOLPH: Clerk, will you please call the  
18 roll?

19 BOARD CLERK ESTABROOK: Dr. Balmes?

20 BOARD MEMBER BALMES: Yes.

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

23 BOARD MEMBER EISENHUT: Yes.

24 BOARD CLERK ESTABROOK: Senator Florez?

25 BOARD MEMBER FLOREZ: Yes.

1 BOARD CLERK ESTABROOK: Ms. Hurt?  
2 BOARD MEMBER HURT: Aye.  
3 BOARD CLERK ESTABROOK: Mr. Kracov?  
4 Dr. Pacheco-Werner?  
5 BOARD MEMBER PACHECO-WERNER: Yes.  
6 BOARD CLERK ESTABROOK: Mrs. Riordan?  
7 BOARD MEMBER RIORDAN: Aye.  
8 BOARD CLERK ESTABROOK: Supervisor Serna?  
9 Professor Sperling?  
10 BOARD MEMBER SPERLING: Aye.  
11 BOARD CLERK ESTABROOK: Ms. Takvorian?  
12 BOARD MEMBER TAKVORIAN: Aye.  
13 BOARD CLERK ESTABROOK: Supervisor Vargas?  
14 BOARD MEMBER VARGAS: Aye.  
15 BOARD CLERK ESTABROOK: Supervisor Vargas?  
16 BOARD MEMBER VARGAS: Oh, Vargas, aye.  
17 BOARD CLERK ESTABROOK: Perfect. Thank you.  
18 Vice Chair Berg?  
19 VICE CHAIR BERG: Aye.  
20 BOARD CLERK ESTABROOK: Chair Randolph?  
21 CHAIR RANDOLPH: Yes.  
22 BOARD CLERK ESTABROOK: Madam Chair, the motion  
23 passes.  
24 CHAIR RANDOLPH: All right. Thank you.  
25 The next item on the agenda is item number

1 22-3-3, proposed amendments to the Airborne Toxic Control  
2 Measure for in-use diesel-fueled transportation  
3 refrigeration units, or TRUs, and TRU generator sets, and  
4 facilities where TRUs operate. If you wish to comment on  
5 this item, please click the raise-hand button or dial star  
6 nine now. We will call on you when we get to the public  
7 comment portion of this item.

8           The proposed amendments were first presented to  
9 the Board at its September 23rd, 2021 public hearing and  
10 are back in front of us today for a final decision.  
11 CARB's regulatory actions coupled with efforts at the  
12 local and federal level have achieved success in reducing  
13 emissions and resulted in cleaner vehicles and equipment  
14 in operation today. Nonetheless, meeting all of  
15 California's public health, air quality, and climate goals  
16 will require large reductions beyond those proposed in  
17 current programs.

18           In addition, the Governor's Executive Order,  
19 N-79-20 set a goal for 100 percent zero emission off-road  
20 vehicles and equipment in the State by 2035 where  
21 feasible. The proposed amendments will achieve additional  
22 emission and health risk reductions from diesel-powered  
23 TRUs and begin to transition the sector to zero-emission  
24 technology, which is needed to further protect communities  
25 from near-source pollution impacts.

1           These proposed amendments will also help meet the  
2 current health based ambient air quality standards across  
3 California and support the State's climate goals.

4           Mr. Corey, would you please introduce the item.

5           EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

6           As noted, staff are proposing amendments to the  
7 current TRU rule to require the transition of  
8 diesel-powered truck TRUs to zero-emission technology.  
9 For newly manufactured non-truck TRU engines, staff is  
10 proposing a particulate matter emissions standard. For  
11 all TRUs staff is proposing the use of lower global  
12 warming potential refrigerant.

13           The proposed amendments also aim to improve  
14 compliance and enforceability of the regulation by adding  
15 new requirements for owners and operators of facilities,  
16 where TRUs operate, expand TRU reporting for all TRUs that  
17 operate in California including out-of-state based TRUs,  
18 and require compliance labels.

19           During the September public hearing, we heard  
20 support from both Board members and the public for staff's  
21 proposal, which includes California's first ever  
22 zero-emission off-road fleet requirement.

23           The proposal before you today has been updated to  
24 address minor issues identified by staff and stakeholders,  
25 as well as to include additional safeguards to help ensure

1 that zero-emission TRUs will function as intended and  
2 support is available as issues arise.

3 I'll now ask Lea Yamashita of the Transportation  
4 and Toxics Division to give the staff presentation.

5 Lea.

6 (Thereupon a slide presentation.)

7 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

8 Okay. Thank you, Mr. Corey, and good morning  
9 Chair Randolph and members of the Board. Today, I will be  
10 presenting for your consideration staff's proposed  
11 amendments to the Airborne Toxic Control Measure for  
12 transport refrigeration units, or TRUs. This is the  
13 second of two Board meetings on this item. Staff  
14 presented their initial proposal last September and are  
15 here today with a final proposal that includes 15-day  
16 changes that were released for public comment in December.

17 --o0o--

18 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

19 CARB adopted the current TRU rule in 2004. In  
20 combination with federal emission standards for off-road  
21 engines, the rule has achieved a nearly 80 percent  
22 reduction in PM emissions. However, despite the progress  
23 made, there is still more work to do. Transitioning TRUs  
24 to zero-emission is necessary to achieve additional  
25 emission reductions to help meet the state's multiple risk

1 reduction, air quality, and climate goals. And we have  
2 the Governor's Executive Order, which set a goal for all  
3 off-road equipment in the state to be zero-emission by  
4 2035, where feasible.

5 --o0o--

6 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

7 One of the main drivers for further TRU  
8 reductions is to better protect communities near  
9 facilities where they operate. As you can see in this  
10 aerial picture of a refrigerated warehouse, these  
11 facilities are often in close proximity to sensitive  
12 receptors and many are in low income and disadvantaged  
13 communities that experience disproportionately high levels  
14 of air pollution and the resulting detrimental impacts to  
15 their health.

16 --o0o--

17 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: So  
18 here we have a summary of our public process to date. The  
19 boxes on the top of this slide show the various outreach  
20 activities we have conducted throughout the rulemaking  
21 process. We held public meetings in Sacramento, Southern  
22 California, and the valley, we mailed postcards, and we  
23 heard from stakeholders during informal phone  
24 conversations, in-person meetings, and site visits.

25 The boxes on the bottom show the various

1 opportunities stakeholders have had to provide formal  
2 comments. This includes the 45-day comment period, at the  
3 September Board meeting, and the 15-day comment period.

4 --o0o--

5 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

6 Just a quick reminder that we're just talking  
7 about the refrigeration unit and not the entire truck or  
8 trailer. And I also want to point out that these units  
9 can emit up to 50 times more PM than a heavy-duty diesel  
10 truck at idle.

11 So as you may recall, we are proposing to  
12 transition diesel-powered TRUs to zero-emission technology  
13 in two parts. The proposed amendments for your  
14 consideration today, or part one, focus on zero-emission  
15 truck TRUs, while part two will focus on zero-emission  
16 requirements for the remaining non-truck TRU types.

17 Since we last met, staff have been working on a  
18 technology assessment for zero-emission non-truck TRUs and  
19 will hold a public technical workshop later this year to  
20 discuss draft portions. The purpose of the technology  
21 assessment is to evaluate the current and projected  
22 development of zero-emission technologies for the  
23 non-truck TRU types. Staff plan to bring the part two  
24 rulemaking to the Board for consideration in 2025. This  
25 provides adequate time to finalize the technology

1 assessment, conduct a thorough public regulatory  
2 development process, and accounts for the additional time  
3 that will be needed to include activities related to  
4 CARB's comprehensive community engagement model and  
5 training curriculum currently under development.

6 --o0o--

7 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: We  
8 presented the detailed requirements of the proposed  
9 amendments at the September meeting, so today I'm just  
10 going to give a quick overview. First, beginning in  
11 December 2022, we have the lower global warming potential  
12 refrigerant requirement. Both major TRU manufacturers  
13 Carrier and Thermo King are producing compliant units now.  
14 We are also requiring newly manufactured non-truck TRU  
15 engines to meet the U.S. EPA Tier 4 final PM standard for  
16 engines greater than 25 horsepower regardless of  
17 horsepower.

18 Beginning in December 2023, we have reporting  
19 requirements for out-of-state based units. And as a  
20 reminder, the current rule already requires owners to  
21 report California based units to CARB. Then there are the  
22 requirements for facility registration, fees, and TRU  
23 compliance labels. And lastly, we have the 15 percent  
24 annual zero-emission truck TRU requirement, which is  
25 phased in to allow fleets to remain eligible for incentive



1 funding during a majority of the transition period, use  
2 their current diesel truck TRUs for most or all their  
3 useful life, and provides time for infrastructure planning  
4 and installation. One hundred percent of the truck TRU  
5 fleet will be zero-emission by 2030, which is ahead of the  
6 Governor's 2035 goal.

7 --o0o--

8 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: At  
9 the September meeting, we heard broad support for staff's  
10 proposal from Board members and the public, especially on  
11 the zero-emission truck TRU piece, which is the state's  
12 first zero-emission off-road fleet requirement.

13 We also heard the Board's direction to ensure  
14 adequate outreach to individual owner-operators on the  
15 proposed requirements and available incentive funding. As  
16 you'll hear later in this presentation, CARB and local air  
17 districts have conducted extensive outreach to  
18 stakeholders and will continue those efforts as we begin  
19 implementation.

20 In addition to the supportive comments, we also  
21 heard a few stakeholder concerns. These included  
22 questions regarding CARB's legal authority to collect fees  
23 from TRU and facility owners, a request for an alternative  
24 labeling requirement, and clarification of requirements  
25 for lessors and lessees.

1                               --o0o--

2                   TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:  In  
3 response to comments received at the first Board meeting  
4 and in public comment letters, staff released 15-day  
5 changes for public comment on December 22nd, 2021.  The  
6 proposed changes include updates to the lessor and lessee  
7 requirements to allow owners to delegate compliance  
8 responsibility to the operator if the rental or lease  
9 agreement is one year or longer.

10                   In light of stakeholder concerns regarding  
11 current supply chain issues, we propose to extend the  
12 compliance extension due to equipment manufacturer delays  
13 from the maximum of four months to six months.  We also  
14 made changes to the applicable facility reporting  
15 requirements in response to stakeholder requests to allow  
16 reporting of alternative information already collected as  
17 part of their normal business practice.

18                   And last, we heard Board members comments about  
19 the inclusion of Low Carbon Fuel Standard, or LCFS,  
20 credits in staff's cost analysis.  We agree it is not  
21 reasonable to assume that all zero-emission truck TRU  
22 owners will take advantage of the LCFS Program.  For that  
23 reason, we removed LCFS credits from the total estimated  
24 cost of the proposed amendments altogether.  But please  
25 note that fleets do use LCFS credits, and all TRU owners

1 have access to the program to reduce costs.

2 --o0o--

3 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: In  
4 addition to the changes proposed in response to  
5 stakeholder comments, staff identified additional 15-day  
6 changes. We propose changes to the fee amounts. The  
7 updated fee amounts, now \$15 per year per TRU or facility,  
8 are lower than originally proposed and reflect updates to  
9 new sales populations and removal of costs to CARB related  
10 to indirect labor.

11 Staff added language to require manufacturers to  
12 provide a warranty for zero-emission truck TRUs and have  
13 an authorized service and repair facility in California to  
14 perform warranty repairs.

15 We also propose changes to the non-compliance and  
16 penalty provisions to specify additional situations, in  
17 which CARB retains the authority to assess penalties. And  
18 last, we propose to add additional severability language  
19 to the fee requirements.

20 We received three comment letters on the 15-day  
21 changes. Staff are not proposing additional changes and  
22 will respond to all comments received in the Final  
23 Statement of Reasons.

24 --o0o--

25 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: As

1 a result of the 15-day changes, staff estimate that the  
2 total net cost of the proposed amendments from 2022 to  
3 2034 is 850.2 million. And that's compared to the  
4 original estimate of 1.04 billion. Again, this has been  
5 updated to exclude LCFS credits. It also does not reflect  
6 the California Energy Commission's updated diesel and  
7 electricity cost projections for 2021, which include  
8 higher diesel costs and would result in greater cost  
9 savings for zero-emission truck TRUs and in even lower net  
10 cost than what is shown here.

11 --o0o--

12 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

13 For illustration purposes, we have a comparison  
14 of the total cost of ownership for a diesel-powered truck  
15 TRU compared to a battery-electric truck TRU. Over the  
16 approximate 10-year useful life of the truck TRU, a diesel  
17 unit would cost approximately 61,000 compared to 73,000  
18 for a battery-electric unit with LCFS credits, and 91,000  
19 for a battery electric unit without LCFS credits.

20 The battery-electric costs are on the high end,  
21 as they are a new product and staff expects prices to  
22 decrease as more come on the market. The cost also  
23 reflects staff's conservative assumption that the battery  
24 will be completely depleted and recharged after each daily  
25 route.

1 In addition, as shown on the next slide, there  
2 are incentive funding programs available to offset the  
3 incremental capital cost for zero-emission TRUs and  
4 supporting infrastructure.

5 --o0o--

6 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: So  
7 here we have some of the active programs that offer  
8 incentive opportunities for TRUs. More information on  
9 each of these programs and others is available on our  
10 webpage, which includes links to the programs to access  
11 funding visitations.

12 Just to highlight a few of these programs. In  
13 November of last year, the Board approved the 2021 through  
14 2022 funding plan, which includes approximately \$195  
15 million for zero-emission off-road equipment through the  
16 Clean Off-Road Voucher Incentive Program, also known as  
17 CORE. There is also the LCFS program, which provides  
18 ongoing revenue that can be used to offset the cost of  
19 electricity, and local utility programs that fund  
20 infrastructure. It should be noted that all these  
21 programs are not TRU specific and funding is often awarded  
22 on a first-come first-served basis to eligible applicants.

23 In addition, to the public meetings on the  
24 proposed amendments, CARB staff held meetings to inform  
25 stakeholders of the availability of incentives offered by

1 these programs. Local air districts also conducted their  
2 own outreach related to TRU funding programs. Staff  
3 understand the need and desire for funding opportunities,  
4 and as committed to in today's resolution, we will  
5 continue to work with regulated entities to help connect  
6 them with programs that may be available to offset some of  
7 the capital costs of zero-emission TRUs and  
8 infrastructure.

9 --o0o--

10 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

11 The proposed amendments will reduce PM2.5, NOx,  
12 and GHG emissions, which will result in fewer adverse  
13 health outcomes statewide. The estimated 1.75 billion in  
14 health cost savings is now over two times the updated  
15 total net cost. And that doesn't reflect additional  
16 health benefits that are not currently monetized,  
17 including impacts in disadvantaged communities, brain and  
18 lung health, and cancer risk.

19 --o0o--

20 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

21 Staff prepared a Draft Supplemental Environmental  
22 Analysis, or EA, for the proposed amendments and released  
23 it for public comment in July 2021. The EA concluded that  
24 implementation of the proposed amendments could result in  
25 beneficial impacts to air quality, energy demand, GHG

1 emissions and climate change, as well as potentially  
2 significant indirect impacts, primarily related to  
3 short-term construction activities.

4           We received one letter during the 45-day comment  
5 period on the EA. In general, the commenter stated that  
6 the applicable facility requirements would lead to  
7 increased truck idling emissions because facilities would  
8 be required to collect TRU information, which may slow  
9 down truck traffic at entry gates, and that additional  
10 facilities will need to be built to accommodate the  
11 reporting requirements. Staff disagree, because CARB's  
12 drayage truck regulation has similar facility reporting  
13 requirements at seaport facilities and railyards. So  
14 adding TRU reporting will not substantially change the  
15 inspection time already required. Truck idling is also  
16 regulated by an existing CARB rule, and the proposed  
17 amendments include measures to make TRU inspections  
18 efficient.

19           Any additional facilities to accommodate  
20 reporting requirements would be minor and have negligible  
21 impacts. Staff posted written responses to all comments  
22 received on the Draft Supplemental EA on our website  
23 earlier this month.

24                           --o0o--

25           TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

1           Staff recommend the Board adopt the proposed  
2 resolution, which would approve the written responses to  
3 environmental comments, certify the Final Supplemental EA,  
4 make the required CEQA findings, adopt the proposed  
5 amendments including 15-day changes, as well as direct  
6 staff to propose a second rulemaking for zero-emission  
7 non-truck TRUs in 2025, and continue stakeholder outreach  
8 with a focus on individual owner-operators and available  
9 incentive funding.

10           That concludes my presentation. Thank you for  
11 your time today and we welcome any questions or comments.

12           CHAIR RANDOLPH: Thank you. We will now hear  
13 from the public who raised their hand to speak on this  
14 item. Will the Board Clerk Please call the commenters.

15           BOARD CLERK ESTABROOK: Yes. Thank you, Chair.

16           We currently have seven commenters with their  
17 hands raised to speak on this item. If you do wish to  
18 verbally comment, please raise your hand in Zoom or dial  
19 star nine now. And if you would like to give your comment  
20 in Spanish, please indicate so at the beginning your  
21 comment and we will get an interpreter to assist you.

22           Our first three commenters area a phone number  
23 ending in 528, Joseph Sullivan, and Yasmine Agelidis. So  
24 phone number ending in 528, I will give you access to  
25 unmute yourself and then you may begin your comment.



1           LAURA ROSENBERGER HAIDER: Hello. This is Laura  
2 Rosenberg Haider.

3           BOARD CLERK ESTABROOK: It looks like you're  
4 unmuted.

5           LAURA ROSENBERGER HAIDER: Did we comment on item  
6 22-3-6 yet?

7           BOARD CLERK ESTABROOK: No. That item will be  
8 heard later today.

9           LAURA ROSENBERGER HAIDER: Well, can I bring it  
10 up now for later? All right, is it okay?

11           BOARD CLERK ESTABROOK: No. We the -- no, we  
12 need -- the comments need to be for the Item 22-3-3 for  
13 the transportation refrigeration units only.

14           LAURA ROSENBERGER HAIDER: Yes, that goal is good  
15 idea, but it should happen sooner. But, all right, I  
16 agree with your transportation refrigeration regulation.  
17 All right. I'm good if it happens. I should happen  
18 sooner. Thanks. I'll comment again later. Thanks.

19           CHAIR RANDOLPH: Thank you.

20           Joseph Sullivan, you will receive a prompt to  
21 unmute and then you can begin your comment.

22           Joseph Sullivan, are you there?

23           Okay. Joseph, I'll come back to you and try  
24 again.

25           Yasmine Agelidis, you can unmute and begin.

1           YASMINE AGELIDIS: Hi. Good morning. Can you  
2 hear me okay?

3           BOARD CLERK ESTABROOK: Yes, we can.

4           YASMINE AGELIDIS: Great. Okay. Wonderful.

5           Good morning, Chair Randolph and members of the  
6 Board. My name is Yasmine Agelidis and I'm here speaking  
7 today on behalf of Earthjustice. I want to voice strong  
8 support for CARB's Transport Refrigeration Unit Rule and  
9 in particular the commitment to move all truck TRUs to  
10 zero emissions by 2029. I also want to highlight the  
11 3,400 public comment messages submitted to the record  
12 earlier in this rulemaking process. And they ask for CARB  
13 to clean up all pollution from TRUs.

14           So because of the way that refrigerated trucks  
15 operate and where they move, they have a concentrated  
16 impact in communities. Truck TRUs, like ice cream trucks,  
17 grocery trucks, beverage trucks drive, idle, and pollute  
18 near refrigerated warehouses, grocery restores, and  
19 people's homes. So I'd like to ask that the Board vote to  
20 adopt this TRU rule today, so that we can begin to clean  
21 up the pollution from this industry as soon as possible.

22           And adopting this rule today will have  
23 considerable positive health benefits, including that it  
24 will save 177 lives and 1.75 billion in estimated health  
25 benefits. In addition to voting to adopt this rule today,

1 I would also like to ask that the Board direct staff to  
2 return in 2023 with a strong proposal to bring all of the  
3 remaining kinds of TRUs to zero emissions, including  
4 trailer TRUs, railcar TRUs, and shipping container TRUs.

5 And then finally, I really just want to thank  
6 staff so much for their hard work in developing this very  
7 strong zero-emissions only TRU rule. The Board's vote  
8 today will mean adopting a life-saving regulation that  
9 will clean up a polluting industry, advance a needed  
10 zero-emissions future and save lives, and will also be the  
11 State and the nation's first zero-emission off-road fleet  
12 requirement. Thank you very much.

13 CHAIR RANDOLPH: Thank you.

14 Joseph, can we try you again.

15 Joseph, I saw that you had unmuted earlier, so  
16 I -- there go. It looks like you're unmuted now.

17 MS. SULLIVAN: Thank you. My name is Joseph  
18 Sullivan. I work the International Brotherhood of  
19 Electrical Workers, Local 11, as well as the National  
20 Electrical Contractors Association of Greater Los Angeles.  
21 This represents approximately 350 electrical contractors  
22 that employ in the neighborhood of 10,000 journeymen,  
23 electricians, and apprentices.

24 So good morning, Chair Randolph, Board, and  
25 staff. I appreciate the opportunity to speak. We want to

1 express our strong support for today's proposed  
2 Transportation Refrigeration Unit Rule. We ask the Board  
3 to vote to adopt the proposed regulation today to require  
4 all refrigerated trucks to transition to zero-emissions by  
5 the end of 2029.

6 We also ask that the Board come back with a  
7 strong proposal for part two that require all trailer,  
8 railcar TRUs and domestic shipping containers to  
9 transition to -- excuse me, to transition to zero  
10 emissions. Not only is this necessary to achieve our  
11 climate goals and to improve air quality, it protects  
12 those who are disproportionately environmentally impacted  
13 by poor air quality and COVID, and it will create high  
14 road careers and apprenticeship opportunities in multiple  
15 industries, including the electrical industry.

16 Thank you. That's all.

17 BOARD CLERK ESTABROOK: Thank you.

18 Our next speakers for this item are Mariela  
19 Ruacho, Sam Wilson, Cynthia Pinto-Cabrera.

20 And just a reminder, if you would like to speak  
21 on this item, please raise your hand in zoom or dial star  
22 nine if you're on the phone. Mariela, you can unmute and  
23 begin.

24 MARIELA RUACHO: Good morning, Chair and Board  
25 Members. I'm Mariela Ruacho from the American Lung

1 Association. We appreciate the work CARB has done to  
2 finalize the TRU rule and support transitioning to  
3 zero-emission TRU equipment. This is an important CARB  
4 rulemaking to advance zero-emission for truck TRUs by  
5 2029. Transitioning TRU engines to zero-emission will  
6 reduce air pollution in local communities, such as NOx and  
7 particular[SIC] matter that cause major respiratory and  
8 cardiovascular complications, including asthma and heart  
9 attacks, stroke and premature death to vulnerable  
10 populations.

11           Reduce -- they also reduce GHGs causing climate  
12 change, including requiring more climate-friendly  
13 refrigerants. And the transition to zero-emission TRUs  
14 will help address climate change concerns, but most  
15 importantly protect the health of Californians.

16           This proposal is just one part of the overall TRU  
17 rule. Today's decision is on box trucks versus other TRU  
18 classes. We urge the Board to direct staff to return by  
19 fall 2023 with zero-emission requirements for additional  
20 TRU classes, such as trailers, railcars, and domestic  
21 trucks, and stuff like that.

22           We urge the Board to approve this rule. And once  
23 again, thank you to the CARB staff and the Board for all  
24 the work that you have done to protect not only our air,  
25 but the health of Californians.

1 Thank you.

2 CLERK ESTABROOK: Thank you. Sam Wilson, you may  
3 unmute and begin.

4 SAM WILSON: Hi. Good morning, Chair Randolph  
5 and Board Members. Thanks so much for the opportunity to  
6 comment today. My name is Sam Wilson and I am a Senior  
7 Vehicles Analyst with the Union of Concerned Scientists  
8 here in the Bay Area.

9 We appreciate the hard work from staff on this  
10 rule and ask that the Board vote to adopt the proposal  
11 today. This rule puts us on better path towards reducing  
12 toxic diesel emissions in our neighborhoods and also  
13 curbing the significant climate impacts from our state's  
14 heavy-duty transportation sector. We really appreciate  
15 staff and the board moving efficiently on this important  
16 regulation, including strong measures to reduce emissions  
17 and also require reporting, which will produce information  
18 vital to understanding the impacts of the regulation going  
19 forward and how we can improve it in the future.

20 Finally, we ask that the Board direct staff to  
21 return in 2023 with a proposal to fully eliminate  
22 refrigerants that contain super greenhouse gases like  
23 hydrofluorocarbons from TRUs. These are over 3,000 times  
24 more potent than carbon dioxide, and also to require the  
25 TRUs run on zero-emissions technology.

1           Adopting this proposal today is estimated to save  
2 the lives of over 175 Californians and will help to reduce  
3 the burdens of a warming climate for those that come after  
4 us. Thanks so much.

5           BOARD CLERK ESTABROOK: Thank you. Our final two  
6 commenters are Cynthia Pinto-Cabrera and Bill Magavern.

7           Cynthia, you may unmute and begin.

8           CYNTHIA PINTO-CABRERA: Good morning, Chair Liane  
9 and Board members. I'm Cynthia Pinto-Cabrera with the  
10 Central Valley Air Quality Coalition, or CVAQ. CVAQ is  
11 unified in our advocacy to restore clean air and achieve  
12 healthy air in the San Joaquin Valley traditionally known  
13 us unceded Yokuts and Miwok lands.

14           CARB has identified the San Joaquin Valley as one  
15 of the areas with the most critical near-term air quality  
16 challenges in the nation. CARB must play a key role in  
17 supporting our region in meeting our clean air goals. We  
18 need strong regulations and stringent enforcement of  
19 mobile sources from CARB to support the fast approaching  
20 2024 and 2025 clean air deadlines.

21           The TRU Regulation offers CARB an opportunity to  
22 support reduced emissions in the San Joaquin Valley.  
23 However, this can only be achieved if CARB commits to  
24 adopting this rule today and commits to immediate action  
25 on the second part of the rule, which will include the

1 zero-emission requirements for other TRU categories like  
2 trailers, railcars, and domestic shipping containers.

3           Refrigerated storage facilities impose immense  
4 health risks on communities closest to facilities that are  
5 often located near communities of color and low-income  
6 neighborhoods that are already being exposed to other  
7 pollution sources. These trucks may run for hours when  
8 they are waiting to unload, concentrating harmful diesel  
9 emissions. Exposure to diesel exhaust can cause  
10 inflammation in the lungs, which may aggravate chronic  
11 respiratory symptoms and increase the frequency or  
12 intensity of asthma attacks. Diesel emissions even have  
13 the potential to contribute to mutations in cells that  
14 lead to cancer.

15           Near-term -- near-term reductions are essential  
16 for the San Joaquin Valley for the sake of the health and  
17 the well-being of valley residents breathing some of the  
18 most polluted air in the nation. We urge CARB to adopt  
19 this regulation today and ask the Board to direct staff to  
20 come back to the Board with these zero-emission  
21 requirements by the end of 2023.

22           Thank you.

23           BOARD CLERK ESTABROOK: Thank you.

24           Bill Magavern you can unmute and begin.

25           BILL MAGAVERN: Good morning. I'm Bill Magavern



1 with the Coalition for Clean Air. And I urge the Board to  
2 approve today this rule that's before you. This is the  
3 second hearing. I think all the issues have been fully  
4 aired. We know that the benefits of the rule far outweigh  
5 the cost. And most importantly, our communities continue  
6 to be plagued by toxic diesel exhaust. And this is  
7 particularly true in low-income communities of color. And  
8 many of these truck TRUs are emitting directly in  
9 communities right around where people live, and play, and  
10 go to school.

11 So we agree with this rule requiring a transition  
12 to zero emissions by 2029 and with the enforcement  
13 provisions, which include responsibility for facility  
14 owners and operators. And we urge you to take the next  
15 step, as my colleagues have said, to come back next year  
16 with a rule to cover the other TRUs, and transition them  
17 also to zero emissions in line with the Mobile Source  
18 Strategy, which projects a emission reduction of 12 tons  
19 per day of NOx in 2031, a very significant reduction.

20 So this is a piece of the many steps that you're  
21 taking to reduce diesel pollution from goods movement and  
22 it's a key piece. And it's important that you come back  
23 next year with this other piece on the remaining TRUs, and  
24 also to include a provision on zero-emission refrigerants,  
25 since refrigerants are a significant and growing source of

1 global warming pollution.

2 Thank you very much.

3 BOARD CLERK ESTABROOK: Thank you.

4 And I see another hand that went up. Phone  
5 number ending in 444, I will give you access to unmute and  
6 then you can unmute and begin.

7 JESSICA CRAVEN: Hi. I think I want -- I wanted  
8 to speak on Item 6, so this is the wrong, time, right?

9 BOARD CLERK ESTABROOK: Okay. Yes. This is Item  
10 3.

11 JESSICA CRAVEN: Okay. Okay. I'll wait. Sorry  
12 about that.

13 BOARD CLERK ESTABROOK: Okay. No worries.  
14 Chair, that concludes the commenters.

15 CHAIR RANDOLPH: All right. Thank you. I will  
16 now close the record on this agenda item. Any written or  
17 oral comments received after this hearing date will not be  
18 accepted as part of the official record on this agenda  
19 item.

20 If the Executive Officer determines that  
21 additional conforming modifications are appropriate, the  
22 record will be reopened and a 15-day notice of public  
23 availability will be issued. If the record is reopened  
24 for a 15-day comment period, the public may submit written  
25 comments on the proposed changes, which will be considered

1 and responded to in the Final Statement of Reasons for the  
2 regulation.

3           The Executive Officer may present the conforming  
4 modifications to the Board for further consideration, if  
5 warranted, and if not, the Executive officer shall approve  
6 or disapprove such modifications and take final action to  
7 adopt the regulation after addressing all appropriate  
8 conforming modifications.

9           Okay. If any Board member has a question or  
10 comments, please raise your hand, if in person, or click  
11 the raise hand symbol on Zoom.

12           Board Member Hurt.

13           BOARD MEMBER HURT: Thank you, Chair Randolph. I  
14 just wanted to state I support the adoption of the  
15 proposed amendments. It's definitely going to lower  
16 emission standards. It will improve health and lower  
17 cancer risk caused by exposure to diesel engines. Just in  
18 the Bay Area, it's believed to impact 900 facilities with  
19 the potential of improving 7,000 additional smaller  
20 facilities within the region and this is just one section  
21 of the state.

22           So this impact statewide is going to be  
23 tremendous and it's going to improve air quality as been  
24 stated in overburdened communities, communities of color.  
25 And the West Oakland AB 617 CERP, this amendment will

1 support one of their key strategies. I think I read it's  
2 strategy number 31. So again, direct impact to  
3 overburdened communities.

4 I want to emphasize and uplift that we need to  
5 continue supporting our smaller businesses,  
6 owner-operators with focused deployment of incentive  
7 funding, community engagement, and support infrastructure  
8 improvements, so that these small trucking and delivery  
9 firms can meet the transition that's needed.

10 And my last comment is around the first-come  
11 first-served incentive funding that I heard in the  
12 presentation today. And it may be a little bit of a  
13 question as well. But on face, it sounds fair, but it's  
14 not entirely equitable. And I would -- there might be a  
15 better way to do this. And I would support maybe a small  
16 percentage of that money reserved for those who are in  
17 great need and income qualified set side, so that if they  
18 come later in the program, there is money for those that  
19 really are challenged and are in need.

20 So I guess my question is how are we dealing with  
21 those that come later in the program with the first-come  
22 first-served program aspect and is there any way that we  
23 can think about really uplifting those that come later in  
24 the program that really need money, incentive funding?

25 And I'll stop there.

1 CHAIR RANDOLPH: All right. Thank you. I'm  
2 going to ask Craig Segall, the Deputy Executive Officer  
3 over Mobile Sources and Incentives to respond.

4 BOARD CLERK ESTABROOK: Craig, we need your mic  
5 on.

6 DEPUTY EXECUTIVE OFFICER SEGALL: Here's the mic.  
7 Great. So what I've seen Board members, broadly agree  
8 that we need to think about distributional components  
9 here. In general, in the programs, obviously, we've been  
10 shifting towards smaller fleets. And needs, we need to  
11 think about mechanisms, simply, income verification, for  
12 instance, can be complex to implement. We'll take that  
13 back and think about ways to make sure we reach the right  
14 folks.

15 Thank you.

16 BOARD MEMBER HURT: Thank you.

17 CHAIR RANDOLPH: Okay. Thank you.

18 Dr. Pacheco-Werner.

19 BOARD MEMBER PACHECO-WERNER: Hi. Yes. Thank  
20 you. Yeah, exciting to be here today. And, you know,  
21 thank you to staff for getting to this place. My -- I  
22 have a couple of questions and just kind of points of  
23 clarification about the incentive funding.

24 The website on TRU funding assistance really  
25 is -- you know, I mean -- and maybe people that are --

1 will be using this program are used to navigating these  
2 websites, but for me I found it very confusing when I'm  
3 clicking the links and trying to figure out like there's  
4 some guidelines from 2018, from 2019 on some of these  
5 links that are provided on this website. So I do think  
6 that if my type of level of understanding of how to  
7 navigate these incentive programs is the baseline, that  
8 this website really be revamped in terms of how to access  
9 these incentives.

10 And also, I'm -- you know, I'm also trying to  
11 figure out, because I know that in the -- just a point of  
12 clarification from staff for me, because we talked a  
13 little bit about the removal of the LCFS credits from the  
14 total cost. And then we talk about the average annual  
15 LCFS credit as part of the savings and then the -- and  
16 then accessing that as part of the incentives program.

17 So can you just kind of clarify for me how  
18 somebody kind of goes through accessing those savings?

19 Thank you.

20 EXECUTIVE OFFICER COREY: Heather, can you take  
21 this, Division Chief overseeing the reg.

22 Heather Arias.

23 TTD ASSISTANT DIVISION CHIEF BOYD: Lea Yamashita  
24 can go ahead and respond to that. Just go ahead and  
25 unmute.

1 EXECUTIVE OFFICER COREY: Great, Rich. Go.

2 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

3 Sure. So we did remove LCFs credits from the  
4 total cost of the amendments for our economic analysis.  
5 We originally assumed that all owners of zero-emission  
6 truck TRUs would take advantage of the LCFS program. But  
7 as pointed out in the last Board meeting, we decided it  
8 probably wasn't reasonable to assume that all owners would  
9 take advantage, just because of the time and effort it  
10 takes to, you know, comply with -- or meet all of the  
11 requirements and do all of the data tracking and  
12 submission, and so that's why we removed it. However,  
13 truck TRU owners can apply -- or can utilize the LCFS  
14 credits and the program if they -- if they do choose so  
15 to.

16 And like I said, there are a long list of  
17 requirements and you need to track your electricity or  
18 alternative fuel usage and submit it to CARB. And then  
19 that's how you get the credits.

20 BOARD MEMBER PACHECO-WERNER: Great. Thank you.  
21 I was just trying to figure out how that sort of fit into  
22 the cost savings that -- you know, the total cost of  
23 ownership, because the 2,000 then, you know, some  
24 people -- it's assumed that, you know, some people may get  
25 it, but some people won't have access to that, right.

1 TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

2 Correct.

3 BOARD MEMBER PACHECO-WERNER: Got it. Thank you  
4 so much.

5 CHAIR RANDOLPH: Okay. Thank you.

6 Vice Chair Berg.

7 VICE CHAIR BERG: Thank you, Chair Randolph. I'm  
8 sorry, but I do need to take to task a little bit about  
9 these incentives and the LCFS credits. We are making it  
10 seem easy and it is not. When you get an LCFS credit, you  
11 get an actual credit that you have to sell on the market,  
12 okay? This is not \$2,000 that is sent to you in a check.  
13 So let's please understand that the single owner-operator,  
14 besides all of the requirements, would have a small amount  
15 for one truck to get credit to go to the open market and  
16 sell it is not reasonable. And so I think that I just  
17 would like to state that.

18 On the incentive programs, these incentive  
19 programs are amazing, but they're also individual. They  
20 each have individual requirements and we don't set aside  
21 money specifically for each area that we bring up  
22 regulation, and we do highlight, and it is possible to get  
23 money for TRUs. But again, it's a complicated process and  
24 I think it's important for the public and the fellow Board  
25 members to understand that there are a lot of needs



1 against this money and there is no specific commitment on  
2 the behalf of CARB or any of these other commitments for a  
3 specific amount of TRUs, for large companies or much less  
4 the smaller.

5           And so maybe as we're looking at our suite of  
6 incentives programs, maybe as Ms. Hurt indicated, we do  
7 need to take a look at this and to see as we do include it  
8 in our financial -- in our economic cost analysis, how can  
9 we be a little bit more dedicated, if you will, to making  
10 sure some of this money goes specifically to some of the  
11 smaller companies.

12           But I'd like to close with the fact that I think  
13 all of staff has been here since we started the TRU  
14 several decades ago and those conversations were really  
15 hard and there was lots of them. And both staff and the  
16 stakeholder industries truly do need to be complimented.  
17 This has gone really much -- I'm not hearing from a lot of  
18 stakeholders. And when we did this originally, I heard  
19 from a slew of people, and we had much, much greater  
20 public participation. So I really do want to compliment  
21 staff and the stakeholders.

22           And with that, if it's appropriate, then I would  
23 move to motion, Madam Chair

24           CHAIR RANDOLPH: Okay. I have a motion to --

25           BOARD MEMBER HURT: Second.

1 CHAIR RANDOLPH: -- approve resolution number  
2 22-5. Do I have a second?

3 BOARD MEMBER HURT: Second.

4 CHAIR RANDOLPH: Okay. Great. Clerk, would you  
5 please call the roll.

6 BOARD CLERK ESTABROOK: Dr. Balmes?

7 BOARD MEMBER BALMES: Yes.

8 BOARD CLERK ESTABROOK: Mr. De La Torre?  
9 Mr. Eisenhut?

10 BOARD MEMBER DE LA TORRE: Yes.

11 BOARD MEMBER EISENHUT: Yes. Yes.

12 BOARD CLERK ESTABROOK: Thank you. I got your  
13 yes, Hector.

14 BOARD CLERK ESTABROOK: Senator Florez?

15 BOARD MEMBER FLOREZ: Aye.

16 BOARD CLERK ESTABROOK: Ms. Hurt?

17 BOARD MEMBER HURT: Aye.

18 BOARD CLERK ESTABROOK: Mr. Kracov?

19 BOARD MEMBER KRACOV: Yes.

20 BOARD CLERK ESTABROOK: Dr. Pacheco-Werner?

21 BOARD MEMBER PACHECO-WERNER: Yes.

22 BOARD CLERK ESTABROOK: Mrs. Riordan?

23 BOARD MEMBER RIORDAN: Aye.

24 BOARD CLERK ESTABROOK: Supervisor Serna?  
25 Professor Sperling?

1 BOARD MEMBER SPERLING: Aye.

2 BOARD CLERK ESTABROOK: Ms. Takvorian?

3 BOARD MEMBER TAKVORIAN: Aye.

4 BOARD CLERK ESTABROOK: Supervisor Vargas?

5 BOARD MEMBER VARGAS: Vargas, aye.

6 BOARD CLERK ESTABROOK: Vice Chair Berg?

7 VICE CHAIR BERG: Aye.

8 BOARD CLERK ESTABROOK: Chair Randolph?

9 CHAIR RANDOLPH: Yes.

10 BOARD CLERK ESTABROOK: Madam Chair, the motion  
11 passes.

12 CHAIR RANDOLPH: All right. Thank you.

13 The next item on the agenda is item number  
14 22-3-6, informational update on the 2022 State SIP  
15 Strategy. If you wish to comment on this item, please  
16 click the raise hand button or dial star nine now. We  
17 will call on you when we get to the public comment portion  
18 of this item.

19 Over the next 15 years, California will need to  
20 build upon its successful mobile source control program  
21 and drive down emissions even further in order to provide  
22 healthy air for all California residents and meet federal  
23 air quality standards. Mobile sources are the largest  
24 contributor to the formation of ozone in California. Last  
25 October, staff presented the 2020 Mobile Source Strategy,

1 which sets out a vision for the transformation of the  
2 mobile source sector. The 2021 Mobile Source Strategy  
3 provides a framework to support multiple planning efforts  
4 currently underway.

5 The 2022 State SIP Strategy expands on the  
6 scenarios and concepts from the 2020 Mobile Source  
7 Strategy and presents a series of measures to reduce  
8 emissions from State regulated mobile sources, other State  
9 controlled sources, and sources that are primarily  
10 regulated by the federal government.

11 This informational update will provide an  
12 opportunity for public comment and for the Board to give  
13 staff direction on finalizing the strategy.

14 Mr. Corey, would you please introduce the item.

15 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

16 SIPs consist of a combination of State and local  
17 air quality planning documents that must demonstrates how  
18 California will meet federal air quality standards. Given  
19 the significant number of mobile sources, the 2022 State  
20 SIP Strategy is a critical element of California's State  
21 Implementation Plan, or SIP. The air quality challenge in  
22 the South Coast and San Joaquin Valley is daunting as you  
23 all know, and substantial reductions from both mobile and  
24 stationary sources will be necessary to meet the ozone  
25 standards in these regions.

1           For the 2022 State SIP Strategy, CARB is  
2 exploring and anticipates proposing an unprecedented  
3 variety of new measures to reduce emissions from the  
4 sources under our authority using all mechanisms  
5 available.

6           The measures that staff have developed are  
7 aggressive and in many cases groundbreaking. But this  
8 level of action is needed to ensure federal air quality  
9 standards are attained and to deliver on our commitments  
10 to protect public health, particularly in light of the  
11 growing body of evidence on the adverse impacts of air  
12 pollution.

13           Although the focus of the 2022 State SIP Strategy  
14 is a 70 ppb ozone standard, implementing -- or rather  
15 implementation of the near-term measures will also provide  
16 emission reductions toward ozone and PM2.5 standards with  
17 earlier attainment dates, as well as reduce impacts in  
18 communities.

19           Today's presentation as you noted is an  
20 informational update to solicit comments from the Board  
21 and the public. In summer 2022, the staff will present  
22 for the Board's consideration, the 2022 State SIP Strategy  
23 and final Environmental Analysis.

24           I'll now ask Austin Hicks of the Air Quality  
25 Planning and Science Division to give the staff

1 presentation.

2 Austin.

3 (Thereupon a slide presentation.)

4 AQPSD AIR POLLUTION SPECIALIST HICKS: Thank you,  
5 Mr. Corey. Hello, Chair Randolph and members of the  
6 Board. I am happy to have this opportunity to speak to  
7 you today about staff's release of the draft 2022 State  
8 Strategy for the State Implementation Plan and ongoing  
9 development. We would like to hear your feedback today at  
10 this stage in the process.

11 --o0o--

12 AQPSD AIR POLLUTION SPECIALIST HICKS: Before we  
13 start on the strategy, I'm going to provide background on  
14 federal standard that is the genesis of this planning  
15 effort. In 2015, EPA revised the 8-hour ozone standard  
16 from 75 parts per billion, or ppb, to the more stringent  
17 and health protective level of 70 ppb. Nineteen areas in  
18 California were designated as nonattainment areas for this  
19 standard, based on the most recent air quality data  
20 available at that time.

21 The map to the right shows all 19 non-attainment  
22 area boundaries and current classifications. These areas  
23 are required to attain the standard between 2020 and 2037,  
24 depending on their classification. All areas that are  
25 moderate, serious, severe or extreme are required under

1 the Clean Air Act to submit SIPs to show how they will  
2 meet the standard. Together, local air districts and CARB  
3 developed these SIPs which contain the magnitude of  
4 emission reductions needed to provide for attainment and  
5 actions necessary to achieve those reductions.

6 South Coast and San Joaquin Valley are the only  
7 two extreme non-attainment areas in the country, with the  
8 most challenging path towards attainment. That being  
9 said, based on preliminary air quality modeling, we're  
10 seeing that meeting the 70 ppb ozone standard is going to  
11 be a challenge for many years across the state. While  
12 historically areas have been able to demonstrate  
13 attainment, based on emissions reductions from existing  
14 regulations, we anticipate that other non-attainment areas  
15 will need emission reduction commitments from this  
16 strategy to show attainment of the 70 ppb ozone standard.  
17 In addition to meeting 70 ppb, CARB will continue to  
18 identify and implement measures for the 75 and 80 ppb  
19 ozone standards.

20 --o0o--

21 AQPSD AIR POLLUTION SPECIALIST HICKS: Now, let's  
22 look at the ozone levels in the South Coast as shown in  
23 this chart. The blue and orange lines are the 1-hour and  
24 8-hour design values respectively, and show steep  
25 reductions which have leveled off over the last decade

1 above the various red lines representing the 1-hour and  
2 80, 75 and 70 ppb 8-hour ozone standards. Let's that  
3 about why this is expected and why this shows that we are  
4 making progress towards meeting all the ozone standards  
5 with the NOx-focused strategy.

6 --o0o--

7 AQPSD AIR POLLUTION SPECIALIST HICKS: Ozone is  
8 formed through a series of complex reactions involving NOx  
9 and VOCs in the presence of sunlight. The complexity of  
10 ozone chemistry means that ozone levels will respond  
11 differently to changes in NOx emissions depending on the  
12 amount of NOx in the atmosphere.

13 The figure on the right shows the complex nature  
14 of the relationship between ozone and NOx. When NOx  
15 emissions are high, shown in the blue shaded region to the  
16 right, reducing NOx emissions by moving from right to left  
17 on the curve can lead to an increase in ozone. As NOx  
18 emissions are reduced further, we near the top of the  
19 curve, where ozone will remain unchanged as NOx emissions  
20 are reduced. However, with further NOx reductions, we  
21 will move into the red shaded region, where ozone will  
22 begin to respond to NOx reductions.

23 On the next slide I will discuss the ozone  
24 weekend effect and how it shows that this is happening in  
25 the real world and supports our NOx-focused control



1 strategy.

2 --o0o--

3 AQPSD AIR POLLUTION SPECIALIST HICKS: The ozone  
4 weekend effect was first observed in the mid-1970s in  
5 areas with high levels of NOx emissions, such as the South  
6 Coast. Ozone levels on the weekend have traditionally  
7 been higher than ozone on the weekdays. This so-called  
8 weekend effect occurs in areas with high NOx emissions  
9 that experience ozone chemistry similar to that in the  
10 blue shaded region on the figure. In those areas, when  
11 NOx emissions are lowered on the weekend due to reduced  
12 truck activity, ozone levels rise.

13 Similar to what was discussed on the previous  
14 slide, as NOx emissions are reduced over time, we expect  
15 the weekend effect to lessen -- to lessen until ozone  
16 levels are the same on weekdays and weekends. With even  
17 further NOx reductions, the weekend effect would reverse  
18 and ozone on the weekend would be lower than on weekdays.  
19 This is exactly what we saw in the San Joaquin Valley in  
20 the mid-2000s and what we are now observing in the South  
21 Coast.

22 --o0o--

23 AQPSD AIR POLLUTION SPECIALIST HICKS: Here, we  
24 are showing the ratio of the weekend to weekday ozone in  
25 the South Coast from 2000 to 2004, where shades of blue

1 mean that the location experiences the traditional weekend  
2 effect or higher ozone on the weekends, while shades of  
3 red mean the location experienced a reverse weekend effect  
4 or lower ozone on the weekends. In the early 2000s, every  
5 region had higher ozone on the weekends.

6 As we move forward in time, we see some areas  
7 starting to shift to lighter shades of blue and even some  
8 red and orange colors, which is indicative of how  
9 NOx-focused control program working.

10 Now, when we get to 2020, we see what happens  
11 when NOx goes dramatically down due to the pandemic.  
12 Every region shifts to lower ozone on the weekends.

13 When emissions bounced back in 2012 we returned  
14 to the pattern from before. The shift in the weekend  
15 effect is exactly what we expected to see and shows that  
16 we are headed in the right direction with our control  
17 program and making progress towards attainment.

18 --o0o--

19 AQPSD AIR POLLUTION SPECIALIST HICKS: The  
20 following slide has two figures. Here to the left is the  
21 SIP pyramid. These are the basic elements of an  
22 attainment SIP. It is represented as a pyramid because  
23 everything we work on in each level of the pyramid builds  
24 into the next. We start with the air quality modeling by  
25 identifying what the air pollution problem is and what it

1 looks like in an area. Then we build emissions  
2 inventories to identify what the sources of the air  
3 pollution are. We then use monitoring data and emissions  
4 inventories to model the air quality and determine how  
5 much emissions needed to be reduced to meet federal air  
6 quality standards.

7           And finally, based on air quality modeling, we  
8 developed a control strategy to reduce emissions and  
9 achieve federal standards. Developing the control  
10 strategy requires extensive coordination with air  
11 districts and stakeholders.

12           As discussed in the previous slides for the  
13 control strategy, CARB relies on the science and the  
14 figure on the right shows an 8-hour ozone isopleth plot  
15 which is generated from our atmospheric modeling. An  
16 isopleth plot helps us understand the future ozone  
17 sensitivity for different levels of NOx and VOC emission  
18 in a non-attainment area.

19           The figure shows the red dots turning downward  
20 represent lower ozone designed values from significant NOx  
21 reductions rather than VOC. The isopleth plot shows ozone  
22 is more sensitive to changes in NOx than VOC. The control  
23 strategy is based on science by targeting sources of NOx  
24 emissions to effectively reduce the formation of ozone.

25           Now, let's pivot back to the Strategy.



1 to meet the 70 ppb ozone standard, as part of SIPs due  
2 this August. This release identifies the proposed  
3 measures, associated emissions reductions and other  
4 elements needed to support attainment of the 70 ppb ozone  
5 standard. But these measures will also support the  
6 attainment of the 80 and 75 ppb ozone standards.

7 With this strategy, CARB is exploring and  
8 proposing an unprecedented variety of new measures to  
9 reduce emissions from the sources under our authority  
10 using all available mechanisms. This level of action is  
11 needed to ensure all air quality standards are attained  
12 and delivered on our commitments to protect public health,  
13 particularly in light of the growing body of evidence on  
14 the adverse impacts of air pollution. The Strategy is  
15 aggressive and drives the pace and scale of the CARB  
16 rulemakings due to California's air quality challenges.

17 --o0o--

18 AQPSD AIR POLLUTION SPECIALIST HICKS: Our  
19 robust -- a robust public process is important in  
20 developing an effective strategy. We kicked off the  
21 public process with a workshop in July 2021 that provided  
22 staff's initial ideas for measures to be pursued in the  
23 2022 State SIP Strategy.

24 Specifically, staff presented the status of  
25 measures from the 2016 State SIP Strategy and how concepts

1 from the 2020 Mobile Source Strategy would transition into  
2 measures for the 2022 State SIP Strategy.

3 After the kick-off, staff held stakeholder  
4 meetings where they shared opportunities and ideas staff  
5 should be pursuing in the Strategy. Last October, staff  
6 released the 2022, State SIP Strategy draft measures  
7 document, which included measures developed by staff, some  
8 of which already -- some of which are already undergoing  
9 independent public processes, potential federal actions,  
10 and potential measures suggested by the public. Staff  
11 then walked through the potential measures identified in  
12 the draft measures document in a second workshop.

13 In October and November 2021, staff participated  
14 in the San Joaquin Valley and South Coast Air District  
15 Control measure workshops, as part of their SIP  
16 development process. After release of that draft 2022  
17 State SIP Strategy in January, staff hosted our third  
18 workshop and provided a high level overview of the draft  
19 strategy, listened to input from stakeholders, solicited  
20 ideas and answered questions. I will give you a summary  
21 of the feedback later in the presentation.

22 --o0o--

23 AQPSD AIR POLLUTION SPECIALIST HICKS: Criteria  
24 pollutant nonattainment areas and disadvantaged  
25 communities are interconnected so much that 99 percent of

1 disadvantaged community populations in California are  
2 within the 70 ppb ozone standard non-attainment areas. We  
3 are keenly aware that emissions from mobile and stationary  
4 sources have a disproportionate impact on disadvantaged  
5 communities and people of color, for example, many of whom  
6 live adjacent to transportation corridors and industrial  
7 operations.

8           The measures in this Strategy will benefit  
9 low-income and disadvantaged communities by providing  
10 opportunities to significantly reduce emissions and  
11 exposure in communities of concern. Such opportunities  
12 include the rapid transition to zero-emission  
13 technologies. The draft strategy measures strive to  
14 compliment AB 617 strategies, while being consistent with  
15 CARB's equity goal. Staff has been soliciting public  
16 input on the best ways to support community-level emission  
17 reductions as part of the 2022 State SIP strategy, as we  
18 know -- as we know we must do more to provide benefits to  
19 the low-income and disadvantaged communities who for  
20 generations have been bearing the brunt of combustion  
21 emissions.

22                           --o0o--

23           AQPSD AIR POLLUTION SPECIALIST HICKS: To put it  
24 simply, the Draft Strategy measures focus on the continued  
25 transition away from combustion and towards zero-emission

1 technologies. Moving to zero everywhere feasible is what  
2 is needed to meet the 70 ppb ozone standard in California  
3 and will support earlier ozone attainment deadlines. The  
4 strategy discusses the pathway to zero for measures under  
5 State control through regulations incentives and voluntary  
6 programs. That said, regulations can continue to be the  
7 core and bulk of the strategy as you will see in the  
8 following slides.

9 --o0o--

10 AQPSD AIR POLLUTION SPECIALIST HICKS: The  
11 proposed measure included in the Draft Strategy  
12 encompasses all categories. The draft strategy includes a  
13 description of these measures for many, the associated  
14 emission reductions.

15 These measures target on- and off-road mobile  
16 sources, primarily federal-regulated sources and other  
17 sources such as consumer products and appliances. I will  
18 now summarize these measures in the next couple of slides.

19 --o0o--

20 AQPSD AIR POLLUTION SPECIALIST HICKS: The  
21 schedule for the Strategy proposes are aggressive. The  
22 gold star represents the year the measures are scheduled  
23 to be adopted. As you can see, most of these measures  
24 will be adopted in the next few years. Following  
25 adoption, the dark blue squares represent the years needed



1 to be implemented that specific measure. Let's now turn  
2 to the specific measures.

3 --o0o--

4 AQPSD AIR POLLUTION SPECIALIST HICKS: For  
5 on-road mobile sources, the Draft Strategy includes the  
6 Clean Miles Standard Regulation, Advanced Clean Fleets  
7 Regulation, and On-Road mobile -- Motorcycles New  
8 Emissions Standards, as included in the October release  
9 draft measures document mentioned earlier. The Advanced  
10 Clean Fleets Regulation is well under development and will  
11 accelerate zero-emission vehicle adoption by setting  
12 zero-emission requirements for heavy-duty fleets.

13 With On-Road Motorcycles New Emissions Standards,  
14 CARB will develop new exhaust emission standards that  
15 achieve harmonization with more aggressive current  
16 European motorcycle emission standards. The Clean Miles  
17 Standard Regulation was adopted by the Board in 2021 and  
18 reduces emissions from ride-hailing services. While it  
19 has -- while it has already been adopted, this was not  
20 include as a measure in CARB's previous 2016 strategy, and  
21 thus is being included as a measure here for inclusion in  
22 the SIP.

23 The Zero-Emission Trucks and Enhanced Regional  
24 Emissions Analysis in SIPs measures are new measures not  
25 in the October draft. CARB staff continues to identify

1 and develop ways to turn over the dirtiest vehicles on the  
2 road to zero-emission vehicles. The Zero-Emission Trucks  
3 Measure is an innovative new approach and builds on the  
4 Public Measure Suggestion for a Heavy-Duty Vehicle Useful  
5 Life Regulation. Similar to that public suggestion, the  
6 Zero-Emissions Trucks Measure targets the replacement of  
7 older trucks in order to increase the number of heavy-duty  
8 ZEVs as soon as possible, and reduces emissions from  
9 fleets not affected by the Advanced Clean Fleets measure.

10 We would explore new methods to replace older  
11 trucks, including market signal tools that would not  
12 unduly burden low-income truckers, provide flexibility,  
13 and target reductions in the areas that need it most.

14 For the second new measure, the Enhance Regional  
15 Emission Analysis in the SIPs measure primarily -- primary  
16 goal is to reduce on-road mobile vehicle emissions through  
17 vehicle miles traveled, or VMT, reductions. CARB is  
18 considering the following options to reduce VMT: a change  
19 to the motor vehicle emission budgets development process,  
20 reasonably available control measure analysis for  
21 transportation control measures, and updated guidance for  
22 Congestion Mitigation and Air Quality Improvement Program  
23 and motor vehicle fees.

24 These two new measures will provide additional  
25 on-road mobile source emission reductions to support a

1 team -- attainment the 70 ppb ozone standard.

2 Finally, Advanced Clean Car Measure that was part  
3 of the 2016 Strategy that you hear later this year will  
4 also provide reductions for these upcoming SIPs.

5 --o0o--

6 AQPSD AIR POLLUTION SPECIALIST HICKS: Next, I'll  
7 cover the proposed measures for the off-road vehicles and  
8 equipment. Our list of potential measures to control  
9 emissions from off-road vehicles and equipment includes a  
10 broad range of programs that go far beyond those in  
11 previous SIP strategies. Emissions from off-road vehicles  
12 and equipment are significant and contribute about 35  
13 percent of total statewide NOx emissions in 2017.

14 With that contribution expected to continue to  
15 grow in the future, the Tier 5 off-road new  
16 compression-ignition standards would require more  
17 stringent exhaust standards for all power categories.  
18 Amendments to the In-Use Off-Road Diesel-Fueled Fleets  
19 Regulation would target the oldest and dirtiest equipment  
20 allowed to operate under the current regulations structure  
21 by adding an operational backstop to the current  
22 regulation for dirtier engines between 2024 and 2033. The  
23 Transport Refrigeration Unit Regulation part two would  
24 require zero-emission for trailer and other TRUs, that  
25 this will be the second phase of the TRU rulemaking.

1           Amendments to the Commercial Harbor Craft  
2 Regulation are also ongoing. This proposal had its first  
3 Board hearing last year and required -- and would require  
4 the vessel to meet the cleanest possible standard and  
5 retrofits based on compliance schedule.

6           The Cargo Handling Equipment Regulation proposes  
7 to start transitioning to fully electric in 2026 to  
8 achieve over 90 percent penetration of electric equipment  
9 by 2036. The Off-Road Zero-Emission Targeted Manufacturer  
10 Rule will propose to require manufacturers to produce for  
11 sale zero-emissions equipment as a percentage of their  
12 annual sales volume. This would increase the availability  
13 of zero-emission options in the off-road sector and  
14 support other potential measures that promote or require  
15 the purchase and use of such options.

16           The Clean Off-Road Fleet Recognition Program  
17 would create a voluntary program encouraging fleets to  
18 incorporate advanced technologies into their fleets. And  
19 finally the Spark-Ignition Marine Engine Standards  
20 proposes to adopt more stringent exhaust standards and  
21 evaluate zero-emissions technologies.

22                           --o0o--

23           AQPSD AIR POLLUTION SPECIALIST HICKS: Along with  
24 on-road sources and off-road equipment, the strategy  
25 proposes measures for consumer products and appliances.

1 CARB is proposing to amend the consumer products  
2 regulation to achieve additional reductions in volatile  
3 organic compounds beyond those achieved through the 2020  
4 and prior amendments.

5 The 2022 Strategy is proposing a new  
6 zero-emission standard for space and water heaters sold in  
7 California that would go into effect in 2030. For this  
8 measures, staff is considering that it could be expanded  
9 to include other end-uses consistent with suggestions  
10 received from the public for additional building and  
11 appliance emission standards.

12 --o0o--

13 AQPSD AIR POLLUTION SPECIALIST HICKS: As  
14 mentioned earlier, we are exploring all mechanisms to  
15 control these sources. It is important to mention that  
16 some mobile sources are primarily federally regulated at  
17 the federal and international level. Even so, CARB will  
18 pursue measures as shown on this slide for locomotives,  
19 aviation, and ocean-going vessels to the extent available  
20 under our authority.

21 CARB is currently undergoing a public rulemaking  
22 process to propose an In-Use Locomotive Regulation which  
23 would accelerate the adoption of advanced cleaner  
24 technologies, including zero-emission technologies for  
25 locomotive operations. The associated emission reductions

1 from these proposed measures are significant.

2 For aviation and ocean-going vessels CARB is  
3 evaluating relevant authorities and exploring potential  
4 approaches to reduce emissions from these sources to  
5 support attainment of air quality standards and to provide  
6 reductions in toxics and other emissions to the  
7 communities near port -- airports, ports, and other  
8 freight facilities. The emission reductions for both  
9 aviation and ocean-going vessels still need to be  
10 quantified.

11 --o0o--

12 AQPSD AIR POLLUTION SPECIALIST HICKS: After all  
13 of the measures I talked about, I want to highlight that  
14 California cannot achieve the reductions needed without  
15 action at the federal level. The graph here shows  
16 statewide mobile source NOx emissions from 2000 to 2040,  
17 with the blue line representing California regulated  
18 mobile resources with adopted rules, and the gold line  
19 representing primarily federally regulated sources, such  
20 as interstate trucks, planes, trains and ships. Emissions  
21 from federal sources surpassed California sources in 2020,  
22 and without more stringent federal requirements, emissions  
23 will be double to California's sources by 2030.

24 Given the contribution from these sources,  
25 federal action is critical to attain the 70 ppb standard,

1 as well as to support attainment of other federal  
2 standards and support CARB's other goals.

3 --o0o--

4 AQPSD AIR POLLUTION SPECIALIST HICKS: In  
5 response to the need to control federal sources, the Draft  
6 Strategy identifies the regulatory actions needed from  
7 federal and international entities for interstate on-road  
8 heavy-duty vehicles, preempted off-road equipment,  
9 locomotives, aviation, and ocean-going vessels.

10 For preempted on-road heavy-duty vehicles, CARB  
11 outlined a petition in the 2016 Strategy for a federal  
12 low-NOx standard. Since that time, a petition was sent  
13 and EPA is now moving forward with the federal Clean Truck  
14 Plan. Beyond this, CARB still needs to petition or  
15 advocate to EPA for federal zero emissions on on-road  
16 heavy-duty vehicle requirements.

17 For preempted off-road equipment, CARB would  
18 petition or advocate EPA to establish an off-road  
19 equipment Tier 5 compression-ignition standards, new  
20 spark-ignition standards, and zero-emission standards  
21 where the technology is feasible.

22 For locomotives, as outlined in the 2016  
23 Strategy, CARB submitted a petition and is waiting for EPA  
24 to respond or act on the petition. Beyond clean --  
25 cleaner combustion standards, CARB would petition or





1 the 2016 Strategy measures that still need to be adopted,  
2 and the blue represents the Draft Strategy measures.  
3 Taken together, these NOx emission reductions represent  
4 about 230 tons per day of reductions in the South Coast  
5 and 150 tons per day reductions in the San Joaquin Valley.

6 The Strategy proposed measures are in blue broken  
7 down by source category in the bar on the right.

8 Preliminary modeling shows that the 36 tons per day of NOx  
9 reductions from the Strategy are sufficient to meet the 70  
10 ppb ozone standard in the San Joaquin Valley. However,  
11 the 70 tons per day reductions are not sufficient to meet  
12 the standard in the South Coast. The next slide provides  
13 a deeper dive into what is needed for the South Coast.

14 --o0o--

15 AQPSD AIR POLLUTION SPECIALIST HICKS: Although  
16 staff is still exploring -- is still exploring -- although  
17 staff is still ex -- still working to quantify benefits  
18 for certain measures with CARB and District measures and  
19 federal actions we quantified to date, additional emission  
20 reductions must be identified to provide for attainment in  
21 the South Coast Air Basin.

22 The following shows South Coast NOx emissions.  
23 From left to right, the bar chart shows the emissions  
24 starting point in 2018 for the South Coast by category.  
25 The next bar shows the emissions in 2037 with the existing

1 control program that provides for 151 tons per day of NOx  
2 reductions from 2018.

3 Next, after accounting for 68 tons per day of NOx  
4 from the draft Strategy and District action, we're still  
5 not there. And finally, the emission reduction from  
6 proposed federal actions of 35 tons per day of NOx  
7 reductions are still not enough to reach the 60 tons per  
8 day NOx level.

9 The line going across the chart is 60 tons per  
10 day representing the emission reductions -- the emissions  
11 level needed to attain the 70 ppb ozone standard.  
12 Considering that nearly 17 million people live in this  
13 basin and along with the largest ports in the nation, zero  
14 technology will be essential.

15 --o0o--

16 AQPSD AIR POLLUTION SPECIALIST HICKS: South  
17 Coast AQMD has continued to refine their modeling and will  
18 be releasing updated information and a draft AQMP in the  
19 coming months. Just last week, South Coast did release  
20 the preliminary 60 tons per day of NOx carrying capacity  
21 to attain the 70 ppb ozone standard in 2037 and identified  
22 additional reductions from aviation and stationary and  
23 area-wide sources above and beyond the Draft Strategy.

24 Together, CARB and AQMD staff are working to  
25 identify the specific commitments from these additional

1 measures and reductions needed to get to the 60 ton per  
2 day NOx carrying capacity.

3           Beyond what has been discussed as proposed  
4 measures in the Draft Strategy and South Coast's proposal  
5 from last week, the Draft Strategy aggressively utilizes  
6 mechanisms within CARB's authority. The proposed measures  
7 under CARB's authority reduce emissions substantially  
8 throughout California. Based on the emission reductions  
9 from existing regulations, 2016 Strategy, and proposed  
10 2022 Strategy measures, the previous bar chart showed that  
11 the remaining largest categories where additional  
12 reductions could be achieved from off-road equipment and  
13 passenger vehicles.

14           Additionally, as a result of outreach and  
15 engagement efforts to date, CARB received suggestions from  
16 the public for State measures to be included in the Draft  
17 Strategy in which we refer to as the Public Measures  
18 Suggestions. Many of the items have been included or  
19 discussed as part of various Community Emission Reduction  
20 Program development by the selected communities, together  
21 with their air district partners under CARB's AB 617  
22 Community Air Protection Program.

23           The public measure suggestions included an  
24 Indirect Source Rule where CARB either developed a  
25 Suggested Control Measure model rule or expanding State

1 law as it relates to Indirect Source Rules. Expanding the  
2 zero-emission building appliance standards, and BACT/BARCT  
3 determinations, which would define limits for specific  
4 pieces of equipment or stationary sources.

5 These are suggestions for the Board to discuss on  
6 where staff could identify additional emission reductions.

7 --o0o--

8 AQPSD AIR POLLUTION SPECIALIST HICKS: After this  
9 presentation, the Board will hear an update on the 2022  
10 Climate Change Scoping Plan. While the SIP and Scoping  
11 Plan are different, they complement one another, since the  
12 mobile reduction measures come from the 2020 Mobile Source  
13 Strategy. The 2020 Mobile Source Strategy continued the  
14 multi-pollutant planning approach to determine the  
15 pathways forward for various mobile sectors that are  
16 necessary in order to achieve California's numerous goals  
17 and targets through 2050.

18 The 2020 Mobile Source Strategy is blueprint to  
19 address our climate, air quality, and community risk  
20 challenges. As for the SIP and Scoping Plan both are  
21 driving technology towards zero through the transition  
22 away from combustion. Additionally, it is important that  
23 CARB Board regulatory efforts support climate change, air  
24 quality, and community risk reduction goals.

25 --o0o--

1           AQPSD AIR POLLUTION SPECIALIST HICKS: As  
2 mentioned earlier, staff held the third workshop in  
3 conjunction with the release of the Draft 2022 Strategy  
4 two weeks ago. Staff presented a high-level overview of  
5 the Draft Strategy, then listened to input from  
6 stakeholders, solicited ideas, and answered any questions.

7                           --o0o--

8           AQPSD AIR POLLUTION SPECIALIST HICKS: Now, I  
9 would like to share the feedback we received from the  
10 workshop to help with today's discussion. First,  
11 stakeholders were thankful for staff adding two new  
12 measures, the Zero-Emission Trucks Measure and the  
13 Enhanced Regional Emissions Analysis in SIPs, and the  
14 significant emission reductions from the proposed in-use  
15 locomotive regulation may achieve.

16           The Zero-Emissions Trucks Measures targets the  
17 replacement of older trucks in order to increase the  
18 number of heavy-duty ZEVs as soon as possible. The  
19 Enhanced Regional Emissions Analysis in SIP's measures  
20 primary goal is to reduce on-road mobile vehicle emissions  
21 through vehicle miles traveled reductions. In -- the  
22 In-Use Locomotive Regulation which would accelerate the  
23 adoption of advanced cleaner technologies, including  
24 zero-emission technologies for locomotive operations.

25           Stakeholders also conveyed the importance of

1 reducing pesticides from commercial and agricultural  
2 operations, development of an Indirect Source Rule from --  
3 through a Suggested Control Measure or Regulation, and the  
4 need for best available control -- and the need for  
5 BACT/BARCT determinations.

6 --o0o--

7 AQPSD AIR POLLUTION SPECIALIST HICKS: So what  
8 are the next steps?

9 Through February, CARB is working on attaining  
10 feedback and ideas from today's February Board hearing.  
11 We also have a public comment docket open through March  
12 4th. CARB continues to work to identify the specific  
13 commitments needed for all nonattainment areas and nailing  
14 down the measures for the South Coast to attain 2037. In  
15 March, we plan to release the Draft Environmental Analysis  
16 for this Strategy and initiate a 45-day CEQA comment  
17 period. We will then release the proposed 2022 State SIP  
18 Strategy and bring it to our Board for consideration,  
19 along with the individual district SIPs this summer. And  
20 looking forward, staff will begin regulatory development  
21 and implementation from the proposed 2022 State SIP  
22 Strategy.

23 --o0o--

24 AQPSD AIR POLLUTION SPECIALIST HICKS: Thank you,  
25 Chair Randolph and members of the Board.

1 CHAIR RANDOLPH: Thank you. We will now hear  
2 from the members of the public who raised their hand to  
3 speak on this item. Board Clerk, would you please call  
4 the commenters.

5 BOARD CLERK ESTABROOK: Yes. Thank you, Chair.

6 We currently have 20 people with their hands  
7 raised to comment. If you wish to verbally comment on  
8 this item, please remember to raise your hand in Zoom or  
9 dial star nine, if you're calling in by phone. And if you  
10 would like to be giving your comment in Spanish, please  
11 remember to state so at the beginning of your comment and  
12 we will ask a interpreter to come and assist you, and you  
13 will be given twice the amount of time.

14 The first three speakers in the queue are David  
15 Moller, Daniel Barad, and a phone number ending in 528.

16 David, you can unmute and begin.

17 DAVID MOLLER: Good morning, Chair Randolph and  
18 Board members. My name is David Moller and I'm  
19 representing the Marin-Sonoma Building Electrification  
20 Squad, which is part of the Climate Reality Project. And  
21 I'd like to start by thanking the Air Resources Board and  
22 staff for all their work on developing the strategy.

23 I'd like to focus in on one specific area of the  
24 strategy, and that is cutting NOx emissions by required  
25 new space and water heaters to meet a zero-emission

1 standard by 2030 or ideally sooner than that. This is a  
2 critical and truly a landmark step in creating clean,  
3 all-electric housing that cuts NOx pollution and even more  
4 importantly cuts greenhouse gas emissions. As I'm sure  
5 you know, residential and commercial buildings account for  
6 nearly a quarter of California's greenhouse gas emissions  
7 and proactive building decarbonization is necessary to  
8 meet our goals.

9           It's critical to start the transition to Clean  
10 appliances as soon as possible to minimize cost and  
11 maximize benefits to the public health, the climate, the  
12 economy, and our clean air goals. It's going to take some  
13 time to carry this out, and the sooner we get started, the  
14 sooner we're going to get there. At the same time, we  
15 need to ensure all Californians, particularly low-income  
16 and environmental justice communities, have the financial  
17 support they need to make the transition.

18           All of this can be accomplished. We have the  
19 technology. We have the financial tools. All we need is  
20 the decision to get started and get started as soon as  
21 possible. I want to thank you for your leadership in  
22 advancing safe and healthy homes and buildings for  
23 Californians, and I want to urge you to move ahead as  
24 quickly as possible and ideally well before 2030 with this  
25 key element of the NOx Reduction Strategy.



1 Thank you very much.

2 BOARD CLERK ESTABROOK: Thank you.

3 Daniel Barad, you may unmute and begin.

4 DANIEL BARAD: Good morning, Chair and members.

5 Daniel Barad on behalf of Sierra Club California and our  
6 500,000 members and supporters statewide. Thank you for  
7 the presentation and for the opportunity to comment.

8 An effective SIP Strategy will need to rapidly  
9 transition the state away from fossil fuel use in every  
10 sector from passenger vehicles, to heavy-duty trucks, to  
11 our homes. We appreciate CARB's commitment to driving  
12 these sectors to zero emissions through electrification.  
13 CARB must stay bold in its current zero-emission proposals  
14 and regulations and continue to look for opportunities to  
15 drive down greenhouse gas pollution and toxic criteria  
16 emissions.

17 We'd especially like to thank CARB for advancing  
18 safer and cleaner homes and buildings in its Draft SIP.  
19 The proposal to require a hundred percent sales of new  
20 space and water heaters to meet a zero-emission standard  
21 by 2030 is a massive step towards cleaner housing that  
22 will slow the climate crisis and improve public health.  
23 This effort will require meaningful collaboration with  
24 stakeholders across the state.

25 As CARB has stated, these measures must be

1 developed carefully in a transparent, public process that  
2 is inclusive and centers environmental justice communities  
3 and voices.

4           We look forward to collaborating with CARB to  
5 create the strongest SIP possible. The SIP is our best  
6 opportunity to achieve federal air quality standards, slow  
7 the climate crisis and improve public health. CARB must  
8 be bold in pushing for zero-emission technologies and  
9 moving away from combustion wherever possible. Thank you  
10 again for the opportunity to comment.

11           BOARD CLERK ESTABROOK: Thank you.

12           Our next speaker will be a phone number ending in  
13 528. After that, we will hear from Teresa Bui, Sarah  
14 Moore, and Leah Louis-Prescott.

15           Phone number ending in 528, you'll hear a prompt  
16 to unmute and then you can do that and begin.

17           LAURA ROSENBERGER HAIDER: Hello. My name is  
18 Laura Rosenberger Haider. I support building  
19 decarbonization. A hundred percent of new space and water  
20 heaters should meet a zero-emission standard by 2025.  
21 However, I don't agree with your idea about setting a  
22 maximum and minimum temperature inside homes. That would  
23 shut down a quarter of the old homes in Fresno and have  
24 housing shortages, and increase vehicles miles traveled.

25           I'm so frustrated about my financial problems and

1 lack of money for food that I turn off my air conditioning  
2 and I turn off my heat. And I -- in the summer, I sit  
3 under a tree at 4 p.m. And if I build a new home, I don't  
4 want any air conditioning or heat until I can afford  
5 zero-emission electric appliances. Also, that's a good  
6 reason to reduce VOCs in materials like fiberboard. And  
7 my skin and nose is healthiest at close to outdoor  
8 temperatures.

9           And also, three other people I know in Fresno,  
10 they -- there's no way they can meet those temperature  
11 standards -- any temperature standards in their homes.  
12 Actually, it would be better to set a maximum fossil fuel  
13 use per home per person. And also cooking, and fast food,  
14 and restaurant emissions need to be regulated for NOx,  
15 because I know their PM2.5 is unsafe. And I feel sorry  
16 for the poor food worker employees.

17           All right. Thanks.

18           BOARD CLERK ESTABROOK: Thank you.

19           Teresa Bui, you can unmute and begin.

20           TERESA BUI: Great. Thank you. Hi. My name is  
21 Teresa Bui. I'm with Pacific Environment. We're an  
22 environmental non-profit group. Thank you to staff for  
23 all your hard work on this document and thank you for  
24 including a measure to get the oldest diesel trucks off  
25 the road. These trucks emit toxic diesel exhaust into our

1 communities, especially in low income communities of color  
2 and CARB's own modeling has shown that the emission  
3 reduction from such a measure would be huge, and we need  
4 those reductions in order to finally have healthy air.

5 Our communities need relief now, but the measure  
6 in the draft has an implementation date beginning in 2030.  
7 And so we would urge you to include in the final SIP an  
8 enforceable measure with these qualities and look forward  
9 to working with you all to make that a reality. On the  
10 shipping side, we strongly support CARB exploring an  
11 Indirect Source Rule. An ISR will allow the air district  
12 to target pollution more holistically, and by addressing  
13 goods movement by tackling some of the largest sources of  
14 toxic air pollution, such as ships.

15 And on the specific for OGVs, we would urge CARB  
16 to expand and then strengthen the At Berth Regulation to  
17 include bulk carrier vessels. These vessels comprise a  
18 majority of ships called to smaller ports, which are  
19 located adjacent to communities that already bear the  
20 brunt of air pollution and then strengthen and expand the  
21 OGV fuel standards to include PM2.5 and NOx. Since the  
22 adoption of the fuel sulfur standard, these regulations  
23 have helped reduce PMs and nitric oxides and have helped  
24 spur the adoption of global standards through the  
25 International Maritime Organization. So include -- adding

1 PM2.5 and NOx will help reduce health impacts to portside  
2 communities.

3           And then in terms of developing a maritime carbon  
4 fuel standard, we are urging CARB to consider all fuels on  
5 a life cycle basis from production, to processing, to the  
6 emissions from its use on board. This must include any  
7 leakage ships are venting from the way -- along the way.  
8 And we do have concerns over the use of liquefied natural  
9 gas maritime fuels. Many of today's LNG ships are worse  
10 than traditional ships that they replace, due to the  
11 methane slip.

12           And we think that going -- these requirements to  
13 get ships to go to zero-emission by 2040 is possible.  
14 We're seeing from the corporate side, you know, Amazon,  
15 Unilever, and Patagonia all committing a hundred percent  
16 zero carbon shipping by 2040, so we urge CARB to develop  
17 stringent and ambitious policy to ban fossil fuel ships  
18 from docking at California ports.

19           Thank you for listening.

20           BOARD CLERK ESTABROOK: Thank you.

21           Sarah Moore, you can unmute and begin.

22           SARAH MOORE: Hi. My name is Sarah Moore. I'm  
23 with the City of Berkeley's Office of Energy and  
24 Sustainable Development. I'm excited about many of the  
25 elements of the SIP. But like others, I'm calling

1 specifically in support of the inclusion of the  
2 development of a statewide zero-emission standards for  
3 space water heaters, and potentially other appliances to  
4 go into effect by 3020. As noted in the SIP, this will  
5 have both criteria pollutant benefits, as well as  
6 greenhouse gas reductions.

7 I think it's a great compliment to the all  
8 electric new construction requirements that Berkeley and  
9 over 50 other local governments have adopted in the last  
10 couple of years, as well as the appliance standards  
11 currently under development by the Bay Area Air Quality  
12 Management District.

13 So thank you for this inclusion in the SIP,  
14 including the noted coordination with State and regional  
15 agencies during an inclusive, transparent, public process.  
16 This CARB action to further drive heat pump adoption in  
17 both new and existing buildings clearly signals the market  
18 to manufacturers and installers, and most importantly will  
19 result in clear health benefits for all Californians.

20 Thank you.

21 BOARD CLERK ESTABROOK: Thank you.

22 Our next speaker will be Leah Louis-Prescott.  
23 After Leah will be Evelyn Loya, Jane Sellen, and then  
24 William Barrett. Leah, you can unmute and begin.

25 LEAH LOUIS-PRESCOTT: Good morning. This is Leah

1 Louis-Prescott, a Senior Associate in the Oakland office  
2 of RMI. Thank you, CARB, for your leadership in  
3 protecting air quality and health and especially for your  
4 commitment to decarbonizing the built environment.

5 I, too, support the Board's proposed statewide  
6 zero-emission standard for new space and water heaters and  
7 potentially other appliances by 2030. I urge the Board to  
8 pursue this landmark standard as quickly as possible while  
9 ensuring equitable implementation. California is  
10 struggling to meet its clean air goals. Eighty-five  
11 percent of Californians live in a county that is in  
12 nonattainment of federal standards for ozone or PM2.5, two  
13 pollutants formed by nitrogen oxides. This means most  
14 Californians live in communities where it is regularly  
15 unsafe to breathe.

16 Fossil fuel appliances are a big part of the  
17 problem. Fossil fuel appliances emit more nitrogen oxides  
18 in California's nonattainment counties than power plants,  
19 oil refineries, or cement plants. This pollution is also  
20 a public health problem contributing to asthma and other  
21 respiratory illnesses.

22 According to Harvard researchers, pollution from  
23 California's fossil fuel appliances accounted for over 460  
24 premature deaths in 2017, equivalent to over \$5 billion in  
25 health costs.

1           We cannot continue to rely on fossil fuel  
2 appliances when zero-emission electric alternatives are  
3 available and can be cost effective today in California.  
4 We need to set dates for all electric new construction and  
5 for zero-emission appliance replacements in existing  
6 buildings. The proposed standard for zero-emission  
7 appliances in the SIP is a critical step to align  
8 California's buildings with its air quality and climate  
9 goals to protect health and to help the State attain its  
10 National Ambient Air Quality Standards. It is essential  
11 that the standard for zero-emission appliances is paired  
12 with investments and policies that will secure an  
13 inclusive and affordable transition for low income and  
14 disadvantaged communities.

15           CARB should work closely with community  
16 organizations and other agencies to ensure that these  
17 communities are prioritized and protected in the  
18 transition. CARB should also begin developing this rule  
19 in coordination with these stakeholders as quickly as  
20 possible to leverage federal funding resources and advance  
21 federal policy during this Presidential administration.

22           CARB's zero-emission standard for space and water  
23 heaters is a first-of-its-kind policy that will serve as a  
24 leading example across the nation. Thank you again for  
25 advancing the transition to safe, healthy, non-polluting



1 buildings. We urge CARB to pursue this proposal and look  
2 forward to collaborating with you on this work.

3 Thank you again.

4 BOARD CLERK ESTABROOK: Thank you.

5 Evelyn Loya, you can unmute and begin.

6 EVELYN LOYA: Good morning, Chair Randolph, Board  
7 members, and staff. I'm Evelyn Loya and I'm speaking on  
8 behalf of Southern California Gas Company. I want to  
9 thank you for allowing me to provide comments on the 2022  
10 State SIP Strategy. California faces some of the toughest  
11 attainment issues for ozone and is on the front line for  
12 the effects of climate change. It is imperative that we  
13 keep the long-term strategy in mind and deploy strategies  
14 to reduce the GHGs and smog-forming pollutants  
15 immediately. The inclusivity of the 2022 State SIP  
16 Strategy from a high level seems to attempt to strike that  
17 balance. Any SIP Strategy must also include clean fuels  
18 and hydrogen infrastructure to help with immediate  
19 emission reductions.

20 By way of background in March 2021, SoCalGas  
21 announced ASPIRE 2045, a goal to achieve net zero GHG  
22 emissions by 2045, which matches the state's carbon  
23 neutrality goal. Our goal includes decarbonizing energy  
24 SoCalGas consumes, as well as energy SoCalGas delivers to  
25 our customers. Building on our climate commitments,

1 SoCalGas released its ASPIRE 2045 sustainability strategy  
2 in February of 2022, which identifies five key areas we  
3 will focus on at advance our sustainability goals, such as  
4 accelerating the transition to clean energy. We  
5 understand we play a vital role in providing  
6 infrastructure to support clean molecules, such as  
7 hydrogen.

8           On February 17th, we filed an application at the  
9 CPUC requesting approval to track costs related to the  
10 development of the Angeles Link. We are proposing to  
11 develop the largest green hydrogen energy infrastructure  
12 system in the U.S., which would drive deep decarbonization  
13 of dispatchable electric generation, hard-to-electrify  
14 industries, and heavy-duty transportation. The proposed  
15 Angeles Link would deliver green hydrogen in an amount  
16 equivalent to almost 25 percent of the natural gas  
17 SoCalGas delivers today and eliminate nearly 25,000 tons  
18 of smog-forming NOx and 14.3 million metric tons of carbon  
19 dioxide from the air annually, the equivalent of taking  
20 3.1 million cars off the road.

21           Lastly, at SoCalGas, we want to be part of the  
22 solution, and in doing so requires us to act. I'm happy  
23 to announce that SoCalGas is in the process of  
24 transitioning our transportation fleet to 100 percent  
25 zero-emission vehicles by 2035. As of today, we have

1 taken ownership of 50 Toyota Mirai. We are wholeheartedly  
2 committed to a collective, collaborative transition to  
3 cleaner energy, and believe that our strategy will help  
4 guide us on doing our part in decarbonizing the energy  
5 sector. Thank you again for the opportunity to provide  
6 comments this morning.

7 BOARD CLERK ESTABROOK: Thank you.

8 Jane Sellen, you may unmute and begin.

9 JANE SELLEN: Hi, Madam Chair, members of the  
10 Board and staff. Thank you for the opportunity to  
11 comment. I'm Jane Sellen with Californians for pesticide  
12 reform. On behalf of our statewide coalition of 200 plus  
13 organizations, I urge you to direct CARB staff to include  
14 pesticide ROG emission reduction measures within the scope  
15 of the SIP plan. It's simply not enough as we heard at  
16 CARB's February 10th hearing to rely on DPR's willingness  
17 to reduce emissions via regulation unless and until the  
18 Department of Pesticide Regulation is appropriately --  
19 appropriately at the table and bound by target-setting  
20 initiatives such as the SIP.

21 At the February 10th hearing, DPR's upcoming  
22 regulation of the toxic air contaminant fumigant pesticide  
23 1,3-dichloropropene was implicitly cited as evidence of  
24 DPR's commitment to reducing these emissions, but that's a  
25 mischaracterization of what DPR is actually doing. They

1 regulating this single pesticide, because they're under  
2 court order to do so. And four years after the court  
3 judgment, they have still not produced a draft regulation  
4 in spite of a one-year deadline imposed by the court in  
5 2018.

6           The reality is DPR is not currently structured to  
7 proactively reduce emissions as needed to address the  
8 severe pollution in the San Joaquin Valley Air Basin,  
9 which, as you said, is one of only two extreme  
10 nonattainment air basins in the nation and also the basin  
11 with the heaviest use of agricultural pesticides.

12           It's therefore imperative that binding pesticide  
13 emission reduction targets be established and that CARB  
14 work with DPR on the regulatory structure to attain them.  
15 According to CalEPA research, pesticides are the pollutant  
16 with the greatest racial disparity and impact, but they're  
17 also one emission type over which the State clearly does  
18 have regulatory authority. With federally regulated  
19 emissions now surpassing those regulations by the state,  
20 the state must take every available opportunity to reduce  
21 emissions that are within their authority.

22           CARB can and must include measures to transition  
23 California agriculture away from polluting practices in  
24 order to achieve attainment in California's most impacted  
25 air basins. Please direct staff to require CARB to work

1 with DPR to create the regulatory structure, to achieve a  
2 target of reducing pesticide emissions by 75 percent of  
3 2020 levels by 2037, and to model pesticides contributions  
4 to ROG emissions and their contribution to ground level  
5 ozone.

6 Thank you.

7 BOARD CLERK ESTABROOK: Thank you.

8 CHAIR RANDOLPH: I will just note that if you  
9 want to speak on this item, go ahead and raise your hand  
10 or dial star nine now. I'm going to be closing the queue  
11 in five minutes. And so, if you need to speak, do it --  
12 raise your hand or dial star nine within the next five  
13 minutes.

14 Thanks.

15 BOARD CLERK ESTABROOK: Thank you.

16 Our next speaker is going to be William Barrett.  
17 After William will be Bill Magavern, Sarah Rees, and then  
18 Ray Pingle.

19 Will, you can unmute and begin.

20 WILL BARRETT: Thank you. I'm Will Barrett with  
21 the American Lung Association. Appreciate the opportunity  
22 so speak this morning. We view the SIP as a critical  
23 opportunity to build on past successes and really elevate  
24 new strategies to reduce the health consequences of poor  
25 air quality in California. We appreciate the overall

1 approach to the Draft 2022 SIP to accelerate the  
2 transition to zero-emission technologies, to eliminate the  
3 impacts of legacy combustion fleets and really ensure  
4 meaningful transitions to alternative transportation modes  
5 to protect and improve health.

6 We feel that Draft SIP really provides strong  
7 elements that will advance these goals and do appreciate  
8 the presentation to that effect today.

9 Further, we wanted to note that the draft SIP was  
10 informed by robust public input including a truck  
11 retirement recommendation, supported by clean air, health  
12 and medical organizations, to address the health and  
13 equity burdens posed by legacy diesel truck fleets. The  
14 Board had a robust discussion about the need to address  
15 truck retirement and useful life within the mobile sources  
16 strategy, a conversation that you all had last fall.

17 While it wasn't included in the Mobile Source  
18 Strategy, this could be one of the most health protective  
19 NOx reduction SIP measures taken by the Board in the  
20 coming years, and we think it should be in place by 2028  
21 at the latest. So we definitely appreciate that the Board  
22 is looking to develop new tools and authorities to advance  
23 fleet turnover and look forward to working with the Board  
24 and the staff on this, but again wanted to just stress  
25 that this really must be an enforceable SIP measure that

1 can rely on current authority that the Board holds.

2 We also wanted to note our support for the  
3 ongoing effort to develop the Advanced Clean Fleets and  
4 Advanced Clean Cars rules and believe that each of those  
5 rules must be as strong as possible in the early years to  
6 accelerate the complete transition to zero-emission sales  
7 of cars and trucks to benefit all California communities.

8 On the issue of vehicle miles traveled, we really  
9 feel strongly that enforceable measures must be included  
10 in the SIP. We look forward to working with the Board on  
11 the measures that are under the Enhanced Regional Measures  
12 Category that were discussed in the presentation, and we  
13 just know that we have to make significant progress on the  
14 VMT issue to make sure we're meeting our air pollution  
15 standards.

16 Off-road, we look at the Locomotives Program as  
17 crucial to protecting health and addressing environmental  
18 justice. The proposed framework for idling reduction,  
19 in-use emission standards, and investments in  
20 zero-emission technology acceleration, those are all very  
21 much something we look forward to working on with the  
22 Board and staff.

23 We also look forward to the all electric  
24 appliance standard as well as the consumer product  
25 policies that were outlined in the draft SIP.

1           On the federal side just quickly. We're eagerly  
2 anticipating the federal rulemaking to complement  
3 California's lifesaving low NOx truck standard, and  
4 believe that that policy really must match the stringency  
5 and durability requirements of the California policies  
6 that this Board adopted in 2020.

7           So in closing, we look forward to working with  
8 the staff, with the air districts, and with U.S. EPA to  
9 really advance clean air for all Californians. And thank  
10 you again for the opportunity to speak.

11           Thank you.

12           BOARD CLERK ESTABROOK: Thank you.

13           Bill Magavern, you can unmute and begin.

14           BILL MAGAVERN: Thank you. Good morning again.  
15 Bill Magavern with the Coalition for Clean Air. I thought  
16 the presentation was excellent. There's so many issues  
17 raised here and I will touch on some of them.

18           First, and I echo Will Barrett's comments, we  
19 appreciate that this draft includes a measure responding  
20 to our proposal to retire old trucks and the end of their  
21 useful lives. This is crucial to achieving the NOx  
22 reductions we need to defeat smog in the State of  
23 California. And I would say there are a couple elements  
24 that need to be filled in in this proposal. One is that  
25 implementation should start no later than 2028 when the



1 2010 trucks reach the end of their useful lives at the  
2 very latest.

3           And secondly, although we agree it would be  
4 helpful for the Legislature to provide additional  
5 authority to help retire old trucks, CARB needs to make a  
6 commitment to act whether or not the Legislature does that  
7 and needs to attach a NOx reduction number, the same as  
8 the other measures here have, and to use its existing  
9 authority.

10           Second, when it comes to light-duty vehicles,  
11 there needs to be an Advanced Clean Cars II standard that  
12 does most of the work of electrifying all of our new sales  
13 by 2030, because the urgency of the air pollution crisis  
14 and the climate crisis. We would also suggest looking at  
15 ways to weed out and retire the gross polluters that are a  
16 small percentage of the cars on the road and make up a  
17 large percentage of the pollution, and also looking beyond  
18 the Clean Miles Standard to additional fleets that could  
19 reach zero emissions earlier than the overall standards  
20 do. We'll support the proposed motorcycle standard and  
21 also think that it's very important to take actions to  
22 reduce vehicle miles traveled, an area that's often  
23 overlooked.

24           When it comes to off-road measures, we very much  
25 agree that the federal government needs to be doing much

1 more than it is and join CARB in calling for that. We  
2 also appreciate that CARB is proposing to act within its  
3 own authority to reduce emissions from locomotives and  
4 ocean-going vessels as they are growing sources of  
5 pollution.

6 And then looking to additional measures, we agree  
7 with other commenters who have suggested measures to  
8 reduce emissions from pesticides. Indirect Source Review  
9 rules we think are crucial. And we need to do better with  
10 best available control technology and BARCT determinations  
11 to continue reducing emissions from stationary sources.

12 Thank you for listening to our views.

13 BOARD CLERK ESTABROOK: Thank you.

14 Sarah Rees, you may unmute and begin.

15 DR. SARAH REES: Good morning. My name is Sarah  
16 Rees and I'm the Deputy Executive Officer for Planning for  
17 South Coast Air Quality Management District. We  
18 appreciate the ongoing collaboration of our two agencies  
19 to address attainment of federal and State air quality  
20 standards. There has been and will continue to be deep  
21 coordination between the staff of both agencies in  
22 developing a coordinated plan of action to bring clean air  
23 to our state and region.

24 As you know, South Coast is particularly affected  
25 by ozone pollution with the highest ozone levels in the

1 nation. And our region is home to two-thirds of  
2 environmental justice populations in the State. A  
3 coordinated approach is important given the substantial  
4 magnitude of emission reductions needed to attain the  
5 standard in 2037, about a 73 percent reduction in NOx  
6 beyond baseline for our region. This will require a  
7 transition to zero-emissions technology across all sectors  
8 and deploying low and ultra low NOx technologies where  
9 zero-emission technologies are not feasible.

10           While plans are still under development, we  
11 foresee three important areas of focus to raise now.  
12 First, like air quality standards with early attainment  
13 dates, this standard requires significant federal action,  
14 which has been lacking for the past decade. It will be  
15 impossible for us to attain any of the federal ozone  
16 standards lacking action on sources subject to federal  
17 control. We need substantial help from many levels of  
18 federal government, including multiple agencies, Congress,  
19 and The White House.

20           Second, the pathway to achieve the standard is  
21 important, given the looming deadlines for other standards  
22 that we face in 2023 and 2031. While there is a little  
23 more time to reach the goals in 2037 for the State SIP  
24 Strategy or beyond the Scoping Plan, we cannot sit and  
25 wait for zero-emission technology. We must implement

1 commercially ready technologies as they become available  
2 along the pathway.

3           A transition to zero-emissions requires  
4 significant coordination across many agencies at the State  
5 level, in particular on fueling and charging  
6 infrastructure. This coordination must occur beyond  
7 anyone individual regulation, but instead at a higher  
8 holistic level to ensure that zero-emission available at  
9 scale, reliably, and affordably. CARB must play a central  
10 role with State agencies to ensure that zero emissions  
11 infrastructure will be available at scale well beyond the  
12 roughly two percent of light-duty vehicles on the road  
13 today.

14           Thank you for the opportunity to testify this  
15 morning.

16           BOARD CLERK ESTABROOK: Thank you.

17           And just a reminder, as the Chair mentioned, the  
18 comment list is currently closed.

19           Our next speaker is going to be Ray Pingle.  
20 After Ray will be Cynthia Pinto-Cabrera, Ryan Kenny, and  
21 then Igor Tregub.

22           Ray, you may unmute and begin.

23           RAY PINGLE: Good morning, all. My name is Ray  
24 Pingle. I'm with Sierra Club California.

25           We would first like to express our appreciation

1 to CARB for creating the Zero-Emissions Trucks Measure as  
2 part of the SIP. The combined effect of the Advanced  
3 Clean Trucks and proposed Advanced Clean Fleet rules will  
4 only result in about 50 percent of California's expected  
5 two million trucks by 2045 being ZEVs. That means one  
6 million polluting medium-, heavy-duty vehicles would still  
7 be on California roads in 2045 when vehicles everywhere  
8 feasible are supposed to be and need to be zero-emission.

9 The proposed ZE Trucks Measure acknowledges this  
10 huge gap and seeks to close it. We very much support the  
11 objectives of this measure. The measure seeks to give  
12 CARB additional authorities to enable new tools such as  
13 differentiated registration fees, and implementation of  
14 Indirect Source Rules statewide. However, whether these  
15 new authorities are achieved in the Legislature or not,  
16 CARB should move forward with authorities it has now.

17 CARB currently has the authority to implement a  
18 requirement for the retirement of medium-, heavy-duty  
19 vehicles when they hit their SB 1 minimum lifetime of 18  
20 years or 800,000 miles.

21 CARB staff ran a scenario where California trucks  
22 were replaced with ZE trucks at the end of their useful  
23 life. NOx emission reductions were 33 tons per day in  
24 2031 for 140,000 vehicles. This would be nearly 40  
25 percent more than what the Advanced Clean Fleet --

1 Advanced Clean Trucks and Heavy-Duty Omnibus rules  
2 together would accomplish. Old truck retirement will have  
3 a huge impact on emissions reduction.

4 We strongly recommend that CARB add enforceable  
5 truck retirement language in this measure. By including  
6 this objective now, it will send a strong signal  
7 disincentivizing the continuing purchase of new ICE  
8 vehicles while increasing the replacement of retiring ICE  
9 vehicles with ZEVs.

10 Finally, since medium-, heavy-duty vehicles will  
11 start hitting their SB 1 18-year max beginning in 2028, we  
12 highly recommend that this proposal begin in 2028 instead  
13 of being delayed until 2030.

14 Thank you very much.

15 BOARD CLERK ESTABROOK: Thank you.

16 Cynthia Pinto-Cabrera, you may unmute and begin.

17 CYNTHIA PINTO-CABRERA: Good morning, Chair Liane  
18 and members of the Board. Cynthia Pinto-Cabrera again  
19 with the Central Valley Air Quality Coalition.

20 The ozone State Implementation Plan is an  
21 important component for achieving clean air in the San  
22 Joaquin Valley, one of the nation's most polluted air  
23 basins for ozone. The San Joaquin Valley has the highest  
24 asthma rates in the state with half of the eight valley  
25 counties falling between the 50th and 74th percentile for

1 lifetime asthma prevalence for all ages, and the rest of  
2 the valley falling above the 75th percentile for asthma  
3 prevalence, according to the California Department of  
4 Health -- Public Health.

5 All San Joaquin Valley residents breathe some of  
6 the nation's dirtiest air with three valley cities ranking  
7 among the top five most polluted cities in the annual  
8 American Lung Association report for ozone pollution.

9 Overburdened communities continuously endure  
10 higher exposure rates plus experience more social  
11 vulnerabilities such as lack of access to affordable  
12 health care and housing. This combination of  
13 vulnerabilities has driven the San Joaquin Valley into a  
14 public health crisis. The valley needs immediate  
15 protections and near-term reductions.

16 We support the adoption of the -- of a strong  
17 statewide Indirect Source Rule, support the proposed  
18 requirement that 100 percent of appliance sales be zero  
19 emission starting in 2030. But we also request that  
20 pesticides and fertilizers also be included in this plan  
21 and that CARB should support alternative management  
22 practices instead of dairy digesters. Emissions and other  
23 impacts from mega dairies are a significant concern in EJ  
24 communities throughout the San Joaquin Valley.

25 Lastly, we also request that CARB enforcement of

1 Best Available Control Technologies and Best Available  
2 Retrofit Control Technologies be implemented and enforced  
3 at the oldest and largest stationary sources with a  
4 priority for environmental justice communities in  
5 nonattainment areas.

6 CARB must adopt and enforce strong measures in  
7 the statewide ozone plan while addressing community  
8 concerns and clinging to largest and oldest pollution  
9 sources.

10 Thank you.

11 BOARD CLERK ESTABROOK: Thank you. Ryan Kenny,  
12 you may unmute and begin.

13 RYAN KENNY: Yes. Good morning, Chair Randolph,  
14 members of the Board. My name is Ryan Kenny with Clean  
15 Energy. We are the nation's largest provider of renewable  
16 natural gas transportation fuel. It is the only fuel  
17 under the LCFS that on average is carbon negative. I want  
18 to point out in our view that the presentation this  
19 morning there is a significant disconnect between the  
20 staff presentation portraying this being a daunting air  
21 quality challenge and the measures focused on 2037 and the  
22 goals focused on 2037 attainment.

23 If there is an air quality challenge that is  
24 daunting, this SIP does not include a near-term emission  
25 reduction strategy only long term. If you go to



1 heavy-duty transportation within the SIP document, NOx is  
2 the -- or heavy-duty transportation is the single most  
3 emitter of NOx, yet there's only two measures focused on  
4 heavy-duty transportation.

5 One is Advanced Clean Fleets, where it's not  
6 really expected to produce enough on-road heavy-duty ZEVs  
7 until around year 2032. And the other measure is the  
8 Zero-Emission Truck Measure, which won't be heard by the  
9 Board until the year 2025.

10 There's also an overreliance on the unknown and  
11 uncertain federal actions and there's also an assumption  
12 that tens of billions of dollars will be made available  
13 for heavy-duty ZEV infrastructure. So you have no  
14 near-term emission reduction strategy, no use of low-NOx  
15 trucks, and operated on carbon negative fuel, and really  
16 measures that are really far into the future to achieve a  
17 lot of the emission reductions.

18 I also want to mention that there has been some  
19 talk recently about relying on CALSTART's ZETI tool for  
20 the commercial readiness status of heavy-duty ZEVs, but  
21 that is a deeply flawed tool. If you -- there's a  
22 disconnect between a company's logo appearing on the tool  
23 page and the vehicle being commercially ready as defined  
24 by available for immediate production based on orders.

25 If you click on North America and heavy-duty

1 truck category, the tool highlights 14 manufacturers that  
2 supposedly are producing heavy-duty ZEVs, but only two are  
3 currently producing electric trucks, BYD and Volvo. So we  
4 believe that heavy-duty ZEVs are not close to being  
5 commercially ready and we encourage the Board to ask  
6 questions today and ask why the near-term emission  
7 reductions strategy is not included.

8 This really is not about zero versus near-zero.  
9 This SIP, as it's in print right now, is more pro-diesel,  
10 because it's really about zero versus diesel at this  
11 point, because heavy-duty ZEVs are not commercially ready.

12 Thank you for your time.

13 BOARD CLERK ESTABROOK: Thank you.

14 Our next speaker is going to be Igor Tregub. And  
15 Igor will be Kevin Hamilton, David Asti, and David  
16 Rothbart.

17 Igor, you can unmute and begin.

18 IGOR TREGUB: Thank you so much, members of the  
19 Board. This is Igor Tregub. For identification purposes,  
20 I'm the Chair of the California Democratic Party  
21 Environmental Caucus, but speaking as an individual.

22 I'd like to join with many of the commenters  
23 today to thank your Board and your staff for all your work  
24 on this plan and for your leadership in advancing safe and  
25 healthy homes and buildings for Californians.

1           As you know, residential and commercial buildings  
2 account for nearly a quarter of GHG emissions and  
3 proactive building decarb efforts are necessary to meet  
4 our climate goals. The aim of these proposals to require  
5 100 percent of sales of new space and water heaters to  
6 meet a zero-emission standard by 2040 is a landmark step  
7 in creating clean all-electric housing that cuts GHG  
8 emissions and NOx pollution.

9           I'm very proud of talking about this proposal to  
10 other colleagues of mine in other states that are looking  
11 to us as a model.

12           It's critical that we start the transition to  
13 clean appliances as soon as possible to minimize the costs  
14 and maximize benefits to public health, the climate, the  
15 economy, and our clean air goals while ensuring that all  
16 Californians, particularly low income and environmental  
17 justice communities have the financial resources that they  
18 need to make that transition.

19           While the climate crisis calls for this bold  
20 action, we'd also like to acknowledge that such an effort  
21 will require meaningful collaboration with stakeholders  
22 across the state. And therefore, I agree with CARB that  
23 such measures would need to be developed carefully through  
24 a full community engagement and public process that's  
25 transparent, inclusive, and community centered.

1 I urge CARB to work with public and private  
2 stakeholders on a comprehensive roadmap that would lay out  
3 the complementary policies needed to equitably decarbonize  
4 our state's new and existing buildings and that the  
5 transition prioritizes environmental justice communities.

6 I also just want to recognize the importance of  
7 uplifting leadership from local and regional work that  
8 community organizations, local governments, like the folks  
9 you've heard today, and local air districts are currently  
10 leading. It will be important to ensure that there's  
11 coordination between the local and regional work happening  
12 and a broader statewide effort to provide the support  
13 necessary for this transition to be truly just and  
14 equitable.

15 And so I look forward to continued collaboration  
16 with CARB on these issues.

17 Thank you so much.

18 BOARD CLERK ESTABROOK: Thank you.

19 Kevin Hamilton. Kevin, you can unmute and begin.

20 KEVIN HAMILTON: Good morning, members of the  
21 Board and staff. Thank you for this opportunity to speak  
22 today. I do want to thank you for including a measure to  
23 get these oldest trucks off the road. These trucks are  
24 emitting toxic diesel exhaust into our communities in the  
25 San Joaquin Valley, where I work as leader of the Central

1 California Asthma Collaborative.

2 As was mentioned by my colleague Cynthia  
3 Pinto-Cabrera, asthma rates in the valley are not only  
4 the -- some of the highest in the state, but they're  
5 continuing to climb. I also want to echo my colleague  
6 Will Barrett's comments on public health and Jane Sellen's  
7 comments regarding ROGs in pesticides which we believe are  
8 underrepresented in the existing ROG inventory. And that  
9 needs to be looked at again. If that source is much  
10 higher, and we all believe that it is, we need to have  
11 that in the inventory and treat it just like we do any  
12 other emission of that type that's feeding into our  
13 problem with ozone.

14 I also want to call to the carpet so to speak the  
15 idea that the San Joaquin is somehow we've made it. You  
16 know, we can now focus on South Coast. That may have not  
17 have been the intention of staff in this presentation but  
18 it certainly felt that way.

19 The valley has by no means got an easy pathway to  
20 meeting the 70 ppb standard, which, by the way, as we all  
21 know, will not be the last standard to come from EPA and  
22 we still need CARB's assistance on both ozone, PM2.5, in  
23 addressing the toxic diesel impacts in our community. We  
24 absolutely must have this help from CARB on these mobile  
25 sources.

1           The idea of implementation dates for these  
2 programs not being the earliest possible is ludicrous to  
3 us. The biggest part of the truck problem in the valley  
4 is older trucks. And with the confusion created by SB 1,  
5 we're not really seeing how we manage to hit the targets  
6 even at the levels that staff have already suggested. And  
7 we'd like staff to specifically demonstrate how this ACF  
8 intersects with SB 1 limitations, so we know exactly how  
9 many of these trucks we're going to see leave the road.

10           As it stands, and if the measure doesn't trigger  
11 until 2040, 2045, we could see these old trucks still on  
12 the road in -- or at least combustion trucks on the road  
13 in 2058, and I don't think anybody wants to see that.

14           So moving that date up to 2028 for implementation  
15 is high -- is totally within your purview and has to be  
16 taken. So I want to thank you for being here today and  
17 doing what you do.

18           BOARD CLERK ESTABROOK: Thank you.

19           David Asti, you can unmute and begin.

20           DAVID ASTI: Thank you. Can you hear me?

21           BOARD CLERK ESTABROOK: Yes, we can.

22           DAVID ASTI: Okay excellent. Good morning, Chair  
23 Randolph and members of the Board and staff members. My  
24 name is David Asti. And on behalf of Southern California  
25 Edison, I thank you for this opportunity to provide

1 comments.

2 I would first like to state though that I  
3 anticipate touching on topics that are relating to the  
4 building electrification, which is an open rate setting  
5 proceeding at the CPUC. If there are decision-makers at  
6 the CPUC on here please let me know at the conclusion of  
7 my presentation, so that SCE can take the appropriate  
8 steps to comply with the ex parte rules governing  
9 conference presentations like this one. SCE looks forward  
10 to its continued partnership with CARB and stakeholders in  
11 the development of both the Scoping Plan and the SIP  
12 Strategy. To that end today, we offer three  
13 recommendations to advance our state goals.

14 But first I want to start by acknowledging CARB  
15 staff and the other State agencies for their efforts to  
16 coordinate activities to better inform both initiatives.

17 Although the goals are different by design, we  
18 benefit by aligning the information and the measures  
19 proposed by both initiatives. This way, stricter emission  
20 standards for transportation, appliances, buildings can  
21 have cumulative impacts on both climate and local  
22 pollution increasing even more the benefits for our state  
23 and our local communities.

24 California's ambitious decarbonization goals are  
25 less than eight years away from the 2030 milestone, and the

1 electrification of space and water heating in buildings  
2 has been identified as one of the most readily achievable  
3 pathways to GHG emission reductions and minimizing indoor  
4 pollution.

5           Building electrification is a critical component  
6 of reaching California's decarbonization targets as many  
7 studies across the State agencies agree. The Energy  
8 Commission's AB 3232 Building decarbonization assessment  
9 demonstrated that buildings would require aggressive  
10 decarbonization efforts to achieve a 40 percent reduction  
11 by 2030. And even its most aggressive building  
12 electrification scenario would be challenged in  
13 sufficiently supporting the achievement of the 2045 carbon  
14 neutrality target.

15           At the same time, the State can accelerate these  
16 climate goals to ensure ambient air quality standards are  
17 attained to reduce air pollution that harms public health  
18 in California.

19           For instance, the draft 2022 SIP strategy  
20 suggests that CARB could propose additional emission  
21 standards for appliance combustion sources used in  
22 buildings making 100 percent of the stoves and furnaces be  
23 zero emissions in buildings for these zero-emission  
24 appliances. This level of action coincides with the  
25 recently released Integrated Energy Policy Report, or the



1 IEPR, by the CEC which recommends a goal of installing at  
2 least six million electric heat pumps statewide by 2030.

3 We have success stories here, but in the  
4 interests of time, I won't go into those today. I will  
5 just say that additional near-term programs and long-term  
6 policies are still needed to achieve the necessary rapid  
7 move to heat pumps, specifically SCE recommends that CARB  
8 includes these three recommendations in the Scoping Plan  
9 update and the SIP Strategy, one set an equitable -- a  
10 quantifiable rather, electric heat pump target, two  
11 eliminate fossil fuels from new buildings and set  
12 performance based standards to phase out fossil fuel  
13 appliances in existing buildings, and three, dedicate  
14 funds through 2030 to efficient building electrification,  
15 including appliance incentives, infrastructure funding  
16 similar to that in the transportation electrification  
17 levels.

18 Thank you very much.

19 BOARD CLERK ESTABROOK: Thank you.

20 Our next speaker will be David Rothbart. After  
21 David will be Sean Edgar, Mark Rose, and a phone number  
22 ending in 444.

23 David, you may unmute and begin.

24 DAVID ROTHBART: Good morning.

25 This is David Rothbart with, the Air Quality

1 Committee Chair for the Southern California Alliance of  
2 Publicly Owned Treatment Works, appreciate the opportunity  
3 to provide comments. I just really wanted to highlight  
4 kind of the purpose of the SIP. I want to go back to the  
5 2016 AQMP that South Coast remitted and was approved by  
6 CARB. And in that document it's a roadmap saying how  
7 we're going to comply with the Clean Air Act. I mean,  
8 that's essentially what we're trying to do here in the SIP  
9 is identify how to comply with the Clean Air Act. The  
10 Clean Air Act isn't a set of goals. They're a set of  
11 requirements we have to reach attainment by a specified  
12 date. The 2016 AQMP set forth how to get to the 2023  
13 standard in South Coast.

14 That's not going to be achieved based on CARB  
15 staff's statements that something is not going to happen.  
16 I do want to highlight that there are penalties specified  
17 in the Clean Air Act when you don't achieve attainment.  
18 And those will include withdrawing of federal highway  
19 funding, penalties upon stationary sources, and a number  
20 of other, you know, unintended consequences. The problem  
21 is the mobile sources, the diesel trucks on the road, and  
22 we need to get those off the road as quickly as possible.

23 While we agree that getting electric vehicles on  
24 the road quickly is a great idea, it's not going to happen  
25 soon enough for attainment purposes. The dilemma my

1 members have that we operate wastewater treatment plants,  
2 we -- people flush their toilets. We need to manage the  
3 gas that is generated from that. This renewable  
4 carbon-neutral gas needs to be utilized in a way that's  
5 productive. And at the moment there isn't really a  
6 thought process of what to do with this gas. We're  
7 talking about electrification, but yet there is no home  
8 for this gas and it could be used immediately, not 20, 30  
9 years down the road. It could be used immediately to  
10 achieve attainment and to meet our climate change goals.

11 So I really would like to offer again to work  
12 with CARB staff and other agencies to figure out how we  
13 can use this gas, get to attainment as quickly as  
14 possible, get diesel trucks off the road, and achieve all  
15 our mutual goals together and comply with the Clean Air  
16 Act.

17 Thank you very much.

18 BOARD CLERK ESTABROOK: Thank you.

19 Sean Edgar, you can unmute and begin.

20 SEAN EDGAR: Good morning. Can you hear me now?

21 BOARD CLERK ESTABROOK: Yes, we can.

22 SEAN EDGAR: Great. Thank you. I'm speaking to  
23 you this morning on behalf of the Western States Trucking  
24 Association. WSTA is the nation's oldest independent  
25 non-profit trucking association representing over 1,000

1 motor carriers, with another 5,000 allied motor carriers  
2 primarily operating on the west coast. I'll be highlight  
3 points in our written testimony that has been posted to  
4 the comment log. I'll be speaking about the Advanced  
5 Clean Fleets proposal and the proposed Zero-Emission Truck  
6 Measure, neither of which we believe are feasible for the  
7 trucking industry in general and WSTA members in  
8 particular.

9 Both measures of effectively punish small  
10 businesses that have already invested as part of the \$5  
11 billion investment that the Board required under the  
12 statewide Truck and Bus Regulation and should be removed  
13 from the SIP document dated January 31st, 2022. We are  
14 delivering emissions reductions every day through huge  
15 investments, now including RNG low-NOx trucks, which are  
16 being ignored in the current SIP.

17 Following up on the prior speaker, mapping out a  
18 strategy for 27 -- 2037 and later, using infeasible  
19 measures is not really wise as part of this document. We  
20 offer specific comments on the Zero-Emission Truck Measure  
21 on three elements. And then I'll turn to the ACF  
22 proposal.

23 First, the Draft SIP Strategy language talks  
24 about quote restrictions or fees for combustion trucks and  
25 quote, "The dirtiest trucks would be assessed higher fees

1 to enter low-emission zones". Our response is that this  
2 would restrict interstate commerce and our member's  
3 ability to support critical infrastructure construction in  
4 the State.

5 Second, Indirect Source Rules to establish  
6 zero-emission zones by 2035 is stated in the draft  
7 language. We do not support programs that shift  
8 additional burden on our members who are struggling to  
9 comply with existing regulations.

10 Third, and finally on this matter, eventually  
11 only zero-emission vehicles would be allowed to enter  
12 these zones under the Zero-Emission Truck Measure, and  
13 restricting the service areas of legally purchased vehicle  
14 interferes with interstate commerce and the routes,  
15 prices, and service of our motor carrier members. In  
16 conclusion, we object to that provision being included in  
17 the SIP.

18 In wrapping up my testimony today, I'll just  
19 borrow that just this past week the Senate Committee on  
20 Transportation observed that quote, "A single fast charger  
21 for a truck will draw the same electricity as 200 homes  
22 and could go higher. Adding a charging depot of 10 to  
23 20 -- 10 or 20 chargers will be like adding a small city",  
24 closed quote.

25 It is apparent to us that the State has once

1 again put the cart before the horse in the proposed  
2 commitment it is making in this bold vision for electric  
3 vehicles. To support the vision, landowners are committed  
4 to break ground and support ZEV infrastructure  
5 installation in the absence of a full Environmental  
6 Analysis and the impacts of those projects. We believe  
7 that this is incomprehensible that the Draft State  
8 Strategy and State could commit itself to hundreds of  
9 thousands of projects without environmental review.

10 Thank you.

11 BOARD CLERK ESTABROOK: Thank you.

12 Mark Rose, you may unmute and begin.

13 MARK ROSE: Good morning, Madam Chair and members  
14 of the Board. I thank you for this opportunity to  
15 comment. My name is Mark Rose and I'm the Sierra Nevada  
16 Program Manager for National Parks Conservation  
17 Association.

18 I first want to thank staff for their work on  
19 drafting up the strategy and openness to exploring new  
20 reduction strategies. MPCA recognizes the immense  
21 challenges ahead in reducing ozone pollution in the State,  
22 especially in the South Coast and San Joaquin Valley and  
23 hope that this challenge is met with equally ambitious  
24 planning and implementation by CARB, relevant air  
25 districts, and the federal government. At a high level,

1 to meet this attainment in 2037, we need an  
2 all-of-the-above strategy, which includes most, if not  
3 all, of the measures identified by CARB and more.

4           Given California's ongoing failure to meet  
5 numerous existing max standards for both ozone and PM2.5,  
6 some of which date back as far as 25 years ago, as well as  
7 the immense need to reduce State greenhouse gas emissions,  
8 we strongly urge you to move as quickly as possible on  
9 future control measures and set strong near-term  
10 milestones to be met in the interim.

11           We also urge you to provide more specifics on  
12 control measures on the table instead of relying so  
13 heavily on so-called aggregate commitments, which as seen  
14 in numerous existing SIPs, far too often amount to failed  
15 promises to explore additional measures in the future only  
16 if they are convenient and not overly burdensome to  
17 industry. We must also do more to recognize and account  
18 for the role of a warming climate and the role that it  
19 will play in increasing formation of ozone in future  
20 years.

21           As it relates to specific sources, NPCA strong  
22 supports efforts to reduce emissions from the  
23 transportation sector, especially the phaseout of the  
24 oldest, dirtiest trucks that have seeked their useful  
25 life.

1           That said, CARB's Draft Strategy for this  
2 category is far too big, particularly when it comes to  
3 CARB's authority. Moreover, the implementation date is  
4 too late and should begin no later than 2028.

5           Similarly, we support CARB's effort to develop  
6 model Indirect Source Review regulations for air  
7 districts, but urge you to use your authority to force  
8 their implementation immediately in regions such as the  
9 San Joaquin Valley, where current ISR regulations remain  
10 less stringent than rules in other districts. As it  
11 relates to the agricultural sector, we are happy to see  
12 pesticides recognized as a source of ROGs and we're -- and  
13 encourage new controls for them. Unfortunately, other  
14 sources of agriculture emissions were left out of this  
15 draft strategy including ROGs from sources like dairy and  
16 CAFOs and man-made NOx pollution from soil.

17           The potential of reducing soil NOx remains an  
18 untapped -- untapped control due to CARB's erroneous  
19 emissions inventories, which count 100 percent of all  
20 current NOx emissions from soils as natural, despite the  
21 many tons of nitrogen based fertilizers and other  
22 petrochemicals applied to California's fields each year.

23           Finally, for stationary sources, we strongly  
24 support building electrification and ask CARB to  
25 immediately utilize your authority to implement more



1 stringent BACT and BARCT controls in air districts across  
2 the state.

3           While there's a long road ahead, moving forward  
4 with strong and timely measures is the only way to ensure  
5 clean air in California's heavily polluted communities and  
6 treasured national parks.

7           Thank you.

8           BOARD CLERK ESTABROOK: Thank you.

9           Our next speaker will be a phone number ending in  
10 444. After that, there will be a phone number ending in  
11 050, Sarah Aird, and then Greg Turner.

12           Phone number ending in 444, you can unmute and  
13 begin.

14           JESSICA CRAVEN: Hi. My name is Jessica Craven.  
15 I am a member of the California Democratic Party  
16 Environmental Caucus and a bunch of other environmental  
17 organizations as well. There have been so many comments,  
18 I don't need to keep piling on, but I just want to add  
19 my -- first my thanks to the California Air Resources  
20 Board for your work on this plan. And just, you know,  
21 sort of repeat what other people are saying. It is  
22 really, really critical to start the transition to clean  
23 appliances as soon as possible to minimize costs and  
24 maximize benefits to public health.

25           And, you know, just to -- we would like you to

1 work with public and private stakeholders to create a  
2 comprehensive roadmap that will layout the complementary  
3 policies needed to equitably decarbonize California's new  
4 and existing buildings. And I want to recognize the  
5 importance of uplifting leadership from local and regional  
6 work that community organizations, local governments, and  
7 local air districts are currently leading. It will be  
8 really important to ensure there is coordination between  
9 the local and regional work happening and our broader  
10 statewide effort to provide the support necessary for this  
11 transition to be equitable.

12 But, in general, thank you so much for your hard  
13 work on this plan and thank you for caring about, you  
14 know, my kid's future, your kid's future. We've got to  
15 remove -- reduce emissions, and residential and commercial  
16 buildings account for so much of GHG commission --  
17 emissions. We just -- we have to be proactive about  
18 building decarbonization. So thank you very much for  
19 doing that and I yield the rest of my time.

20 BOARD CLERK ESTABROOK: Thank you. And Jessica,  
21 could you state your last name again for the record?

22 THE WITNESS: Yeah. Craven. C-r-a-v as in  
23 Victor, E-n as in Nancy.

24 BOARD CLERK ESTABROOK: Perfect. Thank you so  
25 much.

1 JESSICA CRAVEN: Okay.

2 BOARD CLERK ESTABROOK: Our next speaker is a  
3 phone number ending in 050. Please state your name for  
4 the record and you may begin.

5 SEAN EDGAR: Hi, Katie. Sean Edgar. I  
6 previously testified. Thank you.

7 BOARD CLERK ESTABROOK: All right. Sarah Aird,  
8 you may unmute and begin.

9 SARAH AIRD: Great. Thank you so much. First, I  
10 would like to thank the California Air Resources Board and  
11 the staff for their work, and consideration of this issue,  
12 and for the opportunity to comment. My name is Sarah Aird  
13 and I'm co-director of the statewide coalition  
14 Californian's for Pesticide Reform. In addition to being  
15 made up of more than 200 organizations across the state,  
16 Californian's for Pesticide Reform also works directly  
17 with front-line communities in eight of the highest  
18 pesticide use counties throughout the state of California,  
19 especially in the San Joaquin Valley and the Central Coast  
20 cost.

21 For decades, the State has allowed discrimination  
22 with respect to pesticides and air quality. Under prior  
23 SIPs, the State allowed lesser pesticide protections in  
24 the San Joaquin Valley in comparison with other  
25 non-attainment areas with only 12 percent reductions in

1 pesticide volatile organic compounds by 1990 levels  
2 required, in comparison with 20 percent reductions  
3 required for other non-attainment areas.

4           Those standards continued for years and years,  
5 even as community members in the San Joaquin Valley County  
6 where we work suffered from among the highest levels of  
7 asthma, cancer, and other ailments as anywhere in the  
8 state, any even sometimes the nation. That kind of  
9 discrimination cannot continue and we're very appreciative  
10 of staff's suggested potential inclusion of the pesticide  
11 measure in this SIP, but the suggestion as of right now is  
12 not enough.

13           Our primary request is that CARB ensure that the  
14 final SIP includes an explicit commitment and measure that  
15 CARB will work with the Department of Pesticide Regulation  
16 to develop new regulations around pesticides.  
17 Specifically, we are asking for development of the  
18 strategy by the end of 2023 for reducing pesticide  
19 reactive organic gas emissions by 75 percent from 2020  
20 levels and high pesticide use air basins by 2037. And we  
21 would like to see these reductions achieved through  
22 reduced pesticide use, reformulation, innovative  
23 technologies and agroecological and regenerative organic  
24 practices.

25           And finally, just a brief reminder that in

1 addition to the California Air Resources Board's general  
2 authority over air quality, CARB actually has primary  
3 jurisdiction over regulating the emissions of pesticide  
4 toxic air contaminant emissions once they volatilized.  
5 And many of these contribute directly to VOC and ROG  
6 emissions. So it's absolutely critical that CARB work  
7 with DPR in this and that this be included in the final  
8 SIP.

9 Thank you.

10 BOARD CLERK ESTABROOK: Thank you. Our next  
11 speakers will be Greg Hurner, Tom Kabat, and Catherine  
12 Dodd.

13 Greg, you can unmute and begin.

14 GREG HURNER: Thank you. Greg Hurner on behalf  
15 of the Sportfishing Association of California and the  
16 Golden Gate Fisherman's Association.

17 First, I want to start off by thanking the  
18 members for their comments at the November meeting  
19 recognizing the impacts that the CHC Rule will have on  
20 small family businesses and our social justice programs,  
21 including marine labs for schools, at-promise youth and  
22 veterans.

23 We committed to working with the staff and the  
24 Board and are continuing to do so and really appreciate  
25 the executive staff's involvement and engagement. We

1 still have significant concerns though as the early  
2 January workshop was held and we feel it provided little  
3 to no value, given that there are no data adjustments or  
4 anything and that was a major component of the  
5 stakeholder's concerns with the rule in this development.

6 We provided a letter to the executive staff on  
7 February 8th. We ask that to be distributed to all  
8 members and it highlights some of our concerns. We would  
9 encourage you to request that letter, if you did not see  
10 that. But five months after the release of the public  
11 comment period, we still don't have all of the data and  
12 modeling information to fully understand how the rule was  
13 developed.

14 As part of our commitment, we conducted a full  
15 vessel inventory statewide of all the subchapter (t)  
16 sportfishing vessels and determined 193 vessels. We  
17 provided this information to staff, including the engine  
18 tiers by type of use of the vessel, including whether it's  
19 coastal or offshore, and by the port or regional area.  
20 Forty-one percent already have best available technology  
21 and have grants that are approved under the Carl Moyer  
22 Program over the next two years. Seventy-four percent of  
23 all of our vessels will have the best available technology  
24 in them.

25 In addition, we've requested funding through the

1 Carl Moyer Program for areas of the state that don't  
2 provide it to marine. And if that -- if we can work with  
3 the Legislature to approve that, we believe the balance of  
4 the fleet would have best available technology within the  
5 next four years.

6 The economics of the fleet do not support not  
7 having access to funding. We've lost one-third of the  
8 fleet due to the economics since 1998. We are looking for  
9 solutions to work with the Board and move forward and  
10 allow you to implement the SIP and other programs. But  
11 currently, we have no economically feasible pathway.

12 We are interested in looking at zero technology  
13 and have requested that the Legislature approve specific  
14 dollars for finding zero technology for our types of  
15 vessels. We will continue to work with the Board, and --  
16 as we move forward.

17 Thank you.

18 BOARD CLERK ESTABROOK: Thank you.

19 Tom Kabat, you may unmute and begin.

20 TOM KABAT: Thank you. My name is Tom Kabat.  
21 I'm a retired gas and electric utility resource planner.  
22 Also, a member of Menlo Park's Environmental Quality  
23 Commission speaking just for myself today.

24 I applaud the staff and the Board for taking a  
25 hard look at what it takes to accelerate our pivot to a

1 clean zero-emission future involving space heat and water  
2 heat. We have found in working on reach codes and other  
3 measures to electrify buildings that the dealing with  
4 equipment replacements is the hard nut to crack. And  
5 they -- the Board and staff looking at taking the items  
6 off the shelf through a zero-emissions standard is the  
7 step in the right direction that will give cities the  
8 courage to make additional rules.

9           But I want to discuss the timing of the rule and  
10 our ability to meet the Paris one and a half degree and  
11 two degree rise limits on climate devastation. Studies by  
12 the Carnegie Science Institute and others have found that  
13 emissions from the existing fleet of worldwide fossil  
14 fired equipment, including our gas water heaters and  
15 furnaces, and other things. Just the emissions from the  
16 existing fleet it's enough to push us just to the two --  
17 you know, up above the two degree rise level, if we just  
18 run it for the remaining portion of its operational life.  
19 So there is no room to meet the two degree target if we  
20 are still putting in additional replacement gas water  
21 heaters and gas furnaces.

22           So the 2030 timeline, while it is groundbreaking,  
23 is still a bit late for meeting the Paris targets. And  
24 furnaces installed under that line will still be operating  
25 seven or eight years easily past our climate neutral



1 targets and all of the emissions will be above the Paris  
2 targets, including the two degree target.

3           So I urge the staff and Board to look at a  
4 process of bringing those timelines closer, and maybe  
5 implementing an annual review of what has -- what has been  
6 learned about the ability to transition sooner, the  
7 solutions coming onto the marketplace, the technology  
8 improvements, et cetera, and the mounting evidence that  
9 these timelines are too late. And so building into the  
10 rule, the flexibility that no later than 2030 will those  
11 emission -- those devices be zero emission and staff will  
12 assist the Board in looking at making it happen sooner.

13           Thank you so much for considering these findings  
14 and looking further at the problem.

15           BOARD CLERK ESTABROOK: Thank you.

16           Catherine Dodd, you may unmute and begin.

17           CATHERINE DODD: Hi. My name is Catherine Dodd.  
18 I'm registered nurse and I'm the policy advisors for  
19 Families Advocating for Chemical and Toxic Safety. I want  
20 to thank the CARB Board for deeply listening to the people  
21 presenting today. Individuals and organizations care very  
22 much about these issues. And I'd like to associate myself  
23 first with the comments of Jane Sellen and Sarah Aird who  
24 specifically highlighted the issues related to pesticides,  
25 and also point out that Bill Magavern, and Ray Pingle, and

1 Cynthia Cabrese[SIC] also mentioned the importance of  
2 pesticides in the SIP.

3           As it was mentioned, the San Joaquin Valley,  
4 where most of agricultural pesticides are used, is  
5 concentrated in one of only two non-containment air boards  
6 in the United States, the entire country. The  
7 Department -- DPR's estimate is that pesticide VOC  
8 emissions in San Joaquin estimate 16 tons a day. This is  
9 an environmental justice issue. It affects primarily  
10 Latinx residents, families, children. And reducing  
11 pesticide emissions through broader adoption of the  
12 agroecological practices has multiple co-benefits  
13 including helping the State meet its carbon neutrality  
14 goals by sequestering carbon in healthy soils.

15           And thank you again for this hearing today.

16           BOARD CLERK ESTABROOK: Thank you.

17           Our final speakers for this item will be Diane  
18 Bailey, Jonathan Evans, and phone Tom Jordan.

19           Diane, you can unmute and begin.

20           DIANE BAILEY: Hello, Chair Randolph and Board  
21 members. My name is Diane Bailey. I represent a  
22 community climate action nonprofit called Menlo Spark, as  
23 well as a Silicon valley-wide alliance called the Campaign  
24 for fossil free buildings, which is comprise of 37  
25 organizations working together to phase out fossil fuels

1 like methane gas from our homes and buildings. I'm  
2 impressed by the suite of measures presented here today,  
3 including zero-emission trucks and many other important  
4 measures addressing diesel freight or goods movement and I  
5 just want echo some of the comments from earlier folks,  
6 Cynthia Pinto-Cabrera, Kevin Hamilton, Will Barrett and  
7 Bill Magavern. And I'll try not to repeat those.

8 In particular, I'm here in strong support of the  
9 proposal to require new heaters and water heaters to meet  
10 a zero-emissions standard by 2030. And hopefully that's a  
11 backstop at the latest. We'd like to see sooner action.  
12 Pollution from gas appliances has gotten very little  
13 attention in the past and really can no longer be ignored,  
14 as methane gas has come to be known as a climate super  
15 pollutant and the combustion byproducts of gas appliances  
16 are now creating more harm than pollution from all of the  
17 power plants in our entire state.

18 Similar to the Harvard study the Leah  
19 Louis-Presicott mentioned, a recent draft Bay Area Air  
20 District study found similarly that eliminating combustion  
21 emissions from space and water heating appliances could  
22 avoid up to 89 premature deaths annually due to the voided  
23 pollution in the Bay Area and that's just the Bay Area.

24 We support an equitable transition off of gas,  
25 particularly addressing the needs of low income and

1 environmental justice communities and ensuring that there  
2 is ample financial support to make this transition.  
3 Low-income turnkey home upgrade programs have already  
4 begun, for example, through SMUD in Sacramento, as well as  
5 Peninsula Clean Energy and East Bay Clean Energy in the  
6 Bay Area. But we need firm State standards in place to  
7 ensure that these support programs can grow to serve  
8 everyone in California.

9           And the Governor's proposal this year to provide  
10 over 600 million to assist low income households is an  
11 excellent start. We support an inclusive process to fully  
12 address all environmental justice issues. And it's worth  
13 noting that inaction on gas appliances creates a major  
14 environmental injustice, because most of the disadvantaged  
15 communities in our state are already in nonattainment  
16 areas and breathing poor air quality.

17           The zero-emission standards for heaters and water  
18 heaters are a critical step to significantly cut  
19 greenhouse gases and NOx pollution and they can't come  
20 quickly enough to help everyone living in those  
21 nonattainment met areas. And as my colleague Tom Kabat  
22 points out, we need to move more swiftly to address the  
23 climate crisis as well. Every new gas appliance that is  
24 installed today is a mistake that will need to be replaced  
25 quickly.

1 I hope you'll move forward with these standards  
2 swiftly and I thank the staff so much for all of their  
3 work going into this plan.

4 Thank you.

5 BOARD CLERK ESTABROOK: Thank you.

6 Jonathan Evans, you may unmute and begin.

7 JONATHAN EVANS: Good morning. My name is  
8 Jonathan Evans. I am the Environmental Health Legal  
9 Director with the Center for Biological Diversity  
10 representing our tens of thousands of members and  
11 supporters in California. Thank you, members of the Board  
12 for the opportunity to speak on the State Implementation  
13 Plan.

14 I urge the Board to include binding measures to  
15 reduce pesticide health threats, public health threats and  
16 greenhouse gas emissions from pesticide use. CARB clearly  
17 has regulatory authority to reduce air pollution and  
18 greenhouse gas emissions. Unfortunately, regulation by  
19 the California Department of Pesticide Regulation is not  
20 providing meaningful important public health protections  
21 or greenhouse gas reductions from air pollution caused by  
22 pesticides. Pesticides are significant air pollutants and  
23 greenhouse gas contributors throughout California.

24 Soil fumigants, such as chloropicrin, metam  
25 sodium, and dazomet cause increased emissions for the

1 ozone precursor and greenhouse gas nitrous oxide, and  
2 represent nearly one-fifth of pesticides used in the  
3 state.

4 CARB must ensure that ensure that measures to  
5 support reduced pesticide use of fumigants are part of the  
6 final Scoping Plan and State Implementation Plan.

7 Pesticides also contribute to volatile organic compounds,  
8 an ozone precursor, which leads to increased -- increases  
9 in tropospheric ozone, and also a public health threat,  
10 and a significant contributor to greenhouse gases and  
11 global warming. CARB should better track and require  
12 binding reductions of volatile organic compounds from  
13 pesticides.

14 Another example of the structural fumigant  
15 sulfuryl fluoride is a toxic air contaminant and has a  
16 global warming potential of more than 4,000 times that of  
17 carbon dioxide, but does not have the necessary binding  
18 reduction measures. This is a significant threat for  
19 Californians. The most recent data by the California  
20 Department of Pesticide Regulation shows that at least 2.  
21 million pounds -- 2.9 million pounds of sulfuryl fluoride  
22 is used annually. Reducing air pollution from pesticide  
23 use will provide important benefits to protect public  
24 health in criteria pollutant nonattainment areas like the  
25 Joaquin Valley, South Coast Air Basin and Coachella

1 Valley, and also helped California on its important fight  
2 against climate change.

3 Thank you very much.

4 BOARD CLERK ESTABROOK: Thank you.

5 Or final speaker will be Tom Jordan. Tom, you  
6 may unmute and being.

7 Tom Jordan.

8 TOM JORDAN: Good morning, I'm Tom Jordan, a  
9 Senior Policy Advisor at the San Joaquin Valley Air  
10 Pollution Control District.

11 Over the past decades, the Air Resources Board  
12 and the San Joaquin Valley Air District have implemented  
13 strategies that have significantly reduced emissions and  
14 reduced ozone levels throughout the San Joaquin Valley.  
15 However, given our topography, meteorology, meteorology,  
16 and the fact that the valley is the main goods movement --  
17 north-south goods movement corridor in the state of  
18 California, we need substantial assistance to continue to  
19 see improvement and to meet newer ozone standards.  
20 Additionally, the valley is non-attainment for PM2.5, and  
21 these measures will also help to meet those standards and  
22 to reduce exposure to diesel particulates in the valley.

23 The District supports CARB's efforts to reduce  
24 mobile source emissions under their authority and also  
25 would like to assist in ensuring that the federal

1 government does it's part to reduce federal source --  
2 emissions from federal sources.

3           Additionally, I wanted to mention that the San  
4 Joaquin Valley Air District was the first agency in  
5 California to adopt an Indirect Source Rule and been  
6 implementing that rule for quite some time. As the State  
7 continues to research this measure, the District would  
8 like to offer ourselves as a resource to help talk about  
9 some of the experiences we've had over the years of  
10 implementing it.

11           We look forward to continue to working with ARB  
12 as we develop strategies and plans to meet air quality  
13 standards into the future. Thanks.

14           BOARD CLERK ESTABROOK: Thank you.

15           Chair, that concludes the commenters for the  
16 item.

17           CHAIR RANDOLPH: Thank you. As noted with the  
18 release of the Draft 2022 SIP Strategy, the docket for  
19 written comments about this item will be open through  
20 March 4th, 2022.

21           Okay. I'm going to bring this back to the Board  
22 now for a Board discussion. I do want to note that we are  
23 going to have an opportunity to discuss the SIP Strategy,  
24 then we will, after our discussion, take a 45-minute lunch  
25 break, and then we will proceed with our next agenda item.



1           So if any Board members have questions or  
2 comments, please raise your hand if in person or click the  
3 raise hand symbol in Zoom.

4           And Dr. Pacheco-Werner.

5           BOARD MEMBER PACHECO-WERNER: I think, Gideon, if  
6 you want to go first, or did you --

7           BOARD MEMBER KRACOV: No, go ahead.

8           BOARD MEMBER PACHECO-WERNER: Okay. Great.  
9 Yeah. Thank you, Chair, thank you, staff, and thank you  
10 to all of the public commenters such insightful comments  
11 from everyone and thank you for your input in this  
12 process. I think -- I want to reiterate some of the --  
13 some of the public comments in terms of the opportunity  
14 that we have with meeting some goals quicker than others,  
15 in particular taking advantage of the end of useful life  
16 for trucks and implementing that. As -- you know, as a  
17 member in the San Joaquin Valley, I really see this as an  
18 opportunity to help in the San Joaquin Valley. And I'm  
19 sure in South Coast as well. I also think that there's a  
20 couple of issues into which collaboration and working with  
21 other agencies is really crucial.

22           I think we must have a clearer sense of what the  
23 comprehensive strategy is for electrification that is  
24 actually relying on household electrification. You know,  
25 what are the joint commitments that we're making and how

1 are we going to make that clear in documents like the SIP  
2 and others this year, as all relevant agencies in the  
3 state of California to keep solar power affordable to  
4 individuals, so that the use of all of these electrical  
5 equipment that we're gearing towards implementing are  
6 actually feasible.

7           Related to this is also the affordability of  
8 housing after the regulations go into place. We must  
9 ensure that these regulations do not price out the very  
10 same people we are seeking to protect. And I know that  
11 while we have a suite of incentives and there's a very  
12 good section on incentives, you know, my concern is how  
13 much we always rely on things people have to apply to  
14 competitive -- you know, and programs that are already  
15 oversubscribed. And so that for me is a concern.

16           I think we as all of the relevant agencies in the  
17 rulemaking that's related to so much that's outlined in  
18 the SIP must all equally be held accountable for being  
19 able to deliver to Californians as we also seek them to  
20 join our movement towards air quality standard attainment.  
21 So I would like to see more of how we're actually -- what  
22 are our joint commitments as relevant agencies in this --  
23 in this proposed strategy.

24           Also, there are municipalities, not industries,  
25 but municipalities that have unique challenges when it

1 comes to both how they use zero-emission equipment, but  
2 also how they use their existing resources, like the  
3 natural gas that are own waste produces. We must make  
4 space for the municipalities to continue to function and  
5 meet our everyday and emergency needs.

6 I think we need to use this opportunity with the  
7 SIP to provide more certainty as to the next steps towards  
8 reductions in pesticide emissions. I know that our staff  
9 has done a lot of work in this area. And I think, you  
10 know, making sure that the public is aware of all of this  
11 progress is important as we move forward in the  
12 development of the SIP.

13 And thank you to staff as well. You know, this  
14 is a very ambitious plan. You know, I hope it's an  
15 attainable plan, but I think that we must really use some  
16 of our leverage with other agencies and must ourselves  
17 commit to keeping really the people that we are trying to  
18 protect in California as well and in their homes.

19 Thank you.

20 CHAIR RANDOLPH: Thank you.

21 Board Member Kracov.

22 BOARD MEMBER KRACOV: Next time I'm going to go  
23 before you, Dr. Pacheco-Werner. Not easy to follow you,  
24 so I've learned my lesson her.

25 Board members, the South Coast Air District that

1 I represent, as we heard in public comment, is not in  
2 compliance with the 1-hour ozone standard from 1979 over  
3 40 years ago, not to mention being in extreme attainment  
4 for the 8-hour standards adopted in 1997, and tightened in  
5 2008. And to meet this new 70 part per billion standard  
6 by 2037 truly is a Herculean challenge for us.

7 Now, I have the privilege and the opportunity to  
8 work on this ozone SIP here as a member of CARB, but also  
9 as Chair of the South Coast Committee writing our  
10 District's specific ozone SIP to meet this same standard.  
11 Both plans will come to this Board to us in August. And  
12 these ozone plans, colleagues, are perhaps the top  
13 priority in my role as an appointee to these boards, maybe  
14 except for the key rules that will actually implement the  
15 plans, like Advanced Clean Fleets we'll see this fall and  
16 the groundbreaking In-Use Locomotive Rule planned for  
17 November.

18 So bear with me. You heard a lot from me when we  
19 approved the Mobile Source Strategy in September, so  
20 apologies in advance, Chair, I know this is just  
21 informational today. Our past SIPs like this one are  
22 designed to prove, of course, to EPA that we can make  
23 ozone attainment. But the straight talk is that in the  
24 South Coast, we have not. We have fallen far short of  
25 many prior commitments. In our last SIP six years ago,

1 the South Coast committed to raising billions of dollars  
2 in new sales tax authority to retire trucks, but we  
3 failed.

4 Our Air Board here committed to 113 tons of  
5 aggregate reductions from mobile sources by 2023,  
6 including an enormous so-called black box, but we also, as  
7 a Board, fell short. So smog in the South Coast has not  
8 improved in the past decade at all. Last year,  
9 colleagues, was the worst in decades. This is straight  
10 talk.

11 Now, it's true that much of this comes from  
12 federal sources like ships, and airplanes, even trucks,  
13 and that the Feds also fell way short. And it's also true  
14 that geographic, and meteorological conditions, and  
15 wildfires make attainment especially challenging in my air  
16 basin -- in our air basin.

17 Imagine, after all we've done, and it's such a  
18 long list that we can be proud of colleagues and staff, we  
19 have to cut oxides of nitrogen by another two-thirds from  
20 today's baseline to make attainment in 2037. Imagine what  
21 that entails.

22 It truly is equal, even if metaphorically, to the  
23 kind of challenge that Hercules did face in those Greek  
24 legends. So how do we rise to the challenge. One  
25 example. We know mobile sources make up more than 80

1 percent of the smog-forming emissions in the South Coast.  
2 And that medium- and heavy-duty diesel trucks are the  
3 biggest emitters. Yet unfortunately, as mentioned in the  
4 comments - I think it was Ray Pingle - today's report  
5 shows that even after implementation of the ACT and ACF  
6 1.4 million combustion powered trucks will still be on the  
7 road in 2037.

8           How is that? Well, this year about 60,000  
9 pre-2010 diesel trucks need to turnover under our Truck  
10 and Bus Rule by December 31st this year. What will those  
11 trucks be replaced with? Between supply chain issues,  
12 uncertainty about electric truck cost and duty cycle and  
13 low natural gas penetration, the answer is - we know this  
14 - used diesel.

15           And those trucks get 13 to 18 years useful life.  
16 This is why we voted last year for the four times a year  
17 smog check. It was a no-brainer in my opinion. This time  
18 loophole colleagues between our Truck and Bus Rule at  
19 year's end this year and our forthcoming Zero-Emission  
20 Fleet rules, this regulatory gap this poisonous  
21 persistence of polluting diesel means that we cannot hope  
22 to meet attainment in the South Coast, not on the upcoming  
23 attainment dates of 2023 and 2031 and maybe not even in  
24 2037. We must do more to turn over these old diesels off  
25 the road. We don't want to fall short yet again -- yet

1 again. So I so appreciate staff, Dr. Benjamin and Mr.  
2 Segall's team, Mr. Hicks today are to meet this challenge  
3 laboring like Hercules with bold action to do all we can.

4 And staying with the diesel truck turnover issue.  
5 If I can call attention to the report today, page 48, for  
6 additional new measures to get these trucks off the road.  
7 Thank you staff. These include a useful life regulation,  
8 that means polluting 18-year old diesel trucks past their  
9 useful life are retired and can't be on our roads. We  
10 have authority for that right now to start in 2028.

11 Also proposed for staff's study between now and  
12 the final SIP are new authorities to implement cutting  
13 edge differentiated registration rates, restrictions on  
14 fees for combustion trucks entering low zero-emissions  
15 zones, and maybe Indirect Source Rules to establish such  
16 zones as well.

17 I'm looking forward, Chair, to seeing these  
18 proposals fleshed out, please, with modeling and data in  
19 the CEQA document on benefits, costs, fleet impacts. We  
20 must insist on that, so that when this comes back to us,  
21 we as a Board, colleagues, have options and are properly  
22 armed to assess the challenges ahead and how we can be  
23 successful this time out.

24 I'm so looking forward to being in a position  
25 where I can vote yes on an accountable, legally compliant

1 ozone plan that pencils out. I commit Officer Corey --  
2 Executive Officer Corey to working with you, and of course  
3 our staff, and South Coast staff until then treating this  
4 like the top priority it is.

5 To finish, Chair, we're not naive. We know how  
6 economically and politically difficult all this will be.  
7 That is why, colleagues, the Governor appointed us, with  
8 all of our varying perspectives, common sense, and  
9 geographic diversity to this Board, and why Senator Leyva  
10 Assembly Member Perez[SIC] were appointed as well. We all  
11 want to rise to the challenge. We will hear from  
12 stakeholders and, of course, EPA too.

13 It's ozone plans like this, decisions like this,  
14 crafting thoughtful public policy with participation like  
15 this, that is why we're called the Air Resources Board.  
16 We can meet this challenge.

17 Thank you, Chair.

18 CHAIR RANDOLPH: Thank you.

19 Dr. Sperling.

20 BOARD MEMBER SPERLING: Hello. Thanks.

21 I just have one small thought, but important, and  
22 that is I want to commend the staff on an outstanding  
23 presentation on the science of ozone formation. It is the  
24 best public presentation I've ever heard on ozone  
25 formation, which is a really complicated -- scientifically



1 complicated process. And it explains -- and they explain  
2 why ozone has not improved in recent years, as Board  
3 Member Kracov was highlighting, and shows the path forward  
4 and how it can be improved.

5           And I also note that this is a big improvement  
6 over the version presented to me last week. So I can  
7 testify that they put a lot of hard work into being able  
8 to communicate to all of us and do it well. And so my  
9 kind of thought on this is that CARB is successful and  
10 it's highly regarded mostly because of our  
11 sophistication -- our technical sophistication, our  
12 commitment to science, and advising regulations and  
13 policies that really are grounded in evidence, and data,  
14 and science.

15           So kudos to the staff.

16           CHAIR RANDOLPH: Thank you.

17           Board member De La Torre.

18           Board Member De La Torre, are you there?

19           BOARD CLERK ESTABROOK: I believe -- since you're  
20 on the phone, I believe you'll need to dial star six and  
21 that should allow you to unmute.

22           BOARD MEMBER DE LA TORRE: Hello.

23           CHAIR RANDOLPH: There you are. Now, we can hear  
24 you.

25           BOARD MEMBER DE LA TORRE: Okay. I will be very

1 brief and I apologize for any background noise. But  
2 number one, and some of my colleagues have already  
3 mentioned it, the useful life provision which I've spoken  
4 about in the fall, very much want to have it included in  
5 the SIP strategy as a possibility. I agree that we have  
6 the authority under SB 1 to have an 18-year useful life  
7 regulation. And I agree that it should be effective no  
8 later than 2028, if we're going to do it, because that's  
9 the first year when the 18 years kicks in from SB 1.

10 So again, as I told staff in my briefing, you  
11 know, let's shape it and make sure that it's part of the  
12 SIP, and then we can decide down the road -- the Board can  
13 decide down the road whether it's a policy that we want to  
14 pursue or a regulation that we want to pursue.

15 Secondly, I also support my colleagues in their  
16 discussion of pesticides, that including pesticides in  
17 some way in the SIP, whatever, you know, staff deemed to  
18 be doable within the SIP context, and then again we can  
19 work with DPR and our ourselves to see what makes sense  
20 going forward, but to absolutely include it in the SIP.

21 And that is it. Thank you very much to staff.  
22 Very comprehensive. I love including all the various  
23 possibilities, including a statewide ISR and to actually  
24 getting this stuff done and not just planning.

25 Thank you.

1 CHAIR RANDOLPH: Thank you.

2 Board Member Takvorian.

3 BOARD MEMBER TAKVORIAN: Thank you, Chair.

4 I just want to echo some of the comments of my  
5 colleagues, especially Mr. De La Torre and Mr. Kracov in  
6 regards to the truck retirement measures. I really  
7 appreciated that it was included in the SIP and that there  
8 are creative ways being developed and thought about. But  
9 I also think that we have the authority as CARB to move  
10 forward and to ensure that that happens before or by 2028.  
11 I want to say that I know that a lot of the focus as  
12 appropriate is on South Coast and San Joaquin. But so  
13 much of California is nonattainment. San Diego is  
14 classified as severe. And some of those same measures  
15 that would work to bring South Coast into compliance will  
16 really benefit our communities and our regions throughout  
17 the state, particularly those that focus on heavy-duty  
18 vehicles.

19 So we really need to do all that we can. And  
20 local air districts and other regulatory bodies are  
21 starting to take action like the Maritime Clean Air  
22 Strategy that the Port of San Diego adopted recently that  
23 is seeking to transition trucks to ZEV by 2030, to beat  
24 the State goal. And I think that the retirement option  
25 being in place by 2028 will really expedite that.

1           The other thing I wanted to add is I, too,  
2 support inclusion of pesticides and I know many have  
3 spoken on that. I just want to add my voice to that.

4           And then last on the Indirect Source Rule, I am  
5 interested in learning more about that and at what pace  
6 CARB might be able to move on that. So I would be  
7 interested in hearing more information about that. I know  
8 that San Diego APCD is starting to develop an ISR. Just  
9 at the beginning stages of that. And I would be  
10 interested to see how CARB can facilitate that local  
11 district process as well as timeline for a statewide ISR.

12           Those are my comments. Thank you.

13           CHAIR RANDOLPH: Thank you.

14           Vice Chair Berg.

15           VICE CHAIR BERG: Thank you, Chair.

16           I also would like to thank staff. This has been  
17 a lot of work, and this doesn't come as an easy time. But  
18 I think about that and I think almost every SIP process  
19 when we've been looking has had such difficulty, as  
20 pointed out by Board Member Kracov. We have reason --  
21 regions that are constantly challenged.

22           So I have just a few questions and that is, has  
23 there ever been any modeling that, given the full  
24 electrification of transportation, will we meet our SIP  
25 goals?

1 EXECUTIVE OFFICER COREY: Michael Benjamin, I  
2 think this will be one for you to respond to, if you  
3 would.

4 AQPSD CHIEF BENJAMIN: Yes. Good morning. This  
5 is Michael Benjamin, Chief of the Air Quality Planing and  
6 Science Division.

7 Yes, Ms. Berg, we actually did do a whole range  
8 of different scenarios as part of the Mobile Source  
9 Strategy. And we looked at opportunities for full  
10 electrification as well as some natural gas scenarios.  
11 And the ones that we arrived at and that were included in  
12 the Mobile Source Strategy, and that underlie the State  
13 SIP Strategy that you're considering today, are based on a  
14 combination of movement towards zero-emission and also  
15 recognition that we're going to have to have some  
16 combustion in the near term. But yes, we did look at full  
17 electrification scenarios.

18 VICE CHAIR BERG: Okay. But I'm sorry, I'm not  
19 advocating to -- this isn't a timing issue for me. This  
20 is when we, whatever that date is, are at full  
21 electrification, will the South Coast and San Joaquin  
22 Valley be in compliance with the SIP?

23 AQPSD CHIEF BENJAMIN: Great. Thank you for  
24 reframing your question. The reality is is that even if  
25 we fully electrify, let's say the on-road fleet, we will

1 not attain in South Coast unless the federal government  
2 acts. And so I just -- what I want to emphasize is that  
3 even if the CARB Board moves to full electrification,  
4 federal action is needed.

5 VICE CHAIR BERG: Thank you very much. So we see  
6 what the challenge is here. And I just want to commend  
7 everybody, because as Board Member Kracov said, it is not  
8 only Herculean, it sometimes feels a bit Don Quixote-ish  
9 that we just keep fighting that windmill and we absolutely  
10 have to, and I just want to thank everybody for doing  
11 that.

12 One of the things that was just a little bit I  
13 felt a missed opportunity in the way we look at SIPs.  
14 Because of the Herculean effort, we need to keep our eyes  
15 and focus on that. But I believe that the areas where  
16 we're missing our SIPs truly are in our EJ communities.  
17 And so it feels to me that we have missed an opportunity  
18 with 617 to be able to look at this more regionally. And  
19 while we're electrifying, what are we going to do to  
20 continually attack the cumulative impacts and how are we  
21 going to tie those together.

22 So maybe it's there and I missed it. And if I  
23 did, I apologize, I'll pay -- I'll do a little more  
24 research on that. But even in the staff's presentation, I  
25 think we can do a better job at looking at how are we

1 tying specifically 617 and how are we making improvements  
2 on the cumulative impacts while we're keeping our eye on  
3 the long term, so I would like to see that.

4 I am very much in favor for pushing up the  
5 pesticides. I know DPR has been working. We have been  
6 working collaboratively. And it is a complicated issue,  
7 but I think we do need to be bold. And I do think we need  
8 to put a stake in the ground, claim our authority of  
9 working together with DPR, but let's start making a  
10 difference on that.

11 And then -- oh, finally, my last observation. I  
12 am distressed that we had very -- no business public  
13 testimony, and -- because without business participating  
14 with us, this is going to be a real uphill battle, because  
15 it becomes even more political and more them against us.  
16 And that's not an inference on anything that staff has  
17 done. It's just, you know, I'm not sure why they're not  
18 participating. But anything I can do to help on that,  
19 please let me know.

20 Thank you, Chair.

21 CHAIR RANDOLPH: All right. Thank you.

22 There's been a lot of discussion about federal  
23 sources and the need for partnership with the federal  
24 government. But I will note, yesterday the federal  
25 government went in the wrong direction and approved -- the

1 Postal Service approved the acquisition of gas vehicles  
2 for their huge fleet instead of electric vehicles. And  
3 the Biden administration objected to that, as appropriate,  
4 but unfortunately USPS went its own way. And we are  
5 talking over 165,000 new polluting vehicles. And that  
6 could have been a huge opportunity to make progress.

7           So as we are looking at ways to assert our  
8 authority over some of these sources, like in the  
9 locomotive space, I would like to ask staff to explore  
10 what the opportunities are to -- in the context of fleet  
11 regulations, what opportunities we have to focus on  
12 delivery vehicles and ensuring that delivery vehicles move  
13 to zero emissions.

14           So we want to see the cleanest postal vehicles  
15 that we can. And if there are any strategies we can  
16 deploy to push that forward, I would like staff to examine  
17 that.

18           Any other Board member comments?

19           Okay. Seeing none, we will now be taking a  
20 45-minute break, and we will be back at 1:00 p.m.

21           Thank you.

22           (Off record: 12:13 p.m.)

23           (Thereupon a lunch break was taken.)

24

25





1 neutrality no later than 2024 -- I'm sorry, 2045.

2           There will be another informational update to the  
3 Board on March 24th as modeling data becomes available and  
4 staff shares technical details on options to decarbonize  
5 the energy and industrial sectors, and to identify a role  
6 for natural and working lands in achieving carbon  
7 neutrality.

8           Since the Legislature passed the California  
9 Global Warming Solutions Act in 20 -- 2006, there have  
10 been three scoping plans approved by the Board. The first  
11 plan outlined actions to return to 1990 emissions levels  
12 by 2020, a task that, at the time, seemed impossible  
13 without a heavy economic tool, but one that was ultimately  
14 achieved ahead of schedule during unprece -- unprecedented  
15 economic instability -- stability.

16           Nevertheless, the climate impacts predicted prior  
17 to adoption of the first Scoping Plan are being realized  
18 in California and beyond. And the 2018 Special Report by  
19 the Intergovernmental Panel on Climate Change tells us  
20 that we must achieve global carbon neutrality by  
21 mid-century to avoid the worst impacts of climate change.

22           This means that in California and globally, we  
23 must achieve deep decarbonization across all sectors of  
24 the economy certainly no later than 2045 requiring that we  
25 escalate our mitigation efforts in the near term.

1           While we know our efforts to address climate  
2 change in California have helped to improve air quality  
3 for our vulnerable communities, a wide gap still remains.  
4 We must stay committed to closing that gap. In both our  
5 SIP Strategy, as we discussed earlier today, and our  
6 climate strategies, we must recognize that the communities  
7 hardest hit by pollution need to be prioritized as we  
8 develop and implement solutions.

9           That same commitment to equity informs the  
10 Governor's proposed budget with an unprecedented amount of  
11 funding to help move away from combustion of fossil fuels  
12 and towards a more sustainable future. Significant  
13 investments today are critical, knowing that the payback  
14 will be in future decades in the form of avoided higher  
15 damages from climate change.

16           A future that phases out fossil fuel combustion  
17 will also deliver the critical air quality benefits needed  
18 to address ongoing air pollution disparities for our  
19 communities of color and low income households.

20           Moreover, as we move away from combustion of  
21 fossil fuels, we must also continue to cut short-lived  
22 climate pollutants, like methane and hydrofluorocarbons.  
23 We need to ensure that success in reducing fossil fuel  
24 emissions is not undermined by emissions of these super  
25 pollutants.

1           The framework for carbon neutrality will also  
2 highlight the role natural and working lands, a critical  
3 yet underutilized sector, will play in achieving our 2045  
4 target, as well as the role other mechanical carbon  
5 dioxide removal technologies may play in balancing out any  
6 emissions remaining in the system.

7           The time to double down our efforts is now. In  
8 line with statutory direction, this Scoping Plan update is  
9 going to set a cost effective and technol --  
10 technologically feasible path to continue our progress  
11 towards our 2030 goal and carbon neutrality no later than  
12 2045 that can attract partners and be exported to other  
13 regions. It will take international action and strong  
14 interstate and jurisdictional partnership to solve this  
15 global threat. As such, building on the partnerships we  
16 have cultivated across the country and the globe will  
17 continue to be a priority for me and this agency.

18           As has been the case historically, the benefits  
19 of this plan will be broader than just climate change.  
20 Its implementation will improve public health by reducing  
21 the emissions burdens experienced by our front-line  
22 communities. And it is for this reason that I have  
23 previously committed to and continue to commit to  
24 developing a permanent environmental justice advisory  
25 structure to ensure that we have environmental justice

1 voices not just for the Scoping Plan development, but as  
2 part of the critical implementation steps that will need  
3 to come.

4           Studies show that this is the last decade to  
5 initiate significant action to avoid the worst impacts of  
6 climate change. I believe we can meet that challenge and  
7 proceed in a way that addresses the historical  
8 environmental injustices faced by our most impacted  
9 communities.

10           Today's item is one of several opportunities for  
11 the Board, members of the Environmental Justice Advisory  
12 Committee and the public to engage on this important  
13 effort.

14           Mr. Corey, would you please introduce the item.

15           EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

16           And as noted, the 2022 Scoping Plan represents  
17 the third update to the State's Climate Strategy. And  
18 this plan will assess our progress towards achieving our  
19 Senate Bill 32 target by 2030, as well as lays out a  
20 technologically feasible cost-effective path to carbon  
21 neutrality no later than 2045.

22           Draft of the Scoping Plan update will be  
23 presented to the Board in June, but these two -- next two  
24 months, as you noted, provide an opportunity to hear from  
25 staff and the public on the progress and considerations

1 relative -- relevant to the Plan.

2           The first Scoping Plan was approved by our board  
3 in 2008. And it identified several policies and actions  
4 to achieve the Assembly Bill 32 target of returning to  
5 1990 emission levels by 2020. That plan included the need  
6 for transportation electrification, cleaner electricity,  
7 cleaner transportation fuels, incentive programs, and  
8 carbon pricing in the form of the Cap-and-Trade Program.

9           CARB and other State agencies have been  
10 implementing these programs for almost a decade or even  
11 longer. During that time, adjustments have been made  
12 through regulatory updates to programs and pursuant to  
13 direction in statute as well as direction from Governor's.

14           Our success in reducing greenhouse gas emissions  
15 to date is due to steady political support and commitment  
16 to program assessment, adjustment, as well as  
17 implementation. These efforts have attracted the types of  
18 private investment we'll need to double, triple, or more  
19 to achieve our 2030 and longer term climate targets, while  
20 also delivering critical air quality benefits.

21           The red flag warnings from the hundreds of  
22 scientists in the Intergovernmental Panel on Climate  
23 Change report have told us we're out of time. We cannot  
24 afford to let the perfect be the enemy of the good, and we  
25 must consider the science and role of every tool available

1 to us to start the transition away from fossil fuels and  
2 start removing carbon from the atmosphere.

3           As indicated in the Zero-Emission Vehicle  
4 Executive Order and the Governor's budget, we must  
5 transition our existing energy assets and infrastructure  
6 and build the energy systems of tomorrow. The transition  
7 away from fossil means having a sustainable and clean  
8 energy supply and distribution system to meet our ongoing  
9 and growing energy needs. We simply can't turn off the  
10 energy systems with no replacement options.

11           The 2022 Scoping Plan update must address the  
12 scale of the transition and technologically feasible and  
13 cost effective tools to achieve carbon neutrality no later  
14 than 2045. And for the first time, it will lay out the  
15 quantified role our natural and working lands will play in  
16 helping to achieve that goal. In this transition, we need  
17 to avoid stranded assets and deploy technologies and  
18 energy that will enable us to reap critical near-term air  
19 quality and public health benefits for our most vulnerable  
20 communities.

21           In this update process, staff will continue to  
22 work with the Environmental Justice Advisory Committee, as  
23 well as a broad spectrum of stakeholders to provide  
24 meaningful public engagement to build an actionable path  
25 to meet our greenhouse gas reduction targets. We have the

1 tools and we know where need to be in the next 20 years.  
2 The 2020 Scoping Plan will outline the path to get there,  
3 and we must do it in a way that supports our actions being  
4 exported elsewhere.

5 With that, I'll ask Stephanie Kato of the  
6 Industrial Strategies Division to give the staff  
7 presentation.

8 Stephanie.

9 (Thereupon a slide presentation.)

10 ISD STAFF AIR POLLUTION SPECIALIST KATO: Thank  
11 you, Mr. Corey. As Chair Randolph noted, this is the  
12 first of two informational items scheduled on progress  
13 developing the 2022 Scoping Plan update.

14 --o0o--

15 ISD STAFF AIR POLLUTION SPECIALIST KATO:

16 California's Scoping Plan lays out a framework  
17 for action to achieve our climate change goals in line  
18 with statutory requirements and administration priorities.  
19 The 2022 update will be our fourth Scoping Plan and third  
20 Plan update since AB 232 was adopted in 2006. Prior plans  
21 focused on specific greenhouse gas emission reduction  
22 targets within the subsequent decade.

23 With this update, we are looking at the action  
24 needed to become carbon neutral no later than mid-century  
25 to avoid the worst impacts of climate change. As a



1 result, the scope and level of ambition for California  
2 with this update is unprecedented.

3 --o0o--

4 ISD STAFF AIR POLLUTION SPECIALIST KATO: The  
5 next two slides provide key objectives for this Scoping  
6 Plan, which AB 32 requires that we update and present to  
7 the Board this year for consideration and approval. Every  
8 Scoping Plan has had a different purpose to reflect new  
9 legislative mandates, climate goals or types of assessment  
10 needed at that time. The 2022 Scoping Plan will assess  
11 progress toward the statutory 2030 target to reduce  
12 greenhouse gas emissions by at least 40 percent from 1990  
13 levels by 2030 and lay out a path to achieving carbon  
14 neutrality no later than 2045.

15 And as the Chair indicated in her opening  
16 remarks, the scientific consensus is clear that globally  
17 we must achieve carbon neutrality no later than 2045, if  
18 we are to avoid the worst impacts of climate change.

19 --o0o--

20 ISD STAFF AIR POLLUTION SPECIALIST KATO: Given  
21 that it looks out over 20 years, this Scoping Plan will  
22 have the longest planning horizon relative to any previous  
23 version. This means we are focusing on outcomes we need  
24 to achieve and be on track to achieve carbon neutrality.

25 With this outcome-focused approach, we are

1 modeling paths for clean technology, energy deployment,  
2 nature-based solutions, and others. These paths will  
3 include metrics, such as the rate of sales of light-duty  
4 electric vehicles, sales of electric appliances, acres of  
5 forest management and conservation and agriculture under  
6 climate smart management. These metrics, in addition to  
7 the annual greenhouse gas inventory, can help us track  
8 progress moving forward.

9           Importantly, these outcomes must be considered in  
10 both the context of achieving near-term air quality  
11 benefits and longer-term greenhouse gas benefits.

12                           --o0o--

13           ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
14 slide provides some context-setting regarding emissions  
15 sources covered by AB 32. CARB is responsible for  
16 maintaining the statewide greenhouse gas emissions  
17 inventory, which estimates greenhouse gases emitted to the  
18 atmosphere from the industrial and energy sectors. AB 32  
19 instructed CARB to develop a Scoping Plan and reduce  
20 emissions for the seven greenhouse gases shown on slide.

21           AB 32 specifies that action focused on sources  
22 that contribute the most to statewide emissions. It also  
23 specifies that the inventory cover direct emissions of  
24 greenhouse gases in the state, but also instructs that  
25 emissions associated with imported electricity used by

1 California consumers be included.

2 The AB 32 target to get to 1990 emission levels  
3 by 2020 and the SB 32 target to reduce emissions 40 percent  
4 below 1990 levels by 2030 cover all sources in the AB 32  
5 inventory.

6 The inventory currently includes statewide  
7 greenhouse gas emissions from transportation, electricity,  
8 residential and commercial, industrial, agriculture, and  
9 waste management sectors, including high global warming  
10 potential gases. The pie chart shows total statewide  
11 emissions of 418.2 million metric tons of carbon dioxide  
12 equivalent, which is about seven million metric tons lower  
13 than 2018 levels, and almost 13 million metric tons below  
14 the 2020 greenhouse gas limit of 431.

15 The chart also shows what sectors contribute the  
16 most greenhouse gas emissions in the AB 32 inventory,  
17 approximately half of the industrial sector emissions are  
18 from oil and gas extraction and refining, which means the  
19 transportation sector is responsible for about 50 percent  
20 of the State's emissions.

21 --o0o--

22 ISD STAFF AIR POLLUTION SPECIALIST KATO: The  
23 graph on the left represents statewide annual greenhouse  
24 gas emissions from sources in the AB 32 inventory from  
25 2000 to 2019, the most recent with published data. Since

1 the peak level in 2004, California's greenhouse gas  
2 emissions have generally followed a decreasing trend.  
3 Continuing the downward trend from 2018, transportation  
4 emissions decreased 3.5 million metric tons in 2019, only  
5 being outpaced by electricity, which reduced emissions by  
6 4.3 metric tons in 2019.

7           It is worth noting this decline in transportation  
8 emissions was influenced by a number of factors directly  
9 related to car's regulations and programs. An increasing  
10 number of zero-emission vehicles on the road, improved  
11 vehicle fuel efficiency, and increasing volumes of low  
12 carbon fuels all contributed to the year-over-year decline  
13 in transportation emissions. Unfortunately, continued  
14 increases in per capita vehicle miles traveled dampened  
15 the overall effect of these policies.

16           While the other sectors have seen modest changes  
17 over time with deeper reductions in the electricity  
18 sector, noncombustion gases have grown and will be  
19 expected to persist even once we phase out all combustion.  
20 Emissions from high global warming potential gases have  
21 continued to increase as they replace ozone depleting  
22 substances that are being phased out under the 1987  
23 Montreal Protocol.

24           Refrigerants used in commercial, industrial, and  
25 residential cooling make up over 90 percent of these high

1 global warming potential gases. Emissions from other  
2 sectors have remained relatively constant in recent years.  
3 It's important to remember that these are 2019 emissions.  
4 CARB has not published data reflecting the effect of the  
5 global pandemic that took hold in 2020. In terms of an  
6 emissions outlook, 2020 greenhouse gas emissions will  
7 likely be even lower due to the effects of the pandemic.  
8 However, as economic activity rebounded from the 2020 to  
9 '21 period, it's likely that greenhouse gas emissions will  
10 also follow the increased activity, meaning 2020 may seem  
11 more as an outlier[SIC] versus a general trend marker.

12           The exchange of ecosystem carbon between the  
13 atmosphere and the plants and soils in land is separately  
14 quantified in CARB's natural and working lands ecosystem  
15 carbon inventory, which also includes wildfire emissions.  
16 This inventory tracks how much carbon exists in  
17 California's ecosystems, and where that carbon is located  
18 at discrete moments in time and estimates how much carbon  
19 is moving in and out of the various land types and carbon  
20 pools.

21           It consists of forests and other natural lands,  
22 crop lands, urban forests, wetlands, and soil carbon.  
23 Lands can be a net source of greenhouse emissions or a net  
24 sink. The graphs on the right show trends in carbon stock  
25 change over time. Note that in juxtaposition to fossil

1 fuel emissions where the goal is to see a declining trend  
2 for natural and working lands, we typically want to see a  
3 stable or increasing trend in carbon stocks, which  
4 indicates increasing carbon sequestration or ongoing  
5 carbon storage and reduced greenhouse gas emissions. Soil  
6 is the largest carbon reservoir included in the inventory.  
7 Forest and shrubland carbon stocks are second largest  
8 carbon pool and also currently is subject to some of the  
9 largest total changes.

10 In 2010, carbon stored in forests and shrublands  
11 was six percent lower than in 2001 due to a number of  
12 large wildfires that occurred during the 2001 to 2010  
13 period. Woody crops and urban forests both gain carbon as  
14 these trees generally well maintained due to their  
15 economic and esthetic values. Part of the carbon gains  
16 seen in urban forests also came from expansion of the  
17 urban footprint over this period of time.

18 As we move forward -- towards carbon neutrality,  
19 we need a holistic approach to addressing anthropogenic  
20 and natural carbon emissions and sinks.

21 --o0o--

22 ISD STAFF AIR POLLUTION SPECIALIST KATO: On this  
23 graphic, we're showing our historical emissions trends for  
24 the energy and industrial sectors in comparison to both  
25 our previous 2020 target and upcoming 2030 target of 40

1 percent below 1990 levels by 2030. On the far right, we  
2 show the 2005 Executive Order goal of 80 percent below  
3 1990 levels by 2050. If we achieve the 2030 target and  
4 maintain that rate of reductions, we would be able to  
5 achieve 80 percent below 1990 levels by 2040.

6 --o0o--

7 ISD STAFF AIR POLLUTION SPECIALIST KATO: I'm  
8 going to now provide a short overview on what a Scoping  
9 Plan is and how it helps us achieve our climate goals.  
10 The Scoping Plan is required by statute and is an  
11 actionable plan that lays out a cost effective and  
12 technologically feasible path to ensure we meet the  
13 statewide greenhouse gas reduction targets.

14 Each Scoping Plan relies on a suite of policies  
15 to achieve the broad mandates that guide development of  
16 the plan. Implementing the outcomes identified in this  
17 scoping plan requires a combination of incentives,  
18 regulations, and carbon pricing, many of which are  
19 mandated or authorized via statute, and that focus on  
20 direct emission sources in the state, with the exception  
21 of imported electricity.

22 AB 32 requires that CARB update the Scoping Plan  
23 at least once every five years. This is our fourth  
24 Scoping Plan update, and all previous plans leveraged  
25 traditional air quality programs to provide both

1 greenhouse gas and air pollution emissions reductions.

2           We are required to minimize leakage, which is the  
3 situation where production of goods and jobs leave the  
4 state giving the appearance that we've reduced emissions,  
5 but in reality resulting in merely shifting emissions  
6 outside of the California border.

7           When production leaves the State, not only does  
8 it shift emissions outside of California's borders, but it  
9 can also result in a loss of jobs and economic activity in  
10 the State.

11           Finally, AB 32 requires that policies in the Plan  
12 are cost effective with feasible compliance options and  
13 directs CARB to facilitate subnational and national  
14 collaboration. Climate change is a global issue and  
15 without action from like-minded partners, we will have  
16 face the impacts of climate change. For global pollutants  
17 such as greenhouse gases, a reduction anywhere is a  
18 benefit everywhere. Our goal has always been to develop  
19 scalable and exportable programs that other jurisdictions  
20 can implement and use to reduce emissions within their  
21 borders. That is one of our biggest contributions to  
22 addressing this global threat.

23                           --o0o--

24           ISD STAFF AIR POLLUTION SPECIALIST KATO: As  
25 mentioned, direction on Scoping Plan goals and objectives



1 are informed by statutes and Executive Orders. Each  
2 Scoping Plan is a high level actionable plan that spans  
3 across all sectors. After each Scoping Plan is adopted,  
4 CARB and other State agencies start the process of  
5 reviewing and updating related programs or developing new  
6 programs to align with the outcomes identified in the  
7 Scoping Plan.

8           Aligning these programs relies on multiple  
9 divisions across CARB and other State agencies taking  
10 action based on their established rules and authority.  
11 For CARB that means we bring forth dozens of regulations  
12 and program to the Board to approve, which will help  
13 implement the plan. Each of these has their own public  
14 process and detailed technical analyses.

15           For example, that means some regulations can take  
16 at least a couple of years to develop through a public  
17 process, go before the Board for adoption, and follow the  
18 rest of the required regulatory steps, including approval  
19 by the Office of Administrative Law and filing with the  
20 Secretary of State before regulations become effective.

21           Once regulations and programs are in effect,  
22 there is additional time for projects to be constructed or  
23 for equipment turnover or retrofits to occur. Therefore  
24 the, emissions reductions from these actions will take  
25 some time to show up in the AB 32 inventory.

1                   --o0o--

2                   ISD STAFF AIR POLLUTION SPECIALIST KATO: In  
3 developing a scoping plan, there are many points of  
4 direction and coordination. The next three slides  
5 highlight the governing requirements and guidance we must  
6 follow. The list is not exhaustive, but we focus on a few  
7 key statutes.

8                   --o0o--

9                   ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
10 slide focuses on requirements for overarching targets and  
11 evaluations. Here, we re-cap the content from the prior  
12 slide on key requirements for Scoping Plans from AB 32.  
13 We have the mid-term 2030 target to reduce emissions from  
14 1990 levels by at least 40 percent.

15                   There are also executive orders we must consider.  
16 The 80 percent reduction below 1990 levels by 2050 goes  
17 back to before AB 32 was signed. While the carbon  
18 neutrality Executive Order pushes us towards a steeper  
19 trajectory than the Executive Order, it still represents a  
20 post-2030 greenhouse gas emissions reduction marker in  
21 absence a specific carbon neutrality target, which doesn't  
22 exist because the scope is different.

23                   And lastly, AB 197 directs us to prioritize  
24 direct emissions reductions and include estimates of  
25 greenhouse gas per ton, air pollutant and social cost of

1 carbon for each action included in the scenarios analyzed.

2 --o0o--

3 ISD STAFF AIR POLLUTION SPECIALIST KATO: There  
4 are also statutes that set sector-specific targets and  
5 goals. Short-lived climate pollutants, or SLCPs, are  
6 powerful climate forcers that have relatively short  
7 atmospheric life times and include the AB 32 greenhouse  
8 gases methane and hydrofluorocarbons, or HFCs. Because  
9 SLCP impacts are especially strong over the short term,  
10 acting now can have an immediate beneficial impact. SB  
11 1383 sets statewide emission reduction targets of 40  
12 percent reduction in methane and HFCs by 2030, and  
13 directed CARB to adopt and begin implementing the SLCP  
14 reduction strategy, which was adopted by the Board in  
15 2017. The legislation also established specific targets  
16 for reducing organic waste in landfills and provided  
17 specific direction for methane emissions reductions from  
18 dairy and livestock operations.

19 SB 100 updates the State's renewables portfolio  
20 standard to ensure that 2030 -- excuse me by at least 2030  
21 at least 60 percent of California's electricity is  
22 renewable and sets a 2045 goal of paring all retail  
23 electricity sold in California and State agency  
24 electricity needs with renewable and zero carbon  
25 resources.

1           The Zero-Emission Vehicle Executive Order and SB  
2 375 set targets for phasing out vehicle fossil fuel use  
3 with zero-emission alternatives and improved  
4 transportation planning. AB 398 identified the  
5 Cap-and-Trade Program as part of the state's climate  
6 strategy through 2030, and provided direction concerning  
7 implementation and design of the program, including  
8 quantitative offset usage limits in the post-2020 period.

9           And recent legislation, SB 596, directs CARB to  
10 develop and implement a strategy to achieve net zero  
11 greenhouse gas emissions associated with cement used  
12 within California no later than 2045 and established  
13 interim targets for reducing its greenhouse gas intensity.

14                           --o0o--

15           ISD STAFF AIR POLLUTION SPECIALIST KATO: There  
16 are also statutes that speak specifically to the  
17 importance of natural and working lands and the States  
18 climate goals and to setting a target for this sector. AB  
19 1504 acknowledged the role of forests in the carbon cycle  
20 and their potential to contribute sequestration targets.

21           SB 1386 broadly identified the conservation and  
22 management of natural and working lands as a key strategy  
23 to meet greenhouse gas reduction goals while also  
24 providing public benefits such as wildlife habitat,  
25 recreation opportunities, food and fiber production, and

1 air and water quality improvement.

2 More recently and significantly, Executive Order  
3 N-82-20 specifically called for more action on the natural  
4 and working lands site across several State agencies,  
5 including a goal of conserving at least 30 percent of the  
6 State's land and coastal waters by 2030.

7 The Executive Order directed the California  
8 Natural Resources Agency, in consultation with CARB, and  
9 the California Department of Food and Agriculture to  
10 develop a Natural and Working Lands Climate Smart Strategy  
11 to set a framework to advance the carbon neutrality goal  
12 and build climate resilience. The Executive Order also  
13 directed CARB to update the target for the natural and  
14 working lands sector in the scoping plan with  
15 consideration of the Natural and Working Lands Climate  
16 Smart Strategy. SB 27 expanded on this to direct CARB to  
17 establish a natural and working lands carbon dioxide  
18 removal target for 2030 and beyond in the Scoping Plan.  
19 It reemphasized the need to collaborate with the  
20 California Natural Resources Agency in developing the  
21 Climate Smart Strategy.

22 --o0o--

23 ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
24 slide gives a sense of the multi-agency coordination that  
25 happens during plan development, as well as after-plan

1 adoption during the implementation phase as it touches  
2 many sectors and many of the policies fall under the  
3 purview of sister agencies. This list is not exhaustive,  
4 but is intended to show that successful development and  
5 implementation of any plan requires close coordination and  
6 understanding of the jurisdiction of other agencies.

7 --o0o--

8 ISD STAFF AIR POLLUTION SPECIALIST KATO: The  
9 overlay of carbon neutrality in our long-term climate  
10 planning means we need to redefine our scope of courses  
11 and six -- sinks in that framework in the 2022 Scoping  
12 Plan. Carbon neutrality is achieved when emissions  
13 sources equal sinks. Up until now, every Scoping Plan has  
14 focused on reducing emissions from fossil energy and  
15 industrial sources, included in the AB 32 inventory. As  
16 we shift to the framework of carbon neutrality, we have  
17 expanded the scope to include all sources, which means the  
18 emissions from natural and working lands and all sinks.

19 The circle shown on this slide represents  
20 California's greenhouse gas emissions from AB 32 inventory  
21 sources, which we continue to ratchet down through air  
22 quality and climate policies and programs. Carbon capture  
23 and sequestration can also be applied to large emitters of  
24 carbon dioxide to mitigate emissions.

25 Natural and working lands can be a net carbon

1 source or sink, as indicated by the plus and minus signs.  
2 As mentioned, at the beginning of this presentation, the  
3 State's separate natural and working lands inventory  
4 allows us to track the greenhouse gas emissions and  
5 sequestration on natural and working lands over time.

6 Beyond nature-based solutions, there are  
7 technological carbon dioxide removal options such as  
8 direct air capture of carbon dioxide coupled with  
9 permanent underground storage of carbon dioxide that can  
10 remove emissions from the ambient air.

11 In this new framework, we must continue to drive  
12 down emissions in the AB 32 inventory sources as those  
13 will result in air quality benefits. However, even with  
14 the ambitious and aggressive action, some greenhouse gas  
15 emissions will remain. In order get to carbon neutrality,  
16 those remaining emissions can be mitigated through  
17 nature-based solutions and technological greenhouse gas  
18 removal technologies.

19 --o0o--

20 ISD STAFF AIR POLLUTION SPECIALIST KATO: Since  
21 we kicked off the 2022 Scoping Plan update in June last  
22 year, we have heard from California stakeholders through  
23 public workshops and Environmental Justice Advisory  
24 Committee meetings. The 11 public workshops included a  
25 three-day kick-off series with the sector-focused

1 discussion, three modeling scenario workshops, and topical  
2 workshops covering natural and working lands, engineered  
3 carbon removal, short-lived climate pollutants,  
4 electricity, building decarbonization and public health.

5           We have received more than 400 written comments  
6 from individuals, environmental justice organizations, and  
7 industry groups, and have also acquired feedback through  
8 stakeholder meetings and workshops with tribes.

9           For the Environmental Justice Advisory Committee,  
10 a key milestone for last year was the submittal of  
11 recommendations for scenario input assumptions. We use  
12 this feedback to design scenarios for both energy and  
13 industrial sources and natural and working land sources  
14 for modeling. These modeling results will inform the  
15 Scoping Plan that we present to the Board. There are two  
16 modeling efforts underway to support the Scoping Plan.  
17 One cover scenarios for energy and industrial sources to  
18 help us understand the pace of transition away from fossil  
19 fuels, quantify greenhouse gases we can eliminate from  
20 these sectors over the next few decades and the residual  
21 emissions that remain.

22           We will quantify the air quality health and  
23 economic impacts of each scenario. The second effort  
24 underway is to estimate the potential to minimize natural  
25 and working lands emission sources and maximize sinks



1 across all of the land cover types in California, while  
2 taking into consideration the numerous co-benefits that  
3 come from these natural systems.

4           We will quantify ecological health and economic  
5 outcomes for these scenarios. Based on evaluations of  
6 different scenarios, we will identify a single Scoping  
7 Plan scenario for adoption by the Board. We will need to  
8 determine how to compensate for any residual emissions to  
9 achieve carbon neutrality. In the next several slides,  
10 I'll be walking through the design approach, modeling  
11 tools, and scenarios first for the energy and industrial  
12 sectors, then for natural and working lands.

13           --o0o--

14           ISD STAFF AIR POLLUTION SPECIALIST KATO: First,  
15 in designing scenarios for the AB 32 sources, staff strive  
16 to build options that align with existing statutes and  
17 executive orders, meet the greenhouse gas goals, and work  
18 in concert with our existing and emerging air quality  
19 programs.

20           Importantly, due to corresponding local  
21 co-pollutant impacts, the AB 32 sources scenarios include  
22 features that will deliver near-term air quality benefits,  
23 especially in heavily burdened communities. When Scoping  
24 Plan Scenarios are presented to the Board, we will provide  
25 details that demonstrate consistency with statutes and

1 Executive Orders. We also identify the tradeoffs among  
2 scenarios and balance multiple statutes that speak to  
3 direct emissions reductions benefits, costs, minimizing  
4 leakage, and technological feasibility. The exception to  
5 this may be a scenario or scenarios that reflect the  
6 reviews of specific stakeholder groups.

7 --o0o--

8 ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
9 slide depicts the modeling tools being used for the  
10 Scoping Plan's AB 32 sources scenario analyses. The  
11 primary energy and industrial source greenhouse gas  
12 modeling tool we are using is called PATHWAYS. This is  
13 the same model used for the 2017 Scoping Plan and is also  
14 used by some sister agencies for their long-term modeling.

15 PATHWAYS does not model local air quality or  
16 health impacts, but its outputs will be used by UC Irvine  
17 to conduct a quantitative air quality and health impact  
18 analysis of each of the Scoping Plan scenarios. This  
19 additional air quality and health analysis will help  
20 evaluate the air quality co-benefits of meeting our  
21 climate goals. AB 32 requires that the Scoping Plan  
22 include an economic analysis quantifying the costs and  
23 benefits of the plan's implementation on the California  
24 economy.

25 Rhodium will conduct the macroeconomic analysis

1 using the IMPLAN model. IMPLAN incorporates changes in  
2 spending on energy and equipment from the PATHWAYS Model,  
3 as well as changes in spending from the health impacts  
4 analysis. The model captures the connections between  
5 industries to analyze the effects of a change in economic  
6 activity, such as electric vehicle sales or change in  
7 residential energy use, as it models the ripple effects of  
8 those activities throughout the economy. Outputs include  
9 impacts when the state's economy represented by changes in  
10 gross state product, changes in employment, and impacts to  
11 households due to changes in personal income.

12 --o0o--

13 ISD STAFF AIR POLLUTION SPECIALIST KATO:

14 PATHWAYS is a State level model that uses inputs  
15 for all sectors of the economy except natural and working  
16 lands. It produces State level outputs for energy demand  
17 by fuel type, tracks the capital investments and fuel  
18 costs associated with decarbonization strategies over  
19 time, and calculates the resulting greenhouse gas  
20 emissions. The associated costs and emissions can be  
21 disaggregated by sector.

22 For the air quality analysis, the State level  
23 drop in emissions from PATHWAYS will be applied as a  
24 proportional drop in emissions at the sources in CARB's  
25 inventory in a future year.

1           Models will be used to spatially and temporally  
2 distribute the emission's data and stimulate photochemical  
3 interactions in the atmosphere to estimate improvement in  
4 ambient pollutant concentrations. U.S. EPA's BenMAP tool  
5 will be used to estimate how the changes in air pollution  
6 result in changes in health outcomes, including the  
7 monetary savings from avoided health impacts as air  
8 quality improves.

9           The health savings estimates will be at the same  
10 resolution as the air quality model and represent net  
11 changes. Therefore, this is not granular enough to look  
12 at emissions changes at any one specific facility.

13 However, UC Irvine will be able to downscale the net  
14 changes in regional air quality to the census tract level  
15 in order to provide insight into the community level air  
16 quality improvements of the Scoping Plan scenarios.

17                           --o0o--

18           ISD STAFF AIR POLLUTION SPECIALIST KATO: In this  
19 update, we expand on prior work to develop a more  
20 extensive health analysis, including more quantitative and  
21 qualitative analysis. The health endpoints that CARB  
22 currently quantifies are mortality, ER visits and hospital  
23 emissions that we know that air pollution can cause health  
24 effects beyond what we are currently quantifying.

25           In the Scoping Plan process, our UC Irvine

1 contractors or calculating reductions in illnesses and  
2 deaths expected due to the mix of changes involved in  
3 moving toward decarbonization. As mentioned in the prior  
4 slide, those health benefits will be calculated at the  
5 State level and scaled down to a more local level.

6 One key way to expand our health analysis is to  
7 include additional health endpoints. Our immediate plans  
8 include expanding our health endpoints to include  
9 additional respiratory and disease outcomes. CARB staff  
10 held a public workshop this past December to discuss our  
11 proposal to include these health endpoints. The endpoints  
12 include ER visits for cardiovascular disease, non-fatal  
13 heart attacks, asthma development and symptoms, lost work  
14 days, lung cancer incidence, and brain health impacts  
15 including Alzheimer's and Parkinson's disease.

16 In addition to the quantitative tools qualitative  
17 tools provide us the opportunity to go beyond what we can  
18 do through the quantitative analysis. We can look at a  
19 broader range of benefits and impacts especially across  
20 communities and groups. Staff will use both the  
21 quantitative and qualitative methods together to cover the  
22 broad range of benefits. Our qualitative assessment can  
23 look at directional effects and the scale of the impacts  
24 and benefits. We will be able to look more clearly at  
25 community vulnerability and the effects of disparities in

1 resources, health conditions, and other factors. We can  
2 look at how goals of the Scoping Plan outcomes will  
3 improve health and communities and assist in a move toward  
4 more resilient communities.

5 --o0o--

6 ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
7 slide provides an overview and comparison of the analysis  
8 for the 2022 and 2017 Scoping Plans. For the quantitative  
9 analysis, you can see the proposed increase in health  
10 endpoints of 11 compared to the three conducted in 2017.  
11 We will also include ozone as well as particulate matter  
12 with a finer spatial analysis. In prior Scoping Plans, we  
13 have acknowledged the mix of factors important in creating  
14 healthy communities.

15 In this analysis, staff will look at a broader  
16 set of factors that impact health in our communities and  
17 how carbon neutrality will promote progress toward  
18 improved health. Physical activity and increased active  
19 transport, including biking and walking, is known to have  
20 substantial health benefits and we have a tool that can  
21 help us assess these benefits. Increased mobility  
22 options, including public transit, provide increased  
23 economic opportunities for community members and more  
24 opportunities for physical activity.

25 We are developing a natural and working lands

1 tool that will help us calculate the potential benefits of  
2 our forest management policies to reduce wildfire risks  
3 and therefore the health impacts of wildfires. It will  
4 also help identify other health benefits of natural and  
5 working lands, such as increased physical and mental  
6 health and well-being.

7           Understanding existing health inequities is also  
8 key to our climate health analysis. Results from our  
9 recent CARB-funded study show disparities in exposure to  
10 mobile source pollutants by race in California. These  
11 result showed that under-resourced communities of color  
12 are burdened by higher levels of particulate pollution  
13 from traffic and industry sources we are also reviewing  
14 new research on health disparities. For example, a recent  
15 U.S. EPA report on climate change and social vulnerability  
16 in the U.S. demonstrates that communities of color are  
17 most likely to currently live in areas where the analyses  
18 project the highest levels of climate change impacts with  
19 a two degree Celsius of global warming or 50 centimeters  
20 of global sea level rise.

21           Staff will be considering how to incorporate  
22 information from existing tools that demonstrate community  
23 vulnerabilities and health disparities into our Scoping  
24 Plan health analysis.

25                           --o0o--

1           ISD STAFF AIR POLLUTION SPECIALIST KATO: In  
2 addition to a reference or business-as-usual scenario, we  
3 are modeling four draft energy and supply demand  
4 scenarios. Two of the scenarios achieve carbon neutrality  
5 by 2035 and two by 2045.

6           Alternative 1 nearly phases out fossil and  
7 biomass combustion completely across the economy. This  
8 alternative includes limited engineered carbon removal to  
9 achieve carbon neutrality by 2035.

10           Alternative 2 implements a full suite of  
11 technology options, including engineered carbon removal at  
12 a rapid pace in order to reduce emissions as much as  
13 possible and achieve carbon neutrality by 2035.

14           Alternative 3 uses a broad portfolio of existing  
15 and emerging fossil fuel alternatives and includes  
16 achievement of Executive Order N-79-20, eliminating  
17 internal combustion engines through the transportation  
18 sector as much as possible.

19           Alternative 4 relies on existing and some  
20 emerging technologies with slower deployment and consumer  
21 acceptance rates. It reflects a higher reliance on carbon  
22 dioxide capture and removal technologies to achieve carbon  
23 neutrality by 2045 Compared to Alternative 3.

24                           --o0o--

25           ISD STAFF AIR POLLUTION SPECIALIST KATO: This



1 slide highlights common attributes and differences amongst  
2 the four scenarios. In terms of similarities, it's  
3 important to note that all four alternatives emphasize  
4 reduced reliance on fossil fuels as the primary source of  
5 greenhouse gas emissions. This requires rapid deployment  
6 of existing and emerging zero carbon emission technologies  
7 throughout our state. For example, all scenarios rely on  
8 rapid deployment of electrified end-uses paired with a  
9 clean grid supplied by renewables.

10           Because we can't just shut everything down and  
11 need to build out new energy supplies and infrastructure,  
12 the alternatives reflect a managed phasedown of fossil  
13 fuel as we shift to clean energy. For example, as our  
14 transportation sector transitions away from liquid  
15 petroleum fuels, like gasoline and diesel, the oil and gas  
16 extraction and refining sector activities will be phased  
17 down in response to the demand in reductions.

18           No scenario is able to eliminate all emissions  
19 from AB 32 sources, and therefore all four have some  
20 degree of residual emissions remaining from sources such  
21 as short-lived climate pollutants like hydrofluorocarbons  
22 associated with refrigerant use. And in order to reach  
23 carbon neutrality by each alternative's end year, the  
24 scenarios deploy varying levels of carbon dioxide removal.

25           The primary differences among these four

1 scenarios are the speed with which we transition away from  
2 fossil fuel, how quickly California residents and  
3 businesses adopt zero-emission vehicles, for example, and  
4 how far we can go eliminating fossil fuels, how many homes  
5 and businesses can convert to electric appliances by 2035  
6 or by 2045.

7           And there are some specific differences between  
8 scenarios pertaining to available technologies and fuels.  
9 For example, Alternative 1's goal, to maximize air quality  
10 co-benefits through a near complete elimination of  
11 combustion, and limited reliance on engineered carbon  
12 removal means that combustion based bioenergy for  
13 biogen -- for power generation is excluded, and gas  
14 appliances in existing buildings are retired before end of  
15 life and replaced with electric equipment.

16                           --o0o--

17           ISD STAFF AIR POLLUTION SPECIALIST KATO: Now, we  
18 will discuss the natural and working lands efforts.  
19 First, a brief history of natural and working lands in the  
20 Scoping Plan. The natural and working lands sector has  
21 been a part of California's Scoping Plan since the first  
22 Scoping Plan in 2008. At that time, however, only forests  
23 were considered and only one study was used to determine a  
24 target. This five million metric ton of carbon per year  
25 was set without any regional perspective or adjustments to

1 the results from the original scientific study.

2           The science of nature based climate solutions was  
3 relatively new at this point in California. The next  
4 Scoping Plan update in 2013 recognized the need for all  
5 lands to contribute to California's climate strategy, and  
6 so the term natural and working lands was developed. This  
7 Scoping Plan called for a more thorough look at forest  
8 lands, which resulted in California's forest carbon plan.  
9 The forest carbon plan does not set any new carbon targets  
10 but does provide a lot of valuable information on actions  
11 and mechanisms that California can use within forests to  
12 help achieve whatever target we all set together.

13           The 2017 Scoping Plan update took the next step  
14 towards developing a comprehensive natural and working  
15 lands carbon target. Through the process of updating the  
16 Scoping Plan, CARB, along with the California Department  
17 of Food Agriculture and the California Natural Resources  
18 Agency developed the natural and working lands  
19 implementation plan. The natural and working lands  
20 implementation plan examined mechanisms and actions that  
21 can be taken throughout California.

22           Through this effort, it was calculated that  
23 California should reduce emissions from natural and  
24 working lands by 15 to 20 million metric tons of carbon  
25 per year by 2030.

1 All of these numbers, however, were somewhat at  
2 the periphery of this Scoping Plan, because the focus of  
3 these Scoping Plans was, for good reason, the reduction of  
4 emissions from fossil sources. However, it is now clear  
5 that reducing emissions is not sufficient to fight climate  
6 change and we have been ordered to determine a path to  
7 make California carbon neutral by 2045. When one moves  
8 from emissions reductions to carbon neutrality, that  
9 requires taking into account the whole carbon balance,  
10 including carbon dynamics within our natural and work  
11 lands.

12 For this reason, and in response to Governor's  
13 Executive Order N-82-20, CARB has significantly expanded  
14 the scale of the natural and working lands analysis for  
15 this Scoping Plan. And in this Scoping Plan update, CARB  
16 will quantify and set carbon targets for natural and  
17 working lands, and natural and working lands carbon  
18 removal and increased sequestration of carbon adds another  
19 tool in our fight against climate change.

20 --o0o--

21 ISD STAFF AIR POLLUTION SPECIALIST KATO: And  
22 while past Scoping Plan natural and working lands analyses  
23 focused primarily on carbon, this Scoping Plan is going a  
24 step further and focusing on analyzing more than just  
25 carbon. CARB staff will also model the impacts that land

1 management actions have on fire emissions and air quality,  
2 water quality, biomass availability, and other natural and  
3 working land ecosystem services.

4           Because of the multi-benefit nature of these  
5 lands, CARB is trying to balance all of the needs that  
6 California and the U.S. have from these ecosystems and  
7 then assessing the impact that the management strategy to  
8 achieve these objectives actually has.

9           In designing scenarios, staff strive to build  
10 options that explore different visions for how California  
11 lands can be managed in the future. While scenarios are  
12 designed to assess carbon stock changes at 2030, 2035, and  
13 2045, we may assist changes at longer time scales more  
14 appropriate for natural and working lands.

15           Each scenario sets overarching objectives, then  
16 utilizes management strategies designed to fulfill those  
17 objectives. Management strategies are set of on -- on the  
18 ground actions that we can take statewide. These  
19 management strategies include climate smart agriculture  
20 action, like compost applications, and hedge row planting.  
21 They also include forest management actions, like thinning  
22 and prescribed fire.

23           In identifying which actions to model, CARB staff  
24 reviewed the existing scientific literature, relied on  
25 other State agency natural and working lands planning

1 documents and reviewed existing model capabilities.

2 To capture the different visions for natural and  
3 working lands, staff engaged extensively with stakeholders  
4 and sister agencies to develop draft scenarios and  
5 overarching objectives, which were then further refined  
6 based on additional comments and collaborative efforts.

7 CARB staff also worked to align the scenarios to  
8 complement both California's climate smart land strategy  
9 and 30 by 30 strategy, which were also called for in the  
10 Governor's Executive Order.

11 When Scoping Plan scenarios are presented to the  
12 Board, we will identify the tradeoffs among scenarios for  
13 various ecosystem co-benefits, economic costs of  
14 implementation, feasibility of mechanism pathways, and  
15 technical feasibility of implementation. We will also  
16 propose a scenario that appropriately leverages this  
17 sector as part of the solution to achieving carbon  
18 neutrality.

19 --o0o--

20 ISD STAFF AIR POLLUTION SPECIALIST KATO: This  
21 slide depicts the primary tools for the 2022 Scoping  
22 Plan's natural and working lands scenario analysis. I'll  
23 briefly run through them here and then go into more detail  
24 in the subsequent slide.

25 To model the ecological impacts of our scenarios,

1 we will utilize a portfolio of models to project  
2 ecological outcomes, including carbon. The RHESSys model  
3 will be used forest shrublands and grasslands. For the  
4 other land types, we'll use a combination of existing  
5 models and CARB-derived models. The projected wildfire  
6 emissions from the RHESSys model will feed into UCLA's  
7 health impact analysis using BenMAP. The economic  
8 analysis done by CARB staff will use the cost estimates of  
9 implementing management strategies and predicted health  
10 impacts.

11 --o0o--

12 ISD STAFF AIR POLLUTION SPECIALIST KATO: As  
13 mentioned, we will be using a suite of models to cover all  
14 natural and working land types across the state. The  
15 complexity of these models vary by land type depending on  
16 the existing science, data, and availability of existing  
17 models to use. These models will be run at the State  
18 level and at a minimum will project carbon stock and flux  
19 change over time with the effects of climate change and  
20 various management practice specified in the scenarios.

21 Some of the more complex models, such as the  
22 RHESSys model for forests, shrublands, and grasslands can  
23 model additional ecological outcomes such as wildfire  
24 activity, water dynamics, and more. CARB aims to  
25 continually refine these models going forward to

1 incorporate new science and data, and improve our  
2 understanding and management of natural and working lands.

3 --o0o--

4 ISD STAFF AIR POLLUTION SPECIALIST KATO: The  
5 management practices that take place across the state,  
6 such as forest fuels reduction treatments, wetland  
7 restoration work, and compost additions on agricultural  
8 lands come with trade-offs and can impact whether the land  
9 is a carbon source or sink, as well as how much. In  
10 addition to a business-as-usual scenario, we are modeling  
11 four different management strategies to estimate the  
12 carbon emissions and carbon sink potential of our natural  
13 and working lands. These scenarios will quantify the  
14 effects of various management strategies under climate  
15 change on statewide carbon stocks.

16 These scenarios explore a range of objectives,  
17 including maximizing mid-century carbon stocks,  
18 implementing current commitments and plans, prioritizing  
19 restoration and long-term climate resilience, and  
20 prioritizing wildfire reduction.

21 These scenarios will assist in identifying which  
22 management strategies minimize emissions and maximize  
23 sinks in California's natural and working lands. We will  
24 also consider other co-benefits that come from natural and  
25 working lands, such as biodiversity, water yield, and



1 water quality when balancing the trade-offs of different  
2 management strategies. Once completed, the natural and  
3 working lands modeling will provide us with information on  
4 the amount of emissions and sequestration we could expect  
5 from natural and working lands by mid-century.

6 In the event we are unable to cost effectively  
7 reach carbon neutrality via emissions mitigation and  
8 nature based carbon sequestration, it's possible that any  
9 residual greenhouse gas emissions need to be compensated  
10 through technological carbon dioxide removal, such as  
11 direct air capture with sequestration.

12 --o0o--

13 ISD STAFF AIR POLLUTION SPECIALIST KATO: There  
14 are many activities slated for the next three months in  
15 preparation for release of the Draft Scoping Plan. In  
16 March, we have public workshops on preliminary scenario  
17 modeling results from the PATHWAYS and natural working  
18 lands. We are also planning a transportation  
19 sector-focused workshop and will present modeling results  
20 to the Board.

21 In April, there will be a public workshop with  
22 air quality public health and economic modeling results.  
23 In May, we plan to release the Draft Scoping Plan for  
24 public comment, and in June we will present the Draft  
25 Scoping Plan to the Board. The Board may provide

1 additional direction to CARB staff to inform the Final  
2 Scoping Plan.

3           The Environmental Justice Advisory Committee has  
4 been meeting bi-monthly and will continue to do so. The  
5 Committee is currently developing recommendations to  
6 inform the Draft Scoping Plan. And there will be a joint  
7 EJ Advisory Committee Board meeting on March 10th, where  
8 the Committee will be able to discussion the  
9 recommendations with Board members.

10           In addition, a process for holding topic-specific  
11 workgroup meetings that include CARB staff has been  
12 established. And meetings are being scheduled to seek  
13 input and provide information on how community members can  
14 influence the Scoping Plan. The first meeting was held  
15 virtually on Tuesday evening for the San Joaquin Valley.

16           Based on Board direction, additional workshops,  
17 EJ Advisory Committee meetings, and public input, updated  
18 modeling will be conducted this summer in preparation for  
19 assembling the proposed Final Scoping Plan.

20                           --o0o--

21           ISD STAFF AIR POLLUTION SPECIALIST KATO: In  
22 terms of the overall schedule as mentioned, upcoming next  
23 month is the joint EJ Advisory Committee Board meeting and  
24 Board informational item on modeling results. Staff will  
25 present the Draft Scoping Plan to the Board in June.

1 There will be another joint EJ Advisory Committee Board  
2 meeting around September, and staff is targeting bringing  
3 the proposed Final Scoping Plan to the Board for adoption  
4 by the end of 2022.

5 Chair Randolph, that concludes the staff  
6 presentation. Before inviting the EJ Advisory Committee  
7 members to share their perspective, does the Board have  
8 any questions?

9 CHAIR RANDOLPH: I just had a question that's  
10 been nagging at me, because I haven't really seen it  
11 addressed in any of the presentations previously. How do  
12 you plan to assess the phaseout of oil and gas extraction  
13 if the modeling shows that we are still having a demand  
14 for oil and gas?

15 DEPUTY EXECUTIVE OFFICER SAHOTA: Thanks, Chair  
16 Randolph. I can take that question. So in the modeling,  
17 as Stephanie presented, we will show that you ratchet down  
18 oil and gas extraction and refining in line with the rate  
19 of decline for demand in the state of California. And in  
20 almost every scenario, some demand remains. What we will  
21 do outside of the modeling is then zero out those  
22 emissions from those sectors and quantify the health  
23 impacts and benefits of doing that, and then also looking  
24 at the economics of still having to import any of that  
25 fuel into the state to meet that ongoing demand. But all

1 of that is outside of the modeling and we do plan to  
2 assess that since that was direction explicit in a letter  
3 from the Governor to yourself.

4 CHAIR RANDOLPH: Okay. Thank you.

5 Dr. Balmes.

6 BOARD MEMBER BALMES: Could I ask for some  
7 clarification on the wildfire modeling? I mean, I  
8 appreciate that we're addressing wildfire and I think this  
9 is more than we've done in the past, but I guess I'm  
10 curious about the fact that there's likely to be a major  
11 increase in wildfire activity over the time frame, and I'm  
12 not sure we really know the benefit of actions to reduce  
13 the risk of wildfire yet. And so I just wondered how  
14 that's being modeled. That's just a totally informational  
15 question. No judgment there.

16 EXECUTIVE OFFICER COREY: Matt Botill should be  
17 able to help with that response, Dr. Balmes.

18 Matt.

19 INDUSTRIAL STRATEGIES DIVISION CHIEF BOTILL:

20 Yeah. Hi, Dr. Balmes. Matt Botill. I'm the  
21 Division Chief for the Industrial Strategies Division.  
22 And so, as Steph mentioned in one of her slides and just  
23 you know for more information here, we are, as part of the  
24 natural and working lands modeling going to be modeling  
25 the effect that various management strategies have on

1 forests. And that model will also have the fire emissions  
2 and the frequency and the intensity of fires that move  
3 through the landscape between now and the end of century.  
4 So we'll have some information about how fire responds in  
5 response to various management actions on the forest  
6 landscape.

7 BOARD MEMBER BALMES: And just to be transparent,  
8 I asked Matthew this in my staff presentation, but I  
9 wanted to hear it publicly.

10 Thank you, Matt.

11 CHAIR RANDOLPH: Okay. Thanks. I just kind of  
12 wanted to make sure we had a chance to do a couple  
13 clarifying questions. I think next we are going to be  
14 hearing from representatives of the Environmental Justice  
15 Advisory Committee, is that correct?

16 Okay.

17 BOARD CLERK ESTABROOK: Stephanie, go ahead.  
18 Okay. Our first -- the first person we will be hearing  
19 from is Martha Argüello.

20 Martha, you can go ahead.

21 MARTHA DINA ARGÜELLO: Yes. I'm just going to  
22 provide a quick update on what the Environmental Justice  
23 Advisory Committee has been doing. And I think my fellow  
24 co-chairs and members will also talk from their  
25 perspectives. So we've been working at a breakneck speed

1 to keep up with the pace of this Scoping Plan and to be  
2 able to engage in a meaningful way. And so I think it's  
3 important to keep in mind the numbers of meetings doesn't  
4 necessarily mean always that the engagement is meaningful.  
5 And I think that has been a real challenge throughout this  
6 entire process, which is why, you know, we have asked on a  
7 number of occasions for an extension of the time line for  
8 us to be able to meaningfully engage, one, as members of  
9 the EJAC, but also the importance of ground truthing many  
10 of these policies with communities in a robust community  
11 engagement.

12           And so what I would recommend is as we think  
13 about making the EJAC permanent, what are the structures  
14 that we need within CARB to support that from budget, to  
15 resources, to ensure that we can be at this table as equal  
16 partners. And again, you know, reflecting what my other  
17 co-chair Paulina said early on. We want to be part of the  
18 process from inception to evaluation.

19           And so, you know, I think those are -- continue  
20 to be the major themes that are emerging from the EJAC.  
21 And I would remiss again if I would say that we want the  
22 focus to be on direct emissions reductions coupled with  
23 focus on the -- all the co-pollutants, including carbon  
24 for those direct emissions reduction, real investments in  
25 building resiliency, because we have waited so long. And

1 now the choices that we have for getting to this magical  
2 carbon neutral future are act -- is more magical thinking  
3 that we can use unproven technologies that further embed  
4 the fossil fuel infrastructure and extended life for 150  
5 years continues to be huge concerns for our communities,  
6 that we can't solve the climate crisis on the backs of the  
7 people who have been bearing the brunt of the climate  
8 crisis.

9           And so that will require some, you know, new  
10 thinking, but also investments in different types of  
11 processes, and tapping into, you know, the knowledge of  
12 our communities on how to solve things, right, because we  
13 don't want -- we want to make sure that we're not creating  
14 other problems as we focus on the carbon emissions and  
15 that's, you know, true for a number of sectors, right?  
16 Where will the energy come from as we electrify our  
17 buildings? Are we leaving the door open for other  
18 technologies that bring with it more pollution burdens  
19 that will be pushed onto our communities?

20           And I -- we are working on sets of  
21 recommendations and we have our EJAC meeting next week.  
22 And so I want to make sure that before we start talking  
23 about what our recommendations are that they've been  
24 vetted by the entire EJAC. And so I will stop there and  
25 hand it over to Dr. Catherine Garoupa White.

1 DR. CATHERINE GAROUPA WHITE: Our colleague Juan  
2 Flores, also had a hard stop at 2 o'clock, so I just  
3 wanted to quickly see if he could go before me, if he's  
4 still available.

5 JUAN FLORES: Yes. Thank you, Dr. Catherine.

6 Good afternoon, Madam Chair and Board members.  
7 My name is Juan Flores and I'm a community organizer at  
8 CRP with over 11 years of experience working directly with  
9 residents in Kern County on oil and gas issues. I have  
10 been engaged in the Scoping Plan process behind the scenes  
11 and hope I can shed some light on why we request more time  
12 and why is it necessary from an organizing perspective.

13 First, many of us organizers have been asking for  
14 this from the start of the Scoping Plan process. And we  
15 were told, well, we won't get the extension when we ask  
16 for it in November that this Board will revisit the issue.  
17 Now is that time.

18 No one can deny that the Scoping Plan is loaded,  
19 technical, and very hard to understand. The EJAC, as it  
20 is comprised, is mainly made up of policy folks, lawyers,  
21 scientists. And it is one thing for them to be able to  
22 understand the information, but then it's a whole other  
23 ballpark when we have to take this information to  
24 residents in a meaningful way.

25 I understand that EJAC recommendations are due in



1 a week so, but I hope this Board knows that our residents  
2 living next to all the sources the Scoping Plan attempts  
3 to trace only had one round of meetings where we were able  
4 to share our stories, but we need more time.

5           And even more disturbing is the fact that valley  
6 residents in a way are the lucky ones here, because the  
7 San Joaquin Valley is the only region that had the  
8 opportunity to do community engagement. So these  
9 recommendations would not have the input of impacted  
10 residents from Southern and Northern California.

11           It is not too late to course correct. As the San  
12 Joaquin Valley community's engagement meeting shows this  
13 past week, our residents are ready to share their stories  
14 in wading through this process you just need to let them.  
15 I appreciate the time to share my insights and hope to be  
16 able to continue emphasizing the significance of community  
17 organizing as a central component of EJAC. Thank you.

18           And now I'll pass the microphone to Dr. Catherine  
19 Garoupa White.

20           DR. CATHERINE GAROUPA WHITE: Thank you, Juan and  
21 thank you, Martha. This is Catherine with the Central  
22 Valley Air Quality Coalition and the Environmental Justice  
23 Advisory committee, speaking as an active participant, and  
24 as my colleagues have already acknowledged not on behalf  
25 of the Environmental Justice Advisory Committee.

1           As someone who started my career as a community  
2 organizer working for CVAQ in 2006, I know well the need  
3 for equitable community engagement and that this is not  
4 new and neither is the Scoping Plan process. The Scoping  
5 Plan is important to the San Joaquin Valley and to  
6 environmental justice communities across California  
7 because of the concentration of pollution in our  
8 neighborhoods, where black and indigenous peoples and  
9 people of color, and low-income communities live.

10           Models are fundamentally human-made tools with a  
11 lot of uncertainty. And if we want to talk about the best  
12 quote/unquote science, I would encourage CARB to look at  
13 the ample literature in fields like social psychology,  
14 about how humans tend to underestimate risk, especially if  
15 it's something that we have never experienced before,  
16 which obviously we are experiencing under unprecedented  
17 effects of human caused climate change.

18           The economic assumptions of modeling will not  
19 automatically account for equity. We have to build it  
20 into the assumptions. The San Joaquin Valley  
21 unfortunately is a canary in the coal mine in this case.  
22 Incentives and models are not producing expected results,  
23 whether it's in SIPs or the Scoping Plan. The need for  
24 ground truthing has never been greater. The process thus  
25 far has been frustrating chaos with a lack of

1 accountability for improving existing processes and  
2 providing the resources and timeline that accommodate  
3 authentic community engagement.

4           The process thus far has disengaged and  
5 disenfranchised the general public and particularly people  
6 living in EJ communities, and it's something that I have  
7 also experienced in the workshops that I have participated  
8 in, which cannot be considered meaningful. There's been a  
9 lack of foresight in budgeting and allocation of  
10 resources, a lack of clarity and expectations and time  
11 commitments asked of EJAC members.

12           The public health and social cost workshop last  
13 week is just one recent example where the meeting was held  
14 for several hours during the day with more than three  
15 hours of presentations discussing health impacts and  
16 praising the potential for this plan to create solutions,  
17 without clear action steps and metrics, and speaking in  
18 scientific terms dissecting dead bodies, traumatizing all  
19 the ways that air pollution is killing people, especially  
20 people in environmental justice communities.

21           When we call out these built ineq -- built in  
22 inequities as EJAC members, we are advised to narrow in  
23 our focus or stop complaining, which is tone deaf to the  
24 gravity of these issues and the magnitude of the disparity  
25 and ongoing suffering that our communities are

1 experiencing. And when we challenge you all to do better,  
2 we're told not now in the future. Despite these  
3 challenges, the San Joaquin Valley held our first  
4 community workshop just a few nights ago. And as  
5 colleagues have also shared, we still need time to debrief  
6 internally before we share specific recommendations from  
7 those conversations. But with over a hundred participants  
8 eager to be engaged and asking for consultation early and  
9 often, we have shown that given resources, we can deepen  
10 and provide access to meaningful engagement of our  
11 communities.

12           From the beginning, we have asked for co-design  
13 and it is not happening. I am striving to be a model  
14 myself and demonstrate with my actions that I am  
15 consulting where possible. So I want to extend my  
16 gratitude to the Office of Environmental Justice staff  
17 particularly Chanell and Ambreen for working on the  
18 templates and contracts to ensure that our advocates and  
19 organizations have resources to do outreach to get  
20 community members to our workshop. And I recognize that  
21 OEJ is a small team that has been given a big task. That  
22 is in itself inequitable.

23           I also appreciate Carey Bylin from Industrial  
24 Strategies Division for consulting with me on my Scoping  
25 Plan overview to ensure that I was sharing the most

1 current information.

2           So in conclusion, I would urge the Board to  
3 consider these resource and capacity constraints,  
4 thoughtfully plan with us a transition to a permanent  
5 EJAC, help us forge new pathways on how to do this better,  
6 move from tokenizing us and our community members to  
7 consulting and collaborating with us, so that we can have  
8 integrated dialogue. Just one small specific step would  
9 be improving the format of your workshops.

10           So three points in conclusion. Number one, I  
11 want to underscore the ask from EJAC for an improved  
12 analysis of public health and social costs that includes  
13 distributional effects.

14           Number two, I urge a program review of  
15 Cap-and-Trade as soon as possible, given the concerning  
16 findings from Independent Emissions Market Advisory  
17 Committee and the recent report from Dr. Manuel Pastor, et  
18 al. showing increases in emissions in our communities.

19           And in conclusion, I would ask the Chair and  
20 members of the Board what is your vision for equity in  
21 this plan now, not in the future, but now? How will you  
22 measure success both in terms of the process and the  
23 substantive outcomes of this plan?

24           Thank you for the opportunity to share my  
25 perspective.

1 BOARD CLERK ESTABROOK: Next we'll be hearing  
2 from Paulina Torres.

3 PAULINA TORRES: Hi. This is Paulina Torres.  
4 I'm actually not planning on speaking. I think my  
5 colleagues on the EJAC covered everything. And I would  
6 like to give this time for either -- other EJAC members  
7 who are present to speak.

8 BOARD CLERK ESTABROOK: We'll go to Kevin  
9 Hamilton. Kevin, I have activated your microphone, so you  
10 should be able to unmute and give your comments.

11 KEVIN HAMILTON: Hi. Thank you for this  
12 opportunity. And I want to echo my colleagues call-outs,  
13 and I wouldn't repeat them, and elevate my friend and  
14 colleague of 20 years Dr. Catherine Garoupa White's so  
15 well enumerated concerns and plan for going forward. I  
16 can't imagine what I could say that would follow that, but  
17 I'll give it a shot here, because I do want to thank the  
18 Chair and staff for following through on their commitment  
19 to raise the issue of a permanent EJAC. And as Catherine  
20 and Martha Dina mentioned, working together with the Chair  
21 of the Board and staff to make that finally happen, I  
22 think it's obvious that's more critical than ever. This  
23 is a commitment that was originally made back in 2011,  
24 2012 and is long overdue. So hopefully we can see that  
25 commitment fulfilled by the end of the year.

1           What my friend Catherine didn't mention is there  
2 was over 180 people who signed up for this event. The  
3 majority attended or attempted to attend. They  
4 overwhelmed our Zoom capability to the point where we had  
5 to ask all advocates who were on the call, but were not  
6 presenting, to step off, which they politely did, so that  
7 residents could take their place.

8           Many of these residents were family members of  
9 folks who we take care of as part of our asthma program,  
10 because we forwarded this message out to all of them, and  
11 this is of great concern to them. I want to illustrate  
12 just how deep into the community this reaches and these  
13 concerns. I had a conversation with one woman who raised  
14 her concerns that methane, which she's using to burn as  
15 natural gas on her stove could be harmful to her family.  
16 And she sees this. She's heard this. This is actually a  
17 message that's percolating through the community, but she  
18 doesn't know how she would afford an electric stove to  
19 replace that. And she's not sure if her vent fan works  
20 actually ventilate the emissions that she's got coming  
21 from here existing stove.

22           It seems like a small thing, but if you think  
23 about it from a macro level, it shows that this is not  
24 something that people don't know anything about and that  
25 residents can't actually advise.

1           So it's very easy to take what she's saying and  
2 go back and think to myself, well, I'm worried about that  
3 methane as it travels from where it comes out of a well  
4 through a pipeline, smaller pipes, facilities and gets to  
5 her, can I be confident in promising her that there's no  
6 leaks along the way and that the climate that she's  
7 expecting to raise her family, her grandchildren, and  
8 great grandchildren in will be one that they can actually  
9 make a living and live safely in, and right now I can't  
10 say that.

11           So these folks are concerned. Their voices  
12 should be heard. The EJAC is the pathway through which  
13 those voices are traditionally heard. And right now, the  
14 EJAC feels hobbled by both the timeline that we've  
15 grudgingly accepted, but CARB has assured us would be  
16 reviewed regularly. And again, as my colleague earlier  
17 Juan said, now is the time. This is the opportunity.

18           So just that one meeting with that kind of  
19 participation was shocking to me. We expected maybe 40 or  
20 50 people, 60 at the most. But to have almost 200 people,  
21 the majority of them residents, take the time out of their  
22 evening from 5 o'clock to 7:30 and stay to the very end,  
23 and ask great questions, and be heavily engaged and want  
24 their voices to be heard, let's me know that if we did  
25 this across California, we might hear a very different



1 story than one that we're hearing at the Capitol. And we  
2 need to act and make sure those voices are not only heard,  
3 but their concerns acted upon.

4 So I call on you to do that today, and moving  
5 forward to commit to the time that we need to make sure  
6 that those voices are heard. And by the way, I do want to  
7 thank staff, as Dr. Garoupa White did. It was great  
8 really helping us get the funding together so that we  
9 could make this happen, get the contracts vended and  
10 moving. Thank you so much. You guys did a fantastic job.

11 Have a great afternoon. Thank you again.

12 BOARD CLERK ESTABROOK: Next, we will hear from  
13 Matt Holmes.

14 MATT HOLMES: Thank you. Thank you to the Clerk.  
15 Thank you, Madam Chair, members of the Board, and fellow  
16 EJAC members, and even CARB staff. This is Matt Holmes.  
17 I'm the EJ Director for Little Manila Rising. We do  
18 social justice and health equity work in South Stockton  
19 and the Sacramento, San Joaquin Delta region. I currently  
20 serve as a proxy for my Executive Director Dillon Delvo,  
21 who actually sits on the EJAC. We joined the EJAC because  
22 Dillon's friend and co-founder Dr. Dawn Bohulano Mabalon,  
23 a Pinay sister from South Stockton, who was incidentally  
24 the leading historian of Filipino American history. She  
25 died at the age of 46 from a completely preventable asthma

1 attack that was directly caused by indifferent planning  
2 efforts at every level of government, and those  
3 governments continue to define communities like ours as  
4 disposable. So that's why I'm into the Scoping Plan. I  
5 think the EJAC has the potential to change that history.

6           You know, my colleagues have nicely laid out  
7 the -- you know, some of the inclusion issues we face, so  
8 I'll try not to be redundant, but I hope it is coming  
9 across that there is still distrust that persists,  
10 particularly from a failed an unanimous attempt by the  
11 EJAC to extend the timeline through a letter submitted to  
12 the Governor that went not where. You know, that  
13 experience and the lack of pre-planning for community  
14 inclusion means that our community still feels like an  
15 afterthought in this process.

16           You know, I'd still like an extension. But the  
17 truth is no matter how much time you give us, only the  
18 authentic integration of our input and risk avoidance in  
19 impacted communities in the final document will tell if  
20 I'm right or wrong about that.

21           So, you know, I do want to celebrate the literacy  
22 bond that I received from this process. Specifically,  
23 I've learned about like years of collaboration between the  
24 State, and the federal government, and national labs to  
25 target a carbon capture and sequestration strategy for my

1 community. Literally nobody here knew about that. Nobody  
2 knew that there were whole protocols for pulling that  
3 permit and injecting carbon underneath the Delta. You  
4 know, it's a moon shot engineering strategy for carbon  
5 removal that seems to be key to our Scoping Plan.

6           You know, and I know, you know, we're deeply  
7 concerned about that. We're concerned, as we heard  
8 earlier, that it will revive or continue unwelcome  
9 industrial activity. But, you know, personally like I'm  
10 not opposed to CCS in principle. I know word is out there  
11 that there's no reason to talk to us creatively about CCS.  
12 And I want to dispel that myth right here and right now.

13           You know, my house is on fire in Stockton. With  
14 urban heat island effect and the threat of sea level rise  
15 coming to displace tens of thousands of homes in San  
16 Joaquin County. So the idea that we're not open to  
17 reaching for a fire extinguisher is just not true. That's  
18 a hoodwink that somebody put on agencies and told them  
19 never to bother to talk to us about that. My issue with  
20 the fire the extinguisher is that I want it to be one that  
21 I know will work, one that belongs to me, and one that has  
22 a fair distribution of receipts and responsibilities.

23           You know, I hope my friends on the Board and  
24 staff understand that it's just really hard for me to  
25 trust something that's been planned for us without us.

1 You know, I think there's still time to fix that. I think  
2 that looks like community-led research that asks tough  
3 questions. You know, tough questions that aren't  
4 designed -- you know, aren't intended just to secure a  
5 permit, but to actually protect the important stuff, stuff  
6 like the Delta. The Delta is the largest estuary on the  
7 west coast of both north and south America. It represents  
8 the best freest way to sequester carbon forever. Like  
9 that's something we should think about more deliberately.

10 Current CARB protocols don't consider that.  
11 Current modeling from any of the national labs never asked  
12 worst case scenarios about that, because they weren't paid  
13 to ask those questions. So you have an opportunity from  
14 including us to ask better questions. And I would love to  
15 work with CARB on that. I think that's a great way to  
16 salvage this process, which is still very much at risk.

17 You know, for the rest of the Plan, I see a lot  
18 of opportunity in elevating the proven nature-based  
19 alternatives that sequester carbon. They represent  
20 investments in our communities, investments that can  
21 create new just transition jobs. They can improve local  
22 air quality and water quality, and they can stave off  
23 those looming threats of sea level rise and the urban heat  
24 island effect.

25 You know, there's -- there is a chronic

1 undervaluation of the co-benefits to communities that I  
2 think we really need to elevate. And I know ecological  
3 services, like trees, and forests, and swamps, and rivers,  
4 those are squishy and maybe engineers have a hard time  
5 penciling out the numbers on that, but there's really  
6 smart people out there that are waiting in the wings that  
7 would love to be embraced by CARB at this moment.

8           So I hope we can make some space for that on the  
9 EJAC. And I'll just close by saying I'm grateful for the  
10 friends and allies who have come out of the woodwork in  
11 this process, and even some of the adversarial folks who  
12 have taken their masks off in front of me. You know,  
13 anybody that wants to show up with more of that, I'm an  
14 open door. I can be reached at matt@littlemanila.org.

15           Thank you.

16           BOARD CLERK ESTABROOK: Switching to public  
17 comment.

18           Okay. Perfect. So our -- we have currently 15  
19 people with their hands raised to speak on this item. The  
20 first three speakers will be Jane Sellen, William Barrett,  
21 and Tom Tietz.

22           Jane, you can unmute and begin.

23           JANE SELLEN: Hi. Madam Chair, members of the  
24 Board and staff, thank you for the opportunity to comment.  
25 I'm Jane Sellen with Californian's for Pesticide Reform.

1           First, want to extend thanks in particular to Ms.  
2 Berg, Ms. Takvorian, and Mr. De La Torre for calling out  
3 the need to include pesticides in the SIP. We're grateful  
4 for your leadership. As you know, we've also been urging  
5 CARB for many years to include pesticide emissions within  
6 the Scoping Plan. We are pleased to note in your  
7 presentation today the inclusion of the Department of  
8 Pesticide Regulation, at long last, to the list of  
9 collaborating agencies and departments.

10           However, the current plan still fails to include  
11 any measures to reduce emissions from fumigant pesticides,  
12 despite their role in generating GHG emissions throughout  
13 their lifecycle from extraction, manufacture, transport  
14 storage, use and disposal.

15           So I had the privilege of participating this week  
16 in the workshop hosted by CVAQ, the Central Valley Air  
17 Quality Coalition, for San Joaquin Valley residents. It  
18 was filled to capacity and beyond, as you've heard. I  
19 wish you'd all been able to hear those voices and the  
20 lived experience and the expertise from which they spoke.

21           It was convened to educate residents on the  
22 decisions now being made on the Scoping Plan and the  
23 profound impact of these decisions on their lives, as well  
24 as to solicit their opinions and ideas of how the State  
25 should meet its target.

1           Person after person in the natural and working  
2 lands discussion at the workshop spoke from their hearts  
3 about the scourge of pesticides in their communities.  
4 They implored CARB to listen to them to protect them from  
5 emissions that harm their health, and to work with growers  
6 to adopt safer ag practices. Many spoke of being  
7 personally impacted by COPD asthma, cancer, autism, and a  
8 range of other ailments. They spoke of coming home from  
9 work with their clothes reeking of chemicals and of being  
10 afraid to hug their children.

11           We know -- oh, they know, excuse me, that the  
12 State wants to reduce emissions, but they don't understand  
13 why pesticide emissions keep being excluded. They know  
14 that CARB is the agency charged with cleaning up their  
15 air, but that the emissions that hurt them the most are  
16 somehow the wrong kind.

17           Thanks to the hard work done in Shafter through  
18 the AB 617 community emissions reduction program, CARB has  
19 acknowledged their jurisdiction over pesticide emissions  
20 once they volatilize in the air. It is unacceptable to  
21 those most impacted by pesticide emissions that the State  
22 continues to allow these emissions to fall through the  
23 regulatory cracks.

24           For the 2022 Scoping Plan to be grounded in  
25 equity and responsive to those most hurt by environmental

1 injustice, pesticide GHG emissions must be accurately and  
2 completely modeled; measures to reduce them must be  
3 included; all GHGs, and not just carbon, must be  
4 considered; and organic agricultural practices must be  
5 modeled and incentivized.

6 Thank you.

7 BOARD CLERK ESTABROOK: William Barrett, you may  
8 unmute and begin.

9 WILL BARRETT: Hi. Thank you very much. This is  
10 Will Barrett with the American Lung Association. And  
11 we've been tracking and discussing this process, along  
12 with colleagues from health, equity, conservation, and  
13 other advocacy groups along the way. And generally, I've  
14 heard agreement that the Scoping Plan really does  
15 represent an important opportunity to set a pathway to  
16 meeting and exceeding near-term 2030 emission targets with  
17 a focus on really transformational programs that advance  
18 health, equity, and environmental goals.

19 You've already heard today some concerns with the  
20 pace and the need for more information to better inform  
21 engagement in the process. And we do hope that  
22 forthcoming information helps to fill in some of those  
23 gaps. We feel that the Draft Plan should really be  
24 evaluated in terms of how quickly we can move away from  
25 fossil fuels as the primary way to meet our 2030 State



1 climate standards, while maximizing strategies that favor  
2 local health protections, especially in our most  
3 disadvantaged communities, as well as relying on natural  
4 carbon sequestration strategies.

5           There was a discussion in the legislative hearing  
6 this week that raised an important question that many  
7 advocates have, how much will this plan implementation  
8 dependent on the Cap-and-Trade Program versus more direct  
9 emission control strategies. Those are some of the issues  
10 I think make it difficult to evaluate how the Plan may set  
11 a course for health improvement, and to what degree health  
12 might improve as, you know, a result of the plan.

13           Similarly, when we look at increasing levels of  
14 VMT reduction or strategies that are presented without  
15 accountability metrics, it's hard to figure out or picture  
16 the on-the-ground results given the challenges we know  
17 exist with SB 375 implementation. Obviously, this is a  
18 very difficult task. There's no doubt about it and we  
19 appreciate the work that's going into it.

20           On the health analysis - and here, I'm also  
21 speaking on behalf of Dr. Linda Rudolph with the Center  
22 for Climate Change and Health - we've engaged with the  
23 CARB Board and staff members over the past Scoping Plans,  
24 and in this Scoping Plan, in the hope that the plans --  
25 this Plan could be designed to maximize health outcomes.

1           The Board guidance that was given in the 2017  
2 Scoping Plan resolution was for the Board to work with  
3 EPA, OEHHA to create a timeline and action plan to better  
4 integrate health into the design of climate programs. So  
5 while we appreciate that the increasing number of health  
6 outcomes and climate endpoints, the active transportation  
7 benefits that will be included and qualitative methods, as  
8 well as really the sister agency participation in the  
9 recent workshop, we're concerned that a plan versus no  
10 plan approach misses a key opportunity to design the  
11 Scoping Plan for health and for equity.

12           The question we really have is what are the  
13 opportunities to utilize health analysis in the  
14 development of the measures that make up the Draft Plan.  
15 Ultimately, you know, we feel that the final draft in the  
16 Scope -- Final Scoping Plan should be informed by the most  
17 health protective standards and measures that bring us to  
18 meeting or exceeding the 2030 climate standards while  
19 benefiting community health in the near term. So with  
20 that, again, we appreciate the time that staff and Board  
21 have given to hear our concerns with the health analysis  
22 process, and we look to continued dialogue to really this  
23 issue in the Draft Plan coming forward.

24           Thank you.

25           BOARD CLERK ESTABROOK: The next speaker will be

1 Tom Tiets. After Tom, will be Julia Levin, Evan Edgar,  
2 and then Kathleen Kilpatrick.

3 Tom, you can unmute and begin.

4 Tom, are you there?

5 TOM TIETZ: I am.

6 BOARD CLERK ESTABROOK: Perfect. We can hear  
7 you.

8 TOM TIETZ: Okay. Good. Tom Tietz. I'm the  
9 Executive Director of the California Nevada Cement  
10 Association. And I thank you for the opportunity to  
11 comment today.

12 I wanted to mention that I appreciated slide 14  
13 on that presentation this afternoon that showed the  
14 various agencies collaborating on reaching common goals.  
15 That's a focal part of my comments this afternoon. I  
16 wanted to mention that the California cement industry has  
17 been leading the nation by creating a robust commitment to  
18 reach carbon neutrality by 2045. We are also proud to  
19 have collaborated with Senator Becker on SB 596, and  
20 supported its passage and now its adoption. It's the  
21 first sector-specific net zero bill in California.

22 And this groundbreaking legislation establishes a  
23 framework for the State and industry to work in  
24 partnership on a framework designed to help accelerate the  
25 pace of change. That's really an essential element of

1 meeting these aggressive goals for an industry that is  
2 really difficult to decarbonize.

3           And while we're interested in formally presenting  
4 our industry carbon neutrality plan to the whole Board in  
5 the near future, we recommend the establishment of a  
6 formal interagency coordinating group that will be  
7 critical to our success. The purpose of this effort would  
8 be to streamline implementation of strategies and avoid  
9 conflicting regulatory insight -- oversight.

10           One of our top priorities is to replace the  
11 fossil fuels used at California cement plants. Our  
12 overarching goal is to utilize alternative fuels at levels  
13 proven effective in other parts of the world. There are  
14 now roughly 20 cement plants worldwide that are using 100  
15 percent alternative fuels, while effectively controlling  
16 criteria pollutants. Examples of these alternative fuels  
17 include engineered municipal solid waste, agricultural  
18 waste, and wood waste, all of which can have negative  
19 impacts if landfilled with their related methane  
20 production.

21           To achieve these goals, it is apparent that an  
22 interagency coordination group will be critical to our  
23 success and that of the State's. This interagency group  
24 would require collaboration among the appropriate State  
25 agencies, particularly those departments, boards, and

1 offices under both CalEPA and Natural Resources Agency.  
2 This will be a vital part of our ability to expedite the  
3 accomplishment of our mutual carbon reduction goals.

4 Thank you.

5 BOARD CLERK ESTABROOK: Julia Levin, you can  
6 unmute and begin.

7 JULIA LEVIN: Good afternoon. Julia Levin with  
8 the Bioenergy Association of California. We are very  
9 grateful and supportive of the increased focus on natural  
10 and working lands, as well as the increased focus on  
11 achieving carbon neutrality by mid-century.

12 We're very concerned, however, at the shrinking  
13 and almost lack of focus at this point on short-lived  
14 climate pollutants in the Scoping Plan. In today's  
15 presentation, there were 29 slides, a quarter of one slide  
16 devoted to short-lived climate pollutants. And even on  
17 that slide, slide 11, it only mentioned methane and HFCs,  
18 and didn't mention an equally important part of SB 1383,  
19 which is the requirement to reduce anthropogenic black  
20 carbon by 50 percent by 2030.

21 There was also no mention of the waste sector,  
22 which is hugely important to meeting our short-lived  
23 climate pollutant reduction goals, and can also provide  
24 carbon-negative transportation fuels and other air quality  
25 benefits.

1           This is particularly surprising when the global  
2 scientific community has been very clear in the last year  
3 about the urgency of reducing short-lived climate  
4 pollutants. The head of the United Nations Environment  
5 Program, President Biden, climate scientists around the  
6 world have said this is the most urgent thing we can do in  
7 the next few decades, and it is the last thing we can do  
8 to avoid catastrophic climate change.

9           Chair Randolph, you mentioned the importance of  
10 turning climate change or global warming around in the  
11 next decade. And short-lived climate pollutants are  
12 really the only tool we have that can do that at scale.

13           In addition, both methane and black carbon are  
14 serious air pollutants. And as we should be trying to  
15 maximize carbon reductions that also benefit air quality,  
16 reducing methane, which is a precursor to smog, and  
17 reducing black carbon, which is particulate matter, also  
18 will have huge benefits for air quality.

19           So for all of these reasons, we urge the Air  
20 Board to put short-lived climate pollutant reductions  
21 front and center in the climate change Scoping Plan. The  
22 global scientific consensus dictates that, SB 1383  
23 requires it, and it is the only way that we can meet our  
24 overall climate change goals. Thank you.

25           EVAN EDGAR: Hello. My name is Evan Edgar. Can

1 you hear me?

2 Hello. Chair and Board members, Evan Edgar.  
3 Live from Sacramento. I'm an engineer for the California  
4 Compost Coalition. I will echo everything that Julia said  
5 and good work on the natural and working lands. And we  
6 need to focus on the near term. We take short-lived  
7 climate pollutants very serious and we've built in  
8 in-state RNG in order to feed into our near-zero fleets.  
9 And it kind of harmonizes with the amount of refuse  
10 fleets.

11 By 2025, it's estimated to be 100 million gallons  
12 of RNG with a carbon intensity of minus 100. So we're  
13 ready to go. It's an elegant solution where there is no  
14 leakage and we have a technology neutral approach.

15 We are in the wheelhouse of the circular economy  
16 where organics turn into bioenergy and carbon-negative  
17 fuel. And the role for biomass and biomethane combustion  
18 after 2030 is skeptical within the modeling that CARB is  
19 presenting. And we need to have a post-30 opportunity for  
20 biomethane and biomass combustion, in order to be carbon  
21 neutral.

22 The thing about ZEVs, ZEVs are not zero. The  
23 carbon intensity for the fuel is plus 35 and rising,  
24 because of low hydro this year. And CARB has a tailpipe  
25 mentality and does not look at life cycles. If you look

1 at the life cycle of batteries in ZEVs, it's a dirty  
2 secret. The manufacturing of ZEV batteries has a large  
3 carbon footprint. We're going to have to dig up  
4 first-world nations in Canada, South Africa, and South  
5 America in order to mine lithium that needs to be -- that  
6 needs to be valued.

7           There was a report -- a White House report  
8 building resilience in the supply chain that considers the  
9 economic and environmental risk of earth. That's  
10 essential with regards to the batteries that we are  
11 importing. The life-cycle analysis for batteries is  
12 critical. The environmental justice of first world  
13 nations need to be considered. Environmental justice  
14 should not be exported by CARB and CARB should not turn a  
15 blind eye to BEV manufacturing with a tailpipe mentality.

16           CARB's statutory requirement in the Scoping Plan  
17 is to minimize leakage in non-California greenhouse gas  
18 emissions. And with battery manufacturing, there's all  
19 types of leakage elsewhere, and CARB needs to consider the  
20 carbon footprint of BEV manufacturing, battery electric  
21 manufacturing.

22           This is critical to be included in the Scoping  
23 Plan. Where is environmental justice for all when we  
24 export emissions onto first world nations.

25           Thank you.



1 BOARD CLERK ESTABROOK: -- will be Kathleen  
2 Kilpatrick. After Kathleen, will be Shayda Azamian, Bill  
3 Magavern and then Ryan Kenny.

4 Kathleen, you can unmute and begin.

5 KATHLEEN KILPATRICK: Oh, unmute. Okay.  
6 Kathleen Patrick. I work with Safe Ag Safe Schools, a  
7 group in the Monterey Bay region and also with a new  
8 little group called Campaign for Organic and Regenerative  
9 Agriculture focused on the Pajaro Valley in Santa Cruz.

10 I want to echo whatever has been previously said  
11 about the multiple benefits of including reduction of  
12 synthetic pesticides and improvement of agricultural  
13 practices, as both helping environmental justice, and  
14 climate, and overall reduction of fossil fuel use. We see  
15 CARB as our climate champions in EPA -- I mean CalEPA.

16 And, you know, we really are depending on you to  
17 make sure that this part of the Scoping Plan gets more  
18 emphasis. I spent most of my health -- my working career  
19 in health care. And I just want to remind you that the  
20 health modeling, as is done currently, does not accurately  
21 reflect the impacts of poor air quality and climate change  
22 on vulnerable populations.

23 Besides asthma and other chronic respiratory  
24 diseases, recent studies show associations between poor  
25 air quality, and intention and behavior problems that

1 impair learning. And the cumulative impacts of multiple  
2 pesticide exposures, through occupational take home and  
3 drift exposures, have been shown to impact neurological  
4 development and may increase the risk of certain cancers.

5 Reducing synthetic pesticide use again has  
6 multiple benefits and must be paired with a change in  
7 agricultural practice.

8 We need to see reduction -- reduction in fossil  
9 fuel use from the beginning to end of the agricultural  
10 process and increased biodiversity. Our climate is at a  
11 danger, a tipping point in our populations, especially in  
12 places like the San Joaquin Valley are being unjustly  
13 impacted by the way agriculture is done now. It's not all  
14 about diesel trucks. It's not all about urban sources.  
15 Please pay attention to our rural communities and to our  
16 agricultural practices when you look about -- look at not  
17 only how we can reduce fossil fuel emissions, but also  
18 sequester carbon by building healthy soils.

19 Thank you.

20 BOARD CLERK ESTABROOK: Shayda Azamian. Shayda,  
21 you can unmute and begin.

22 SHAYDA AZAMIAN: Thank you, Chair Randolph, the  
23 Board and staff. And thank you EJAC members for a  
24 powerful and accurate comments today that really said  
25 almost all of it for us. I'm Shayda Azamian with the

1 Leadership Counsel for Justice and Accountability. I'm  
2 one of the many environmental justice health and climate  
3 advocates who remain concerned that the process and  
4 substance provided by CARB staff to date will not yield  
5 the Scoping Plan that is mandated by State law, one that  
6 is advancing human well-being and equity.

7 To date, and very clearly demonstrated in the  
8 staff presentation today, the strategies proposed through  
9 the Scoping Plan process have originated from a dominant  
10 lens of carbon neutrality. While carbon neutrality by  
11 2045 is important for curtailing the worst of the climate  
12 crisis, it is not the only nor is it the primary mandate  
13 of the Scoping Plan.

14 CARB must be anxious concerned with first meeting  
15 the 2030 target to reduce greenhouse gas emissions by 40  
16 percent from 1990 levels and significantly reducing  
17 co-pollutants with dedicated strategies for this.

18 CARB is required by State law to prioritize  
19 direct emissions reductions at the source in meeting this  
20 2030 target. And without CARB's utmost attention on 2030,  
21 implementation of the 2045 neutrality target will surely  
22 further harm environmental Justice communities, who have  
23 already felt the negative impacts of current carbon  
24 neutral policies.

25 So we look to the Board to ensure adequate focus

1 in the Scoping Plan process on first meeting and exceeding  
2 our 2030 reduction targets. Additionally, as shown again  
3 most recently in the Legislature this week Cap-and-Trade  
4 has not and will not produce equitable emissions  
5 reductions. Cap-and-Trade is concentrating pollution in  
6 Environmental Justice communities and must be replaced  
7 with real and equitable climate mitigation policy with  
8 clear direction for this in the Scoping Plan. If CARB  
9 seeks to advance environmental justice and to help as many  
10 people as possible to make it through the worsening  
11 climate crisis, then the State cannot and must not rely on  
12 emissions trading offsets or geoengineered carbon capture  
13 and storage technology and extend fossil fuel and gas  
14 dependence.

15           These approaches must not be considered emissions  
16 reduction strategies and they all perpetuate harm in low  
17 income disadvantaged communities, which CARB is  
18 statutorily prohibited from doing in the Scoping Plan per  
19 SB 32.

20           California met its 2020 reduction goals largely  
21 through regulation. In this Scoping Plan, we still need  
22 clear timelines, regulatory direction, and goals for  
23 agency coordination to completely phase out and transition  
24 sectors, like oil and biogas production, and industrial  
25 agriculture. We need significant corresponding investment

1 into an affordable zero energy -- zero-emission energy  
2 system in sustainable sectors that are already doing the  
3 good work of recreating a sustainable economy, but need a  
4 clear State framework for scaling zero-emission solutions.

5           Lastly, we echo the call for the CARB Board to  
6 require more comprehensive health equity analysis that  
7 will evaluate public health benefits, threats, and social  
8 costs of each Scoping Plan Scenario. The forthcoming  
9 analyses CARB staff and consultants are already planning  
10 to conduct are not able to provide this comprehensive of a  
11 health analysis, which is necessary to knowing the Scoping  
12 Plan's projected impact on human health and equity.

13           Thank you.

14           BOARD CLERK ESTABOORK: ...you can unmute and  
15 begin.

16           BILL MAGAVERN: Thank you. Bill Magavern with  
17 the Coalition for Clean Air. I worked on AB 32, I worked  
18 on SB 32, and I've commented on every Scoping Plan to  
19 date. And I just want to make some kind of big picture  
20 comments.

21           The first is, and I think Shayda just made this  
22 point well, is that the primary task of this Scoping Plan  
23 is to make sure we comply with the statutory emissions  
24 limit that was set by SB 32. We do need to keep emissions  
25 going down afterward. And so, you know, I don't object to

1 looking at a 2045 target, but let's make sure that we're  
2 doing the hard work necessary to actually reaching that  
3 rather challenging 40 percent reduction by 2030.

4           And to do that, we shouldn't overrely on  
5 Cap-and-Trade. And, you know, that's been a theme of my  
6 comments on every Scoping Plan. And I think they've been  
7 borne out, that what has really worked for California has  
8 not been shifting emissions around through trading and  
9 offsets, it's been having smart and strong regulatory  
10 standards. That's been the backbone of California's  
11 emission reductions, whether it's in air quality or in  
12 climate change.

13           And we compliment those strong standards with  
14 incentive programs to advance the technology and to turn  
15 over the dirtier equipment and hasten the advent of the  
16 newer, cleaner equipment. So we urge you to stick with  
17 what's been working, strong standards, complemented by  
18 incentives and not to overrely on trading, and certainly  
19 not on offsets. Offsets should be restricted to those  
20 that are within the state of California and those should  
21 have very strict standards to make sure that they are  
22 indeed additional and to make sure that they are  
23 permanent. And we also urge you to do the kind of health  
24 analysis that has been recommended by the Lung Association  
25 and others.

1 Thank you.

2 BOARD CLERK ESTABROOK: ...will be Ryan Kenny.  
3 After Ryan, will be Sarah Aird, Alison Torres, and Michael  
4 Boccadoro.

5 Ryan, you can unmute and begin.

6 RYAN KENNY: Yes. Thank you. Good afternoon,  
7 Chair Randolph and members of the Board. My name is Ryan  
8 Kenny with Clean Energy.

9 I think a staff member said it earlier well,  
10 we're out of time. We must remove carbon from the  
11 atmosphere. Unfortunately, this Scoping Plan, like other  
12 regulations is really focused on the long term. And I  
13 think Julia Levin mentioned it earlier very well that  
14 there needs to be an emphasis and make short-lived climate  
15 pollutant reductions the highest priority.

16 Climate change scientists have said we only have  
17 six to seven years left to slow warming or we will go  
18 beyond the critical 1.5 degree Celsius stage increase that  
19 will trigger very damaging feedback loops. And that, of  
20 course, I think should be a priority in the Scoping Plan.

21 Of course, diesel is a significant strategy  
22 for -- reduction of diesel is a significant strategy for  
23 reducing short-lived climate pollutants, especially  
24 because it causes black carbon emissions, and the  
25 displacement reduces methane from livestock and landfill

1 waste.

2           Also, within the Scoping Plan, we have not seen  
3 alternative scenarios publicly released by CARB looking at  
4 other options besides 100 percent electrification. We  
5 believe CARB should model what renewable fuels can do to  
6 meet the State's greenhouse gas emission reduction goals.  
7 Also, two scientifically valid studies have been submitted  
8 to staff, and they both concluded that both zero and  
9 near-zero together can deliver earlier and more cost  
10 effective benefits than a ZEV-only approach. And I know  
11 staff has received and acknowledged receipt of those  
12 studies, but there has not been a public response to those  
13 and we'd like to see staff's analysis.

14           Diesel trucks are the largest source of  
15 greenhouse gas emissions in the transportation sector.  
16 Heavy-duty ZEVs are not close to being commercially ready.  
17 I mentioned earlier this morning the deficiency in  
18 CALSTART's ZETI tool, which claims to provide the  
19 readiness status of commercial heavy-duty ZEVs. And there  
20 is a lot of misinformation provided in there. For  
21 instance, if you click on the category North America and  
22 heavy-duty truck, 14 manufacturers are listed, but only  
23 two are currently producing electric trucks, that's BYD  
24 and Volvo, and Volvo has a pre-limited spec with less than  
25 a hundred mile range.



1           So we'd like to see CARB staff take a look at the  
2 reality of that ZETI list, because it's just not an  
3 effective tool for the reality of heavy-duty commercial  
4 ZEVs at the moment.

5           RNG is carbon negative and available now and in  
6 plenty of supply in California and we urge the Board to  
7 take a look at alternatives really increase immediately  
8 those short-lived climate pollutants and other climate  
9 pollutants as well.

10           Thank you.

11           BOARD CLERK ESTABROOK: Sarah Aird, you can  
12 unmute and begin.

13           SARAH AIRD: Yes. My name is Sarah Aird and I'm  
14 Co-Director with Jane Sellen of the statewide coalition  
15 Californian's for Pesticide Reform made up of more than  
16 200 organizations around the state. CARB staff has spent  
17 a lot of time considering the issue of pesticides and  
18 we're very appreciative of their efforts, and again with  
19 many thanks to those CARB Board members who have  
20 recognized this important issue as requiring priority.

21           We were pleased to see that organic farming is  
22 being considered within some of the proposed modeling  
23 scenarios for natural and working lands in the Scoping  
24 Plan. Having said that, we believe organic farming should  
25 be in all the modeling scenarios. And most importantly,

1 we are asking the Board to ensure that the final Scoping  
2 Plan includes and prioritizes adoption of organic farming  
3 as a key natural and working lands climate strategy and  
4 identifies measures to increase its adoption.

5           Hundreds of studies, including many from  
6 California, document how organic farming sequesters carbon  
7 at significantly higher rates when compared to  
8 conventional farming that is reliant on synthetic  
9 pesticides and fertilizers. We also ask that CARB ensure  
10 that other pesticide reduction strategies are included in  
11 the Scoping Plan.

12           Unfortunately, to date, all indications from  
13 staff are that other pesticide reduction strategies will  
14 not be included. But if pesticide reduction language is  
15 not included in the Scoping Plan, the Scoping Plan can  
16 lead to increased use of pesticides and their disparate  
17 impact in low income communities of color. Studies shows  
18 that some climate-smart ag practices that the Scoping Plan  
19 is likely to support, such as no till and conventional  
20 farming result in higher pesticide use.

21           In addition to its air quality obligations, CARB  
22 is under a civil rights obligation to comply with  
23 California code 11135 and Title 6 to ensure that its  
24 policies and programs, such as the Scoping Plan, do not  
25 inflict or make a disparate impact worse. And we know,

1 based on CalEPA's own researchers, that pesticides are  
2 pollutants with the greatest income and ethnic disparities  
3 in the state.

4           The Scoping Plan cannot be designed in a way that  
5 will result in an increase in these pollutants. And the  
6 best way to ensure it doesn't is to explicitly include  
7 language on pesticides and support adoption of pesticide  
8 reduction strategies.

9           In particular, it's important to include fumigant  
10 reduction strategies. Fumigants are among the most  
11 hazardous and toxic pesticides and contribute directly to  
12 greenhouse gas emissions. Fumigant and pesticides are  
13 toxic air contaminants that contribute to the formation of  
14 tropospheric zone. And a number of the most highly used  
15 fumigants result in nitrous oxide emissions increases as  
16 much as 7 to 100-fold.

17           Because they effectively sterilize the soil,  
18 fumigants also lead to higher use of synthetic fertilizers  
19 to make up for the nutrients lost in the soil due to  
20 fumigant use, leading to even greater greenhouse gas  
21 emissions. There is sufficient evidence now to include  
22 strategies in the Scoping Plan to support fumigant  
23 reduction.

24           Finally, the Scoping Plan is a bold, broad plan.  
25 It's a vision that helps set a critical statewide

1 direction. We've just heard today Board members and staff  
2 note that the perfect can't be the enemy of the good and  
3 that we must take bold action now. To leave out  
4 greenhouse gas emissions apart from carbon, such as  
5 methane and nitrous oxide emissions from natural and  
6 working lands, is not bold action. Leaving pesticide  
7 reduction strategies out of the Scoping Plan is not bold  
8 action.

9           We've been calling for the inclusion of pesticide  
10 reduction strategies in the Scoping Plan since 2017 to no  
11 effect. It's time to take action now.

12           Thank you.

13           BOARD CLERK ESTABROOK: Alison Torres, you may  
14 unmute and begin.

15           ALISON TORRES: Good afternoon, Madam Chair and  
16 Board member. My name is Alison Torres with Eastern  
17 Municipal Water District. EMWD is a water, wastewater,  
18 and recycled water agency located in southwest Riverside  
19 County. We've provide essential services to 555 square  
20 mile service area serving more than 827,000 people. EMWD  
21 operates four wastewater treatment plants that currently  
22 treat a combined total of approximately 46 million gallons  
23 per day. I appreciate the opportunity to comment and the  
24 work that staff has put into the Climate Change Scoping  
25 Plan.

1           As a provider of essential public services for  
2 wastewater treatment, our facilities collect and treat  
3 wastewater from our surrounding communities. A natural  
4 by-product of our wastewater treatment process is  
5 wastewater biogas, which is a non-fossil renewable low  
6 carbon fuel and must go somewhere. Beneficial use of the  
7 low carbon now-fossil fuel is a technology available  
8 today.

9           It is critical that a clear viable market and  
10 pathway for the use of this biogas is maintained. The  
11 Scoping Plan scenario inputs should account for the  
12 continued generation and use of this POTW-derived biogas.  
13 The Scoping Plan update scenarios also need to acknowledge  
14 the important role of the public wastewater sector in  
15 achieving the organic waste diversion mandates in SB 1383,  
16 and the use of wastewater biogas in near zero-emission  
17 vehicles as a renewable transportation fuel.

18           I commend CARB staff for the work that they've  
19 put into the scoping plan update thus far and I look  
20 forward to the continued opportunity to participate in the  
21 process.

22           Thank you for the opportunity to comment.

23           BOARD CLERK ESTABROOK: ...will be Michael  
24 Boccadoro. After Michael will be Sydney Chamberlin, Jason  
25 Barbose, and Danny Cullenward.

1 Michael, you can unmute and begin.

2 MICHAEL BOCCADORO: Thank you very much. Michael  
3 Boccadoro on behalf of Dairy Cares. Let me first thank  
4 those CARB Board members who have taken the time over the  
5 past few months to learn more about what California's  
6 Dairy Farm families are accomplishing. We have enjoyed  
7 hosting many of you on our projects in the San Joaquin  
8 Valley. It should not be lost on any of you that  
9 California has very ambitious goals to reduce methane. In  
10 fact, California is the only major jurisdiction that would  
11 have a 40 -- that has a 40 percent statutory methane  
12 reduction in place and the state put it in place five  
13 years ago. The rest of the world coming out of COP26 has  
14 signed on to a 30 percent methane pledge and that includes  
15 the United States.

16 The important takeaway here is that the  
17 California dairy sector is well on our way to achieving  
18 the 40 percent methane reduction sought by the State and  
19 you're doing it in the state with the largest dairy sector  
20 in the nation. It should be accommodated for that.

21 Our dairy farm families have initiated over 300  
22 methane reduction projects, including over 200 digester  
23 projects in the state. We have initiated 15 separate  
24 digester clusters with over 150 existing dairies of all  
25 sizes installing digesters. I want to be clear here, more

1 than 30 of these digesters are on small dairies here in  
2 the State that have been made possible by the effective  
3 incentive programs that are being made available to these  
4 small farm families in California. We've installed more  
5 than 200 miles of gas gathering lines and we've invested  
6 close to \$2 billion, matching the State's \$700 million  
7 investment, nearly two to one.

8           Your charge is very clear, and that is to  
9 identify, as your staff provided in the overview, to  
10 identify science-based, cost-effective, and  
11 technologically-feasible solutions that do not result in  
12 leakage, and I want to focus on that. Putting cows on  
13 U-Hauls is not a science-based policy that will result in  
14 reducing methane, quite the opposite. It will lead to  
15 leakage and leakage is failure.

16           We must avoid that. And the only way to avoid  
17 that is to continue to recognize that the incentive-based  
18 model is the appropriate model. It's the model that's  
19 been implemented by other countries, including countries  
20 in the European Union. And most importantly, it's the  
21 model that's now being implemented by the Biden  
22 Administration for the entire tire U.S.

23           Just a couple of weeks ago, the Biden  
24 Administration announced a \$1 billion investment in  
25 climate smart agriculture in the United States, including

1 investing in dairy digesters. This is the right course.  
2 It's the only course that will achieve the 40 cent  
3 reduction sought by the State. We encourage you to stay  
4 the course.

5 Thank you.

6 BOARD CLERK ESTABROOK: Sydney Chamberlin, you  
7 may unmute begin.

8 SYDNEY CHAMBERLIN: Thank you. Good afternoon,  
9 Chair Randolph, Board members and staff. This is Sydney  
10 Chamberlin with The Nature Conservancy. And I'm thankful  
11 for the opportunity to speak today. I also appreciate the  
12 many comments we've heard so far with respect to our  
13 natural and working lands.

14 Across the state, we have more than 28 million  
15 acres of land available to help the state reduce its  
16 greenhouse gas emissions and increase carbon stocks to  
17 mitigate climate change, all while providing a suite of  
18 additional complementary benefits for communities, and  
19 nature our. And the time for action in the natural and  
20 working lands sector is now. We're already seeing the  
21 impacts of climate change. And while our lands have  
22 historically served us as a net sink of carbon dioxide,  
23 these impacts, along with human development and wildfire  
24 point to them becoming net sources of emissions without  
25 intervention.



1           In light of this, we're glad to see CARB begin to  
2 consider detailed scenarios and interventions for the  
3 natural and working lands sector. Putting our lands on  
4 the right trajectory will require careful consideration of  
5 land management practices, restoration, and land use, in  
6 addition to reducing emissions from wildfire and  
7 significant scaling up of nature-based solutions in  
8 California. And nature-based solutions are not something  
9 to be utilized only in the context of offsets and  
10 Cap-and-Trade. We need to think more broadly about how to  
11 strengthen the health and resilience of our lands, so they  
12 can continue to provide us with both climate mitigation  
13 and adaptation benefits as well as other vital ecosystems  
14 services.

15           To that end, we urge CARB to elevate action in  
16 the natural and working lands sector in the same way we've  
17 seen in through sectors to set clear and ambitious climate  
18 goals identifying the greenhouse gas mitigation  
19 opportunity by region and landscape, and to prioritize the  
20 equitable implementation of nature-based strategies that  
21 provide multiple co-benefits and protect communities.

22           We're eager to ensure that California can achieve  
23 meaningful CLIMATE action through the natural and work  
24 lands sector and stand ready to continue working with CARB  
25 to help inform this work.

1 Thank you.

2 BOARD CLERK ESTABROOK: Jason Barbose, you can  
3 unmute and begin.

4 JASON BARBOSE: Thank you. Jason Barbose with  
5 the Union of Concerned Scientists. I'd like to make brief  
6 comments touching on a few separate issues within the  
7 Scoping Plan. They're electricity generation, petroleum  
8 refining, biofuels, and the Cap-and-Trade Program.

9 So first, the modeling that is underway for this  
10 Scoping Plan considers emissions from electricity  
11 center -- electricity generation to potentially arrange  
12 from 23 to 38 million metric tons of CO2 equivalent. As  
13 many know, the PUC just codified a target of 38 million  
14 metric tons for 2030, and has opened the door to  
15 considering further tightening of power sector emissions  
16 to 30 million metric tons by 2030.

17 UCS believes that reducing emissions to 30  
18 million metric tons is necessary to put California on the  
19 path to reducing emissions sufficiently and we encourage  
20 CARB to recommend a 30 million metric ton target for the  
21 power sector in a proposed Scoping Plan.

22 Second, we strongly support the request of the  
23 EJAC to adopt an interagency plan to manage the phasedown  
24 of California oil refineries. Electrification of surface  
25 transportation clearly implies drastically reduced liquid

1 fuel consumption. And therefore, a coordinated plan will  
2 help affected communities and priorities that manage this  
3 important transition.

4 Third, on biofuels, we request that the Scoping  
5 Plan clarify that the use of vegetable oil based liquid  
6 fuels and other biofuels be limited to a sustainable level  
7 to avoid indirectly contributing to damaging crop land  
8 expansion.

9 And then finally we share the concerns of many  
10 about the Cap-and-Trade Program's capacity to ensure  
11 California reaches the statutorily mandated emissions  
12 limit of 40 percent below 1990 levels by 2030. As the  
13 annual report of the Independent Emissions Market Advisory  
14 Committee, which I think the next public speaker is a  
15 member, that Committee noted earlier this month that there  
16 are allowances currently banked into the system than  
17 emissions reductions expected from program over the course  
18 of this decade. And that calls into question the  
19 program's ability to act as a backstop to meeting our  
20 climate emissions goals to say nothing of the program's  
21 ability to improve air quality in environmentally  
22 overburdened communities. CARB takes this risk seriously  
23 and takes action to address it.

24 So in conclusion, this comes at a critical moment  
25 in our mobilization to address the climate crisis. Agree

1 with some of the previous comments that CARB's top  
2 priority should really be a process to produce a detailed  
3 an ambitious plan to meet our statutory emissions  
4 reduction limits for 2030, and we look forward to staying  
5 engaged as the plan is further developed.

6 Thank you.

7 BOARD CLERK ESTABROOK: Danny Cullenward. After  
8 Danny will be Gary Hughes, Tom Kabat, and David Rothbart.

9 Danny, you can unmute and begin.

10 DANNY CULLENWARD: Good afternoon, members of the  
11 Board. Thank you for the opportunity to speak. My name  
12 is Dan Cullenward. I'm speaking today in my capacity as  
13 Vice Chair of the Independent Emissions Market Advisory  
14 Committee, the statutorily authorized advising body that  
15 works with CARB, as well as the Legislature, particularly  
16 on the design and performance of the Cap-and-Trade  
17 Program.

18 I wanted to summarize a few of the key findings  
19 from our report for you today, as well as to extend and  
20 invitation to the Board collectively as well as to every  
21 individual member of the Board for anyone who would desire  
22 a briefing on the contents of our consensus based  
23 five-member report.

24 This year's report focuses on a number of topics.  
25 I will touch on three of them very briefly. The first

1 concerns the Scoping Plan process and the adequacy of  
2 modeling availability to track the performance of the  
3 Cap-and-Trade Program in the Scoping Plan process, as we  
4 as its relationship to the current Cap-and-Trade Program  
5 design. The report indicates that none of the technical  
6 modeling made available so far provides any insights as to  
7 the size or function of the Cap-and-Trade Program in its  
8 contribution to 2030.

9 Clarifying this is extremely important, because  
10 in the previous Scoping Plan cap-and-trade was the single  
11 biggest driver of emission reductions planned in that  
12 document. I understand the modeling work that will be  
13 coming out in a short while may help address some of these  
14 issues. My colleagues and I look forward to reviewing  
15 that when it's available.

16 The second two issues I want to touch on have to  
17 do with the performance of the Cap-and-Trade Program.  
18 I'll start with the question of allowance banking. This  
19 report provides an opportunity after the first three  
20 compliance programs -- compliance periods that the program  
21 had finished to take stock of the performance of the  
22 program. And one of the big challenges that the community  
23 observed in its report this year is that there are about  
24 321 million allowances in the program that were banked  
25 from these first three compliance periods into the current

1 period of compliance.

2           This number is about twice the amount that CARB  
3 considered in its most recent Cap-and-Trade Rulemaking in  
4 response to statutory instruction to address this issue.  
5 It's also consistent with concerns from critics who've  
6 raised issues around whether or not these surplus  
7 allowances will render the program unable to serve in its  
8 current backstop function get to our 2030 goal. And it's  
9 also significantly larger than the planned reductions CARB  
10 anticipated in the 2017 Scoping Plan from the entire  
11 program.

12           Finally, I want to touch briefly on the large  
13 carbon offsets program, which volumetrically has produced  
14 about half of the allowance bank in terms of usage of  
15 offsets throughout the broader Cap-andTrade Program. The  
16 report reviews a number of technical considerations that  
17 are documented now in the peer-reviewed literature and  
18 highlighted as areas of concern with respect to  
19 overcrediting in the Large Forest Offsets Program, as well  
20 as concerns around our ability to manage the risk of fire  
21 and other risks to forest carbon permanence.

22           Again, I want to extend the invitation to the  
23 Board and to individual Board members. If anyone wants a  
24 technical briefing, I and my colleagues would be happy to  
25 arrange that. I'd also like to extend that invitation to

1 my colleagues in the Environmental Justice Advisory  
2 Committee.

3 Thank you for your time.

4 BOARD CLERK ESTABROOK: Gary Hughes, you can  
5 unmute and begin.

6 GARY HUGHES: Thank yo. Hello, esteemed Chair  
7 Randolph, members of the Board, and agency staff. My name  
8 is Gary Hughes with the international organization  
9 Biofuelwatch. Thank you for this opportunity to provide  
10 brief comment on the development of the 2022 Scoping Plan  
11 update.

12 I want to communicate to members of the Board our  
13 organization is concerned about what has been  
14 characterized as the magical thinking of California's  
15 approach to climate mitigation. It is necessary to flag  
16 that there is a contradictory reliance on the land sector  
17 for both the extraction of natural resources, such as  
18 feedstocks for bioenergy, as well as for hypothetical  
19 carbon removals. The hard truth about California's  
20 heavily industrialized landscapes, forests, and otherwise,  
21 is that climate driven disturbances will greatly undermine  
22 climate mitigation aims.

23 What we know is that rising temperatures and  
24 declining precipitation patterns are projected on average  
25 to drive ongoing declines in biomass and carbon storage in

1 California's ecosystems across the 21st century. The  
2 climate risks to the land sector are considerable. Yet,  
3 the emphasis on natural and working lands in the Scoping  
4 Plan process is failing to adequately integrate the best  
5 contemporary science that shows that land sector based  
6 climate mitigation strategies are most likely to be useful  
7 if, and only if, they are paired with aggressive  
8 reductions at source of fossil fuel emissions, and that  
9 they are most certainly destined to fail if land  
10 management policies are offered as a substitute for  
11 reducing fossil fuel emissions or as used -- or are used  
12 as greenwash of ongoing resource extraction.

13 Another issue that we want to flag in considering  
14 a new Scoping Plan is that existing mechanisms need  
15 thorough review, such as the Low Carbon Fuel Standard,  
16 which in numerous instances is finally starting to receive  
17 the attention of the Board. As an example, I ask that the  
18 Board investigate civil society concerns that the scoping  
19 plan is glossing over the risks that the LCFS promotion of  
20 making liquid fuels from high deforestation risk feed  
21 stock commodities like soy is incentivizing a refinery  
22 pivot to biofuels that promises to make the climate  
23 situation worse, not better, while keeping front-line  
24 communities in the pollution hot seat.

25 The refinery pivot to liquid biofuels as we are



1 watching happen in the Bay Area is based on a fossil gas,  
2 i.e. methane, intensive refining process relies on  
3 feedstocks that put tropical rain forests at risk, and the  
4 final product is not even actually replacing  
5 petroleum-based fuels. As such, it does not and will not  
6 contribute to decarbonization.

7 We really do encourage the Board to do a thorough  
8 evaluation of many of the increasingly dubious assumptions  
9 that are driving the Scoping Plan update process. It is  
10 not too late to correct course. Thank you for your  
11 attention to this comment.

12 BOARD CLERK ESTABROOK: Tom Kabat, you can unmute  
13 and begin.

14

15 TOM KABAT: Thank you very much. Thank you for  
16 the opportunity to comment today. I appreciate the Board  
17 and staff taking this modeling project on and sharing  
18 their plan with how to go about the modeling. What I saw  
19 from the presentation was that much of the modeling was to  
20 look at the impacts and benefits to Californians, as  
21 though we are isolated under some kind of dome and not  
22 really looking at the additional benefits created  
23 elsewhere from the CARB leadership. So if the modeling  
24 can take into account the greenhouse gas reductions in  
25 California also reduced greenhouse gas problems elsewhere,

1 globally, that would be another benefit to include. And  
2 so it makes sense to look at the global benefits of  
3 greenhouse gas reduction, as well as criteria pollutants  
4 that drift across our State borders to other places.

5 Also, it makes sense to look at the leadership  
6 role and to explicitly model the leadership role that CARB  
7 can have in energizing other parties around the world in  
8 other states and other countries to get onto the problem  
9 in a rapid manner, by including a multiplier in your  
10 modeling, looking at what is the effect of other countries  
11 and states adopting bold initiatives, because they see  
12 what you are able to model and implement here.

13 We think that can produce much more benefit than  
14 is credited in the models. And those additional benefits  
15 are worthy to stack up against the costs when the  
16 naysayers bring up costs to tell you to go slow.

17 So please expand the modeling efforts to look at  
18 the -- both the benefits from the emission reductions that  
19 California does and the benefits from the leadership that  
20 California provides through a bold action, getting back on  
21 track with meeting our obligations and going further to  
22 try to approach meeting the two degree and one and a half  
23 degree Paris climate accord targets.

24 Also, there's been a lot of talk about using  
25 carbon capture and sequestration. And from my attending

1 various presentations about it by the oil industry, they  
2 are hopeful to be able to provide that service at a cost  
3 of \$200 per ton of CO2. I think the modelers and  
4 policymakers should use that optimistic low-cost  
5 projection of \$200 per ton, instead of low cap and trade  
6 values when figuring out what is the optimal level of  
7 other activities to pursue. We ought to be putting a \$150  
8 a ton into other activities like electrification and real  
9 reductions of methane use.

10 Thank you.

11 BOARD CLERK ESTABROOK: ...will be David  
12 Rothbart. And then after David, our final three speakers  
13 will be Leah Louis-Prescott, Paul Mason, and Sarah  
14 Deslauriers.

15 David, you can unmute and begin.

16 DAVID ROTHBART: Thank you. This is David  
17 Rothbart with the Southern California Alliance of Publicly  
18 Owned Treatment Works. Thank you Chair Randolph and Board  
19 members for giving me the opportunity to comment on the  
20 updated Scoping Plan.

21 As an entity that the members are wastewater  
22 treatment plant operators, we generate a biogas. As a  
23 process of flushing your toilet, we generate a biogas that  
24 must be managed. But beyond that, I wanted to talk about  
25 unintended consequences of just an electrification-only

1 approach. As you're aware some other speakers talked  
2 about SB 1383, where we're going to start taking food  
3 waste out landfills and a lot of that is going to go to  
4 wastewater treatment plants to generate a non-fossil fuel  
5 biogas, that could be used in a productive manner.

6 My organization uses wastewater treatment plant  
7 biogas to generate on-site power. My treatment plants are  
8 already carbon negative and we'd like to pursue that  
9 moving forward.

10 The problem is, as we talked about earlier today,  
11 as far as ozone attainment. The problem is, we move  
12 forward the attainment requirements get more and more  
13 restrictive and we're not going to be able to generate  
14 more power at my treatment plants. I need some where else  
15 for that gas to go.

16 Essentially, if we're saying electrification  
17 only, I don't have a home for that gas. It makes more  
18 sense to say, what's the highest and best use of that gas  
19 giving us an ability as a central public service to find a  
20 home for that gas that's carbon neutral. And at the  
21 moment, the best place for it with the existing  
22 infrastructure to get reductions now of greenhouse gas  
23 reductions, get diesel trucks off the road is to put that  
24 non-fossil fuel into RNG vehicles and get those reductions  
25 today and continue becoming carbon neutral moving forward.

1           We really would appreciate having options for  
2 this gas and to avoid this unintended consequence. Thank  
3 you for the attention.

4           BOARD CLERK ESTABROOK: Leah Louis-Prescott, you  
5 can unmute and begin.

6           LEAH LOUIS-PRESCOTT: Good afternoon. This is  
7 Leah Louis-Prescott, a Senior Associate from the Oakland  
8 office of R MI.

9           Thank you so much for all of your work on this  
10 Scoping Plan. I have not heard much on buildings in this  
11 Scoping Plan discussion. I want to reemphasize the  
12 importance of an equitable statewide transition to safe,  
13 health, all-electric homes and businesses. As I mentioned  
14 in earlier comments today, buildings are a major source of  
15 nitrogen oxide emissions contributing to health and air  
16 quality issues. Direct building emissions account for ten  
17 percent of our state's greenhouse gas pollution  
18 contributing to the climate crisis.

19           This Scoping Plan is a critical opportunity for  
20 CARB to help initiate planning for the multi-stakeholder  
21 effort for statewide building electrification that we  
22 need. We need to start this process as soon as possible  
23 to ensure adequate opportunities for community input and  
24 to act in time to meet our climate goals. I urge CARB to  
25 include the building sector in the main body of the

1 Scoping Plan, rather than in an appendix to underscore the  
2 need for a coordinated transition for this major source of  
3 pollution.

4 I also encourage CARB to follow the EJAC's  
5 leadership to ensure that this Scoping Plan reflects an  
6 equitable pathway to decarbonizing new and existing  
7 buildings, and prioritizes environmental justice  
8 communities and good jobs created in this transition.  
9 California cannot achieve carbon neutrality without  
10 decarbonizing its buildings.

11 I am grateful that CARB is committed to advancing  
12 an equitable transition for the building sector, and I  
13 hope that the depth of this commitment is reflected by  
14 making building decarbonization a key section in the body  
15 of this Scoping Plan update.

16 Thank you.

17 PAUL MASON: Good afternoon, Madam Chair, members  
18 of the Board. Paul Mason with Pacific Forest Trust. Much  
19 has already been said and I will try and avoid being  
20 redundant. We really appreciate that the Resources Board  
21 is taking a much more substantial approach to inclusion of  
22 that from working lands in this -- in this update to the  
23 Scoping Plan. And we really looking forward to seeing  
24 some of those preliminary modeling results in the coming  
25 weeks. We really only have the most general idea of

1 what's being modeled, so having an opportunity to see and  
2 provide some feedback on those different scenarios will be  
3 really helpful for those of us that work in this natural  
4 and working lands space.

5 I want to really focus in on highlighting three  
6 key things. One is around resilient forest conditions.  
7 It's been gratifying that there's so much attention to  
8 improving forest conditions, and a fairly broad  
9 recognition that healthier forests are going to have  
10 fewer, larger, well-spaced trees, where regular fire is  
11 part of a natural process that maintains those conditions.

12 But I'm really worried that too often we have a  
13 short-term view of what we're going to do in forests and  
14 try and focus on the ecological thinning and burning, and  
15 increasing management, when forests operate on a very long  
16 cycle. So to get to the conditions and to maintain the  
17 conditions that we're trying to get to, it's going to  
18 require permanent changes in how we manage forests. And  
19 an important part of getting there is going to be working  
20 forest conservation easements that keep those forests in  
21 private ownership where they're currently in private  
22 ownership, but secure permanent and enforceable changes in  
23 how they're managed, so they're more climate smart and  
24 resilient going forward. That will also help us meet some  
25 of our biodiversity and other, you know, water, and

1 wildlife, and conservation goals at the same time. But  
2 that will make sure we're actually getting durable  
3 benefits from these initial treatments.

4           Second, I'd like to focus on making sure that  
5 we're working at significant scale, so that we're really  
6 trying to restore forest and watershed function at enough  
7 of a scale that fire can be a natural process there and  
8 doesn't just come in an just blow past some of the small  
9 restoration activities that we might otherwise focus on.

10           And lastly, I would just highlight that there's  
11 been a lot of attention to fire, because of the really  
12 extreme smoke events we've had the last couple of years.  
13 And part of our challenge there is that our current policy  
14 focused on suppression, puts out all the fires that would  
15 actually be beneficial to resilience, and we end up  
16 spending billions of dollars to select for the most  
17 damaging fires. So we're really going to have to look at  
18 how we approach fire suppression, and, you know, come to  
19 grips with the fact that we're going to have a little bit  
20 of smoke under even the best circumstances. We just need  
21 to choose the timing on that.

22           Thank you.

23           BOARD CLERK ESTABROOK: ...hear from Sarah  
24 Deslauriers. You can unmute and begin.

25           SARAH DESLAURIERS: Thank you. Hello. My name



1 is Sarah Deslauriers and I'm the Climate Change Program  
2 Manager of the California Association of Sanitation  
3 Agencies, or CASA, the members of which represent over 90  
4 percent of the sewered population of California. And I  
5 just want to thank you for the opportunity today to  
6 provide comment on the latest update of the Scoping Plan.

7 Our members, while reliably provide an essential  
8 public service, wastewater treatment, to protect public  
9 health, and environment, and support emergency services,  
10 the wastewater sector can also contribute to all the major  
11 climate policies in pursuit of carbon neutrality.

12 However, we have identified barriers to implementation  
13 while remaining reliable and in compliance with existing  
14 regulations. And you've heard some of those from our  
15 members that have already spoken earlier.

16 I will reiterate that while CARB does strongly  
17 support CalRecycle and the State Water Resources Control  
18 Board in their efforts to implement Senate Bill 1383  
19 regulations to achieve methane reduction, which  
20 incentivizes the increased production of biogas for use as  
21 a transportation fuel or for on-site powered heat  
22 production, CARB is also moving forward with Advance Clean  
23 Vehicle Regulations to fully electrify vehicles.

24 While this promotes biogas to be converted to  
25 power, it disincentivizes the medium- and long-term

1 opportunities for development of biogas into a low carbon  
2 fuel, even though the technology is immediately available  
3 and local air pollutant reductions can be achieved today.  
4 For example, we could achieve 90 percent reduction in NOx  
5 to achieve ozone reductions as folks have been mentioning  
6 in earlier testimonies.

7           We have a resource that will be produced in  
8 perpetuity -- well, as long as we all flush, right -- and  
9 can support the overall resilience of our own essential  
10 public services that we provide. Another product we  
11 produce from co-digestion of sewage, sludge, and diverted  
12 food waste in, you know, compliance with Senate Bill 1383  
13 is biosolids. Biosolids are a organic soil amendment that  
14 can achieve many different benefits when it's applied to  
15 soils, improving the soil health, including carbon  
16 sequestration that is a target of natural and working  
17 lands climate -- or the draft, a smart strategy as well as  
18 the Healthy Soils Initiative, as well as looking at the  
19 wildfire and forest kind of resilience aspects as well.

20           So we want to make sure that we're also  
21 participating in any kind of work groups that are  
22 discussing the potential for biosolids that are used  
23 towards those efforts and policies are achieving those  
24 goals as well.

25           I just want to thank you for your time today and

1 we look forward to the engagement. We have been engaging  
2 with CARB staff, CARB executives, Board members, and  
3 really appreciated that, and coming to a solution for the  
4 wastewater sector on both biogas and biosolids related  
5 items.

6 Thank you.

7 BOARD CLERK ESTABROOK: We'll hear Mikhael  
8 Skvarla. Mikhael, you can unmute and begin.

9 MIKHAEL SKVARLA: Yeah. Thank you, Chair and  
10 Board members. I know you guys have been here for a long  
11 day. My name is Mikhael Skvarla. I'm with Gualco Group.  
12 I'm here on behalf of the California Council for  
13 Environmental and Economic Balance. We're a business  
14 labor organization focusing on environmental solutions at  
15 a reasonable economic cost.

16 You've heard a lot today, and I just want to make  
17 a couple points. First, with regard to the Cap-and-Trade  
18 Program, the Program has delivered the emission reductions  
19 necessary to achieve the State's targets. We understand  
20 the criticisms, which are annual and perennial, and  
21 ongoing since we reauthorized in 2017.

22 To that end, the market is sending the  
23 appropriate economic signals. We have one of the highest  
24 carbon prices in the Pacific Rim, especially if you  
25 aggregate it with the RPS and Low Carbon Fuel Standard.

1 The overall cost of carbon in the state of California is  
2 driving a tremendous amount of investment.

3 And with regard to that, we have started to dive  
4 into the OEHHA report which is indicating that we are  
5 seeing benefits in and around the facilities that are  
6 capped. And to that end, we think that over the long run  
7 as we're able to continue to make efficiency upgrades and  
8 improvements, we will continue to see those benefits in  
9 and around the industrialized base.

10 Also, as we look towards the future, the ability  
11 to decarbonize Electrons and molecules is highly dependent  
12 on our ability to permit in the state of California. The  
13 next decade is going to require a massive infrastructure  
14 exercise. And I think the Obama admin -- or the Biden  
15 administration and Congress have recognized that with the  
16 IIJA funding and the need to invest heavily in  
17 decarbonization both in electrons and molecules.

18 And so to that end, as we look further into the  
19 Scoping Plan and what's needed beyond, I think that  
20 permitting needs to be raised and the ability to make sure  
21 that these clean molecule and clean electron projects get  
22 on-line, notably the state -- the buildings trades have  
23 highlighted recently that two wind projects have been  
24 denied both in conservative and democratic district  
25 counties. And so to that end, we think that this is kind

1 of a ubiquitous problem across the state that, you know,  
2 we think the Board should dive into and maybe look at  
3 solutions to help us move quicker, so that we can help  
4 achieve the goals that a lot of the constituents and other  
5 stakeholders have talked about today.

6 Thank you.

7 BOARD CLERK ESTABROOK: Final speaker will be  
8 Stephen Jepsen. Stephen, you can unmute and begin.

9 STEPHEN JEPSEN: Hi. Thank you, Madam Chair and  
10 Board for the opportunity to speak today. This is Steve  
11 Jepsen, the Executive Director for the Southern California  
12 Alliance of Publicly Owned Treatment Works, or SCAP. We  
13 represent over 80 public water, waste watery, and recycled  
14 water agencies in Southern California.

15 As described by my wastewater colleagues earlier,  
16 wastewater treatment plants generate a non-fossil biogas  
17 as part of the process of cleaning the public's wastewater  
18 to protect public health and the environment. This  
19 wastewater derived biogas is currently used in a few ways  
20 including generating on-site heat and power for the  
21 treatment plant, and also as a low carbon truck and  
22 vehicle fuel which has 90 percent less NOx than diesel  
23 fuel.

24 As described earlier, SB 1383 will be diverting  
25 food waste away from landfills to POTWs. This will

1 significantly increase the amount of waste-derived  
2 non-fossil biogas generate. Using this low carbon  
3 renewable fuel source to power our essential public  
4 service maintenance and emergency equipment will expedite  
5 the transition from diesel-powered trucks.

6           The wastewater derived renewable gas engines and  
7 equipment we need to maintain our wastewater systems are  
8 currently available, and in some cases already in use.  
9 Whereas, zero-emission equipment are not available, and  
10 based on communication with equipment suppliers not  
11 feasible with current technologies for our heavy-duty  
12 emergency response and maintenance uses.

13           We are not opposed to zero-emission, light-duty  
14 vehicles and medium-duty vehicles. And many of our  
15 agencies already have them in their fleets. To achieve  
16 clean air goals and be consistent with Federal Clean Air  
17 Act requirements, we must use all the tools in the  
18 toolbox.

19           In summary, the waste sector has a non-fossil  
20 renewable fuel source derived from society's waste that  
21 cannot be turned off. Engines and our specialty equipment  
22 that can use this fuel already exists. Embracing this  
23 non-fossil renewable fuel will expedite getting diesel  
24 trucks off the road, allow the wastewater sector to  
25 continue our mission of protecting public health and be

1 consistent with Federal Clean Air Act requirements.

2 We ask that CARB policies include the wastewater  
3 sector's non-fossil wastewater derived renewable gas  
4 fueled heavy-duty vehicles and specialized equipment as  
5 part of a clean air solution.

6 Thank you very much.

7 BOARD CLERK ESTABROOK: That concludes the  
8 commenters.

9 CHAIR RANDOLPH: Thank you. All right. This is  
10 an information item, so I will ask the Board members to  
11 raise their hands zoom if they have any questions or  
12 comments they would like to make.

13 Everyone is thinking deeply about everything they  
14 just heard.

15 Okay. Board Member Kracov.

16 BOARD MEMBER KRACOV: Yes. Thank you, Chair.

17 It's a lot to digest to be sure. And as a newer  
18 Board member looking forward to learning more about this.  
19 I know we've got a few meetings I think with the EJAC  
20 again in March. And we're going to be seeing this quite a  
21 bit as it moves forward. So for me at least as a new  
22 Board member it really is a learning experience.

23 So if I can, Chair, just ask a couple of  
24 clarifying questions as part of the education process  
25 today. I guess the first one is about sort of the goals

1 for the Scoping Plan in terms of timeline. There seems to  
2 be some back and forth about what the role of meeting the  
3 2030 goal is, which I believe is 40 percent below the 1990  
4 baseline. So I guess if I can ask staff to speak to this  
5 as to how much are we going to be looking at the 2030 goal  
6 in the Scoping Plan? So I'll...

7 DEPUTY EXECUTIVE OFFICER SAHOTA: Board Member  
8 Kracov, this is Rajinder Sahota the Deputy Executive  
9 Officer for Climate Change and Research.

10 The Scoping Plan, as in previous Scoping Plans,  
11 will make an assessment towards the near-term target,  
12 which is that 2030 target. So we will try to understand  
13 through the modeling are we on track and what are the  
14 uncertainties over this decade that could hinder or impede  
15 our achievement of that goal. And there are new  
16 uncertainties that have become available, certainties  
17 around permitting, certainties around funding, and  
18 certainties around CEQA analyses and other kinds of  
19 fundamental steps that need to be taken before you can  
20 actually take action on the ground or break ground on any  
21 projects. So that will be part of the discussion.

22 And then as part of the second part of the  
23 Scoping Plan, we will also look at the outcomes that we  
24 need to achieve the 2045, 2035 targets for carbon  
25 neutrality. So it will serve dual purposes. That is the



1 precedent that has been set in previous scoping plans to  
2 look at near term and then project forward. It allows us  
3 to think about stranded assets. It allows us to think  
4 about even focusing near term on things that can help on  
5 the longer term, and so that is really the goal for the  
6 Scoping Plan just as before.

7 BOARD MEMBER KRACOV: Thank you very much for  
8 that. If I can ask a couple other clarifying questions,  
9 Chair. We talked about, or Ms. Sahota just talked  
10 about -- is it Dr. Sahota?

11 DEPUTY EXECUTIVE OFFICER SAHOTA: Definitely not.  
12 (Laughter.)

13 DEPUTY EXECUTIVE OFFICER SAHOTA: It's just a  
14 practical degree, which was a Master's.

15 BOARD MEMBER KRACOV: Right. Yeah. That's --

16 DEPUTY EXECUTIVE OFFICER SAHOTA: No offense to  
17 the PhDs.

18 BOARD MEMBER KRACOV: Yeah, that's for sure, a  
19 practical degree in this job. So I just want to get it  
20 straight. I'm sorry. The whole thing has been on Zoom.  
21 I think I met you once in person. It does -- it's hard.

22 Talk about uncertainties. How do we take into  
23 account uncertainties in the Scoping Plan. You know, for  
24 example, like whether we're going to meet our VMT targets,  
25 which are quite aggressive in some of the scenarios or,

1 you know, our renewable energy goals for that matter, how  
2 is the uncertainty factored into the modeling.

3 DEPUTY EXECUTIVE OFFICER SAHOTA: That is a great  
4 question. We started to factor in uncertainty in the 2017  
5 Scoping Plan, where you do the modeling, you actually have  
6 a point estimate. But around any estimate, you have to  
7 think about things such as will there be legal challenges,  
8 could there be delays in breaking ground on projects,  
9 could there be delays in funding, et cetera.

10 And so we go through and look at historical  
11 patterns on things like permitting. And we will go back  
12 and look at historical patterns on funding or how some of  
13 those projects -- that rate of deployment of those  
14 projects and factor that into uncertainty and put bounds  
15 around every point estimate for every year.

16 On VMT, we all know that every year -- or every  
17 time that we get asked to do the Scoping Plan, we are  
18 asked to do aggressive targets on VMT. And we also know  
19 that based on the updated reports that we put out, we are  
20 off track on VMT. So we will try to do an assessment of  
21 uncertainty around VMT, which means that every time that  
22 we do a VMT portion of the modeling in the Scoping Plan,  
23 we can show you what the perfect reduction would be, if  
24 that VMT target can be perfectly met.

25 But those annual assessments that are related to

1 AB 32 inventory data, and when look at vehicle miles  
2 traveled, or we consider the five-year update to the  
3 Scoping Plan, those also provide those touchpoints to make  
4 sure that we're on track or make adjustments. So the  
5 uncertainties are a big part of the discussion here. I  
6 think it's easy to get focused on a point estimate and  
7 runoff with a number. But over this decade, as Executive  
8 Officer Corey mentioned, implementation is key. And what  
9 we're seeing right now across all the sectors is huge  
10 uncertainty around permitting and actually breaking ground  
11 on the things that we need to build to move forward.

12 BOARD MEMBER KRACOV: That's an interesting  
13 observation. It's probably worth a whole meeting.

14 If I can, Chair, just one last question. And I  
15 guess it relates to the uncertainty point that we were  
16 just discussing. I know that some of the models, the  
17 scenarios talk about a phasedown of oil and gas extraction  
18 and potentially even refining.

19 How to -- but I think some of them say, you know,  
20 according to demand. And again, we're projecting out not  
21 only to 2030 but, you know, beyond, so uncertainty plays a  
22 factor in that. So how do we assess that phasedown and  
23 the uncertainty around what, you know, demand might be in  
24 the future? How are we approaching that?

25 DEPUTY EXECUTIVE OFFICER SAHOTA: So again this

1 comes back to the question of what we model and what we  
2 can do outside of the modeling. In the modeling right  
3 now, we are phasing down demand act -- or we are phasing  
4 down demand, and then at the same rate phasing down the  
5 in-state production. That includes oil and gas extraction  
6 and includes refining. We know that across a few of the  
7 scenarios residual demand will remain for petroleum  
8 products across the economy, especially in the  
9 transportation sector in particular.

10 For those sectors, when we get that modeling, we  
11 can figure out the fuel that will be used and combusted  
12 and the associated missions for those refinings and oil  
13 and gas extraction activities. We can then zero those  
14 out, use that fuel difference to calculate any health  
15 benefits. But then we also need to include a discussion  
16 about how to meet that ongoing demand, if we phase down  
17 those activities. And that ongoing demand is going to be  
18 met through imports if we're not producing it in state.

19 And associated with that imported fuel to meet  
20 that demand is going to be consideration of how does that  
21 fuel enter the state, what are the costs associated with  
22 that fuel, and potentially which sectors or which groups  
23 will be the ones paying for that fuel to still be brought  
24 in to meet that demand.

25 So the modeling doesn't show it, but we can take

1 the data from the modeling to do this exercise, as was  
2 requested by the Governor in a letter to CARB.

3 BOARD MEMBER KRACOV: Okay. Thank you, Chair,  
4 for allowing me to ask those questions.

5 CHAIR RANDOLPH: Thank you.

6 Board Member Takvorian.

7 BOARD MEMBER TAKVORIAN: Thank you, Chair.

8 I was just saying to somebody this feels a little  
9 déjà vu. This has always been -- the Scoping Plan process  
10 has always been very challenging. It's really  
11 overwhelming. And I really want to thank staff for a  
12 comprehensive explanation and presentation on the Scoping  
13 Plan today, and also thank the Environmental Justice  
14 Advisory Committee members who have been going, as they  
15 said, at a breakneck pace, so many meetings, and so much  
16 conversation, and so much study, as well as the public  
17 who's continuing to really participate in a big way.

18 I think the Scoping Plan is often described as  
19 very high level, but it's setting the table via the  
20 choices that are included in the modeling and determining  
21 what strategies and measures will be developed over the  
22 next period of time and which will not be included.

23 So I think there's a little bit of chicken and  
24 egg dynamic here that makes it confusing for the public  
25 and I think has often made it confusing for the Board as

1 well. So I'm really hopeful in this year -- in this time  
2 that we're updating the plan that we can get clearer about  
3 it, because I think that's why we have so many people from  
4 every stakeholder category, and especially environmental  
5 justice communities participating in the process to ensure  
6 that the measures included address the issues in the  
7 communities.

8           So I'm very grateful, I want to say, to the Chair  
9 for announcing that there will be a permanent EJAC. It's  
10 so long overdue. And it's been a request since the first  
11 EJAC, which I had the privilege of sitting on. I think it  
12 provides the opportunity to ensure authentic environmental  
13 justice participation in the measures that make up the  
14 Scoping Plan. So there's a continuity that comes with  
15 developing the Scoping Plan and then the measures that  
16 obviously are necessary to make it deliver on its  
17 promises. So that's something I think is essential.

18           So I just want to point to a few areas where I  
19 really hope that we can discuss in the EJAC and CARB  
20 conversation as well as have these included the modeling.

21           As we all know, half of California's GHGs come  
22 from the interconnected sources of transportation system,  
23 the light- and heavy-duty vehicles, fossil fuel  
24 refineries, and extractions. And getting to zero-emission  
25 in these four areas is going to be really critical to

1 meeting our targets. And we've provided -- I think CARB  
2 has provided and paved the way for the world really in  
3 decarbonizing transportation, but we just heard in the SIP  
4 discussion that we're not going far enough. We really  
5 have to double down.

6           So I think in this regard, the Scoping Plan  
7 really should show an acceleration of goals for medium-  
8 and heavy-duty vehicle sales to be at a hundred percent  
9 ZEV by 2030 with perhaps only ZEVs on the road by 2035.  
10 I'm sure there will be some exceptions and an equitable  
11 investment in ZEV charging infrastructure. So we really  
12 need to prioritize the investments in the disadvantaged  
13 communities to ensure that these are -- that these changes  
14 are really benefiting EJ communities fees. And I think  
15 per Tania's point during the SIP discussion, we real have  
16 to change the system, so we don't leave -- the whole  
17 incentive system so we don't leave low-income businesses  
18 and residents behind and should really abandon the  
19 first-come first-served kind of mentality with these --  
20 with these programs.

21           The second area I think in transportation that we  
22 really need to prioritize in the Scoping Plan is  
23 investments in all forms of transportation, like mass  
24 transit, that increase opportunity for EJ communities.  
25 While it's a lot about cars and trucks transitioning to

1 ZEV, we really need to focus on transit as well. And we  
2 can do that by setting VMT reduction targets. And I know  
3 that that's starting to be considered by the staff as part  
4 of the Scoping Plan, which I appreciate. I think looking  
5 at targets of around 11 percent transit mode statewide by  
6 2035 with a corresponding VMT reduction of about 30  
7 percent would really get us to where we need to go.

8 And along with that, the Scoping Plan can really  
9 look at higher SB 375 targets for the MPOs, accelerating  
10 walking and biking, which was mentioned in the staff  
11 presentation as a positive health action.

12 Next, I think the direct emission reduction, as  
13 we've heard from so many of the stakeholders who testified  
14 that the Scoping Plan process really needs to rely heavily  
15 on direct emission reduction strategies and regulations.  
16 And I think EJAC will be making additional recommendations  
17 related to that and we look forward to that. I've said  
18 this before, but I really hope that the 617 community CERP  
19 measures, many of which are direct emission reductions as  
20 they are required to be, are included in the Scoping Plan.  
21 And I'd like to see that actually listed out, so that we  
22 can see where the Scoping Plan is making progress for the  
23 CERPs. I think it's something that will be very important  
24 and the permanent EJAC will play a huge role in ensuring  
25 that these measures are brought forward in a timely



1 manner.

2           Next, I would -- I would say that in relationship  
3 to Cap-and-Trade, which has been discussed by public  
4 members today, that this has been a heavy -- this has been  
5 a controversial item obviously in all of the Scoping  
6 plans, and there's been heavy reliance on Cap-and-Trade to  
7 meet the state's climate goals. I think the current  
8 Scoping Plan includes a 38 percent reliance on  
9 Cap-and-Trade.

10           And I was a little bit surprised actually that  
11 that wasn't addressed in the staff presentation or that  
12 the Independent Emissions Market Advisory Committee report  
13 that Mr. Cullenward gave us a very brief summary of, was  
14 not addressed either. And so I'd like to hear more about  
15 that. It's clear that there are excessive allowances. It  
16 could really hurt our ability to meet the State's goals.  
17 The Legislative Analyst has also said that the allowance  
18 bank is so substantial that large emitters may not be  
19 required to reduce at all between now and 2030. And many  
20 of these emitters are in the fossil fuel sector, which is  
21 the focus of the Scoping Plan. So I think we really have  
22 to address this.

23           And I did hear from the update from the Senate  
24 Committee hearing yesterday that it was announced that we  
25 won't begin a robust discussion on those allowances and on

1 Cap-and-Trade until 2023 after the Scoping Plan. That  
2 seems a little unwise to me and I wanted to hear from  
3 staff about how this report will inform the 2022 Scoping  
4 Plan and how we might revise the extent to which the  
5 State's climate strategy should rely Cap-and-Trade. And I  
6 did ask these questions in my briefing and hope to hear  
7 more about it today.

8 I'd also like to commend the staff on including a  
9 broader reach on health analysis and appreciate the  
10 addition of some of the health outcomes. I am concerned  
11 about how we utilize the health analysis in the Scoping  
12 Plan to evaluate what more we can do to get additional  
13 health benefits. And to my knowledge, that's not how  
14 we're using the health analysis. So in the same way that  
15 we look at the technological feasibility and the economic  
16 impacts, it seems like we're looking at health benefits in  
17 that same way, so that we could look at options to say,  
18 you know, where do we get more of those health benefits.  
19 And I'd appreciate knowing if that is something that we  
20 could incorporate.

21 And lastly, I'd say again that I think it's  
22 important that pesticides be included and the -- all the  
23 emissions from the ag industry be incorporated into the  
24 Scoping Plan, which you did mention as being important to  
25 the development of the Plan.

1 Thank you. Those are my comments.

2 CHAIR RANDOLPH: All right. Thank you.

3 Dr. Pacheco-Werner.

4 BOARD MEMBER PACHECO-WERNER: Yeah. Actually, I  
5 had a -- thank you, Chair. I had a similar question to  
6 Board Member Takvorian in terms of the Cap-and-Trade  
7 conversation. I'm just trying to get a clear sense of  
8 what the timeline on having that conversation is, also  
9 tied to the timeline by which we have to meet this Scoping  
10 Plan. I guess I'm a little concerned -- you know, if the  
11 conversation is going to happen, when is it going to  
12 happen and are we still going to be, you know, in  
13 compliance with, you know, whatever deadline we have to  
14 meet, or, you know, does the December -- end of the year  
15 feels overly ambitious to tackle this. So that was --  
16 yeah, if -- just kind of getting a little more clarity on  
17 that would be helpful.

18 And also to the extent as has been questioned  
19 before by Board Member Kracov just making sure that we  
20 have a clear point of what is -- what is in the modeling  
21 that's helping us achieve those near terms and then the  
22 longer term pieces separating that out a little bit more  
23 might be helpful for us and the public.

24 One of my concerns, also as Board Member  
25 Takvorian mentioned, is how much were capitalizing or not

1 capitalizing on what we could be doing in terms of public  
2 transportation. In particular, I'm thinking about  
3 wildfire events that while they're being treated, you  
4 know, in a specific category, you know, they are -- they  
5 are going to be part of our yearly reality at least for  
6 me, you know, living close enough to the Sierras. You  
7 know, that's an unexpected part of my summer and fall  
8 reality now. And I think that we could -- we could be  
9 doing more by thinking about how we capitalize on freight  
10 public transportation during emergency events and just  
11 kind of thinking about those sort of more drastic  
12 investments, but that are -- that are -- that can address  
13 some of the things that are -- that are going to be part  
14 of our reality before 2030.

15 Thank you.

16 CHAIR RANDOLPH: Staff, do you want to go ahead  
17 and address Board Member Takvorian and Dr.  
18 Pacheco-Werner's questions around the Cap-and-Trade  
19 Program, and in particular the kind of inputs and data  
20 that you need to analyze for the -- to deal with this  
21 question about the allowances and recommendations around  
22 that.

23 EXECUTIVE OFFICER COREY: Chair, I'm going to  
24 start and then Rajinder will follow up in terms of the  
25 underlying analysis. And I wanted to get to both Board

1 Member Takvorian's and Dr. Pacheco-Werner's comments, and  
2 it's an interesting comment that was made by both in terms  
3 of that really is connecting, which is actually fortuitous  
4 that we did the SIP presentation and the Scoping Plan  
5 presentation because a fundamental driver -- with respect  
6 to meeting both these targets ambient air quality NAAQS,  
7 National Ambient Air Quality Standards, the community  
8 protection, and GHGs, the fundamental driver is  
9 combustion. It's across the board.

10 Now, there's certainly some non-combustion  
11 sources. But the good thing is when we're talking about  
12 many of these strategies, the response of this strategy  
13 actually speaks to both GHGs and criteria pollutants. The  
14 challenge is one of time frame and the real challenge is  
15 one of legacy fleets. Someone mentioned that comment in  
16 terms of achieving the Governor's Executive Order, a  
17 hundred percent ZEVs in 2035. You still have a lot of  
18 combustion in use on the road and 2045. How do we turn  
19 that over? Lower income vehicles, how do we turn that  
20 over? How incentives, what role do they play?

21 So with respect to the Scoping Plan in terms of  
22 the fundamental analysis, in terms of 2030 and carbon  
23 neutrality is what's already in the hopper and where is  
24 that going to take us? How far along does that take us?  
25 What's the gap? That's really the fundamental underlying

1 analysis. And what are the opportunities of the package  
2 of managers, not in specific regulatory detail? That  
3 follows. But it really looks at what is the mix to close  
4 the gap. That is what the Scoping Plan is.

5 But to the question about the Cap-and-Trade  
6 Program, this is really important, as I was reflecting on  
7 a number of commenters that spoke, as well as yesterday's  
8 hearing, and even though some would say, hey, we've been  
9 running the program ten years. Actually, the program has  
10 been one year. Let me say why that is.

11 AB 398 effectively created a new Cap-and-Trade  
12 Program. The stringency doubled, doubled to four percent  
13 year over year starting January 1 of 2021. And  
14 integrating the additional AB 398 provisions and the  
15 change in the offset provisions, price containment points,  
16 how the cap is established and, set, and triggered, it  
17 established a new program we've been running for one year  
18 and also we also did take allowances out. So there's  
19 conversation about, well, should more be taken out.  
20 Certainly, there's a range of opinions on that.

21 We have one year under this program. We need to  
22 run it for a few more years, report back to you all,  
23 report back to the Legislature, and have that experience  
24 under our belt to really inform -- have informed  
25 recommendations in terms of going forward. So I really do

1 think it's just important to underscore that point about  
2 the fundamental step change that was made just one year  
3 ago to this program.

4           So with that, I want to see if Rajinder can  
5 fill -- backfill the underlying follow-up analysis on the  
6 Scoping Plan side.

7           DEPUTY EXECUTIVE OFFICER SAHOTA: Sure. Thank  
8 you, Executive officer Corey.

9           I will address the one outstanding comment I  
10 think that is still out there, and that is the timing  
11 question that Dr. Pacheco-Werner asked. So we are still  
12 on track to get the Scoping Plan completed by the end of  
13 this year. That is the legislative mandate of update at  
14 least once every five years. As soon as a Scoping Plan is  
15 done or even close to it being done, we do start looking  
16 at the programs that we have at ARB and programs that may  
17 exist at other agencies to understand if they need to be  
18 adjusted, strengthened, or new program need to be added to  
19 make sure that we remain on track to hit our targets.

20           And so it's really difficult to try and  
21 understand what adjustments to make, if you actually can't  
22 take a step back, as we do in the Scoping Plan, and do an  
23 overall assessment across all the sectors and all the  
24 programs, because our metric is a single GHG mass  
25 calculation each year. It is a mass based target of 1990

1 levels of 431 million metric tons. And so we have to look  
2 at that and understand are we on track or not on track?  
3 And once we understand if we're not on track, we have to  
4 then go a little deeper to understand what's going on in  
5 the sectors that make up that total target and then look  
6 at the programs that are overlaid on those sectors, and  
7 whether those programs need to be adjusted.

8           And I'll give you one example, and that 1383 has  
9 a methane reduction target for dairy digesters -- or  
10 dairies, and it's a 40 percent reduction from 2013 levels  
11 by 2030. Cap-and-Trade doesn't cover fugitive methane  
12 emissions and so it would not be a logical choice to think  
13 about making Cap-and-Trade more stringent on source that  
14 is outside of its coverage. It would be more about  
15 looking at the direct regulations, or programs, or  
16 incentives that feed into that sector adjusting those.

17           And so that is the type of analysis that we do  
18 after we complete the Scoping Plan. And as Executive  
19 Officer Corey said, it is important for us to have a  
20 data-informed package of regulatory amendments. And so  
21 all of the questions that are being raised in that IEMAC  
22 report about allowance supply, et cetera, those are about  
23 calculations, and data, and modeling. And so we want to  
24 make sure that we actually have an understanding of what  
25 this program looks like, and that is that legislatively



1 designed program that began about a year ago. And even  
2 though we keep calling it a new program, as we set the  
3 caps for this decade, we did actually remove allowances  
4 through this decade, knowing that we were ahead of  
5 schedule meeting our 2020 target.

6 And so it's easy in short conversations and  
7 comments to throw down numbers and make relationships  
8 across numbers, but the complete story is a lot more than  
9 a number. And that's why it's important for us to have  
10 that public conversation, have modeling, and time to do  
11 that more thoughtfully before we come back with any  
12 recommended changes.

13 CHAIR RANDOLPH: Okay. Board Member De La Torre.  
14 Are you there?

15 CHAIR RANDOLPH: Okay. I'm going to go to Board  
16 Member Riordan and maybe Board Member De La Torre can come  
17 back after that.

18 BOARD MEMBER DE LA TORRE: Hello.

19 CHAIR RANDOLPH: Oh, there you are. Okay. There  
20 he is.

21 (Laughter.)

22 BOARD MEMBER DE LA TORRE: I'm sorry. It's very  
23 different to do it on the phone than it is to do it from  
24 the screen.

25 I just wanted to make a couple of general

1 comments. One, that the Scoping Plan is a holistic  
2 approach, and essentially what Rajinder just said, that it  
3 informs the major programs that we have and we shouldn't  
4 be moving on those major programs that we have until we've  
5 done the holistic approach of analyzing everything in the  
6 context of the Scoping Plan number one.

7           Number two, that -- you know, I want to get  
8 this -- as Rajinder just said, we're going to finish later  
9 this year. I want to finish this, because it's already,  
10 you know, for all intents and purposes 2023 by the time we  
11 finish and our target is 2030. We have to get to work on  
12 the actual work. And so dragging out the planning phase  
13 doesn't necessarily help us.

14           And then finally, in terms of specific sectors,  
15 we know the sectors that did not contribute to us hitting  
16 the 2020 target, namely transportation, natural and  
17 working lands, and short-lived climate pollutants. And  
18 the short-lived climate pollutants are, as you all know,  
19 carbon -- black carbon, hydrofluorocarbons, and methane.

20           So, you know, I'm going to be looking as we do  
21 this process this year to see how we step it up on those  
22 three sectors to make sure that they contributing to us  
23 hitting the 2030 target and not just riding on the other  
24 sectors delivering GHG reductions.

25           So that's -- those are my comments. But thank

1 you, staff. Wonderful work to this point. Thank you to  
2 the EJAC for their work. I know that there's a lot of  
3 work being put in there. And I hope that we get some good  
4 priorities out of the EJAC for us to include in the final  
5 product.

6 Thank you.

7 CHAIR RANDOLPH: All right. Thank you.

8 Board Member Riordan.

9 BOARD MEMBER RIORDAN: Thank you, Madam Chair.

10 I really just wanted to say to the staff  
11 particularly how appreciative I am of all the work that  
12 you have put into this over the years. I mean, this is  
13 not easy work. And I just think you've done a terrific  
14 job. I mean, it's sort of like new territory at times.  
15 We don't have a lot of history for these scoping plans.  
16 We haven't been doing them for years, and years, and  
17 years. And so I just want to say thank you and I hope  
18 everybody appreciates what you do.

19 Thank you.

20 CHAIR RANDOLPH: All right. Thank you.

21 Okay. Any other comments on this informational  
22 item?

23 Dr. Balmes.

24 BOARD MEMBER BALMES: Thank you, Madam Chair. So  
25 first of all, I want to thank staff for all the hard work

1 they've done so far with regard to the Scoping Plan. It's  
2 a really lot of work that they have to do. And there's  
3 really not enough time to do everything that everybody  
4 wants. As I think Ms. Takvorian said, you know, every  
5 stakeholder group has something that they want to include  
6 in the Plan and we -- as Mr. De La Torre said very well,  
7 this is a high level holistic plan, and we can't put every  
8 bell and whistle in.

9           That said, I have some specific -- no, not  
10 requests. There's one.

11           (Laughter.)

12           BOARD MEMBER BALMES: But I mostly want to ask  
13 staff for a little bit of clarification. So I missed the  
14 specific discussion, most of it, because I had to give a  
15 talk in a nearby hotel, and I didn't hear about the  
16 inclusion of ambient pesticides in the SIP. And I really  
17 want to endorse having pesticides and their life cycle  
18 included in the Scoping Plan. I realize it's probably not  
19 a super high driver of greenhouse gas emissions. But it's  
20 so important that we've heard so much from the communities  
21 that are affected about this that I really feel like we  
22 have to step up. And I'm sorry, I didn't hear the SIP  
23 discussion, but I just wanted to endorse those who want to  
24 include pesticides in the Scoping Plan.

25           I would also like to hear from -- I'm probably

1 going to get the acronym wrong, but the Economic Advisory  
2 Committee. Mr. Cullenward said that his group would be  
3 reviewing the Cap-and-Trade component of the Scoping Plan.  
4 And I'd -- he volunteered to give a presentation, a  
5 briefing, and I would very much endorse that.

6 I'd like to ask, not Dr. Sahota, to respond to  
7 the concern about refinery conversions in terms of --  
8 because I think there's some misconceptions out there.

9 DEPUTY EXECUTIVE OFFICER SAHOTA: Yeah. Thank  
10 you for those questions. And I know that in the SIP -- or  
11 the -- yes, the SIP presentation, there was a discussion  
12 about looking and coordinating on the pesticide inclusion  
13 there. And we are going to have some discussion of the  
14 pesticide issue in the Scoping Plan as well.

15 For the refinery conversions, that is part of  
16 that idea about how -- do we phase down all the things we  
17 don't want and how do we bring up the things that we  
18 really need to transition to, because it's not going to be  
19 satisfying politically or to most of society if we just  
20 start turning things off. And what we're seeing in a  
21 couple of the refineries across the state is that they are  
22 starting to request permits and undergo the permitting  
23 process to be able to produce the kinds of low carbon  
24 fuels that we think we are going to need for a while. So  
25 things like renewable diesel that deliver diesel PM

1 benefits, fuels like sustainable aviation fuel that are  
2 not regulated at the federal level, but are incentivized  
3 through tax credits at the federal level and can earn LCFS  
4 credits here.

5           And the footprints for the refineries in the Bay  
6 Area that I'm aware of are going to be smaller than their  
7 existing footprints for the petroleum production. And  
8 this conversion process is also consistent with language  
9 in the Governor's Zero-Emission Vehicle Executive Order,  
10 which talks about a report from CalEPA on how to  
11 streamline the process on these types of conversions, but  
12 then also highlights the need to make sure that there's  
13 community involvement, and that all of the environmental  
14 protections and public health protections remain in place.

15           And so there is a strong signal that is being  
16 sent that this is the kind of conversion that we want to  
17 see, the use of these assets, as we think about quickly  
18 phasing down out of fossil fuels and bringing up the new  
19 fuels that we need, and it is part of that Executive  
20 Order.

21           Now we as ARB are not involved in that permitting  
22 process and many of these conversations are happening at  
23 the local level. We -- and for full disclosure, we have  
24 been asked questions about our Low Carbon Fuel Standard  
25 Program. And so to the extent that we are hearing from

1 local agencies or local advocates on trying to understand  
2 the LCFS Program and how it plays into the role for  
3 conversions, we are going to respond to those to make sure  
4 that the facts about the Program are clear and are out  
5 there.

6 BOARD MEMBER BALMES: And while I have you, yeah,  
7 I've been hearing, and I just heard it at the public  
8 health workshop that we could delay implementing the -- or  
9 getting the Scoping Plan out, not implementing it, for a  
10 year, that the Governor has the power to authorize that.  
11 But could you explain why we don't think that's a good  
12 idea?

13 DEPUTY EXECUTIVE OFFICER SAHOTA: So the language  
14 in AB 32 is updated at least once every five years. The  
15 last time we updated it was the end of 2017, which puts us  
16 at the end of 2022. And honestly, the longer we delay in  
17 putting out the markers that are going to attract some of  
18 that private investment and spur that action on the ground  
19 to build the things we need, status quo will persist. And  
20 status quo is currently fossil fuels in the economy. And  
21 so not only is there statutory language, but there has to  
22 be this conscious thought behind what we're trying to  
23 achieve and that the longer we take in forwarding through  
24 the perfect solution or debating the perfect solution,  
25 we're still burning fossil fuels in the meantime, because

1 nobody is investing in anything clean and nothing new is  
2 being built.

3 BOARD MEMBER BALMES: And so thank you. To my  
4 environmental justice friends who would like to see a  
5 delay in the Scoping Plan development, to do a better job  
6 at addressing public health concerns, especially at the  
7 community -- disadvantaged community level, I hear you,  
8 but I think my own assessment of the public health impacts  
9 of the current situation with fossil fuel combustion is  
10 that to try to get a more complete and thorough public  
11 health analysis, which I'd like to see.

12 As a public health person and the public health  
13 representative on the Board, I don't think we should delay  
14 the Scoping Plan development process. I think the  
15 tradeoff there is not one that's good for public health.

16 That said, I'm very committed to the endgame. I  
17 think in every regulation that we've -- or every policy we  
18 put forward under the Scoping Plan, we should have a  
19 public health lens, especially a public health  
20 environmental justice lens.

21 And so, as Mr. De La Torre said, this is the big  
22 picture framework for our push to carbon neutrality and  
23 our push to eliminate fossil fuel combustion. We have to  
24 put details forward and -- when we implement policies to  
25 reach the Scoping Plan, you know, targets. So I'm



1 pledging that attention -- and I know other Board members  
2 feel the same way, that attention to public health, but  
3 about I don't think we should delay the Scoping Plan  
4 development to get a better public health impacts  
5 assessment. But I'm going to -- I will say that the staff  
6 is trying to do more with public health this time than any  
7 other Scoping Plan we've done. I appreciate that. I  
8 would like to see them pushed, as much as possible, to do  
9 what's -- what is possible, what is feasible within the  
10 time frame.

11           And so then the last thing I want to say is I  
12 really appreciate Chair Randolph's commitment to develop a  
13 permanent -- or to set up a permanent EJAC. I think it's  
14 the right thing to do, it's about time, and I thank the  
15 Chair for that.

16           DEPUTY EXECUTIVE OFFICER SAHOTA: May I make one  
17 comment on the public health assessment in the Scoping  
18 Plan?

19           BOARD MEMBER BALMES: Sure, I would like to hear  
20 it.

21           DEPUTY EXECUTIVE OFFICER SAHOTA: Because this  
22 ties back to direction that the Board gave us in 2017 when  
23 the last Scoping Plan was adopted. The direction was to  
24 tray and expand the public health analysis looking into  
25 the future. And so a lot of the new expanded health

1 endpoints and the new work that we're trying to do on  
2 status quo versus a reimagined future without fossil fuel  
3 combustion is directly related to that resolution, where  
4 we want to try and show the path we're on versus the path  
5 that we could be on.

6           And we also realize there are research gaps.  
7 Like, we actually don't fully understand all of the health  
8 impacts of some of the fuels and combustion that is out  
9 there. And we know that it is -- there are different  
10 responses in different populations. We also don't have  
11 that data. So we do have gaps. But to the extent that we  
12 have the data and the tools to analyze it, we're going to  
13 be trying to do that in the Scoping Plan, and then  
14 hopefully more as we move forward.

15           CHAIR RANDOLPH: Okay. I think that's it for  
16 Board comments and questions and so -- oh, sorry, Dr.  
17 Pacheco-Werner has her hand up.

18           BOARD MEMBER PACHECO-WERNER: Sorry. I just  
19 wanted to just have it clarified, because I'm still a  
20 little confused based on the hearing yesterday and then  
21 some of what we heard today, in terms of will there be a  
22 signal in the Scoping Plan that we will be looking at  
23 Cap-and-Trade once the data comes in? I guess it's still  
24 not very clear to me as to what commitments -- what  
25 different commitments, if any, are we making in the

1 Scoping Plan on that. And if no new commitments, that's  
2 helpful to know too. It's just I'm -- I want to be clear.

3 Thank you.

4 DEPUTY EXECUTIVE OFFICER SAHOTA: Dr.

5 Pacheco-Werner this is Rajinder. Secretary Blumenfeld  
6 sent a letter last year or two years ago saying that we  
7 would look at the role Cap-and-Trade plays in achieving the  
8 2030 and he cited a percentage number for what it would  
9 have to lift in the 2017 Scoping Plan to hit that 2030  
10 target. We will be able to do an analysis to show is that  
11 role for the Cap-and-Trade Program the same level or a  
12 different level as we have new data on emissions.

13 And the landscape has changed on the modeling.  
14 We had a global pandemic that in just 2020 reduced  
15 emissions by 40 million metric tons from 2019 to 2020. We  
16 never would have been anticipated that and we never would  
17 have modeled for that in 2017.

18 And so it is absolutely our intent and the right  
19 thing to do to go back and remodel what we think the  
20 emissions are going to look like over this decade and  
21 deliver on that letter as promised at looking at the role  
22 of the Cap-and-Trade Program through 2030.

23 Now, we may find that we have to make adjustments  
24 to some programs based on that review and we may say this  
25 requires agencies to go back and review programs in the

1 light of the new modeling data et cetera. So that may be  
2 an outcome of the modeling. But we are not going to try  
3 and redesign or design any specific program in the Scoping  
4 Plan, because the actual changes to any of the existing  
5 programs, especially regulations, are through a separate  
6 APA, Administrative Procedures Act, process that has its  
7 own requirements for CEQA, public process, economics, and  
8 health analyses. And so it is a stepwise process, but we  
9 have some information coming out of this Scoping Plan on  
10 whether or not we actually need to go back and look at our  
11 programs. So the signal will be there.

12 BOARD MEMBER PACHECO-WERNER: Thank you. That's  
13 help --

14 DEPUTY EXECUTIVE OFFICER SAHOTA: Oh, and I --  
15 Yeah, and I'm sorry. I also forget to mention that  
16 Secretary Blumenfed committed to a report back to the  
17 Legislature at the end of 2023, after the Scoping Plan  
18 modeling is completed and after we have more data under  
19 the AB 398 Cap-and-Trade Program, because we also do have  
20 to think about the very prescriptive requirements in AB  
21 398. And maybe through our technical assessment, we  
22 decide that some of those provisions in AB 398 may not  
23 allow us to make the changes that we need to make to have  
24 a efficient and cost effective program that is going to  
25 keep reducing emissions, and we will have to actually

1 explain or recommend changes to the legislative intent or  
2 the legislative provisions. So we do have a very  
3 prescriptive framework in which we are also working in  
4 over this decade for the program.

5 BOARD MEMBER PACHECO-WERNER: That's helpful.  
6 Thank you so much.

7 CHAIR RANDOLPH: Board Member Hurt.

8 BOARD MEMBER HURT: Thank you, Chair, and thank  
9 you fellow Board members for all the great questions, some  
10 of which I've had as well, but I just wanted to make a  
11 quick statement. You know, despite this being a big  
12 picture document, if we don't show in the Scoping Plan  
13 policies giving direct relief to overburdened communities,  
14 where people can feel and see a difference in their  
15 everyday lives, and if we further don't give  
16 accountability and transparency around EJAC  
17 recommendations that are being adopted or not, and why, I  
18 have a feeling that we're going to repeat all the feelings  
19 that came out of the last Scoping Plan.

20 And I don't think we want to be there in this  
21 future. So I just want us to be very thoughtful about all  
22 the time that communities are putting into these  
23 recommendations and how we integrate them, and how  
24 communities will directly feel change in this future. And  
25 I think we all want and need change.

1           But I look forward -- I know we're early in this  
2 process. I look forward to the May draft, so we can  
3 really take a deep dive on how to make that an impactful  
4 and improved future.

5           I'll end there. Thank you.

6           BOARD MEMBER BALMES: Thank you, Supervisor Hurt.  
7 In my comments, I didn't mean, in any way, to disagree  
8 with the importance of carefully reviewing what EJAC  
9 recommends. I agree with you that if we end up at the  
10 same place we were in the past, that that -- in terms of  
11 dissatisfaction -- severe dissatisfaction from EJAC, that  
12 that's not a good outcome.

13           CHAIR RANDOLPH: And so --

14           BOARD MEMBER HURT: And through the Chair, could  
15 I make one more comment?

16           I just wanted folks -- if you don't mind. That  
17 comment wasn't directly to your comment, Dr. Balmes, but  
18 thank you for clearing that up.

19           Thank you.

20           CHAIR RANDOLPH: Thank you. I was actually just  
21 given -- remind the Board that we have a joint EJAC and  
22 Board meeting coming up very soon on March 10th. So that  
23 will be a good opportunity to talk through some of these  
24 issues.

25           Okay. I think that is it for this agenda item.

1 Now, we need to go to open public comment, public comment  
2 on items that are not on the agenda. And you can raised  
3 your hand on Zoom or dial star nine.

4 Clerk, can you call the commenters.

5 BOARD CLERK ESTABROOK: Yes. Thank you, Chair.  
6 We currently have one person with their hand raised to  
7 speak for open comment. And that is a phone number ending  
8 in 433. I will give you a -- send a prompt for you to  
9 unmute and then you can unmute and give your comments.  
10 And it should be star six to unmute.

11 HARVEY EDER: Hello. Am I being heard?

12 BOARD CLERK ESTABROOK: Yes, you are.

13 HARVEY EDER: Okay. You'll have to excuse me.  
14 I'm outside and I missed most of the meeting.

15 My name is Harvey Eder. I'm speaking for myself  
16 and for Public Solar Power Coalition. I've been coming to  
17 you folks for decades, in the South Coast and other -- the  
18 PUC, and CEC, et cetera.

19 I've been around 45 years and the first solar  
20 proceedings. We worked with Commissioner Grimes on the  
21 equity issue and published the low income solar equity  
22 program in '81 and litigated along with some of your  
23 expert witness on solar.

24 So the concept there on equity is to get its  
25 housing equity -- you could get -- the example he gave us,

1 we could get tax credits which are refundable, up to  
2 \$3,000 for hot water, space heating, and electric, nine  
3 grand, you could put a down payment on a house and get  
4 equity, buy into a partnership or a solar cop-op, et  
5 cetera. You could vertically and horizontally integrate  
6 solar renewable industries and equity into that,  
7 incorporating by reference into all of the comments we  
8 made to all states and local districts including that  
9 Piketty the French Economist working the Berkeley's Saez  
10 on equity that -- and 14 published capital in the 21st  
11 century and 20 capital and ideology.

12           Sixty, seventy percent of our population in the  
13 lost 30, 40 years plus have seen no increase in income or  
14 equity, all right? And it's all gone to the top and gets  
15 more concentrated now. And that threatens our democracy.  
16 We can see what's happening with the Republicans. They're  
17 not party. They've got to be called out straight up.  
18 We've got extreme stuff happening now. The hundred of  
19 these climate models were evaluated on the 7th of this  
20 month in case 1 through 9 Wall Street Journal.

21           They said that they're doing super computer  
22 models with a hundred models and that -- and we had much  
23 more extreme worst cases what's happening with the fires,  
24 and the floods, the Neil Youngs, the band -- this is  
25 incorporated by reference.



1           Anyway, look, there's going to -- there is now --  
2 I want to find out what's happening on the SIP and  
3 scoping -- and I guess (inaudible) deficiency findings.

4           Okay. We put in the '16th Solar New Deal. It  
5 wasn't evaluated by you or by the --

6           BOARD CLERK ESTABROOK: Thirty seconds remaining.

7           HARVEY EDER: Pardon?

8           Hello.

9           BOARD CLERK ESTABROOK: Oh, just 30 seconds  
10 remaining.

11           HARVEY EDER: All right. Okay. I want -- is  
12 there -- is there a deficiency finding now? I tried to  
13 get the '91 plan and the deficiency findings themselves.  
14 I'm trying to get it from you. What's up with that?  
15 Please answer me now. And if -- we're working on it  
16 ourselves. There's -- you know, and the two consumer  
17 groups in October 6th of '20 brought the stuff up. You're  
18 in violation. You have been in violation. You're not  
19 going to -- you tried to spend another three years on the  
20 plan. The numbers used for deaths are all wrong and  
21 everything. It's ten hundred times bigger --

22           BOARD CLERK ESTABROOK: Thank you.

23           Thank yo. That concludes your time.

24           HARVEY EDER: Thank you.

25           BOARD CLERK ESTABROOK: Our next speaker is a

1 phone number ending in 050. You can unmute and begin.

2 SEAN EDGAR: Hi, can you hear me?

3 BOARD CLERK ESTABROOK: Yes, we can.

4 SEAN EDGAR: Great. This is Sean Edgar, the  
5 director of Clean Fleets. And I captured from the Board  
6 comments on the SIP and the Scoping Plan items earlier  
7 today that near-term emission reductions of short-lived  
8 climate pollutants are needed. Consistent with my prior  
9 testimony and that you heard from Julia Levin earlier  
10 today, CARB really has a golden opportunity to reduce  
11 short-lived climate pollutants now to help South Coast and  
12 San Joaquin.

13 And to be clear, I'm not talking about the use of  
14 fossil gas or expanding use of fossil fuels, but instead  
15 encouraging the use of renewable fuels, renewable biogas  
16 specifically, as the (inaudible) into a one-to-one  
17 replacement for petroleum fueled trucks and the billions  
18 can be found to construct the EV infrastructure.

19 I reference Mr. Corey's introduction to the  
20 Scoping Plan to wit that the perfect should not be the  
21 enemy of the good. I interpret his statement to mean that  
22 if there are good, cost-effective emissions reductions to  
23 be had, it behooves us to look at those. In that spirit,  
24 I'd like to take a few minutes to draw from the statewide  
25 aggregated data, that your staff released last week as

1 their summary of the Advanced Clean Trucks large entity  
2 reporting that the Board approved in June 2020 for the  
3 largest fleet operators, meaning those that are greater  
4 than 50 trucks or 50 million in annual revenue.

5           The first issue that I found from the staff's  
6 data is the fueling infrastructure. That's Table 13 in  
7 the document for those of you that would like to read it.  
8 It shows the 763 sites reported having electricity  
9 available for charging, but not ZEV infrastructure  
10 currently built. So that number represents about 10  
11 percent of all large fleets respondents are estimating  
12 they have electricity to support ZEVs installed in the  
13 future. This means that about 90 percent, which is about  
14 7,000 facilities, owned or operated by the folks that you  
15 want to migrate to ZEVs don't believe they have adequate  
16 subsidy. (Inaudible) natural gas fueling sites.

17           We know that renewable biogas from State sources  
18 is being used at many of these sites today and it's very  
19 feasible to increase the amount of in-state carbon  
20 negative biogas from implementing Senate Bill 1583. You  
21 heard very impassioned testimony from CASA and the  
22 sanitation districts of Los Angeles. There's public  
23 sector agencies in addition to private investment is  
24 really critic --

25           BOARD CLERK ESTABROOK: I think -- Sean, I think

1 we lost you. I think the call dropped.

2 And so Chair, that concludes the commenters.

3 CHAIR RANDOLPH: Okay. That concludes our open  
4 session for today. And tomorrow morning at 8:30 a.m., we  
5 will be doing the agenda item on Community Air Grants. So  
6 looking forward to that discussion.

7 And we are now adjourning into closed session.

8 Thank you.

9 (Off record: 4:23 p.m.)

10 (Thereupon the meeting recessed  
11 into closed session.)

12 (Thereupon the meeting reconvened  
13 open session.)

14 (On record: 4:46 p.m.)

15 CHAIR RANDOLPH: All right. It is 4:46. The  
16 Board has completed closed session. No action was taken.  
17 And we will adjourn to -- the rest of this meeting  
18 tomorrow morning at 8:30.

19 Thank you.

20 (Thereupon the Air Resources Board meeting  
21 adjourned at 4:47 p.m.)

22

23

24

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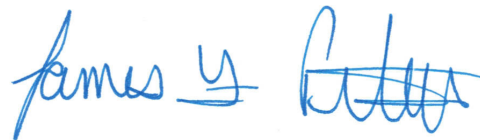
CERTIFICATE OF REPORTER

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 11th day of March, 2022.



JAMES F. PETERS, CSR  
Certified Shorthand Reporter  
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