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
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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
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Gabriel Monroe, Senior Attorney, Legal Office
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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
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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
## INDEX

<p>| Call to Order | 1 |
| Roll Call | 1 |
| Opening Remarks | 2 |
| <strong>Item 22-3-1</strong> | |
| Chair Randolph | 6 |
| Executive Officer Corey | 6 |
| Motion | 7 |
| Vote | 7 |
| <strong>Item 22-3-3</strong> | |
| Chair Randolph | 8 |
| Executive Officer Corey | 10 |
| Staff Presentation | 11 |
| Laura Rosenberger Haider | 23 |
| Yasmine Agelidis | 24 |
| Joseph Sullivan | 25 |
| Mariela Ruacho | 26 |
| Sam Wilson | 28 |
| Cynthia Pinto-Cabrera | 29 |
| Bill Magavern | 30 |
| Board Discussion and Q&amp;A | 32 |
| Motion | 39 |
| Vote | 40 |
| <strong>Item 22-3-6</strong> | |
| Chair Randolph | 41 |
| Executive Officer Corey | 42 |
| Staff Presentation | 44 |
| David Moller | 69 |
| Daniel Barad | 71 |
| Laura Rosenberger | 72 |
| Teresa Bui | 73 |
| Sarah Moore | 75 |
| Lea Louis-Prescott | 76 |
| Evelyn Loya | 79 |
| Jane Sellen | 81 |
| William Barrett | 83 |
| Bill Magavern | 86 |
| Sarah Rees | 88 |
| Ray Fingle | 90 |
| Cynthia Pinto-Cabrera | 92 |
| Ryan Kenny | 94 |</p>
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 22-3-6 (continued)</td>
<td></td>
</tr>
<tr>
<td>Igor Tregub</td>
<td>96</td>
</tr>
<tr>
<td>Kevin Hamilton</td>
<td>98</td>
</tr>
<tr>
<td>David Asti</td>
<td>100</td>
</tr>
<tr>
<td>David Rothbart</td>
<td>104</td>
</tr>
<tr>
<td>Sean Edgar</td>
<td>105</td>
</tr>
<tr>
<td>Mark Rose</td>
<td>108</td>
</tr>
<tr>
<td>Jessica Craven</td>
<td>111</td>
</tr>
<tr>
<td>Sarah Aird</td>
<td>113</td>
</tr>
<tr>
<td>Greg Hurner</td>
<td>115</td>
</tr>
<tr>
<td>Tom Kabat</td>
<td>117</td>
</tr>
<tr>
<td>Catherine Dodd</td>
<td>119</td>
</tr>
<tr>
<td>Diane Bailey</td>
<td>120</td>
</tr>
<tr>
<td>Jonathan Evans</td>
<td>123</td>
</tr>
<tr>
<td>Tom Jordan</td>
<td>125</td>
</tr>
<tr>
<td>Board Discussion and Q&amp;A</td>
<td>126</td>
</tr>
</tbody>
</table>

| Item 22-3-5 | |
| Chair Randolph | 143 |
| Executive Officer Corey | 147 |
| Staff Presentation | 150 |
| Board Discussion and Q&A | 185 |
| Martha Dina Arg ello | 187 |
| Juan Flores | 190 |
| Dr. Catherine Garoupa White | 191 |
| Paulina Torres | 196 |
| Kevin Hamilton | 196 |
| Matt Holmes | 199 |
| Jane Sellen | 203 |
| William Barrett | 206 |
| Tom Tietz | 209 |
| Julia Levin | 211 |
| Evan Edgar | 212 |
| Kathleen Kilpatrick | 215 |
| Shayda Azamian | 216 |
| Bill Magavern | 219 |
| Ryan Kenny | 221 |
| Sarah Aird | 223 |
| Alison Torres | 226 |
| Michael Boccadoro | 228 |
| Sydney Chamberlin | 230 |
| Jason Barbose | 232 |
| Danny Cullenward | 234 |
| Gary Hughes | 237 |
| Tom Kabat | 239 |
| David Rothbart | 241 |
## INDEX

<table>
<thead>
<tr>
<th>Item 22-3-5 (continued)</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leah Louis-Prescott</td>
<td>243</td>
</tr>
<tr>
<td>Paul Mason</td>
<td>244</td>
</tr>
<tr>
<td>Sarah Deslauriers</td>
<td>246</td>
</tr>
<tr>
<td>Mikhael Skvarla</td>
<td>249</td>
</tr>
<tr>
<td>Stephen Jepsen</td>
<td>251</td>
</tr>
<tr>
<td>Board Discussion and Q&amp;A</td>
<td>253</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Public Comment</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvey Eder</td>
<td>285</td>
</tr>
<tr>
<td>Sean Edgar</td>
<td>288</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Closed Session</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjournment</td>
<td>290</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reporter's Certificate</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>291</td>
</tr>
</tbody>
</table>
PROCEEDINGS

CHAIR RANDOLPH: All right. Good morning. The
February 24th, 2022 publish meeting of the California Air
Resources Board will come to order.
Board Clerk, will you please call the roll.
BOARD CLERK ESTABROOK: Dr. Balmes?
BOARD MEMBER BALMES: Here.
BOARD CLERK ESTABROOK: Mr. De La Torre?
Mr. Eisenhut?
BOARD MEMBER EISENHUT: Here.
BOARD CLERK ESTABROOK: Senator Florez?
BOARD MEMBER FLOREZ: Here.
BOARD CLERK ESTABROOK: Assembly Member Garcia?
Ms. Hurt?
BOARD MEMBER HURT: Present.
BOARD CLERK ESTABROOK: Mr. Kracov?
Senator Leyva?
Dr. Pacheco-Werner?
BOARD MEMBER PACHECO-WERNER: Here,
BOARD CLERK ESTABROOK: Mrs. Riordan?
BOARD MEMBER RIORIAN: Here.
BOARD CLERK ESTABROOK: Supervisor Serna?
Professor Sperling?
BOARD MEMBER SPERLING: Here.
BOARD CLERK ESTABROOK: Ms. Takvorian?
BOARD MEMBER TAKVORIAN: Here.
BOARD CLERK ESTABROOK: Supervisor Vargas?
BOARD MEMBER VARGAS: Here.
BOARD CLERK ESTABROOK: Vice Chair Berg?
VICE CHAIR BERG: Here.
BOARD CLERK ESTABROOK: Chair Randolph?
CHAIR RANDOLPH: Here.
BOARD CLERK ESTABROOK: Madam Chair, we have a quorum.
CHAIR RANDOLPH: Thank you.
I'd like to begin with a few housekeeping items.
In accordance with Assembly Bill 361, as extended by Governor Newsom's Executive Order N-1-22. We are conducting today's meeting remotely using Zoom with public participation options available both by phone and in Zoom.
A closed captioning feature is available for those of you joining us in the Zoom environment. In order to turn on the subtitles, please look for a button labeled "CC" at the bottom of the Zoom window, as shown in the example on the screen now.
I would like to take this opportunity to remind everyone to speak clearly and from a quiet location, whether you are joining us in Zoom or calling in by phone. Interpretation services will be provided today in Spanish. If you are joining us using Zoom, there is a
button labeled, "Interpretation", on the Zoom screen. Click on that interpretation button and select Spanish to hear the meeting in Spanish.

(Interpreter translated in Spanish)

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

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

If you are currently watching the webcast on CAL-SPAN, but you do wish to comment, please register for the Zoom webinar or call in. Information for both can be found on the public agenda for today's meeting. To make a verbal comment, we will be using the raise hand feature in Zoom. If you wish to speak on a Board item, please virtually raise your hand, as soon as the item has begun to let us know you wish to speak. To do this, if you are using a computer or tablet, there is a raise button. If you are calling in on the phone, dial star nine to raise your hand. Even if you previously indicated which item
you wish to speak on when you registered for the meeting. You must raise your hand at the beginning of the item, so that you can be added to the queue and so that your chance to speak will not be skipped.

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

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

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

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

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

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

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

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

Okay. The first item on today's agenda is item
number 22-3-1, proposed 2021 amendments to area
designations for State ambient air quality standards. If
you wish to comment on this item, please click the
raise-hand button or dial star nine now. We will call on
you when we get to the public comment portion of this
item.

Mr. Corey, would you please summarize the item.

EXECUTIVE OFFICER COREY: Yes. Thank you, Chair.

State law requires CARB to annually review and
update the area designations for State ambient air quality
standards as appropriate. Today, based on a review of
2018 through 2020 air quality data, staff is proposing
amendments to existing area designations for nitrogen
dioxide, NO2, suspended particulate matter, PM10, and fine
particular matter, PM2.5.

For NO2, staff recommends the Board redesignate
the California 60 near-road portion of the San Bernardino,
Riverside, and Los Angeles counties in South Coast Air
Basin as attainment. For PM10, staff is recommending that
the Board redesignate Mendocino County in the North Coast
Air Basin as attainment. And finally, for the PM2.5,
staff recommends the Board redesignate Santa Barbara
County in the South Coast -- or rather South Central Coast
Air Basin as attainment.

So in summary, these changes reflect the current
air quality data in these areas, and staff recommends approval of the proposed changes to the State area designations. That's concludes my remarks.

CHAIR RANDOLPH: Okay. Thank you.

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

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

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

VICE CHAIR BERG: Madam Chair, so moved.

BOARD MEMBER BALMES: I'll second.

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

BOARD CLERK ESTABROOK: Dr. Balmes?

BOARD MEMBER BALMES: Yes.

BOARD CLERK ESTABROOK: Mr. De La Torre?

Mr. Eisenhut?

BOARD MEMBER EISENHUT: Yes.

BOARD CLERK ESTABROOK: Senator Florez?

BOARD MEMBER FLOREZ: Yes.
BOARD CLERK ESTABROOK: Ms. Hurt?
BOARD MEMBER HURT: Aye.
BOARD CLERK ESTABROOK: Mr. Kracov?
Dr. Pacheco-Werner?
BOARD MEMBER PACHECO-WERNER: Yes.
BOARD CLERK ESTABROOK: Mrs. Riordan?
BOARD MEMBER RIORDAN: Aye.
BOARD CLERK ESTABROOK: Supervisor Serna?
Professor Sperling?
BOARD MEMBER SPERLING: Aye.
BOARD CLERK ESTABROOK: Ms. Takvorian?
BOARD MEMBER TAKVORIAN: Aye.
BOARD CLERK ESTABROOK: Supervisor Vargas?
BOARD MEMBER VARGAS: Aye.
BOARD CLERK ESTABROOK: Supervisor Vargas?
BOARD MEMBER VARGAS: Oh, Vargas, aye.
BOARD CLERK ESTABROOK: Perfect. Thank you.
Vice Chair Berg?
VICE CHAIR BERG: Aye.
BOARD CLERK ESTABROOK: Chair Randolph?
CHAIR RANDOLPH: Yes.
BOARD CLERK ESTABROOK: Madam Chair, the motion passes.
CHAIR RANDOLPH: All right. Thank you.
The next item on the agenda is item number
22-3-3, proposed amendments to the Airborne Toxic Control Measure for in-use diesel-fueled transportation refrigeration units, or TRUs, and TRU generator sets, and facilities where TRUs operate. If you wish to comment on this item, please click the raise-hand button or dial star nine now. We will call on you when we get to the public comment portion of this item.

The proposed amendments were first presented to the Board at its September 23rd, 2021 public hearing and are back in front of us today for a final decision.

CARB's regulatory actions coupled with efforts at the local and federal level have achieved success in reducing emissions and resulted in cleaner vehicles and equipment in operation today. Nonetheless, meeting all of California's public health, air quality, and climate goals will require large reductions beyond those proposed in current programs.

In addition, the Governor's Executive Order, N-79-20 set a goal for 100 percent zero emission off-road vehicles and equipment in the State by 2035 where feasible. The proposed amendments will achieve additional emission and health risk reductions from diesel-powered TRUs and begin to transition the sector to zero-emission technology, which is needed to further protect communities from near-source pollution impacts.
These proposed amendments will also help meet the current health based ambient air quality standards across California and support the State's climate goals.

Mr. Corey, would you please introduce the item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

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

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

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

The proposal before you today has been updated to address minor issues identified by staff and stakeholders, as well as to include additional safeguards to help ensure
that zero-emission TRUs will function as intended and support is available as issues arise.

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

Lea.

(Thereupon a slide presentation.)

TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

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

--o0o--

TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

CARB adopted the current TRU rule in 2004. In combination with federal emission standards for off-road engines, the rule has achieved a nearly 80 percent reduction in PM emissions. However, despite the progress made, there is still more work to do. Transitioning TRUs to zero-emission is necessary to achieve additional emission reductions to help meet the state's multiple risk
reduction, air quality, and climate goals. And we have the Governor's Executive Order, which set a goal for all off-road equipment in the state to be zero-emission by 2035, where feasible.

---o0o---

TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

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

---o0o---

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

The boxes on the bottom show the various
opportunities stakeholders have had to provide formal comments. This includes the 45-day comment period, at the September Board meeting, and the 15-day comment period.

--o0o--

TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: Just a quick reminder that we're just talking about the refrigeration unit and not the entire truck or trailer. And I also want to point out that these units can emit up to 50 times more PM than a heavy-duty diesel truck at idle.

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

Since we last met, staff have been working on a technology assessment for zero-emission non-truck TRUs and will hold a public technical workshop later this year to discuss draft portions. The purpose of the technology assessment is to evaluate the current and projected development of zero-emission technologies for the non-truck TRU types. Staff plan to bring the part two rulemaking to the Board for consideration in 2025. This provides adequate time to finalize the technology.
assessment, conduct a thorough public regulatory development process, and accounts for the additional time that will be needed to include activities related to CARB's comprehensive community engagement model and training curriculum currently under development.

--o0o--

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

Beginning in December 2023, we have reporting requirements for out-of-state based units. And as a reminder, the current rule already requires owners to report California based units to CARB. Then there are the requirements for facility registration, fees, and TRU compliance labels. And lastly, we have the 15 percent annual zero-emission truck TRU requirement, which is phased in to allow fleets to remain eligible for incentive
funding during a majority of the transition period, use
their current diesel truck TRUs for most or all their
useful life, and provides time for infrastructure planning
and installation. One hundred percent of the truck TRU
fleet will be zero-emission by 2030, which is ahead of the
Governor's 2035 goal.

--o0o--

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

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

In addition to the supportive comments, we also
heard a few stakeholder concerns. These included
questions regarding CARB's legal authority to collect fees
from TRU and facility owners, a request for an alternative
labeling requirement, and clarification of requirements
for lessors and lessees.
TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA: In response to comments received at the first Board meeting and in public comment letters, staff released 15-day changes for public comment on December 22nd, 2021. The proposed changes include updates to the lessor and lessee requirements to allow owners to delegate compliance responsibility to the operator if the rental or lease agreement is one year or longer.

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

And last, we heard Board members comments about the inclusion of Low Carbon Fuel Standard, or LCFS, credits in staff's cost analysis. We agree it is not reasonable to assume that all zero-emission truck TRU owners will take advantage of the LCFS Program. For that reason, we removed LCFS credits from the total estimated cost of the proposed amendments altogether. But please note that fleets do use LCFS credits, and all TRU owners...
TMD STAFF AIR POLLUTION SPECIALIST YAMASHITA: In addition to the changes proposed in response to stakeholder comments, staff identified additional 15-day changes. We propose changes to the fee amounts. The updated fee amounts, now $15 per year per TRU or facility, are lower than originally proposed and reflect updates to new sales populations and removal of costs to CARB related to indirect labor.

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

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

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

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

--o0o--

TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:
For illustration purposes, we have a comparison of the total cost of ownership for a diesel-powered truck TRU compared to a battery-electric truck TRU. Over the approximate 10-year useful life of the truck TRU, a diesel unit would cost approximately 61,000 compared to 73,000 for a battery-electric unit with LCFS credits, and 91,000 for a battery electric unit without LCFS credits.

The battery-electric costs are on the high end, as they are a new product and staff expects prices to decrease as more come on the market. The cost also reflects staff's conservative assumption that the battery will be completely depleted and recharged after each daily route.
In addition, as shown on the next slide, there are incentive funding programs available to offset the incremental capital cost for zero-emission TRUs and supporting infrastructure.

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

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

In addition, to the public meetings on the proposed amendments, CARB staff held meetings to inform stakeholders of the availability of incentives offered by
these programs. Local air districts also conducted their own outreach related to TRU funding programs. Staff understand the need and desire for funding opportunities, and as committed to in today's resolution, we will continue to work with regulated entities to help connect them with programs that may be available to offset some of the capital costs of zero-emission TRUs and infrastructure.

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TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:
The proposed amendments will reduce PM2.5, NOx, and GHG emissions, which will result in fewer adverse health outcomes statewide. The estimated 1.75 billion in health cost savings is now over two times the updated total net cost. And that doesn't reflect additional health benefits that are not currently monetized, including impacts in disadvantaged communities, brain and lung health, and cancer risk.

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TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:
Staff prepared a Draft Supplemental Environmental Analysis, or EA, for the proposed amendments and released it for public comment in July 2021. The EA concluded that implementation of the proposed amendments could result in beneficial impacts to air quality, energy demand, GHG
emissions and climate change, as well as potentially significant indirect impacts, primarily related to short-term construction activities. We received one letter during the 45-day comment period on the EA. In general, the commenter stated that the applicable facility requirements would lead to increased truck idling emissions because facilities would be required to collect TRU information, which may slow down truck traffic at entry gates, and that additional facilities will need to be built to accommodate the reporting requirements. Staff disagree, because CARB's drayage truck regulation has similar facility reporting requirements at seaport facilities and railyards. So adding TRU reporting will not substantially change the inspection time already required. Truck idling is also regulated by an existing CARB rule, and the proposed amendments include measures to make TRU inspections efficient. Any additional facilities to accommodate reporting requirements would be minor and have negligible impacts. Staff posted written responses to all comments received on the Draft Supplemental EA on our website earlier this month.

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TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:

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

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

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

BOARD CLERK ESTABROOK: Yes. Thank you, Chair.

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

Our first three commenters area a phone number ending in 528, Joseph Sullivan, and Yasmine Agelidis. So phone number ending in 528, I will give you access to unmute yourself and then you may begin your comment.
LAURA ROSENBERGER HAIDER: Hello. This is Laura Rosenberger Haider.

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

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

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

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

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

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

CHAIR RANDOLPH: Thank you.

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

Joseph Sullivan, are you there?

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

Yasmine Agelidis, you can unmute and begin.
YASMINE AGELIDIS: Hi. Good morning. Can you hear me okay?

BOARD CLERK ESTABROOK: Yes, we can.


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

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

And adopting this rule today will have considerable positive health benefits, including that it will save 177 lives and 1.75 billion in estimated health benefits. In addition to voting to adopt this rule today,
I would also like to ask that the Board direct staff to return in 2023 with a strong proposal to bring all of the remaining kinds of TRUs to zero emissions, including trailer TRUs, railcar TRUs, and shipping container TRUs.

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

CHAIR RANDOLPH: Thank you.

Joseph, can we try you again.

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

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

So good morning, Chair Randolph, Board, and staff. I appreciate the opportunity to speak. We want to
express our strong support for today's proposed Transportation Refrigeration Unit Rule. We ask the Board to vote to adopt the proposed regulation today to require all refrigerated trucks to transition to zero-emissions by the end of 2029.

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

    Thank you. That's all.

    BOARD CLERK ESTABROOK: Thank you.

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

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

    MARIELA RUACHO: Good morning, Chair and Board Members. I'm Mariela Ruacho from the American Lung
Association. We appreciate the work CARB has done to finalize the TRU rule and support transitioning to zero-emission TRU equipment. This is an important CARB rulemaking to advance zero-emission for truck TRUs by 2029. Transitioning TRU engines to zero-emission will reduce air pollution in local communities, such as NOx and particular[SIC] matter that cause major respiratory and cardiovascular complications, including asthma and heart attacks, stroke and premature death to vulnerable populations.

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

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

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

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

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

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

Finally, we ask that the Board direct staff to return in 2023 with a proposal to fully eliminate refrigerants that contain super greenhouse gases like hydrofluorocarbons from TRUs. These are over 3,000 times more potent than carbon dioxide, and also to require the TRUs run on zero-emissions technology.
Adopting this proposal today is estimated to save the lives of over 175 Californians and will help to reduce the burdens of a warming climate for those that come after us. Thanks so much.

BOARD CLERK ESTABROOK: Thank you. Our final two commenters are Cynthia Pinto-Cabrera and Bill Magavern. Cynthia, you may unmute and begin.

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

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

The TRU Regulation offers CARB an opportunity to support reduced emissions in the San Joaquin Valley. However, this can only be achieved if CARB commits to adopting this rule today and commits to immediate action on the second part of the rule, which will include the
zero-emission requirements for other TRU categories like trailers, railcars, and domestic shipping containers.

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

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

Bill Magavern you can unmute and begin.

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

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

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

Thank you very much.

BOARD CLERK ESTABROOK: Thank you.

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

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

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

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

BOARD CLERK ESTABROOK: Okay. No worries.

Chair, that concludes the commenters.

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

If the Executive Officer determines that additional conforming modifications are appropriate, the record will be reopened and a 15-day notice of public availability will be issued. If the record is reopened for a 15-day comment period, the public may submit written comments on the proposed changes, which will be considered.
and responded to in the Final Statement of Reasons for the regulation.

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

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

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

So this impact statewide is going to be tremendous and it's going to improve air quality as been stated in overburdened communities, communities of color. And the West Oakland AB 617 CERP, this amendment will
support one of their key strategies. I think I read it's strategy number 31. So again, direct impact to overburdened communities.

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

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

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

And I'll stop there.
CHAIR RANDOLPH: All right. Thank you. I'm going to ask Craig Segall, the Deputy Executive Officer over Mobile Sources and Incentives to respond.

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

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

Thank you.

BOARD MEMBER HURT: Thank you.

CHAIR RANDOLPH: Okay. Thank you.

Dr. Pacheco-Werner.

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

The website on TRU funding assistance really is -- you know, I mean -- and maybe people that are --
will be using this program are used to navigating these websites, but for me I found it very confusing when I'm clicking the links and trying to figure out like there's some guidelines from 2018, from 2019 on some of these links that are provided on this website. So I do think that if my type of level of understanding of how to navigate these incentive programs is the baseline, that this website really be revamped in terms of how to access these incentives.

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

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

Thank you.

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

Heather Arias.

TTD ASSISTANT DIVISION CHIEF BOYD: Lea Yamashita can go ahead and respond to that. Just go ahead and unmute.
EXECUTIVE OFFICER COREY: Great, Rich. Go.

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

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

BOARD MEMBER PACHECO-WERNER: Great. Thank you. I was just trying to figure out how that sort of fit into the cost savings that -- you know, the total cost of ownership, because the 2,000 then, you know, some people -- it's assumed that, you know, some people may get it, but some people won't have access to that, right.
TTD STAFF AIR POLLUTION SPECIALIST YAMASHITA:
Correct.
BOARD MEMBER PACHECO-WERNER: Got it. Thank you so much.
CHAIR RANDOLPH: Okay. Thank you.
Vice Chair Berg.
VICE CHAIR BERG: Thank you, Chair Randolph. I'm sorry, but I do need to take to task a little bit about these incentives and the LCFS credits. We are making it seem easy and it is not. When you get an LCFS credit, you get an actual credit that you have to sell on the market, okay? This is not $2,000 that is sent to you in a check. So let's please understand that the single owner-operator, besides all of the requirements, would have a small amount for one truck to get credit to go to the open market and sell it is not reasonable. And so I think that I just would like to state that.

On the incentive programs, these incentive programs are amazing, but they're also individual. They each have individual requirements and we don't set aside money specifically for each area that we bring up regulation, and we do highlight, and it is possible to get money for TRUs. But again, it's a complicated process and I think it's important for the public and the fellow Board members to understand that there are a lot of needs
against this money and there is no specific commitment on
the behalf of CARB or any of these other commitments for a
specific amount of TRUs, for large companies or much less
the smaller.

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

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

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

CHAIR RANDOLPH: Okay. I have a motion to --
BOARD MEMBER HURT: Second.
CHAIR RANDOLPH: -- approve resolution number 22-5. Do I have a second?

BOARD MEMBER HURT: Second.

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

BOARD CLERK ESTABROOK: Dr. Balmes?

BOARD MEMBER BALMES: Yes.

BOARD CLERK ESTABROOK: Mr. De La Torre?

Mr. Eisenhut?

BOARD MEMBER DE LA TORRE: Yes.

BOARD MEMBER EISENHUT: Yes. Yes.

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

BOARD CLERK ESTABROOK: Senator Florez?

BOARD MEMBER FLOREZ: Aye.

BOARD CLERK ESTABROOK: Ms. Hurt?

BOARD MEMBER HURT: Aye.

BOARD CLERK ESTABROOK: Mr. Kracov?

BOARD MEMBER KRACOV: Yes.

BOARD CLERK ESTABROOK: Dr. Pacheco-Werner?

BOARD MEMBER PACHECO-WERNER: Yes.

BOARD CLERK ESTABROOK: Mrs. Riordan?

BOARD MEMBER RIORDAN: Aye.

BOARD CLERK ESTABROOK: Supervisor Serna?

Professor Sperling?
BOARD MEMBER SPERLING: Aye.

BOARD CLERK ESTABROOK: Ms. Takvorian?

BOARD MEMBER TAKVORIAN: Aye.

BOARD CLERK ESTABROOK: Supervisor Vargas?

BOARD MEMBER VARGAS: Vargas, aye.

BOARD CLERK ESTABROOK: Vice Chair Berg?

VICE CHAIR BERG: Aye.

BOARD CLERK ESTABROOK: Chair Randolph?

CHAIR RANDOLPH: Yes.

BOARD CLERK ESTABROOK: Madam Chair, the motion passes.

CHAIR RANDOLPH: All right. Thank you.

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

Over the next 15 years, California will need to build upon its successful mobile source control program and drive down emissions even further in order to provide healthy air for all California residents and meet federal air quality standards. Mobile sources are the largest contributor to the formation of ozone in California. Last October, staff presented the 2020 Mobile Source Strategy,
which sets out a vision for the transformation of the
mobile source sector. The 2021 Mobile Source Strategy
provides a framework to support multiple planning efforts
currently underway.

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

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

Mr. Corey, would you please introduce the item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

SIPs consist of a combination of State and local
air quality planning documents that must demonstrates how
California will meet federal air quality standards. Given
the significant number of mobile sources, the 2022 State
SIP Strategy is a critical element of California's State
Implementation Plan, or SIP. The air quality challenge in
the South Coast and San Joaquin Valley is daunting as you
all know, and substantial reductions from both mobile and
stationary sources will be necessary to meet the ozone
standards in these regions.
For the 2022 State SIP Strategy, CARB is exploring and anticipates proposing an unprecedented variety of new measures to reduce emissions from the sources under our authority using all mechanisms available.

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

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

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

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

Austin.

(Thereupon a slide presentation.)

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

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

The map to the right shows all 19 non-attainment area boundaries and current classifications. These areas are required to attain the standard between 2020 and 2037, depending on their classification. All areas that are moderate, serious, severe or extreme are required under
the Clean Air Act to submit SIPs to show how they will meet the standard. Together, local air districts and CARB developed these SIPs which contain the magnitude of emission reductions needed to provide for attainment and actions necessary to achieve those reductions.

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: Now, let's look at the ozone levels in the South Coast as shown in this chart. The blue and orange lines are the 1-hour and 8-hour design values respectively, and show steep reductions which have leveled off over the last decade.
above the various red lines representing the 1-hour and 80, 75 and 70 ppb 8-hour ozone standards. Let's that about why this is expected and why this shows that we are making progress towards meeting all the ozone standards with the NOx-focused strategy.

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

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

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

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: Here, we are showing the ratio of the weekend to weekday ozone in the South Coast from 2000 to 2004, where shades of blue
mean that the location experiences the traditional weekend effect or higher ozone on the weekends, while shades of red mean the location experienced a reverse weekend effect or lower ozone on the weekends. In the early 2000s, every region had higher ozone on the weekends.

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

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: The following slide has two figures. Here to the left is the SIP pyramid. These are the basic elements of an attainment SIP. It is represented as a pyramid because everything we work on in each level of the pyramid builds into the next. We start with the air quality modeling by identifying what the air pollution problem is and what it
looks like in an area. Then we build emissions inventories to identify what the sources of the air pollution are. We then use monitoring data and emissions inventories to model the air quality and determine how much emissions needed to be reduced to meet federal air quality standards.

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

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

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

Now, let's pivot back to the Strategy.
AQPSD AIR POLLUTION SPECIALIST HICKS: As I mentioned earlier, developing the control strategy requires collaboration with our partners. Each of our partners has a role over sources they control. The attainment plan can and will include emission reductions from CARB and local air districts as needed to attain.

CARB's emission reduction measures and commitments are developed through the State SIP Strategy. The strategy builds upon previous strategies and CARB's regulatory efforts by including additional measures and commitments to reduce emissions from our sources to support attainment across the state.

In addition to local district measures the strategy not only identifies CARB measures, but is also proposing action at the federal level for primarily federally regulated sources and transportation planning agency vehicle miles traveled. Collectively, District and CARB, along with federal and transportation planning agency measures show the pathway towards attaining the standard.

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AQPSD AIR POLLUTION SPECIALIST HICKS: Staff released a Draft Strategy on January 31st describing the State Strategy and commitments to reduce emissions needed
to meet the 70 ppb ozone standard, as part of SIPs due this August. This release identifies the proposed measures, associated emissions reductions and other elements needed to support attainment of the 70 ppb ozone standard. But these measures will also support the attainment of the 80 and 75 ppb ozone standards.

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

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

Specifically, staff presented the status of measures from the 2016 State SIP Strategy and how concepts
from the 2020 Mobile Source Strategy would transition into measures for the 2022 State SIP Strategy.

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: Criteria pollutant nonattainment areas and disadvantaged communities are interconnected so much that 99 percent of
disadvantaged community populations in California are within the 70 ppb ozone standard non-attainment areas. We are keenly aware that emissions from mobile and stationary sources have a disproportionate impact on disadvantaged communities and people of color, for example, many of whom live adjacent to transportation corridors and industrial operations.

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: To put it simply, the Draft Strategy measures focus on the continued transition away from combustion and towards zero-emission
technologies. Moving to zero everywhere feasible is what is needed to meet the 70 ppb ozone standard in California and will support earlier ozone attainment deadlines. The strategy discusses the pathway to zero for measures under State control through regulations incentives and voluntary programs. That said, regulations can continue to be the core and bulk of the strategy as you will see in the following slides.

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: The schedule for the Strategy proposes are aggressive. The gold star represents the year the measures are scheduled to be adopted. As you can see, most of these measures will be adopted in the next few years. Following adoption, the dark blue squares represent the years needed
to be implemented that specific measure. Let's now turn to the specific measures.

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

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

The Zero-Emission Trucks and Enhanced Regional Emissions Analysis in SIPs measures are new measures not in the October draft. CARB staff continues to identify
and develop ways to turn over the dirtiest vehicles on the road to zero-emission vehicles. The Zero-Emission Trucks Measure is an innovative new approach and builds on the Public Measure Suggestion for a Heavy-Duty Vehicle Useful Life Regulation. Similar to that public suggestion, the Zero-Emissions Trucks Measure targets the replacement of older trucks in order to increase the number of heavy-duty ZEVs as soon as possible, and reduces emissions from fleets not affected by the Advanced Clean Fleets measure.

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

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

These two new measures will provide additional on-road mobile source emission reductions to support a
team -- attainment the 70 ppb ozone standard.

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

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

With that contribution expected to continue to grow in the future, the Tier 5 off-road new compression-ignition standards would require more stringent exhaust standards for all power categories. Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation would target the oldest and dirtiest equipment allowed to operate under the current regulations structure by adding an operational backstop to the current regulation for dirtier engines between 2024 and 2033. The Transport Refrigeration Unit Regulation part two would require zero-emission for trailer and other TRUs, that this will be the second phase of the TRU rulemaking.
Amendments to the Commercial Harbor Craft Regulation are also ongoing. This proposal had its first Board hearing last year and required -- and would require the vessel to meet the cleanest possible standard and retrofits based on compliance schedule.

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: Along with on-road sources and off-road equipment, the strategy proposes measures for consumer products and appliances.
CARB is proposing to amend the consumer products regulation to achieve additional reductions in volatile organic compounds beyond those achieved through the 2020 and prior amendments.

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

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

CARB is currently undergoing a public rulemaking process to propose an In-Use Locomotive Regulation which would accelerate the adoption of advanced cleaner technologies, including zero-emission technologies for locomotive operations. The associated emission reductions
from these proposed measures are significant.

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

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

Given the contribution from these sources, federal action is critical to attain the 70 ppb standard,
as well as to support attainment of other federal standards and support CARB's other goals.

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

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

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

For locomotives, as outlined in the 2016 Strategy, CARB submitted a petition and is waiting for EPA to respond or act on the petition. Beyond clean -- cleaner combustion standards, CARB would petition or
advocate to EPA to promulgate national zero-emission standards for switchers and remove the remanufacturing loophole.

For ocean-going vessels, CARB would petition or advocate to adopt more stringent Tier 4 marine standards and require visits made by tier 3 or cleaner vessels.

And finally for aviation, CARB would petition or advocate to EPA and the International Civil Aviation Organization for more stringent standards for aircraft engines to require the use of cleaner files and engines when traveling through California, and require zero-emission on-ground operations at California airports.

These actions are necessary for California to attain the 70 pp[SIC] ozone standard.

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AQPSD AIR POLLUTION SPECIALIST HICKS: Now, that you've had an idea of what the measures require, I will now talk about the substantial amount of emission reductions that will be achieved. The associated NOx emission reductions are quantified in the following bar charts and are represented in negative values.

We start with the bar on the left showing the total NOx reductions in 2037 compared to 2018 for the South Coast and San Joaquin Valley with the green portion showing already adopted regulations, the yellow represents
the 2016 Strategy measures that still need to be adopted, and the blue represents the Draft Strategy measures. Taken together, these NOx emission reductions represent about 230 tons per day of reductions in the South Coast and 150 tons per day reductions in the San Joaquin Valley. The Strategy proposed measures are in blue broken down by source category in the bar on the right. Preliminary modeling shows that the 36 tons per day of NOx reductions from the Strategy are sufficient to meet the 70 ppb ozone standard in the San Joaquin Valley. However, the 70 tons per day reductions are not sufficient to meet the standard in the South Coast. The next slide provides a deeper dive into what is needed for the South Coast.

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

The following shows South Coast NOx emissions. From left to right, the bar chart shows the emissions starting point in 2018 for the South Coast by category. The next bar shows the emissions in 2037 with the existing
control program that provides for 151 tons per day of NOx reductions from 2018.

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

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

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

Together, CARB and AQMD staff are working to identify the specific commitments from these additional
measures and reductions needed to get to the 60 ton per
day NOx carrying capacity.

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

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

The public measure suggestions included an
Indirect Source Rule where CARB either developed a
Suggested Control Measure model rule or expanding State
law as it relates to Indirect Source Rules. Expanding the zero-emission building appliance standards, and BACT/BARCT determinations, which would define limits for specific pieces of equipment or stationary sources.

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

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

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

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

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

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

Stakeholders also conveyed the importance of
reducing pesticides from commercial and agricultural operations, development of an Indirect Source Rule from -- through a Suggested Control Measure or Regulation, and the need for best available control -- and the need for BACT/BARCT determinations.

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

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

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AQPSD AIR POLLUTION SPECIALIST HICKS: Thank you, Chair Randolph and members of the Board.
CHAIR RANDOLPH: Thank you. We will now hear from the members of the public who raised their hand to speak on this item. Board Clerk, would you please call the commenters.

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

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

David, you can unmute and begin.

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

I'd like to focus in on one specific area of the strategy, and that is cutting NOx emissions by required new space and water heaters to meet a zero-emission
standard by 2030 or ideally sooner than that. This is a critical and truly a landmark step in creating clean, all-electric housing that cuts NOx pollution and even more importantly cuts greenhouse gas emissions. As I'm sure you know, residential and commercial buildings account for nearly a quarter of California's greenhouse gas emissions and proactive building decarbonization is necessary to meet our goals.

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

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

BOARD CLERK ESTABROOK: Thank you.
Daniel Barad, you may unmute and begin.

DANIEL BARAD: Good morning, Chair and members.

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

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

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

As CARB has stated, these measures must be
developed carefully in a transparent, public process that is inclusive and centers environmental justice communities and voices.

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

BOARD CLERK ESTABROOK: Thank you.

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

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

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

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

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

All right. Thanks.

BOARD CLERK ESTABROOK: Thank you.

Teresa Bui, you can unmute and begin.

TERESA BUI: Great. Thank you. Hi. My name is Teresa Bui. I'm with Pacific Environment. We're an environmental non-profit group. Thank you to staff for all your hard work on this document and thank you for including a measure to get the oldest diesel trucks off the road. These trucks emit toxic diesel exhaust into our
communities, especially in low income communities of color and CARB's own modeling has shown that the emission reduction from such a measure would be huge, and we need those reductions in order to finally have healthy air.

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

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

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

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

Thank you for listening.

BOARD CLERK ESTABROOK: Thank you.

Sarah Moore, you can unmute and begin.

SARAH MOORE: Hi. My name is Sarah Moore. I'm with the City of Berkeley's Office of Energy and Sustainable Development. I'm excited about many of the elements of the SIP. But like others, I'm calling
specifically in support of the inclusion of the
development of a statewide zero-emission standards for
space water heaters, and potentially other appliances to
go into effect by 3020. As noted in the SIP, this will
have both criteria pollutant benefits, as well as
greenhouse gas reductions.

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

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

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

LEAH LOUIS-PREScott: Good morning. This is Leah
Louis-Prescott, a Senior Associate in the Oakland office of RMI. Thank you, CARB, for your leadership in protecting air quality and health and especially for your commitment to decarbonizing the built environment.

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

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

According to Harvard researchers, pollution from California's fossil fuel appliances accounted for over 460 premature deaths in 2017, equivalent to over $5 billion in health costs.
We cannot continue to rely on fossil fuel appliances when zero-emission electric alternatives are available and can be cost effective today in California. We need to set dates for all electric new construction and for zero-emission appliance replacements in existing buildings. The proposed standard for zero-emission appliances in the SIP is a critical step to align California's buildings with its air quality and climate goals to protect health and to help the State attain its National Ambient Air Quality Standards. It is essential that the standard for zero-emission appliances is paired with investments and policies that will secure an inclusive and affordable transition for low income and disadvantaged communities.

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

CARB's zero-emission standard for space and water heaters is a first-of-its-kind policy that will serve as a leading example across the nation. Thank you again for advancing the transition to safe, healthy, non-polluting
buildings. We urge CARB to pursue this proposal and look forward to collaborating with you on this work.

Thank you again.

BOARD CLERK ESTABROOK: Thank you.

Evelyn Loya, you can unmute and begin.

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

By way of background in March 2021, SoCalGas announced ASPIRE 2045, a goal to achieve net zero GHG emissions by 2045, which matches the state's carbon neutrality goal. Our goal includes decarbonizing energy SoCalGas consumes, as well as energy SoCalGas delivers to our customers. Building on our climate commitments,
SoCalGas released its ASPIRE 2045 sustainability strategy in February of 2022, which identifies five key areas we will focus on at advance our sustainability goals, such as accelerating the transition to clean energy. We understand we play a vital role in providing infrastructure to support clean molecules, such as hydrogen.

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

Lastly, at SoCalGas, we want to be part of the solution, and in doing so requires us to act. I'm happy to announce that SoCalGas is in the process of transitioning our transportation fleet to 100 percent zero-emission vehicles by 2035. As of today, we have
taken ownership of 50 Toyota Mirai. We are wholeheartedly committed to a collective, collaborative transition to cleaner energy, and believe that our strategy will help guide us on doing our part in decarbonizing the energy sector. Thank you again for the opportunity to provide comments this morning.

BOARD CLERK ESTABROOK: Thank you.

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

At the February 10th hearing, DPR's upcoming regulation of the toxic air contaminant fumigant pesticide 1,3-dichloropropene was implicitly cited as evidence of DPR's commitment to reducing these emissions, but that's a mischaracterization of what DPR is actually doing. They
regulating this single pesticide, because they're under
court order to do so. And four years after the court
judgment, they have still not produced a draft regulation
in spite of a one-year deadline imposed by the court in
2018.

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

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

CARB can and must include measures to transition
California agriculture away from polluting practices in
order to achieve attainment in California's most impacted
air basins. Please direct staff to require CARB to work
with DPR to create the regulatory structure, to achieve a
target of reducing pesticide emissions by 75 percent of
2020 levels by 2037, and to model pesticides contributions
to ROG emissions and their contribution to ground level
ozone.

Thank you.

BOARD CLERK ESTABROOK: Thank you.

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

Thanks.

BOARD CLERK ESTABROOK: Thank you.

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

Will, you can unmute and begin.

WILL BARRETT: Thank you. I'm Will Barrett with
the American Lung Association. Appreciate the opportunity
so speak this morning. We view the SIP as a critical
opportunity to build on past successes and really elevate
new strategies to reduce the health consequences of poor
air quality in California. We appreciate the overall
approach to the Draft 2022 SIP to accelerate the
transition to zero-emission technologies, to eliminate the
impacts of legacy combustion fleets and really ensure
meaningful transitions to alternative transportation modes
to protect and improve health.

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

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

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

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

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

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

We also look forward to the all electric
appliance standard as well as the consumer product
policies that were outlined in the draft SIP.
On the federal side just quickly. We're eagerly anticipating the federal rulemaking to complement California's lifesaving low NOx truck standard, and believe that that policy really must match the stringency and durability requirements of the California policies that this Board adopted in 2020.

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

Bill Magavern, you can unmute and begin.

BILL MAGAVERN: Thank you. Good morning again.

Bill Magavern with the Coalition for Clean Air. I thought the presentation was excellent. There's so many issues raised here and I will touch on some of them.

First, and I echo Will Barrett's comments, we appreciate that this draft includes a measure responding to our proposal to retire old trucks and the end of their useful lives. This is crucial to achieving the NOx reductions we need to defeat smog in the State of California. And I would say there are a couple elements that need to be filled in in this proposal. One is that implementation should start no later than 2028 when the
2010 trucks reach the end of their useful lives at the very latest.

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

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

When it comes to off-road measures, we very much agree that the federal government needs to be doing much
more than it is and join CARB in calling for that. We also appreciate that CARB is proposing to act within its own authority to reduce emissions from locomotives and ocean-going vessels as they are growing sources of pollution.

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

Thank you for listening to our views.

BOARD CLERK ESTABROOK: Thank you.
Sarah Rees, you may unmute and begin.

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

As you know, South Coast is particularly affected by ozone pollution with the highest ozone levels in the
nation. And our region is home to two-thirds of environmental justice populations in the State. A coordinated approach is important given the substantial magnitude of emission reductions needed to attain the standard in 2037, about a 73 percent reduction in NOx beyond baseline for our region. This will require a transition to zero-emissions technology across all sectors and deploying low and ultra low NOx technologies where zero-emission technologies are not feasible.

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

Second, the pathway to achieve the standard is important, given the looming deadlines for other standards that we face in 2023 and 2031. While there is a little more time to reach the goals in 2037 for the State SIP Strategy or beyond the Scoping Plan, we cannot sit and wait for zero-emission technology. We must implement
A transition to zero-emissions requires significant coordination across many agencies at the State level, in particular on fueling and charging infrastructure. This coordination must occur beyond anyone individual regulation, but instead at a higher holistic level to ensure that zero-emission available at scale, reliably, and affordably. CARB must play a central role with State agencies to ensure that zero emissions infrastructure will be available at scale well beyond the roughly two percent of light-duty vehicles on the road today.

Thank you for the opportunity to testify this morning.

BOARD CLERK ESTABROOK: Thank you.

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

Our next speaker is going to be Ray Pingle.

After Ray will be Cynthia Pinto-Cabrera, Ryan Kenny, and then Igor Tregub.

Ray, you may unmute and begin.

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

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

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

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

CARB staff ran a scenario where California trucks were replaced with ZE trucks at the end of their useful life. NOx emission reductions were 33 tons per day in 2031 for 140,000 vehicles. This would be nearly 40 percent more than what the Advanced Clean Fleet --
Advanced Clean Trucks and Heavy-Duty Omnibus rules together would accomplish. Old truck retirement will have a huge impact on emissions reduction.

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

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

Thank you very much.

BOARD CLERK ESTABROOK: Thank you.
Cynthia Pinto-Cabrera, you may unmute and begin.
CYNTHIA PINTO-CABRERA: Good morning, Chair Liane and members of the Board. Cynthia Pinto-Cabrera again with the Central Valley Air Quality Coalition.

The ozone State Implementation Plan is an important component for achieving clean air in the San Joaquin Valley, one of the nation's most polluted air basins for ozone. The San Joaquin Valley has the highest asthma rates in the state with half of the eight valley counties falling between the 50th and 74th percentile for
lifetime asthma prevalence for all ages, and the rest of
the valley falling above the 75th percentile for asthma
prevalence, according to the California Department of
Health -- Public Health.

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

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

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

Lastly, we also request that CARB enforcement of
Best Available Control Technologies and Best Available Retrofit Control Technologies be implemented and enforced at the oldest and largest stationary sources with a priority for environmental justice communities in nonattainment areas.

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

Thank you.

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

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

If there is an air quality challenge that is daunting, this SIP does not include a near-term emission reduction strategy only long term. If you go to
heavy-duty transportation within the SIP document, NOx is
the -- or heavy-duty transportation is the single most
emitter of NOx, yet there's only two measures focused on
heavy-duty transportation.

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

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

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

If you click on North America and heavy-duty
truck category, the tool highlights 14 manufacturers that
supposedly are producing heavy-duty ZEVs, but only two are
currently producing electric trucks, BYD and Volvo. So we
believe that heavy-duty ZEVs are not close to being
commercially ready and we encourage the Board to ask
questions today and ask why the near-term emission
reductions strategy is not included.

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

Thank you for your time.

BOARD CLERK ESTABROOK: Thank you.

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

Igor, you can unmute and begin.

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

I'd like to join with many of the commenters
today to thank your Board and your staff for all your work
on this plan and for your leadership in advancing safe and
healthy homes and buildings for Californians.
As you know, residential and commercial buildings account for nearly a quarter of GHG emissions and proactive building decarb efforts are necessary to meet our climate goals. The aim of these proposals to require 100 percent of sales of new space and water heaters to meet a zero-emission standard by 2040 is a landmark step in creating clean all-electric housing that cuts GHG emissions and NOx pollution.

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

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

While the climate crisis calls for this bold action, we'd also like to acknowledge that such an effort will require meaningful collaboration with stakeholders across the state. And therefore, I agree with CARB that such measures would need to be developed carefully through a full community engagement and public process that's transparent, inclusive, and community centered.
I urge CARB to work with public and private stakeholders on a comprehensive roadmap that would lay out the complementary policies needed to equitably decarbonize our state's new and existing buildings and that the transition prioritizes environmental justice communities. I also just want to recognize the importance of uplifting leadership from local and regional work that community organizations, local governments, like the folks you've heard today, and local air districts are currently leading. It will be important to ensure that there's coordination between the local and regional work happening and a broader statewide effort to provide the support necessary for this transition to be truly just and equitable.

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

Thank you so much.

BOARD CLERK ESTABROOK: Thank you.

Kevin Hamilton. Kevin, you can unmute and begin.

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

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

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

The valley has by no means got an easy pathway to meeting the 70 ppb standard, which, by the way, as we all know, will not be the last standard to come from EPA and we still need CARB's assistance on both ozone, PM2.5, in addressing the toxic diesel impacts in our community. We absolutely must have this help from CARB on these mobile sources.
The idea of implementation dates for these programs not being the earliest possible is ludicrous to us. The biggest part of the truck problem in the valley is older trucks. And with the confusion created by SB 1, we're not really seeing how we manage to hit the targets even at the levels that staff have already suggested. And we'd like staff to specifically demonstrate how this ACF intersects with SB 1 limitations, so we know exactly how many of these trucks we're going to see leave the road.

As it stands, and if the measure doesn't trigger until 2040, 2045, we could see these old trucks still on the road in -- or at least combustion trucks on the road in 2058, and I don't think anybody wants to see that. So moving that date up to 2028 for implementation is high -- is totally within your purview and has to be taken. So I want to thank you for being here today and doing what you do.

BOARD CLERK ESTABROOK: Thank you.
David Asti, you can unmute and begin.
DAVID ASTI: Thank you. Can you hear me?
BOARD CLERK ESTABROOK: Yes, we can.
DAVID ASTI: Okay excellent. Good morning, Chair Randolph and members of the Board and staff members. My name is David Asti. And on behalf of Southern California Edison, I thank you for this opportunity to provide
comments.

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

But first I want to start by acknowledging CARB staff and the other State agencies for their efforts to coordinate activities to better inform both initiatives. Although the goals are different by design, we benefit by aligning the information and the measures proposed by both initiatives. This way, stricter emission standards for transportation, appliances, buildings can have cumulative impacts on both climate and local pollution increasing even more the benefits for our state and our local communities.

California's ambitious decarbonization goals are less than eight years away from the 2030 milestone, and the
electrification of space and water heating in buildings

has been identified as one of the most readily achievable
pathways to GHG emission reductions and minimizing indoor
pollution.

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

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

For instance, the draft 2022 SIP strategy
suggests that CARB could propose additional emission
standards for appliance combustion sources used in
buildings making 100 percent of the stoves and furnaces be
zero emissions in buildings for these zero-emission
appliances. This level of action coincides with the
recently released Integrated Energy Policy Report, or the
IEPR, by the CEC which recommends a goal of installing at least six million electric heat pumps statewide by 2030.

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

Thank you very much.

BOARD CLERK ESTABROOK: Thank you.

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

David, you may unmute and begin.

DAVID ROTHBART: Good morning.

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

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

While we agree that getting electric vehicles on the road quickly is a great idea, it's not going to happen soon enough for attainment purposes. The dilemma my
members have that we operate wastewater treatment plants, we -- people flush their toilets. We need to manage the gas that is generated from that. This renewable carbon-neutral gas needs to be utilized in a way that's productive. And at the moment there isn't really a thought process of what to do with this gas. We're talking about electrification, but yet there is no home for this gas and it could be used immediately, not 20, 30 years down the road. It could be used immediately to achieve attainment and to meet our climate change goals.

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

Thank you very much.

BOARD CLERK ESTABROOK: Thank you.

Sean Edgar, you can unmute and begin.

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

BOARD CLERK ESTABROOK: Yes, we can.

SEAN EDGAR: Great. Thank you. I'm speaking to you this morning on behalf of the Western States Trucking Association. WSTA is the nation's oldest independent non-profit trucking association representing over 1,000
motor carriers, with another 5,000 allied motor carriers primarily operating on the west coast. I'll be highlighting points in our written testimony that has been posted to the comment log. I'll be speaking about the Advanced Clean Fleets proposal and the proposed Zero-Emission Truck Measure, neither of which we believe are feasible for the trucking industry in general and WSTA members in particular.

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

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

First, the Draft SIP Strategy language talks about quote restrictions or fees for combustion trucks and quote, "The dirtiest trucks would be assessed higher fees..."
to enter low-emission zones”. Our response is that this would restrict interstate commerce and our members' ability to support critical infrastructure construction in the State.

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

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

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

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

Mark Rose, you may unmute and begin.

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

I first want to thank staff for their work on drafting up the strategy and openness to exploring new reduction strategies. MPCA recognizes the immense challenges ahead in reducing ozone pollution in the State, especially in the South Coast and San Joaquin Valley and hope that this challenge is met with equally ambitious planning and implementation by CARB, relevant air districts, and the federal government. At a high level,
to meet this attainment in 2037, we need an
all-of-the-above strategy, which includes most, if not
all, of the measures identified by CARB and more.

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

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

As it relates to specific sources, NPCA strong
supports efforts to reduce emissions from the
transportation sector, especially the phaseout of the
oldest, dirtiest trucks that have seeked their useful
life.
That said, CARB's Draft Strategy for this category is far too big, particularly when it comes to CARB's authority. Moreover, the implementation date is too late and should begin no later than 2028.

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

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

Finally, for stationary sources, we strongly support building electrification and ask CARB to immediately utilize your authority to implement more
stringent BACT and BARCT controls in air districts across the state.

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

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

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

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

And, you know, just to -- we would like you to
work with public and private stakeholders to create a comprehensive roadmap that will layout the complementary policies needed to equitably decarbonize California's new and existing buildings. And I want to recognize the importance of uplifting leadership from local and regional work that community organizations, local governments, and local air districts are currently leading. It will be really important to ensure there is coordination between the local and regional work happening and our broader statewide effort to provide the support necessary for this transition to be equitable.

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

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


BOARD CLERK ESTABROOK: Perfect. Thank you so much.
JESSICA CRAVEN: Okay.

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

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

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

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

For decades, the State has allowed discrimination with respect to pesticides and air quality. Under prior SIPs, the State allowed lesser pesticide protections in the San Joaquin Valley in comparison with other non-attainment areas with only 12 percent reductions in
pesticide volatile organic compounds by 1990 levels required, in comparison with 20 percent reductions required for other non-attainment areas.

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

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

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

Thank you.

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

Greg, you can unmute and begin.


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

We committed to working with the staff and the Board and are continuing to do so and really appreciate the executive staff's involvement and engagement. We
still have significant concerns though as the early January workshop was held and we feel it provided little to no value, given that there are no data adjustments or anything and that was a major component of the stakeholder's concerns with the rule in this development. We provided a letter to the executive staff on February 8th. We ask that to be distributed to all members and it highlights some of our concerns. We would encourage you to request that letter, if you did not see that. But five months after the release of the public comment period, we still don't have all of the data and modeling information to fully understand how the rule was developed.

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

In addition, we've requested funding through the
Carl Moyer Program for areas of the state that don't provide it to marine. And if that -- if we can work with the Legislature to approve that, we believe the balance of the fleet would have best available technology within the next four years.

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

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

Thank you.

BOARD CLERK ESTABROOK: Thank you.

Tom Kabat, you may unmute and begin.

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

I applaud the staff and the Board for taking a hard look at what it takes to accelerate our pivot to a
clean zero-emission future involving space heat and water heat. We have found in working on reach codes and other measures to electrify buildings that the dealing with equipment replacements is the hard nut to crack. And they -- the Board and staff looking at taking the items off the shelf through a zero-emissions standard is the step in the right direction that will give cities the courage to make additional rules.

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

So the 2030 timeline, while it is groundbreaking, is still a bit late for meeting the Paris targets. And furnaces installed under that line will still be operating seven or eight years easily past our climate neutral
targets and all of the emissions will be above the Paris targets, including the two degree target.

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

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

BOARD CLERK ESTABROOK: Thank you.

Catherine Dodd, you may unmute and begin.

CATHERINE DODD: Hi. My name is Catherine Dodd. I'm registered nurse and I'm the policy advisors for Families Advocating for Chemical and Toxic Safety. I want to thank the CARB Board for deeply listening to the people presenting today. Individuals and organizations care very much about these issues. And I'd like to associate myself first with the comments of Jane Sellen and Sarah Aird who specifically highlighted the issues related to pesticides, and also point out that Bill Magavern, and Ray Pingle, and
Cynthia Cabrese[SIC] also mentioned the importance of pesticides in the SIP.

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

And thank you again for this hearing today.

BOARD CLERK ESTABROOK: Thank you.

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

Diane, you can unmute and begin.

DIANE BAILEY: Hello, Chair Randolph and Board members. My name is Diane Bailey. I represent a community climate action nonprofit called Menlo Spark, as well as a Silicon Valley-wide alliance called the Campaign for fossil free buildings, which is comprise of 37 organizations working together to phase out fossil fuels
like methane gas from our homes and buildings. I'm impressed by the suite of measures presented here today, including zero-emission trucks and many other important measures addressing diesel freight or goods movement and I just want echo some of the comments from earlier folks, Cynthia Pinto-Cabrera, Kevin Hamilton, Will Barrett and Bill Magavern. And I'll try not to repeat those.

In particular, I'm here in strong support of the proposal to require new heaters and water heaters to meet a zero-emissions standard by 2030. And hopefully that's a backstop at the latest. We'd like to see sooner action.

Pollution from gas appliances has gotten very little attention in the past and really can no longer be ignored, as methane gas has come to be known as a climate super pollutant and the combustion byproducts of gas appliances are now creating more harm than pollution from all of the power plants in our entire state.

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

We support an equitable transition off of gas, particularly addressing the needs of low income and
environmental justice communities and ensuring that there is ample financial support to make this transition. Low-income turnkey home upgrade programs have already begun, for example, through SMUD in Sacramento, as well as Peninsula Clean Energy and East Bay Clean Energy in the Bay Area. But we need firm State standards in place to ensure that these support programs can grow to serve everyone in California.

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

The zero-emission standards for heaters and water heaters are a critical step to significantly cut greenhouse gases and NOx pollution and they can't come quickly enough to help everyone living in those nonattainment met areas. And as my colleague Tom Kabat points out, we need to move more swiftly to address the climate crisis as well. Every new gas appliance that is installed today is a mistake that will need to be replaced quickly.
I hope you'll move forward with these standards swiftly and I thank the staff so much for all of their work going into this plan.

Thank you.

BOARD CLERK ESTABROOK: Thank you.

Jonathan Evans, you may unmute and begin.

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

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

Soil fumigants, such as chloropicrin, metam sodium, and dazomet cause increased emissions for the
ozone precursor and greenhouse gas nitrous oxide, and represent nearly one-fifth of pesticides used in the state.

CARB must ensure that measures to support reduced pesticide use of fumigants are part of the final Scoping Plan and State Implementation Plan. Pesticides also contribute to volatile organic compounds, an ozone precursor, which leads to increased increases in tropospheric ozone, and also a public health threat, and a significant contributor to greenhouse gases and global warming. CARB should better track and require binding reductions of volatile organic compounds from pesticides.

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

Thank you very much.

BOARD CLERK ESTABROOK: Thank you.

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

Tom Jordan.

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

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

The District supports CARB's efforts to reduce mobile source emissions under their authority and also would like to assist in ensuring that the federal
government does it's part to reduce federal source --
emissions from federal sources.

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

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

BOARD CLERK ESTABROOK: Thank you.
Chair, that concludes the commenters for the
item.

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

Okay. I'm going to bring this back to the Board
now for a Board discussion. I do want to note that we are
going to have an opportunity to discuss the SIP Strategy,
then we will, after our discussion, take a 45-minute lunch
break, and then we will proceed with our next agenda item.
So if any Board members have questions or comments, please raise your hand if in person or click the raise hand symbol in Zoom.

And Dr. Pacheco-Werner.

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

BOARD MEMBER KRACOV: No, go ahead.

BOARD MEMBER PACHECO-WERNER: Okay. Great.

Yeah. Thank you, Chair, thank you, staff, and thank you to all of the public commenters such insightful comments from everyone and thank you for your input in this process. I think -- I want to reiterate some of the -- some of the public comments in terms of the opportunity that we have with meeting some goals quicker than others, in particular taking advantage of the end of useful life for trucks and implementing that. As -- you know, as a member in the San Joaquin Valley, I really see this as an opportunity to help in the San Joaquin Valley. And I'm sure in South Coast as well. I also think that there's a couple of issues into which collaboration and working with other agencies is really crucial.

I think we must have a clearer sense of what the comprehensive strategy is for electrification that is actually relying on household electrification. You know, what are the joint commitments that we're making and how
are we going to make that clear in documents like the SIP and others this year, as all relevant agencies in the state of California to keep solar power affordable to individuals, so that the use of all of these electrical equipment that we're gearing towards implementing are actually feasible.

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

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

Also, there are municipalities, not industries, but municipalities that have unique challenges when it
comes to both how they use zero-emission equipment, but also how they use their existing resources, like the natural gas that are own waste produces. We must make space for the municipalities to continue to function and meet our everyday and emergency needs.

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

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

Thank you.

CHAIR RANDOLPH: Thank you.

Board Member Kracov.

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

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

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

So bear with me. You heard a lot from me when we approved the Mobile Source Strategy in September, so apologies in advance, Chair, I know this is just informational today. Our past SIPS like this one are designed to prove, of course, to EPA that we can make ozone attainment. But the straight talk is that in the South Coast, we have not. We have fallen far short of many prior commitments. In our last SIP six years ago,
the South Coast committed to raising billions of dollars
in new sales tax authority to retire trucks, but we
failed.

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

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

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

It truly is equal, even if metaphorically, to the
kind of challenge that Hercules did face in those Greek
legends. So how do we rise to the challenge. One
example. We know mobile sources make up more than 80
percent of the smog-forming emissions in the South Coast. And that medium- and heavy-duty diesel trucks are the biggest emitters. Yet unfortunately, as mentioned in the comments - I think it was Ray Pingle - today's report shows that even after implementation of the ACT and ACF 1.4 million combustion powered trucks will still be on the road in 2037.

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

And those trucks get 13 to 18 years useful life. This is why we voted last year for the four times a year smog check. It was a no-brainer in my opinion. This time loophole colleagues between our Truck and Bus Rule at year's end this year and our forthcoming Zero-Emission Fleet rules, this regulatory gap this poisonous persistence of polluting diesel means that we cannot hope to meet attainment in the South Coast, not on the upcoming attainment dates of 2023 and 2031 and maybe not even in 2037. We must do more to turn over these old diesels off the road. We don't want to fall short yet again -- yet
again. So I so appreciate staff, Dr. Benjamin and Mr. Segall's team, Mr. Hicks today are to meet this challenge laboring like Hercules with bold action to do all we can. And staying with the diesel truck turnover issue. If I can call attention to the report today, page 48, for additional new measures to get these trucks off the road. Thank you staff. These include a useful life regulation, that means polluting 18-year old diesel trucks past their useful life are retired and can't be on our roads. We have authority for that right now to start in 2028. Also proposed for staff's study between now and the final SIP are new authorities to implement cutting edge differentiated registration rates, restrictions on fees for combustion trucks entering low zero-emissions zones, and maybe Indirect Source Rules to establish such zones as well.

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

I'm so looking forward to being in a position where I can vote yes on an accountable, legally compliant
ozone plan that pencils out. I commit Officer Corey --
Executive Officer Corey to working with you, and of course our staff, and South Coast staff until then treating this like the top priority it is.

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

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

Thank you, Chair.

CHAIR RANDOLPH: Thank you.

Dr. Sperling.

BOARD MEMBER SPERLING: Hello. Thanks.

I just have one small thought, but important, and that is I want to commend the staff on an outstanding presentation on the science of ozone formation. It is the best public presentation I've ever heard on ozone formation, which is a really complicated -- scientifically
complicated process. And it explains -- and they explain why ozone has not improved in recent years, as Board Member Kracov was highlighting, and shows the path forward and how it can be improved.

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

So kudos to the staff.

CHAIR RANDOLPH: Thank you.

Board member De La Torre.

Board Member De La Torre, are you there?

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

BOARD MEMBER DE LA TORRE: Hello.

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

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

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

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

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

Thank you.
CHAIR RANDOLPH: Thank you.

Board Member Takvorian.

BOARD MEMBER TAKVORIAN: Thank you, Chair.

I just want to echo some of the comments of my colleagues, especially Mr. De La Torre and Mr. Kracov in regards to the truck retirement measures. I really appreciated that it was included in the SIP and that there are creative ways being developed and thought about. But I also think that we have the authority as CARB to move forward and to ensure that that happens before or by 2028.

I want to say that I know that a lot of the focus as appropriate is on South Coast and San Joaquin. But so much of California is nonattainment. San Diego is classified as severe. And some of those same measures that would work to bring South Coast into compliance will really benefit our communities and our regions throughout the state, particularly those that focus on heavy-duty vehicles.

So we really need to do all that we can. And local air districts and other regulatory bodies are starting to take action like the Maritime Clean Air Strategy that the Port of San Diego adopted recently that is seeking to transition trucks to ZEV by 2030, to beat the State goal. And I think that the retirement option being in place by 2028 will really expedite that.
The other thing I wanted to add is I, too, support inclusion of pesticides and I know many have spoken on that. I just want to add my voice to that.

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

Those are my comments. Thank you.

CHAIR RANDOLPH: Thank you.

Vice Chair Berg.

VICE CHAIR BERG: Thank you, Chair.

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

So I have just a few questions and that is, has there ever been any modeling that, given the full electrification of transportation, will we meet our SIP goals?
EXECUTIVE OFFICER COREY: Michael Benjamin, I think this will be one for you to respond to, if you would.

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

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

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

AQPSD CHIEF BENJAMIN: Great. Thank you for reframing your question. The reality is is that even if we fully electrify, let's say the on-road fleet, we will
not attain in South Coast unless the federal government acts. And so I just -- what I want to emphasize is that even if the CARB Board moves to full electrification, federal action is needed.

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

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

So maybe it's there and I missed it. And if I did, I apologize, I'll pay -- I'll do a little more research on that. But even in the staff's presentation, I think we can do a better job at looking at how are we
tying specifically 617 and how are we making improvements on the cumulative impacts while we're keeping our eye on the long term, so I would like to see that.

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

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

Thank you, Chair.

CHAIR RANDOLPH: All right. Thank you.

There's been a lot of discussion about federal sources and the need for partnership with the federal government. But I will note, yesterday the federal government went in the wrong direction and approved -- the
Postal Service approved the acquisition of gas vehicles for their huge fleet instead of electric vehicles. And the Biden administration objected to that, as appropriate, but unfortunately USPS went its own way. And we are talking over 165,000 new polluting vehicles. And that could have been a huge opportunity to make progress.

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

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

Any other Board member comments?

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

Thank you.

(Off record: 12:13 p.m.)

(Thereupon a lunch break was taken.)
AFTERNOON SESSION

(On record: 1:01 p.m.)

CHAIR RANDOLPH: All right. Thanks, everyone for coming back to participate in the Board meeting after lunch. The last item on the agenda is Item number 22-3-5, an overview of the development of the 2022 Scoping Plan update.

If you wish to comment on this item, please click the raise-hand button or dial star nine now. We will call on you when we get to the public comment portion of this item.

This is the first of two informational items scheduled to hear from staff about progress in developing the 2022 Scoping Plan update and details on specific legislation and considerations guiding this process. The Board will also have the opportunity for further engagement with the Environmental Justice Advisory Committee at the upcoming joint meeting with Board members and EJAC members on March 10th.

Today's item provides the Board, the Environmental Justice Advisory Committee, and the public another opportunity to hear from staff as they work towards analyzing options, tools, scenarios, and integrating environmental justice and equity considerations into the Scoping Plan to achieve carbon
neutrality no later than 2024 -- I'm sorry, 2045.

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

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

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

This means that in California and globally, we must achieve deep decarbonization across all sectors of the economy certainly no later than 2045 requiring that we escalate our mitigation efforts in the near term.
While we know our efforts to address climate change in California have helped to improve air quality for our vulnerable communities, a wide gap still remains. We must stay committed to closing that gap. In both our SIP Strategy, as we discussed earlier today, and our climate strategies, we must recognize that the communities hardest hit by pollution need to be prioritized as we develop and implement solutions.

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

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

Moreover, as we move away from combustion of fossil fuels, we must also continue to cut short-lived climate pollutants, like methane and hydrofluorocarbons. We need to ensure that success in reducing fossil fuel emissions is not undermined by emissions of these super pollutants.
The framework for carbon neutrality will also highlight the role natural and working lands, a critical yet underutilized sector, will play in achieving our 2045 target, as well as the role other mechanical carbon dioxide removal technologies may play in balancing out any emissions remaining in the system.

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

As has been the case historically, the benefits of this plan will be broader than just climate change. Its implementation will improve public health by reducing the emissions burdens experienced by our front-line communities. And it is for this reason that I have previously committed to and continue to commit to developing a permanent environmental justice advisory structure to ensure that we have environmental justice
voices not just for the Scoping Plan development, but as part of the critical implementation steps that will need to come.

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

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

Mr. Corey, would you please introduce the item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

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

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

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

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

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

The red flag warnings from the hundreds of scientists in the Intergovernmental Panel on Climate Change report have told us we're out of time. We cannot afford to let the perfect be the enemy of the good, and we must consider the science and role of every tool available.
to us to start the transition away from fossil fuels and start removing carbon from the atmosphere.

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

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

In this update process, staff will continue to work with the Environmental Justice Advisory Committee, as well as a broad spectrum of stakeholders to provide meaningful public engagement to build an actionable path to meet our greenhouse gas reduction targets. We have the
tools and we know where need to be in the next 20 years. The 2020 Scoping Plan will outline the path to get there, and we must do it in a way that supports our actions being exported elsewhere.

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

Stephanie.

(Thereupon a slide presentation.)

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO:

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

With this update, we are looking at the action needed to become carbon neutral no later than mid-century to avoid the worst impacts of climate change. As a
result, the scope and level of ambition for California with this update is unprecedented.

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

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

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

With this outcome-focused approach, we are
modeling paths for clean technology, energy deployment, nature-based solutions, and others. These paths will include metrics, such as the rate of sales of light-duty electric vehicles, sales of electric appliances, acres of forest management and conservation and agriculture under climate smart management. These metrics, in addition to the annual greenhouse gas inventory, can help us track progress moving forward.

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

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

AB 32 specifies that action focused on sources that contribute the most to statewide emissions. It also specifies that the inventory cover direct emissions of greenhouse gases in the state, but also instructs that emissions associated with imported electricity used by
California consumers be included.

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

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: The graph on the left represents statewide annual greenhouse gas emissions from sources in the AB 32 inventory from 2000 to 2019, the most recent with published data. Since
the peak level in 2004, California's greenhouse gas emissions have generally followed a decreasing trend. Continuing the downward trend from 2018, transportation emissions decreased 3.5 million metric tons in 2019, only being outpaced by electricity, which reduced emissions by 4.3 metric tons in 2019.

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

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

Refrigerants used in commercial, industrial, and residential cooling make up over 90 percent of these high
global warming potential gases. Emissions from other sectors have remained relatively constant in recent years. It's important to remember that these are 2019 emissions. CARB has not published data reflecting the effect of the global pandemic that took hold in 2020. In terms of an emissions outlook, 2020 greenhouse gas emissions will likely be even lower due to the effects of the pandemic. However, as economic activity rebounded from the 2020 to '21 period, it's likely that greenhouse gas emissions will also follow the increased activity, meaning 2020 may seem more as an outlier[SIC] versus a general trend marker.

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

It consists of forests and other natural lands, crop lands, urban forests, wetlands, and soil carbon. Lands can be a net source of greenhouse emissions or a net sink. The graphs on the right show trends in carbon stock change over time. Note that in juxtaposition to fossil
fuel emissions where the goal is to see a declining trend
for natural and working lands, we typically want to see a
stable or increasing trend in carbon stocks, which
indicates increasing carbon sequestration or ongoing
carbon storage and reduced greenhouse gas emissions. Soil
is the largest carbon reservoir included in the inventory.
Forest and shrubland carbon stocks are second largest
carbon pool and also currently is subject to some of the
largest total changes.

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: On this
graphic, we're showing our historical emissions trends for
the energy and industrial sectors in comparison to both
our previous 2020 target and upcoming 2030 target of 40
percent below 1990 levels by 2030. On the far right, we show the 2005 Executive Order goal of 80 percent below 1990 levels by 2050. If we achieve the 2030 target and maintain that rate of reductions, we would be able to achieve 80 percent below 1990 levels by 2040.

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

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

AB 32 requires that CARB update the Scoping Plan at least once every five years. This is our fourth Scoping Plan update, and all previous plans leveraged traditional air quality programs to provide both
greenhouse gas and air pollution emissions reductions.

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

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: As mentioned, direction on Scoping Plan goals and objectives
are informed by statutes and Executive Orders. Each Scoping Plan is a high level actionable plan that spans across all sectors. After each Scoping Plan is adopted, CARB and other State agencies start the process of reviewing and updating related programs or developing new programs to align with the outcomes identified in the Scoping Plan.

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

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

Once regulations and programs are in effect, there is additional time for projects to be constructed or for equipment turnover or retrofits to occur. Therefore the, emissions reductions from these actions will take some time to show up in the AB 32 inventory.
ISD STAFF AIR POLLUTION SPECIALIST KATO: In developing a scoping plan, there are many points of direction and coordination. The next three slides highlight the governing requirements and guidance we must follow. The list is not exhaustive, but we focus on a few key statutes.

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

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

And lastly, AB 197 directs us to prioritize direct emissions reductions and include estimates of greenhouse gas per ton, air pollutant and social cost of
carbon for each action included in the scenarios analyzed.

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

SB 100 updates the State's renewables portfolio standard to ensure that 2030 -- excuse me by at least 2030 at least 60 percent of California's electricity is renewable and sets a 2045 goal of paring all retail electricity sold in California and State agency electricity needs with renewable and zero carbon resources.
The Zero-Emission Vehicle Executive Order and SB 375 set targets for phasing out vehicle fossil fuel use with zero-emission alternatives and improved transportation planning. AB 398 identified the Cap-and-Trade Program as part of the state's climate strategy through 2030, and provided direction concerning implementation and design of the program, including quantitative offset usage limits in the post-2020 period.

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

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

SB 1386 broadly identified the conservation and management of natural and working lands as a key strategy to meet greenhouse gas reduction goals while also providing public benefits such as wildlife habitat, recreation opportunities, food and fiber production, and
air and water quality improvement.

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

The Executive Order directed the California Natural Resources Agency, in consultation with CARB, and the California Department of Food and Agriculture to develop a Natural and Working Lands Climate Smart Strategy to set a framework to advance the carbon neutrality goal and build climate resilience. The Executive Order also directed CARB to update the target for the natural and working lands sector in the scoping plan with consideration of the Natural and Working Lands Climate Smart Strategy. SB 27 expanded on this to direct CARB to establish a natural and working lands carbon dioxide removal target for 2030 and beyond in the Scoping Plan.

It reemphasized the need to collaborate with the California Natural Resources Agency in developing the Climate Smart Strategy.

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ISD STAFF AIR POLLUTION SPECIALIST KATO: This slide gives a sense of the multi-agency coordination that happens during plan development, as well as after-plan
adoption during the implementation phase as it touches many sectors and many of the policies fall under the purview of sister agencies. This list is not exhaustive, but is intended to show that successful development and implementation of any plan requires close coordination and understanding of the jurisdiction of other agencies.

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

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

Natural and working lands can be a net carbon
source or sink, as indicated by the plus and minus signs.
As mentioned, at the beginning of this presentation, the
State's separate natural and working lands inventory
allows us to track the greenhouse gas emissions and
sequestration on natural and working lands over time.

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: Since
we kicked off the 2022 Scoping Plan update in June last
year, we have heard from California stakeholders through
public workshops and Environmental Justice Advisory
Committee meetings. The 11 public workshops included a
three-day kick-off series with the sector-focused
discussion, three modeling scenario workshops, and topical workshops covering natural and working lands, engineered carbon removal, short-lived climate pollutants, electricity, building decarbonization and public health.

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

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

We will quantify the air quality health and economic impacts of each scenario. The second effort underway is to estimate the potential to minimize natural and working lands emission sources and maximize sinks.
across all of the land cover types in California, while
taking into consideration the numerous co-benefits that
come from these natural systems.

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

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

Importantly, due to corresponding local co-pollutant impacts, the AB 32 sources scenarios include features that will deliver near-term air quality benefits, especially in heavily burdened communities. When Scoping Plan Scenarios are presented to the Board, we will provide details that demonstrate consistency with statutes and
Executive Orders. We also identify the tradeoffs among scenarios and balance multiple statutes that speak to direct emissions reductions benefits, costs, minimizing leakage, and technological feasibility. The exception to this may be a scenario or scenarios that reflect the reviews of specific stakeholder groups.

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

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO:

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

For the air quality analysis, the State level drop in emissions from PATHWAYS will be applied as a proportional drop in emissions at the sources in CARB's inventory in a future year.
Models will be used to spatially and temporally distribute the emission's data and stimulate photochemical interactions in the atmosphere to estimate improvement in ambient pollutant concentrations. U.S. EPA's BenMAP tool will be used to estimate how the changes in air pollution result in changes in health outcomes, including the monetary savings from avoided health impacts as air quality improves.

The health savings estimates will be at the same resolution as the air quality model and represent net changes. Therefore, this is not granular enough to look at emissions changes at any one specific facility. However, UC Irvine will be able to downscale the net changes in regional air quality to the census tract level in order to provide insight into the community level air quality improvements of the Scoping Plan scenarios.

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

In the Scoping Plan process, our UC Irvine
contractors or calculating reductions in illnesses and
deaths expected due to the mix of changes involved in
moving toward decarbonization. As mentioned in the prior
slide, those health benefits will be calculated at the
State level and scaled down to a more local level.

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

In addition to the quantitative tools qualitative
tools provide us the opportunity to go beyond what we can
do through the quantitative analysis. We can look at a
broader range of benefits and impacts especially across
communities and groups. Staff will use both the
quantitative and qualitative methods together to cover the
broad range of benefits. Our qualitative assessment can
look at directional effects and the scale of the impacts
and benefits. We will be able to look more clearly at
community vulnerability and the effects of disparities in
resources, health conditions, and other factors. We can look at how goals of the Scoping Plan outcomes will improve health and communities and assist in a move toward more resilient communities.

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

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

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

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

Staff will be considering how to incorporate information from existing tools that demonstrate community vulnerabilities and health disparities into our Scoping Plan health analysis.
ISD STAFF AIR POLLUTION SPECIALIST KATO: In addition to a reference or business-as-usual scenario, we are modeling four draft energy and supply demand scenarios. Two of the scenarios achieve carbon neutrality by 2035 and two by 2045.

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

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

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: This
slide highlights common attributes and differences amongst
the four scenarios. In terms of similarities, it's
important to note that all four alternatives emphasize
reduced reliance on fossil fuels as the primary source of
greenhouse gas emissions. This requires rapid deployment
of existing add emerging zero carbon emission technologies
throughout our state. For example, all scenarios rely on
rapid deployment of electrified end-uses paired with a
clean grid supplied by renewables.

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

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

The primary differences among these four
scenarios are the speed with which we transition away from fossil fuel, how quickly California residents and businesses adopt zero-emission vehicles, for example, and how far we can go eliminating fossil fuels, how many homes and businesses can convert to electric appliances by 2035 or by 2045.

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

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

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

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

Through this effort, it was calculated that California should reduce emissions from natural and working lands by 15 to 20 million metric tons of carbon per year by 2030.
All of these numbers, however, were somewhat at the periphery of this Scoping Plan, because the focus of these Scoping Plans was, for good reason, the reduction of emissions from fossil sources. However, it is now clear that reducing emissions is not sufficient to fight climate change and we have been ordered to determine a path to make California carbon neutral by 2045. When one moves from emissions reductions to carbon neutrality, that requires taking into account the whole carbon balance, including carbon dynamics within our natural and working lands.

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: And while past Scoping Plan natural and working lands analyses focused primarily on carbon, this Scoping Plan is going a step further and focusing on analyzing more than just carbon. CARB staff will also model the impacts that land
management actions have on fire emissions and air quality, water quality, biomass availability, and other natural and working land ecosystem services.

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

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

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

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

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

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

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

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

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

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

Some of the more complex models, such as the RHESSys model for forests, shrublands, and grasslands can model additional ecological outcomes such as wildfire activity, water dynamics, and more. CARB aims to continually refine these models going forward to
incorporate new science and data, and improve our understanding and management of natural and working lands.

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

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

These scenarios will assist in identifying which management strategies minimize emissions and maximize sinks in California's natural and working lands. We will also consider other co-benefits that come from natural and working lands, such as biodiversity, water yield, and
water quality when balancing the trade-offs of different management strategies. Once completed, the natural and working lands modeling will provide us with information on the amount of emissions and sequestration we could expect from natural and working lands by mid-century.

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

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

In April, there will be a public workshop with air quality public health and economic modeling results. In May, we plan to release the Draft Scoping Plan for public comment, and in June we will present the Draft Scoping Plan to the Board. The Board may provide
additional direction to CARB staff to inform the Final Scoping Plan.

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

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

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

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ISD STAFF AIR POLLUTION SPECIALIST KATO: In terms of the overall schedule as mentioned, upcoming next month is the joint EJ Advisory Committee Board meeting and Board informational item on modeling results. Staff will present the Draft Scoping Plan to the Board in June.
There will be another joint EJ Advisory Committee Board meeting around September, and staff is targeting bringing the proposed Final Scoping Plan to the Board for adoption by the end of 2022.

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

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

DEPUTY EXECUTIVE OFFICER SAHOTA: Thanks, Chair Randolph. I can take that question. So in the modeling, as Stephanie presented, we will show that you ratchet down oil and gas extraction and refining in line with the rate of decline for demand in the state of California. And in almost every scenario, some demand remains. What we will do outside of the modeling is then zero out those emissions from those sectors and quantify the health impacts and benefits of doing that, and then also looking at the economics of still having to import any of that fuel into the state to meet that ongoing demand. But all
of that is outside of the modeling and we do plan to
assess that since that was direction explicit in a letter
from the Governor to yourself.

CHAIR RANDOLPH: Okay. Thank you.

Dr. Balmes.

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

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

Matt.

INDUSTRIAL STRATEGIES DIVISION CHIEF BOTILL:
Yeah. Hi, Dr. Balmes. Matt Botill. I'm the
Division Chief for the Industrial Strategies Division.
And so, as Steph mentioned in one of her slides and just
you know for more information here, we are, as part of the
natural and working lands modeling going to be modeling
the effect that various management strategies have on
forests. And that model will also have the fire emissions and the frequency and the intensity of fires that move through the landscape between now and the end of century. So we'll have some information about how fire responds in response to various management actions on the forest landscape.

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

Thank you, Matt.

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

Okay.

BOARD CLERK ESTABROOK: Stephanie, go ahead.

Okay. Our first -- the first person we will be hearing from is Martha Argüello.

Martha, you can go ahead.

MARTHA DINA ARGÜELLO: Yes. I'm just going to provide a quick update on what the Environmental Justice Advisory Committee has been doing. And I think my fellow co-chairs and members will also talk from their perspectives. So we've been working at a breakneck speed...
to keep up with the pace of this Scoping Plan and to be able to engage in a meaningful way. And so I think it's important to keep in mind the numbers of meetings doesn't necessarily mean always that the engagement is meaningful. And I think that has been a real challenge throughout this entire process, which is why, you know, we have asked on a number of occasions for an extension of the time line for us to be able to meaningfully engage, one, as members of the EJAC, but also the importance of ground truthing many of these policies with communities in a robust community engagement.

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

And so, you know, I think those are -- continue to be the major themes that are emerging from the EJAC. And I would remiss again if I would say that we want the focus to be on direct emissions reductions coupled with focus on the -- all the co-pollutants, including carbon for those direct emissions reduction, real investments in building resiliency, because we have waited so long.
now the choices that we have for getting to this magical carbon neutral future are act -- is more magical thinking that we can use unproven technologies that further embed the fossil fuel infrastructure and extended life for 150 years continues to be huge concerns for our communities, that we can't solve the climate crisis on the backs of the people who have been bearing the brunt of the climate crisis.

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

And I -- we are working on sets of recommendations and we have our EJAC meeting next week. And so I want to make sure that before we start talking about what our recommendations are that they've been vetted by the entire EJAC. And so I will stop there and hand it over to Dr. Catherine Garoupa White.
DR. CATHERINE GAROUPA WHITE: Our colleague Juan Flores, also had a hard stop at 2 o'clock, so I just wanted to quickly see if he could go before me, if he's still available.

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

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

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

I understand that EJAC recommendations are due in
a week so, but I hope this Board knows that our residents living next to all the sources the Scoping Plan attempts to trace only had one round of meetings where we were able to share our stories, but we need more time.

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

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

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

DR. CATHERINE GAROUPA WHITE: Thank you, Juan and thank you, Martha. This is Catherine with the Central Valley Air Quality Coalition and the Environmental Justice Advisory committee, speaking as an active participant, and as my colleagues have already acknowledged not on behalf of the Environmental Justice Advisory Committee.
As someone who started my career as a community organizer working for CVAQ in 2006, I know well the need for equitable community engagement and that this is not new and neither is the Scoping Plan process. The Scoping Plan is important to the San Joaquin Valley and to environmental justice communities across California because of the concentration of pollution in our neighborhoods, where black and indigenous peoples and people of color, and low-income communities live.

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

The economic assumptions of modeling will not automatically account for equity. We have to build it into the assumptions. The San Joaquin Valley unfortunately is a canary in the coal mine in this case. Incentives and models are not producing expected results, whether it's in SIPs or the Scoping Plan. The need for ground truthing has never been greater. The process thus far has been frustrating chaos with a lack of
accountability for improving existing processes and
providing the resources and timeline that accommodate
authentic community engagement.

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

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

When we call out these built ineq -- built in
inequities as EJAC members, we are advised to narrow in
our focus or stop complaining, which is tone deaf to the
gravity of these issues and the magnitude of the disparity
and ongoing suffering that our communities are
experiencing. And when we challenge you all to do better, we're told not now in the future. Despite these challenges, the San Joaquin Valley held our first community workshop just a few nights ago. And as colleagues have also shared, we still need time to debrief internally before we share specific recommendations from those conversations. But with over a hundred participants eager to be engaged and asking for consultation early and often, we have shown that given resources, we can deepen and provide access to meaningful engagement of our communities.

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

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

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

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

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

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

Thank you for the opportunity to share my perspective.
BOARD CLERK ESTABROOK: Next we'll be hearing from Paulina Torres.

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

BOARD CLERK ESTABROOK: We'll go to Kevin Hamilton. Kevin, I have activated your microphone, so you should be able to unmute and give your comments.

KEVIN HAMILTON: Hi. Thank you for this opportunity. And I want to echo my colleagues call-outs, and I wouldn't repeat them, and elevate my friend and colleague of 20 years Dr. Catherine Garoupa White's so well enumerated concerns and plan for going forward. I can't imagine what I could say that would follow that, but I'll give it a shot here, because I do want to thank the Chair and staff for following through on their commitment to raise the issue of a permanent EJAC. And as Catherine and Martha Dina mentioned, working together with the Chair of the Board and staff to make that finally happen, I think it's obvious that's more critical than ever. This is a commitment that was originally made back in 2011, 2012 and is long overdue. So hopefully we can see that commitment fulfilled by the end of the year.
What my friend Catherine didn't mention is there was over 180 people who signed up for this event. The majority attended or attempted to attend. They overwhelmed our Zoom capability to the point where we had to ask all advocates who were on the call, but were not presenting, to step off, which they politely did, so that residents could take their place.

Many of these residents were family members of folks who we take care of as part of our asthma program, because we forwarded this message out to all of them, and this is of great concern to them. I want to illustrate just how deep into the community this reaches and these concerns. I had a conversation with one woman who raised her concerns that methane, which she's using to burn as natural gas on her stove could be harmful to her family. And she sees this. She's heard this. This is actually a message that's percolating through the community, but she doesn't know how she would afford an electric stove to replace that. And she's not sure if her vent fan works actually ventilate the emissions that she's got coming from here existing stove.

It seems like a small thing, but if you think about it from a macro level, it shows that this is not something that people don't know anything about and that residents can't actually advise.
So it's very easy to take what she's saying and go back and think to myself, well, I'm worried about that methane as it travels from where it comes out of a well through a pipeline, smaller pipes, facilities and gets to her, can I be confident in promising her that there's no leaks along the way and that the climate that she's expecting to raise her family, her grandchildren, and great grandchildren in will be one that they can actually make a living and live safely in, and right now I can't say that.

So these folks are concerned. Their voices should be heard. The EJAC is the pathway through which those voices are traditionally heard. And right now, the EJAC feels hobbled by both the timeline that we've grudgingly accepted, but CARB has assured us would be reviewed regularly. And again, as my colleague earlier Juan said, now is the time. This is the opportunity.

So just that one meeting with that kind of participation was shocking to me. We expected maybe 40 or 50 people, 60 at the most. But to have almost 200 people, the majority of them residents, take the time out of their evening from 5 o'clock to 7:30 and stay to the very end, and ask great questions, and be heavily engaged and want their voices to be heard, let's me know that if we did this across California, we might hear a very different
story than one that we're hearing at the Capitol. And we need to act and make sure those voices are not only heard, but their concerns acted upon.

So I call on you to do that today, and moving forward to commit to the time that we need to make sure that those voices are heard. And by the way, I do want to thank staff, as Dr. Garoupa White did. It was great really helping us get the funding together so that we could make this happen, get the contracts vended and moving. Thank you so much. You guys did a fantastic job.

Have a great afternoon. Thank you again.

BOARD CLERK ESTABROOK: Next, we will hear from Matt Holmes.

MATT HOLMES: Thank you. Thank you to the Clerk. Thank you, Madam Chair, members of the Board, and fellow EJAC members, and even CARB staff. This is Matt Holmes. I'm the EJ Director for Little Manila Rising. We do social justice and health equity work in South Stockton and the Sacramento, San Joaquin Delta region. I currently serve as a proxy for my Executive Director Dillon Delvo, who actually sits on the EJAC. We joined the EJAC because Dillon's friend and co-founder Dr. Dawn Bohulano Mabalon, a Pinay sister from South Stockton, who was incidentally the leading historian of Filipino American history. She died at the age of 46 from a completely preventable asthma
attack that was directly caused by indifferent planning
efforts at every level of government, and those
governments continue to define communities like ours as
disposable. So that's why I'm into the Scoping Plan. I
think the EJAC has the potential to change that history.

You know, my colleagues have nicely laid out
the -- you know, some of the inclusion issues we face, so
I'll try not to be redundant, but I hope it is coming
across that there is still distrust that persists,
particularly from a failed an unanimous attempt by the
EJAC to extend the timeline through a letter submitted to
the Governor that went not where. You know, that
experience and the lack of pre-planning for community
inclusion means that our community still feels like an
afterthought in this process.

You know, I'd still like an extension. But the
truth is no matter how much time you give us, only the
authentic integration of our input and risk avoidance in
impacted communities in the final document will tell if
I'm right or wrong about that.

So, you know, I do want to celebrate the literacy
bond that I received from this process. Specifically,
I've learned about like years of collaboration between the
State, and the federal government, and national labs to
target a carbon capture and sequestration strategy for my
community. Literally nobody here knew about that. Nobody knew that there were whole protocols for pulling that permit and injecting carbon underneath the Delta. You know, it's a moon shot engineering strategy for carbon removal that seems to be key to our Scoping Plan.

You know, and I know, you know, we're deeply concerned about that. We're concerned, as we heard earlier, that it will revive or continue unwelcome industrial activity. But, you know, personally like I'm not opposed to CCS in principle. I know word is out there that there's no reason to talk to us creatively about CCS. And I want to dispel that myth right here and right now.

You know, my house is on fire in Stockton. With urban heat island effect and the threat of sea level rise coming to displace tens of thousands of homes in San Joaquin County. So the idea that we're not open to reaching for a fire extinguisher is just not true. That's a hoodwink that somebody put on agencies and told them never to bother to talk to us about that. My issue with the fire the extinguisher is that I want it to be one that I know will work, one that belongs to me, and one that has a fair distribution of receipts and responsibilities.

You know, I hope my friends on the Board and staff understand that it's just really hard for me to trust something that's been planned for us without us.
You know, I think there's still time to fix that. I think that looks like community-led research that asks tough questions. You know, tough questions that aren't designed -- you know, aren't intended just to secure a permit, but to actually protect the important stuff, stuff like the Delta. The Delta is the largest estuary on the west coast of both north and south America. It represents the best freest way to sequester carbon forever. Like that's something we should think about more deliberately.

Current CARB protocols don't consider that. Current modeling from any of the national labs never asked worst case scenarios about that, because they weren't paid to ask those questions. So you have an opportunity from including us to ask better questions. And I would love to work with CARB on that. I think that's a great way to salvage this process, which is still very much at risk.

You know, for the rest of the Plan, I see a lot of opportunity in elevating the proven nature-based alternatives that sequester carbon. They represent investments in our communities, investments that can create new just transition jobs. They can improve local air quality and water quality, and they can stave off those looming threats of sea level rise and the urban heat island effect.

You know, there's -- there is a chronic
undervaluation of the co-benefits to communities that I think we really need to elevate. And I know ecological services, like trees, and forests, and swamps, and rivers, those are squishy and maybe engineers have a hard time penciling out the numbers on that, but there's really smart people out there that are waiting in the wings that would love to be embraced by CARB at this moment.

So I hope we can make some space for that on the EJAC. And I'll just close by saying I'm grateful for the friends and allies who have come out of the woodwork in this process, and even some of the adversarial folks who have taken their masks off in front of me. You know, anybody that wants to show up with more of that, I'm an open door. I can be reached at matt@littlemanila.org.

Thank you.

BOARD CLERK ESTABROOK: Switching to public comment.

Okay. Perfect. So our -- we have currently 15 people with their hands raised to speak on this item. The first three speakers will be Jane Sellen, William Barrett, and Tom Tietz.

Jane, you can unmute and begin.

JANE SELLEN: Hi. Madam Chair, members of the Board and staff, thank you for the opportunity to comment. I'm Jane Sellen with Californian's for Pesticide Reform.
First, want to extend thanks in particular to Ms. Berg, Ms. Takvorian, and Mr. De La Torre for calling out the need to include pesticides in the SIP. We're grateful for your leadership. As you know, we've also been urging CARB for many years to include pesticide emissions within the Scoping Plan. We are pleased to note in your presentation today the inclusion of the Department of Pesticide Regulation, at long last, to the list of collaborating agencies and departments.

However, the current plan still fails to include any measures to reduce emissions from fumigant pesticides, despite their role in generating GHG emissions throughout their lifecycle from extraction, manufacture, transport, storage, use and disposal.

So I had the privilege of participating this week in the workshop hosted by CVAQ, the Central Valley Air Quality Coalition, for San Joaquin Valley residents. It was filled to capacity and beyond, as you've heard. I wish you'd all been able to hear those voices and the lived experience and the expertise from which they spoke.

It was convened to educate residents on the decisions now being made on the Scoping Plan and the profound impact of these decisions on their lives, as well as to solicit their opinions and ideas of how the State should meet its target.
Person after person in the natural and working lands discussion at the workshop spoke from their hearts about the scourge of pesticides in their communities. They implored CARB to listen to them to protect them from emissions that harm their health, and to work with growers to adopt safer ag practices. Many spoke of being personally impacted by COPD asthma, cancer, autism, and a range of other ailments. They spoke of coming home from work with their clothes reeking of chemicals and of being afraid to hug their children.

We know -- oh, they know, excuse me, that the State wants to reduce emissions, but they don't understand why pesticide emissions keep being excluded. They know that CARB is the agency charged with cleaning up their air, but that the emissions that hurt them the most are somehow the wrong kind.

Thanks to the hard work done in Shafter through the AB 617 community emissions reduction program, CARB has acknowledged their jurisdiction over pesticide emissions once they volatilize in the air. It is unacceptable to those most impacted by pesticide emissions that the State continues to allow these emissions to fall through the regulatory cracks.

For the 2022 Scoping Plan to be grounded in equity and responsive to those most hurt by environmental
injustice, pesticide GHG emissions must be accurately and completely modeled; measures to reduce them must be included; all GHGs, and not just carbon, must be considered; and organic agricultural practices must be modeled and incentivized.

Thank you.

BOARD CLERK ESTABROOK: William Barrett, you may unmute and begin.

WILL BARRETT: Hi. Thank you very much. This is Will Barrett with the American Lung Association. And we've been tracking and discussing this process, along with colleagues from health, equity, conservation, and other advocacy groups along the way. And generally, I've heard agreement that the Scoping Plan really does represent an important opportunity to set a pathway to meeting and exceeding near-term 2030 emission targets with a focus on really transformational programs that advance health, equity, and environmental goals.

You've already heard today some concerns with the pace and the need for more information to better inform engagement in the process. And we do hope that forthcoming information helps to fill in some of those gaps. We feel that the Draft Plan should really be evaluated in terms of how quickly we can move away from fossil fuels as the primary way to meet our 2030 State
climate standards, while maximizing strategies that favor
local health protections, especially in our most
disadvantaged communities, as well as relying on natural
carbon sequestration strategies.

There was a discussion in the legislative hearing
this week that raised an important question that many
advocates have, how much will this plan implementation
dependent on the Cap-and-Trade Program versus more direct
emission control strategies. Those are some of the issues
I think make it difficult to evaluate how the Plan may set
a course for health improvement, and to what degree health
might improve as, you know, a result of the plan.

Similarly, when we look at increasing levels of
VMT reduction or strategies that are presented without
accountability metrics, it's hard to figure out or picture
the on-the-ground results given the challenges we know
exist with SB 375 implementation. Obviously, this is a
very difficult task. There's no doubt about it and we
appreciate the work that's going into it.

On the health analysis - and here, I'm also
speaking on behalf of Dr. Linda Rudolph with the Center
for Climate Change and Health - we've engaged with the
CARB Board and staff members over the past Scoping Plans,
and in this Scoping Plan, in the hope that the plans --
this Plan could be designed to maximize health outcomes.
The Board guidance that was given in the 2017 Scoping Plan resolution was for the Board to work with EPA, OEHHA to create a timeline and action plan to better integrate health into the design of climate programs. So while we appreciate that the increasing number of health outcomes and climate endpoints, the active transportation benefits that will be included and qualitative methods, as well as really the sister agency participation in the recent workshop, we're concerned that a plan versus no plan approach misses a key opportunity to design the Scoping Plan for health and for equity.

The question we really have is what are the opportunities to utilize health analysis in the development of the measures that make up the Draft Plan. Ultimately, you know, we feel that the final draft in the Scope -- Final Scoping Plan should be informed by the most health protective standards and measures that bring us to meeting or exceeding the 2030 climate standards while benefiting community health in the near term. So with that, again, we appreciate the time that staff and Board have given to hear our concerns with the health analysis process, and we look to continued dialogue to really this issue in the Draft Plan coming forward.

Thank you.

BOARD CLERK ESTABROOK: The next speaker will be
Tom Tiets. After Tom, will be Julia Levin, Evan Edgar, and then Kathleen Kilpatrick.

Tom, you can unmute and begin.

Tom, are you there?

TOM TIETZ: I am.

BOARD CLERK ESTABROOK: Perfect. We can hear you.

TOM TIETZ: Okay. Good. Tom Tietz. I'm the Executive Director of the California Nevada Cement Association. And I thank you for the opportunity to comment today.

I wanted to mention that I appreciated slide 14 on that presentation this afternoon that showed the various agencies collaborating on reaching common goals. That's a focal part of my comments this afternoon. I wanted to mention that the California cement industry has been leading the nation by creating a robust commitment to reach carbon neutrality by 2045. We are also proud to have collaborated with Senator Becker on SB 596, and supported its passage and now its adoption. It's the first sector-specific net zero bill in California.

And this groundbreaking legislation establishes a framework for the State and industry to work in partnership on a framework designed to help accelerate the pace of change. That's really an essential element of
meeting these aggressive goals for an industry that is really difficult to decarbonize.

And while we're interested in formally presenting our industry carbon neutrality plan to the whole Board in the near future, we recommend the establishment of a formal interagency coordinating group that will be critical to our success. The purpose of this effort would be to streamline implementation of strategies and avoid conflicting regulatory insight -- oversight.

One of our top priorities is to replace the fossil fuels used at California cement plants. Our overarching goal is to utilize alternative fuels at levels proven effective in other parts of the world. There are now roughly 20 cement plants worldwide that are using 100 percent alternative fuels, while effectively controlling criteria pollutants. Examples of these alternative fuels include engineered municipal solid waste, agricultural waste, and wood waste, all of which can have negative impacts if landfilled with their related methane production.

To achieve these goals, it is apparent that an interagency coordination group will be critical to our success and that of the State's. This interagency group would require collaboration among the appropriate State agencies, particularly those departments, boards, and
offices under both CalEPA and Natural Resources Agency. This will be a vital part of our ability to expedite the accomplishment of our mutual carbon reduction goals.

Thank you.

BOARD CLERK ESTABROOK: Julia Levin, you can unmute and begin.

JULIA LEVIN: Good afternoon. Julia Levin with the Bioenergy Association of California. We are very grateful and supportive of the increased focus on natural and working lands, as well as the increased focus on achieving carbon neutrality by mid-century.

We're very concerned, however, at the shrinking and almost lack of focus at this point on short-lived climate pollutants in the Scoping Plan. In today's presentation, there were 29 slides, a quarter of one slide devoted to short-lived climate pollutants. And even on that slide, slide 11, it only mentioned methane and HFCs, and didn't mention an equally important part of SB 1383, which is the requirement to reduce anthropogenic black carbon by 50 percent by 2030.

There was also no mention of the waste sector, which is hugely important to meeting our short-lived climate pollutant reduction goals, and can also provide carbon-negative transportation fuels and other air quality benefits.
This is particularly surprising when the global scientific community has been very clear in the last year about the urgency of reducing short-lived climate pollutants. The head of the United Nations Environment Program, President Biden, climate scientists around the world have said this is the most urgent thing we can do in the next few decades, and it is the last thing we can do to avoid catastrophic climate change.

Chair Randolph, you mentioned the importance of turning climate change or global warming around in the next decade. And short-lived climate pollutants are really the only tool we have that can do that at scale.

In addition, both methane and black carbon are serious air pollutants. And as we should be trying to maximize carbon reductions that also benefit air quality, reducing methane, which is a precursor to smog, and reducing black carbon, which is particulate matter, also will have huge benefits for air quality.

So for all of these reasons, we urge the Air Board to put short-lived climate pollutant reductions front and center in the climate change Scoping Plan. The global scientific consensus dictates that, SB 1383 requires it, and it is the only way that we can meet our overall climate change goals. Thank you.

EVAN EDGAR: Hello. My name is Evan Edgar. Can
you hear me?

Hello. Chair and Board members, Evan Edgar.

Live from Sacramento. I'm an engineer for the California Compost Coalition. I will echo everything that Julia said and good work on the natural and working lands. And we need to focus on the near term. We take short-lived climate pollutants very serious and we've built in in-state RNG in order to feed into our near-zero fleets. And it kind of harmonizes with the amount of refuse fleets.

By 2025, it's estimated to be 100 million gallons of RNG with a carbon intensity of minus 100. So we're ready to go. It's an elegant solution where there is no leakage and we have a technology neutral approach.

We are in the wheelhouse of the circular economy where organics turn into bioenergy and carbon-negative fuel. And the role for biomass and biomethane combustion after 2030 is skeptical within the modeling that CARB is presenting. And we need to have a post-30 opportunity for biomethane and biomass combustion, in order to be carbon neutral.

The thing about ZEVs, ZEVs are not zero. The carbon intensity for the fuel is plus 35 and rising, because of low hydro this year. And CARB has a tailpipe mentality and does not look at life cycles. If you look
at the life cycle of batteries in ZEVs, it's a dirty secret. The manufacturing of ZEV batteries has a large carbon footprint. We're going to have to dig up first-world nations in Canada, South Africa, and South America in order to mine lithium that needs to be -- that needs to be valuated.

There was a report -- a White House report building resilience in the supply chain that considers the economic and environmental risk of earth. That's essential with regards to the batteries that we are importing. The life-cycle analysis for batteries is critical. The environmental justice of first world nations need to be considered. Environmental justice should not be exported by CARB and CARB should not turn a blind eye to BEV manufacturing with a tailpipe mentality.

CARB's statutory requirement in the Scoping Plan is to minimize leakage in non-California greenhouse gas emissions. And with battery manufacturing, there's all types of leakage elsewhere, and CARB needs to consider the carbon footprint of BEV manufacturing, battery electric manufacturing.

This is critical to be included in the Scoping Plan. Where is environmental justice for all when we export emissions onto first world nations.

Thank you.
BOARD CLERK ESTABROOK: -- will be Kathleen Kilpatrick. After Kathleen, will be Shayda Azamian, Bill Magavern and then Ryan Kenny.

Kathleen, you can unmute and begin.

KATHLEEN KILPATRICK: Oh, unmute. Okay. Kathleen Patrick. I work with Safe Ag Safe Schools, a group in the Monterey Bay region and also with a new little group called Campaign for Organic and Regenerative Agriculture focused on the Pajaro Valley in Santa Cruz.

I want to echo whatever has been previously said about the multiple benefits of including reduction of synthetic pesticides and improvement of agricultural practices, as both helping environmental justice, and climate, and overall reduction of fossil fuel use. We see CARB as our climate champions in EPA -- I mean CalEPA.

And, you know, we really are depending on you to make sure that this part of the Scoping Plan gets more emphasis. I spent most of my health -- my working career in health care. And I just want to remind you that the health modeling, as is done currently, does not accurately reflect the impacts of poor air quality and climate change on vulnerable populations.

Besides asthma and other chronic respiratory diseases, recent studies show associations between poor air quality, and intention and behavior problems that
impair learning. And the cumulative impacts of multiple pesticide exposures, through occupational take home and drift exposures, have been shown to impact neurological development and may increase the risk of certain cancers.

Reducing synthetic pesticide use again has multiple benefits and must be paired with a change in agricultural practice.

We need to see reduction -- reduction in fossil fuel use from the beginning to end of the agricultural process and increased biodiversity. Our climate is at a danger, a tipping point in our populations, especially in places like the San Joaquin Valley are being unjustly impacted by the way agriculture is done now. It's not all about diesel trucks. It's not all about urban sources. Please pay attention to our rural communities and to our agricultural practices when you look about -- look at not only how we can reduce fossil fuel emissions, but also sequester carbon by building healthy soils.

Thank you.

BOARD CLERK ESTABROOK: Shayda Azamian. Shayda, you can unmute and begin.

SHAYDA AZAMIAN: Thank you, Chair Randolph, the Board and staff. And thank you EJAC members for a powerful and accurate comments today that really said almost all of it for us. I'm Shayda Azamian with the
Leadership Counsel for Justice and Accountability. I'm one of the many environmental justice health and climate advocates who remain concerned that the process and substance provided by CARB staff to date will not yield the Scoping Plan that is mandated by State law, one that is advancing human well-being and equity.

To date, and very clearly demonstrated in the staff presentation today, the strategies proposed through the Scoping Plan process have originated from a dominant lens of carbon neutrality. While carbon neutrality by 2045 is important for curtailing the worst of the climate crisis, it is not the only nor is it the primary mandate of the Scoping Plan.

CARB must be anxious concerned with first meeting the 2030 target to reduce greenhouse gas emissions by 40 percent from 1990 levels and significantly reducing co-pollutants with dedicated strategies for this.

CARB is required by State law to prioritize direct emissions reductions at the source in meeting this 2030 forget. And without CARB's utmost attention on 2030, implementation of the 2045 neutrality target will surely further harm environmental Justice communities, who have already felt the negative impacts of current carbon neutral policies.

So we look to the Board to ensure adequate focus
in the Scoping Plan process on first meeting and exceeding
our 2030 reduction targets. Additionally, as shown again
most recently in the Legislature this week Cap-and-Trade
has not and will not produce equitable emissions
reductions. Cap-and-Trade is concentrating pollution in
Environmental Justice communities and must be replaced
with real and equitable climate mitigation policy with
clear direction for this in the Scoping Plan. If CARB
seeks to advance environmental justice and to help as many
people as possible to make it through the worsening
climate crisis, then the State cannot and must not rely on
emissions trading offsets or geoengineered carbon capture
and storage technology and extend fossil fuel and gas
dependence.

These approaches must not be considered emissions
reduction strategies and they all perpetuate harm in low
income disadvantaged communities, which CARB is
statutorily prohibited from doing in the Scoping Plan per
SB 32.

California met its 2020 reduction goals largely
through regulation. In this Scoping Plan, we still need
clear timelines, regulatory direction, and goals for
agency coordination to completely phase out and transition
sectors, like oil and biogas production, and industrial
agriculture. We need significant corresponding investment
into an affordable zero energy -- zero-emission energy
system in sustainable sectors that are already doing the
good work of recreating a sustainable economy, but need a
clear State framework for scaling zero-emission solutions.

Lastly, we echo the call for the CARB Board to
require more comprehensive health equity analysis that
will evaluate public health benefits, threats, and social
costs of each Scoping Plan Scenario. The forthcoming
analyses CARB staff and consultants are already planning
to conduct are not able to provide this comprehensive of a
health analysis, which is necessary to knowing the Scoping
Plan's projected impact on human health and equity.

Thank you.

BOARD CLERK ESTABOORK: ...you can unmute and
begin.

BILL MAGAVERN: Thank you. Bill Magavern with
the Coalition for Clean Air. I worked on AB 32, I worked
on SB 32, and I've commented on every Scoping Plan to
date. And I just want to make some kind of big picture
comments.

The first is, and I think Shayda just made this
point well, is that the primary task of this Scoping Plan
is to make sure we comply with the statutory emissions
limit that was set by SB 32. We do need to keep emissions
going down afterward. And so, you know, I don't object to
looking at a 2045 target, but let's make sure that we're doing the hard work necessary to actually reaching that rather challenging 40 percent reduction by 2030.

And to do that, we shouldn't overrely on Cap-and-Trade. And, you know, that's been a theme of my comments on every Scoping Plan. And I think they've been borne out, that what has really worked for California has not been shifting emissions around through trading and offsets, it's been having smart and strong regulatory standards. That's been the backbone of California's emission reductions, whether it's in air quality or in climate change.

And we compliment those strong standards with incentive programs to advance the technology and to turn over the dirtier equipment and hasten the advent of the newer, cleaner equipment. So we urge you to stick with what's been working, strong standards, complemented by incentives and not to overrely on trading, and certainly not on offsets. Offsets should be restricted to those that are within the state of California and those should have very strict standards to make sure that they are indeed additional and to make sure that they are permanent. And we also urge you to do the kind of health analysis that has been recommended by the Lung Association and others.
Thank you.

BOARD CLERK ESTABROOK: ...will be Ryan Kenny.

After Ryan, will be Sarah Aird, Alison Torres, and Michael Boccadoro.

Ryan, you can unmute and begin.

RYAN KENNY: Yes. Thank you. Good afternoon, Chair Randolph and members of the Board. My name is Ryan Kenny with Clean Energy.

I think a staff member said it earlier well, we're out of time. We must remove carbon from the atmosphere. Unfortunately, this Scoping Plan, like other regulations is really focused on the long term. And I think Julia Levin mentioned it earlier very well that there needs to be an emphasis and make short-lived climate pollutant reductions the highest priority.

Climate change scientists have said we only have six to seven years left to slow warming or we will go beyond the critical 1.5 degree Celsius stage increase that will trigger very damaging feedback loops. And that, of course, I think should be a priority in the Scoping Plan.

Of course, diesel is a significant strategy for -- reduction of diesel is a significant strategy for reducing short-lived climate pollutants, especially because it causes black carbon emissions, and the displacement reduces methane from livestock and landfill...
waste.

Also, within the Scoping Plan, we have not seen alternative scenarios publicly released by CARB looking at other options besides 100 percent electrification. We believe CARB should model what renewable fuels can do to meet the State's greenhouse gas emission reduction goals. Also, two scientifically valid studies have been submitted to staff, and they both concluded that both zero and near-zero together can deliver earlier and more cost effective benefits than a ZEV-only approach. And I know staff has received and acknowledged receipt of those studies, but there has not been a public response to those and we'd like to see staff's analysis.

Diesel trucks are the largest source of greenhouse gas emissions in the transportation sector. Heavy-duty ZEVs are not close to being commercially ready. I mentioned earlier this morning the deficiency in CALSTART's ZETI tool, which claims to provide the readiness status of commercial heavy-duty ZEVs. And there is a lot of misinformation provided in there. For instance, if you click on the category North America and heavy-duty truck, 14 manufacturers are listed, but only two are currently producing electric trucks, that's BYD and Volvo, and Volvo has a pre-limited spec with less than a hundred mile range.
So we'd like to see CARB staff take a look at the reality of that ZETI list, because it's just not an effective tool for the reality of heavy-duty commercial ZEVs at the moment.

RNG is carbon negative and available now and in plenty of supply in California and we urge the Board to take a look at alternatives really increase immediately those short-lived climate pollutants and other climate pollutants as well.

Thank you.

BOARD CLERK ESTABROOK: Sarah Aird, you can unmute and begin.

SARAH AIRD: Yes. My name is Sarah Aird and I'm Co-Director with Jane Sellen of the statewide coalition Californian's for Pesticide Reform made up of more than 200 organizations around the state. CARB staff has spent a lot of time considering the issue of pesticides and we're very appreciative of their efforts, and again with many thanks to those CARB Board members who have recognized this important issue as requiring priority.

We were pleased to see that organic farming is being considered within some of the proposed modeling scenarios for natural and working lands in the Scoping Plan. Having said that, we believe organic farming should be in all the modeling scenarios. And most importantly,
we are asking the Board to ensure that the final Scoping Plan includes and prioritizes adoption of organic farming as a key natural and working lands climate strategy and identifies measures to increase its adoption.

Hundreds of studies, including many from California, document how organic farming sequesters carbon at significantly higher rates when compared to conventional farming that is reliant on synthetic pesticides and fertilizers. We also ask that CARB ensure that other pesticide reduction strategies are included in the Scoping Plan.

Unfortunately, to date, all indications from staff are that other pesticide reduction strategies will not be included. But if pesticide reduction language is not included in the Scoping Plan, the Scoping Plan can lead to increased use of pesticides and their disparate impact in low income communities of color. Studies shows that some climate-smart ag practices that the Scoping Plan is likely to support, such as no till and conventional farming result in higher pesticide use.

In addition to its air quality obligations, CARB is under a civil rights obligation to comply with California code 11135 and Title 6 to ensure that its policies and programs, such as the Scoping Plan, do not inflict or make a disparate impact worse. And we know,
based on CalEPA's own researchers, that pesticides are
pollutants with the greatest income and ethnic disparities
in the state.

   The Scoping Plan cannot be designed in a way that
will result in an increase in these pollutants. And the
best way to ensure it doesn't is to explicitly include
language on pesticides and support adoption of pesticide
reduction strategies.

   In particular, it's important to include fumigant
reduction strategies. Fumigants are among the most
hazardous and toxic pesticides and contribute directly to
greenhouse gas emissions. Fumigant and pesticides are
toxic air contaminants that contribute to the formation of
tropospheric zone. And a number of the most highly used
fumigants result in nitrous oxide emissions increases as
much as 7 to 100-fold.

   Because they effectively sterilize the soil,
fumigants also lead to higher use of synthetic fertilizers
to make up for the nutrients lost in the soil due to
fumigant use, leading to even greater greenhouse gas
emissions. There is sufficient evidence now to include
strategies in the Scoping Plan to support fumigant
reduction.

   Finally, the Scoping Plan is a bold, broad plan.
   It's a vision that helps set a critical statewide
direction. We've just heard today Board members and staff note that the perfect can't be the enemy of the good and that we must take bold action now. To leave out greenhouse gas emissions apart from carbon, such as methane and nitrous oxide emissions from natural and working lands, is not bold action. Leaving pesticide reduction strategies out of the Scoping Plan is not bold action.

We've been calling for the inclusion of pesticide reduction strategies in the Scoping Plan since 2017 to no effect. It's time to take action now.

Thank you.

BOARD CLERK ESTABROOK: Alison Torres, you may unmute and begin.

ALISON TORRES: Good afternoon, Madam Chair and Board member. My name is Alison Torres with Eastern Municipal Water District. EMWD is a water, wastewater, and recycled water agency located in southwest Riverside County. We've provide essential services to 555 square mile service area serving more than 827,000 people. EMWD operates four wastewater treatment plants that currently treat a combined total of approximately 46 million gallons per day. I appreciate the opportunity to comment and the work that staff has put into the Climate Change Scoping Plan.
As a provider of essential public services for wastewater treatment, our facilities collect and treat wastewater from our surrounding communities. A natural by-product of our wastewater treatment process is wastewater biogas, which is a non-fossil renewable low carbon fuel and must go somewhere. Beneficial use of the low carbon now-fossil fuel is a technology available today.

It is critical that a clear viable market and pathway for the use of this biogas is maintained. The Scoping Plan scenario inputs should account for the continued generation and use of this POTW-derived biogas. The Scoping Plan update scenarios also need to acknowledge the important role of the public wastewater sector in achieving the organic waste diversion mandates in SB 1383, and the use of wastewater biogas in near zero-emission vehicles as a renewable transportation fuel.

I commend CARB staff for the work that they've put into the scoping plan update thus far and I look forward to the continued opportunity to participate in the process.

Thank you for the opportunity to comment.

BOARD CLERK ESTABROOK: ...will be Michael Boccadoro. After Michael will be Sydney Chamberlin, Jason Barbose, and Danny Cullenward.
Michael, you can unmute and begin.

MICHAEL BOCCADORO: Thank you very much. Michael Boccadoro on behalf of Dairy Cares. Let me first thank those CARB Board members who have taken the time over the past few months to learn more about what California's Dairy Farm families are accomplishing. We have enjoyed hosting many of you on our projects in the San Joaquin Valley. It should not be lost on any of you that California has very ambitious goals to reduce methane. In fact, California is the only major jurisdiction that would have a 40 -- that has a 40 percent statutory methane reduction in place and the state put it in place five years ago. The rest of the world coming out of COP26 has signed on to a 30 percent methane pledge and that includes the United States.

The important takeaway here is that the California dairy sector is well on our way to achieving the 40 percent methane reduction sought by the State and you're doing it in the state with the largest dairy sector in the nation. It should be accommodated for that.

Our dairy farm families have initiated over 300 methane reduction projects, including over 200 digester projects in the state. We have initiated 15 separate digester clusters with over 150 existing dairies of all sizes installing digesters. I want to be clear here, more
than 30 of these digesters are on small dairies here in the State that have been made possible by the effective incentive programs that are being made available to these small farm families in California. We've installed more than 200 miles of gas gathering lines and we've invested close to $2 billion, matching the State's $700 million investment, nearly two to one.

Your charge is very clear, and that is to identify, as your staff provided in the overview, to identify science-based, cost-effective, and technologically-feasible solutions that do not result in leakage, and I want to focus on that. Putting cows on U-Hauls is not a science-based policy that will result in reducing methane, quite the opposite. It will lead to leakage and leakage is failure.

We must avoid that. And the only way to avoid that is to continue to recognize that the incentive-based model is the appropriate model. It's the model that's been implemented by other countries, including countries in the European Union. And most importantly, it's the model that's now being implemented by the Biden Administration for the entire tire U.S.

Just a couple of weeks ago, the Biden Administration announced a $1 billion investment in climate smart agriculture in the United States, including
investing in dairy digesters. This is the right course. It's the only course that will achieve the 40 cent reduction sought by the State. We encourage you to stay the course.

Thank you.

BOARD CLERK ESTABROOK: Sydney Chamberlin, you may unmute begin.

SYDNEY CHAMBERLIN: Thank you. Good afternoon, Chair Randolph, Board members and staff. This is Sydney Chamberlin with The Nature Conservancy. And I'm thankful for the opportunity to speak today. I also appreciate the many comments we've heard so far with respect to our natural and working lands.

Across the state, we have more than 28 million acres of land available to help the state reduce its greenhouse has emissions and increase carbon stocks to mitigate climate change, all while providing a suite of additional complementary benefits for communities, and nature our. And the time for action in the natural and working lands sector is now. We're already seeing the impacts of climate change. And while our lands have historically served us as a net sink of carbon dioxide, these impacts, along with human development and wildfire point to them becoming net sources of emissions without intervention.
In light of this, we're glad to see CARB begin to consider detailed scenarios and interventions for the natural and working lands sector. Putting our lands on the right trajectory will require careful consideration of land management practices, restoration, and land use, in addition to reducing emissions from wildfire and significant scaling up of nature-based solutions in California. And nature-based solutions are not something to be utilized only in the context of offsets and Cap-and-Trade. We need to think more broadly about how to strengthen the health and resilience of our lands, so they can continue to provide us with both climate mitigation and adaptation benefits as well as other vital ecosystems services.

To that end, we urge CARB to elevate action in the natural and working lands sector in the same way we've seen in through sectors to set clear and ambitious climate goals identifying the greenhouse gas mitigation opportunity by region and landscape, and to prioritize the equitable implementation of nature-based strategies that provide multiple co-benefits and protect communities.

We're eager to ensure that California can achieve meaningful CLIMATE action through the natural and work lands sector and stand ready to continue working with CARB to help inform this work.
Thank you.

BOARD CLERK ESTABROOK: Jason Barbose, you can unmute and begin.

JASON BARBOSE: Thank you. Jason Barbose with the Union of Concerned Scientists. I'd like to make brief comments touching on a few separate issues within the Scoping Plan. They're electricity generation, petroleum refining, biofuels, and the Cap-and-Trade Program.

So first, the modeling that is underway for this Scoping Plan considers emissions from electricity center -- electricity generation to potentially arrange from 23 to 38 million metric tons of CO2 equivalent. As many know, the PUC just codified a target of 38 million metric tons for 2030, and has opened the door to considering further tightening of power sector emissions to 30 million metric tons by 2030.

UCS believes that reducing emissions to 30 million metric tons is necessary to put California on the path to reducing emissions sufficiently and we encourage CARB to recommend a 30 million metric ton target for the power sector in a proposed Scoping Plan.

Second, we strongly support the request of the EJAC to adopt an interagency plan to manage the phasedown of California oil refineries. Electrification of surface transportation clearly implies drastically reduced liquid
fuel consumption. And therefore, a coordinated plan will help affected communities and priorities that manage this important transition.

Third, on biofuels, we request that the Scoping Plan clarify that the use of vegetable oil based liquid fuels and other biofuels be limited to a sustainable level to avoid indirectly contributing to damaging crop land expansion.

And then finally we share the concerns of many about the Cap-and-Trade Program's capacity to ensure California reaches the statutorily mandated emissions limit of 40 percent below 1990 levels by 2030. As the annual report of the Independent Emissions Market Advisory Committee, which I think the next public speaker is a member, that Committee noted earlier this month that there are allowances currently banked into the system than emissions reductions expected from program over the course of this decade. And that calls into question the program's ability to act as a backstop to meeting our climate emissions goals to say nothing of the program's ability to improve air quality in environmentally overburdened communities. CARB takes this risk seriously and takes action to address it.

So in conclusion, this comes at a critical moment in our mobilization to address the climate crisis. Agree
with some of the previous comments that CARB's top priority should really be a process to produce a detailed ambitious plan to meet our statutory emissions reduction limits for 2030, and we look forward to staying engaged as the plan is further developed.

Thank you.

BOARD CLERK ESTABROOK: Danny Cullenward. After Danny will be Gary Hughes, Tom Kabat, and David Rothbart.

Danny, you can unmute and begin.

DANNY CULLENWARD: Good afternoon, members of the Board. Thank you for the opportunity to speak. My name is Dan Cullenward. I'm speaking today in my capacity as Vice Chair of the Independent Emissions Market Advisory Committee, the statutorily authorized advising body that works with CARB, as well as the Legislature, particularly on the design and performance of the Cap-and-Trade Program.

I wanted to summarize a few of the key findings from our report for you today, as well as to extend and invitation to the Board collectively as well as to every individual member of the Board for anyone who would desire a briefing on the contents of our consensus based five-member report.

This year's report focuses on a number of topics. I will touch on three of them very briefly. The first
concerns the Scoping Plan process and the adequacy of modeling availability to track the performance of the Cap-and-Trade Program in the Scoping Plan process, as well as its relationship to the current Cap-and-Trade Program design. The report indicates that none of the technical modeling made available so far provides any insights as to the size or function of the Cap-and-Trade Program in its contribution to 2030.

Clarifying this is extremely important, because in the previous Scoping Plan cap-and-trade was the single biggest driver of emission reductions planned in that document. I understand the modeling work that will be coming out in a short while may help address some of these issues. My colleagues and I look forward to reviewing that when it's available.

The second two issues I want to touch on have to do with the performance of the Cap-and-Trade Program. I'll start with the question of allowance banking. This report provides an opportunity after the first three compliance programs -- compliance periods that the program had finished to take stock of the performance of the program. And one of the big challenges that the community observed in its report this year is that there are about 321 million allowances in the program that were banked from these first three compliance periods into the current
period of compliance.

This number is about twice the amount that CARB considered in its most recent Cap-and-Trade Rulemaking in response to statutory instruction to address this issue. It's also consistent with concerns from critics who've raised issues around whether or not these surplus allowances will render the program unable to serve in its current backstop function get to our 2030 goal. And it's also significantly larger than the planned reductions CARB anticipated in the 2017 Scoping Plan from the entire program.

Finally, I want to touch briefly on the large carbon offsets program, which volumetrically has produced about half of the allowance bank in terms of usage of offsets throughout the broader Cap-and-Trade Program. The report reviews a number of technical considerations that are documented now in the peer-reviewed literature and highlighted as areas of concern with respect to overcrediting in the Large Forest Offsets Program, as well as concerns around our ability to manage the risk of fire and other risks to forest carbon permanence.

Again, I want to extend the invitation to the Board and to individual Board members. If anyone wants a technical briefing, I and my colleagues would be happy to arrange that. I'd also like to extend that invitation to
my colleagues in the Environmental Justice Advisory Committee.

Thank you for your time.

BOARD CLERK ESTABROOK: Gary Hughes, you can unmute and begin.

GARY HUGHES: Thank you. Hello, esteemed Chair Randolph, members of the Board, and agency staff. My name is Gary Hughes with the international organization Biofuelwatch. Thank you for this opportunity to provide brief comment on the development of the 2022 Scoping Plan update.

I want to communicate to members of the Board our organization is concerned about what has been characterized as the magical thinking of California's approach to climate mitigation. It is necessary to flag that there is a contradictory reliance on the land sector for both the extraction of natural resources, such as feedstocks for bioenergy, as well as for hypothetical carbon removals. The hard truth about California's heavily industrialized landscapes, forests, and otherwise, is that climate driven disturbances will greatly undermine climate mitigation aims.

What we know is that rising temperatures and declining precipitation patterns are projected on average to drive ongoing declines in biomass and carbon storage in
California's ecosystems across the 21st century. The climate risks to the land sector are considerable. Yet, the emphasis on natural and working lands in the Scoping Plan process is failing to adequately integrate the best contemporary science that shows that land sector based climate mitigation strategies are most likely to be useful if, and only if, they are paired with aggressive reductions at source of fossil fuel emissions, and that they are most certainly destined to fail if land management policies are offered as a substitute for reducing fossil fuel emissions or as used -- or are used as greenwash of ongoing resource extraction.

Another issue that we want to flag in considering a new Scoping Plan is that existing mechanisms need thorough review, such as the Low Carbon Fuel Standard, which in numerous instances is finally starting to receive the attention of the Board. As an example, I ask that the Board investigate civil society concerns that the scoping plan is glossing over the risks that the LCFS promotion of making liquid fuels from high deforestation risk feed stock commodities like soy is incentivizing a refinery pivot to biofuels that promises to make the climate situation worse, not better, while keeping front-line communities in the pollution hot seat.

The refinery pivot to liquid biofuels as we are
watching happen in the Bay Area is based on a fossil gas, i.e. methane, intensive refining process relies on feedstocks that put tropical rain forests at risk, and the final product is not even actually replacing petroleum-based fuels. As such, it does not and will not contribute to decarbonization.

We really do encourage the Board to do a thorough evaluation of many of the increasingly dubious assumptions that are driving the Scoping Plan update process. It is not too late to correct course. Thank you for your attention to this comment.

BOARD CLERK ESTABROOK: Tom Kabat, you can unmute and begin.

TOM KABAT: Thank you very much. Thank you for the opportunity to comment today. I appreciate the Board and staff taking this modeling project on and sharing their plan with how to go about the modeling. What I saw from the presentation was that much of the modeling was to look at the impacts and benefits to Californians, as though we are isolated under some kind of dome and not really looking at the additional benefits created elsewhere from the CARB leadership. So if the modeling can take into account the greenhouse gas reductions in California also reduced greenhouse gas problems elsewhere,
globally, that would be another benefit to include. And so it makes sense to look at the global benefits of greenhouse gas reduction, as well as criteria pollutants that drift across our State borders to other places.

Also, it makes sense to look at the leadership role and to explicitly model the leadership role that CARB can have in energizing other parties around the world in other states and other countries to get onto the problem in a rapid manner, by including a multiplier in your modeling, looking at what is the effect of other countries and states adopting bold initiatives, because they see what you are able to model and implement here.

We think that can produce much more benefit than is credited in the models. And those additional benefits are worthy to stack up against the costs when the naysayers bring up costs to tell you to go slow.

So please expand the modeling efforts to look at the -- both the benefits from the emission reductions that California does and the benefits from the leadership that California provides through a bold action, getting back on track with meeting our obligations and going further to try to approach meeting the two degree and one and a half degree Paris climate accord targets.

Also, there's been a lot of talk about using carbon capture and sequestration. And from my attending
various presentations about it by the oil industry, they are hopeful to be able to provide that service at a cost of $200 per ton of CO2. I think the modelers and policymakers should use that optimistic low-cost projection of $200 per ton, instead of low cap and trade values when figuring out what is the optimal level of other activities to pursue. We ought to be putting a $150 a ton into other activities like electrification and real reductions of methane use.

Thank you.

BOARD CLERK ESTABROOK: ...will be David Rothbart. And then after David, our final three speakers will be Leah Louis-Prescott, Paul Mason, and Sarah Deslauriers.

David, you can unmute and begin.

DAVID ROTHBART: Thank you. This is David Rothbart with the Southern California Alliance of Publicly Owned Treatment Works. Thank you Chair Randolph and Board members for giving me the opportunity to comment on the updated Scoping Plan.

As an entity that the members are wastewater treatment plant operators, we generate a biogas. As a process of flushing your toilet, we generate a biogas that must be managed. But beyond that, I wanted to talk about unintended consequences of just an electrification-only
approach. As you're aware some other speakers talked about SB 1383, where we're going to start taking food waste out landfills and a lot of that is going to go to wastewater treatment plants to generate a non-fossil fuel biogas, that could be used in a productive manner.

My organization uses wastewater treatment plant biogas to generate on-site power. My treatment plants are already carbon negative and we'd like to pursue that moving forward.

The problem is, as we talked about earlier today, as far as ozone attainment. The problem is, we move forward the attainment requirements get more and more restrictive and we're not going to be able to generate more power at my treatment plants. I need some where else for that gas to go.

Essentially, if we're saying electrification only, I don't have a home for that gas. It makes more sense to say, what's the highest and best use of that gas giving us an ability as a central public service to find a home for that gas that's carbon neutral. And at the moment, the best place for it with the existing infrastructure to get reductions now of greenhouse gas reductions, get diesel trucks off the road is to put that non-fossil fuel into RNG vehicles and get those reductions today and continue becoming carbon neutral moving forward.
We really would appreciate having options for this gas and to avoid this unintended consequence. Thank you for the attention.

BOARD CLERK ESTABROOK: Leah Louis-Prescott, you can unmute and begin.

LEAH LOUIS-PRESCOTT: Good afternoon. This is Leah Louis-Prescott, a Senior Associate from the Oakland office of RMI.

Thank you so much for all of your work on this Scoping Plan. I have not heard much on buildings in this Scoping Plan discussion. I want to reemphasize the importance of an equitable statewide transition to safe, health, all-electric homes and businesses. As I mentioned in earlier comments today, buildings are a major source of nitrogen oxide emissions contributing to health and air quality issues. Direct building emissions account for ten percent of our state's greenhouse gas pollution contributing to the climate crisis.

This Scoping Plan is a critical opportunity for CARB to help initiate planning for the multi-stakeholder effort for statewide building electrification that we need. We need to start this process as soon as possible to ensure adequate opportunities for community input and to act in time to meet our climate goals. I urge CARB to include the building sector in the main body of the
Scoping Plan, rather than in an appendix to underscore the need for a coordinated transition for this major source of pollution.

I also encourage CARB to follow the EJAC's leadership to ensure that this Scoping Plan reflects an equitable pathway to decarbonizing new and existing buildings, and prioritizes environmental justice communities and good jobs created in this transition. California cannot achieve carbon neutrality without decarbonizing its buildings.

I am grateful that CARB is committed to advancing an equitable transition for the building sector, and I hope that the depth of this commitment is reflected by making building decarbonization a key section in the body of this Scoping Plan update.

Thank you.

PAUL MASON: Good afternoon, Madam Chair, members of the Board. Paul Mason with Pacific Forest Trust. Much has already been said and I will try and avoid being redundant. We really appreciate that the Resources Board is taking a much more substantial approach to inclusion of working lands in this -- in this update to the Scoping Plan. And we really looking forward to seeing some of those preliminary modeling results in the coming weeks. We really only have the most general idea of
what's being modeled, so having an opportunity to see and provide some feedback on those different scenarios will be really helpful for those of us that work in this natural and working lands space.

I want to really focus in on highlighting three key things. One is around resilient forest conditions. It's been gratifying that there's so much attention to improving forest conditions, and a fairly broad recognition that healthier forests are going to have fewer, larger, well-spaced trees, where regular fire is part of a natural process that maintains those conditions.

But I'm really worried that too often we have a short-term view of what we're going to do in forests and try and focus on the ecological thinning and burning, and increasing management, when forests operate on a very long cycle. So to get to the conditions and to maintain the conditions that we're trying to get to, it's going to require permanent changes in how we manage forests. And an important part of getting there is going to be working forest conservation easements that keep those forests in private ownership where they're currently in private ownership, but secure permanent and enforceable changes in how they're managed, so they're more climate smart and resilient going forward. That will also help us meet some of our biodiversity and other, you know, water, and
wildlife, and conservation goals at the same time. But
that will make sure we're actually getting durable
benefits from these initial treatments.

Second, I'd like to focus on making sure that
we're working at significant scale, so that we're really
trying to restore forest and watershed function at enough
of a scale that fire can be a natural process there and
doesn't just come in and just blow past some of the small
restoration activities that we might otherwise focus on.

And lastly, I would just highlight that there's
been a lot of attention to fire, because of the really
extreme smoke events we've had the last couple of years.
And part of our challenge there is that our current policy
focused on suppression, puts out all the fires that would
actually be beneficial to resilience, and we end up
spending billions of dollars to select for the most
damaging fires. So we're really going to have to look at
how we approach fire suppression, and, you know, come to
grips with the fact that we're going to have a little bit
of smoke under even the best circumstances. We just need
to choose the timing on that.

Thank you.

BOARD CLERK ESTABROOK: ...hear from Sarah
Deslauriers. You can unmute and begin.

SARAH DESLAURIERS: Thank you. Hello. My name
is Sarah Deslauriers and I'm the Climate Change Program Manager of the California Association of Sanitation Agencies, or CASA, the members of which represent over 90 percent of the sewered population of California. And I just want to thank you for the opportunity today to provide comment on the latest update of the Scoping Plan.

Our members, while reliably provide an essential public service, wastewater treatment, to protect public health, and environment, and support emergency services, the wastewater sector can also contribute to all the major climate policies in pursuit of carbon neutrality. However, we have identified barriers to implementation while remaining reliable and in compliance with existing regulations. And you've heard some of those from our members that have already spoken earlier.

I will reiterate that while CARB does strongly support CalRecycle and the State Water Resources Control Board in their efforts to implement Senate Bill 1383 regulations to achieve methane reduction, which incentivizes the increased production of biogas for use as a transportation fuel or for on-site powered heat production, CARB is also moving forward with Advance Clean Vehicle Regulations to fully electrify vehicles.

While this promotes biogas to be converted to power, it disincentivizes the medium- and long-term
opportunities for development of biogas into a low carbon fuel, even though the technology is immediately available and local air pollutant reductions can be achieved today. For example, we could achieve 90 percent reduction in NOx to achieve ozone reductions as folks have been mentioning in earlier testimonies.

We have a resource that will be produced in perpetuity -- well, as long as we all flush, right -- and can support the overall resilience of our own essential public services that we provide. Another product we produce from co-digestion of sewage, sludge, and diverted food waste in, you know, compliance with Senate Bill 1383 is biosolids. Biosolids are an organic soil amendment that can achieve many different benefits when it's applied to soils, improving the soil health, including carbon sequestration that is a target of natural and working lands climate -- or the draft, a smart strategy as well as the Healthy Soils Initiative, as well as looking at the wildfire and forest kind of resilience aspects as well.

So we want to make sure that we're also participating in any kind of work groups that are discussing the potential for biosolids that are used towards those efforts and policies are achieving those goals as well.

I just want to thank you for your time today and
we look forward to the engagement. We have been engaging
with CARB staff, CARB executives, Board members, and
really appreciated that, and coming to a solution for the
wastewater sector on both biogas and biosolids related
items.

      Thank you.

BOARD CLERK ESTABROOK: We'll hear Mikhail
Skvarla. Mikhail, you can unmute and begin.

MIKHAEL SKVARLA: Yeah. Thank you, Chair and
Board members. I know you guys have been here for a long
day. My name is Mikhail Skvarla. I'm with Gualco Group.
I'm here on behalf of the California Council for
Environmental and Economic Balance. We're a business
labor organization focusing on environmental solutions at
a reasonable economic cost.

      You've heard a lot today, and I just want to make
a couple points. First, with regard to the Cap-and-Trade
Program, the Program has delivered the emission reductions
necessary to achieve the State's targets. We understand
the criticisms, which are annual and perennial, and
ongoing since we reauthorized in 2017.

      To that end, the market is sending the
appropriate economic signals. We have one of the highest
carbon prices in the Pacific Rim, especially if you
aggregate it with the RPS and Low Carbon Fuel Standard.
The overall cost of carbon in the state of California is driving a tremendous amount of investment. And with regard to that, we have started to dive into the OEHHA report which is indicating that we are seeing benefits in and around the facilities that are capped. And to that end, we think that over the long run as we're able to continue to make efficiency upgrades and improvements, we will continue to see those benefits in and around the industrialized base.

Also, as we look towards the future, the ability to decarbonize Electrons and molecules is highly dependent on our ability to permit in the state of California. The next decade is going to require a massive infrastructure exercise. And I think the Obama admin -- or the Biden administration and Congress have recognized that with the IIJA funding and the need to invest heavily in decarbonization both in electrons and molecules.

And so to that end, as we look further into the Scoping Plan and what's needed beyond, I think that permitting needs to be raised and the ability to make sure that these clean molecule and clean electron projects get on-line, notably the state -- the buildings trades have highlighted recently that two wind projects have been denied both in conservative and democratic district counties. And so to that end, we think that this is kind
of a ubiquitous problem across the state that, you know, we think the Board should dive into and maybe look at solutions to help us move quicker, so that we can help achieve the goals that a lot of the constituents and other stakeholders have talked about today.

Thank you.

BOARD CLERK ESTABROOK: Final speaker will be Stephen Jepsen. Stephen, you can unmute and begin.

STEPHEN JEPSEN: Hi. Thank you, Madam Chair and Board for the opportunity to speak today. This is Steve Jepsen, the Executive Director for the Southern California Alliance of Publicly Owned Treatment Works, or SCAP. We represent over 80 public water, waste watery, and recycled water agencies in Southern California.

As described by my wastewater colleagues earlier, wastewater treatment plants generate a non-fossil biogas as part of the process of cleaning the public's wastewater to protect public health and the environment. This wastewater derived biogas is currently used in a few ways including generating on-site heat and power for the treatment plant, and also as a low carbon truck and vehicle fuel which has 90 percent less NOx than diesel fuel.

As described earlier, SB 1383 will be diverting food waste away from landfills to POTWs. This will
significantly increase the amount of waste-derived non-fossil biogas generate. Using this low carbon renewable fuel source to power our essential public service maintenance and emergency equipment will expedite the transition from diesel-powered trucks.

The wastewater derived renewable gas engines and equipment we need to maintain our wastewater systems are currently available, and in some cases already in use. Whereas, zero-emission equipment are not available, and based on communication with equipment suppliers not feasible with current technologies for our heavy-duty emergency response and maintenance uses.

We are not opposed to zero-emission, light-duty vehicles and medium-duty vehicles. And many of our agencies already have them in their fleets. To achieve clean air goals and be consistent with Federal Clean Air Act requirements, we must use all the tools in the toolbox.

In summary, the waste sector has a non-fossil renewable fuel source derived from society's waste that cannot be turned off. Engines and our specialty equipment that can use this fuel already exists. Embracing this non-fossil renewable fuel will expedite getting diesel trucks off the road, allow the wastewater sector to continue our mission of protecting public health and be
consistent with Federal Clean Air Act requirements.

We ask that CARB policies include the wastewater sector's non-fossil wastewater derived renewable gas fueled heavy-duty vehicles and specialized equipment as part of a clean air solution.

Thank you very much.

BOARD CLERK ESTABROOK: That concludes the commenters.

CHAIR RANDOLPH: Thank you. All right. This is an information item, so I will ask the Board members to raise their hands zoom if they have any questions or comments they would like to make.

Everyone is thinking deeply about everything they just heard.

Okay. Board Member Kracov.

BOARD MEMBER KRACOV: Yes. Thank you, Chair.

It's a lot to digest to be sure. And as a newer Board member looking forward to learning more about this. I know we've got a few meetings I think with the EJAC again in March. And we're going to be seeing this quite a bit as it moves forward. So for me at least as a new Board member it really is a learning experience.

So if I can, Chair, just ask a couple of clarifying questions as part of the education process today. I guess the first one is about sort of the goals
for the Scoping Plan in terms of timeline. There seems to
be some back and forth about what the role of meeting the
2030 goal is, which I believe is 40 percent below the 1990
baseline. So I guess if I can ask staff to speak to this
as to how much are we going to be looking at the 2030 goal
in the Scoping Plan? So I'll...

DEPUTY EXECUTIVE OFFICER SAHOTA: Board Member
Kracov, this is Rajinder Sahota the Deputy Executive
Officer for Climate Change and Research.

The Scoping Plan, as in previous Scoping Plans,
will make an assessment towards the near-term target,
which is that 2030 target. So we will try to understand
through the modeling are we on track and what are the
uncertainties over this decade that could hinder or impede
our achievement of that goal. And there are new
uncertainties that have become available, certainties
around permitting, certainties around funding, and
certainties around CEQA analyses and other kinds of
fundamental steps that need to be taken before you can
actually take action on the ground or break ground on any
projects. So that will be part of the discussion.

And then as part of the second part of the
Scoping Plan, we will also look at the outcomes that we
need to achieve the 2045, 2035 targets for carbon
neutrality. So it will serve dual purposes. That is the
precedent that has been set in previous scoping plans to look at near term and then project forward. It allows us to think about stranded assets. It allows us to think about even focusing near term on things that can help on the longer term, and so that is really the goal for the Scoping Plan just as before.

BOARD MEMBER KRACOV: Thank you very much for that. If I can ask a couple other clarifying questions, Chair. We talked about, or Ms. Sahota just talked about -- is it Dr. Sahota?

DEPUTY EXECUTIVE OFFICER SAHOTA: Definitely not.

(Laughter.)

DEPUTY EXECUTIVE OFFICER SAHOTA: It's just a practical degree, which was a Master's.

BOARD MEMBER KRACOV: Right. Yeah. That's --

DEPUTY EXECUTIVE OFFICER SAHOTA: No offense to the PhDs.

BOARD MEMBER KRACOV: Yeah, that's for sure, a practical degree in this job. So I just want to get it straight. I'm sorry. The whole thing has been on Zoom. I think I met you once in person. It does -- it's hard.

Talk about uncertainties. How do we take into account uncertainties in the Scoping Plan. You know, for example, like whether we're going to meet our VMT targets, which are quite aggressive in some of the scenarios or,
you know, our renewable energy goals for that matter, how is the uncertainty factored into the modeling.

DEPUTY EXECUTIVE OFFICER SAHOTA: That is a great question. We started to factor in uncertainty in the 2017 Scoping Plan, where you do the modeling, you actually have a point estimate. But around any estimate, you have to think about things such as will there be legal challenges, could there be delays in breaking ground on projects, could there be delays in funding, et cetera.

And so we go through and look at historical patterns on things like permitting. And we will go back and look at historical patterns on funding or how some of those projects -- that rate of deployment of those projects and factor that into uncertainty and put bounds around every point estimate for every year.

On VMT, we all know that every year -- or every time that we get asked to do the Scoping Plan, we are asked to do aggressive targets on VMT. And we also know that based on the updated reports that we put out, we are off track on VMT. So we will try to do an assessment of uncertainty around VMT, which means that every time that we do a VMT portion of the modeling in the Scoping Plan, we can show you what the perfect reduction would be, if that VMT target can be perfectly met.

But those annual assessments that are related to
AB 32 inventory data, and when look at vehicle miles traveled, or we consider the five-year update to the Scoping Plan, those also provide those touchpoints to make sure that we're on track or make adjustments. So the uncertainties are a big part of the discussion here. I think it's easy to get focused on a point estimate and runoff with a number. But over this decade, as Executive Officer Corey mentioned, implementation is key. And what we're seeing right now across all the sectors is huge uncertainty around permitting and actually breaking ground on the things that we need to build to move forward.

BOARD MEMBER KRACOV: That's an interesting observation. It's probably worth a whole meeting.

If I can, Chair, just one last question. And I guess it relates to the uncertainty point that we were just discussing. I know that some of the models, the scenarios talk about a phasedown of oil and gas extraction and potentially even refining.

How to -- but I think some of them say, you know, according to demand. And again, we're projecting out not only to 2030 but, you know, beyond, so uncertainty plays a factor in that. So how do we assess that phasedown and the uncertainty around what, you know, demand might be in the future? How are we approaching that?

DEPUTY EXECUTIVE OFFICER SAHOTA: So again this
comes back to the question of what we model and what we can do outside of the modeling. In the modeling right now, we are phasing down demand act -- or we are phasing down demand, and then at the same rate phasing down the in-state production. That includes oil and gas extraction and includes refining. We know that across a few of the scenarios residual demand will remain for petroleum products across the economy, especially in the transportation sector in particular.

For those sectors, when we get that modeling, we can figure out the fuel that will be used and combusted and the associated missions for those refinings and oil and gas extraction activities. We can then zero those out, use that fuel difference to calculate any health benefits. But then we also need to include a discussion about how to meet that ongoing demand, if we phase down those activities. And that ongoing demand is going to be met through imports if we're not producing it in state.

And associated with that imported duel to meet that demand is going to be consideration of how does that fuel enter the state, what are the costs associated with that fuel, and potentially which sectors or which groups will be the ones paying for that fuel to still be brought in to meet that demand.

So the modeling doesn't show it, but we can take
the data from the modeling to do this exercise, as was requested by the Governor in a letter to CARB.

    BOARD MEMBER KRACOV:  Okay. Thank you, Chair, for allowing me to ask those questions.

    CHAIR RANDOLPH:  Thank you.

    Board Member Takvorian.

    BOARD MEMBER TAKVORIAN:  Thank you, Chair.

    I was just saying to somebody this feels a little déjá vu. This has always been -- the Scoping Plan process has always been very challenging. It's really overwhelming. And I really want to thank staff for a comprehensive explanation and presentation on the Scoping Plan today, and also thank the Environmental Justice Advisory Committee members who have been going, as they said, at a breakneck pace, so many meetings, and so much conversation, and so much study, as well as the public who's continuing to really participate in a big way.

    I think the Scoping Plan is often described as very high level, but it's setting the table via the choices that are included in the modeling and determining what strategies and measures will be developed over the next period of time and which will not be included.

    So I think there's a little bit of chicken and egg dynamic here that makes it confusing for the public and I think has often made it confusing for the Board as
well. So I'm really hopeful in this year -- in this time that we're updating the plan that we can get clearer about it, because I think that's why we have so many people from every stakeholder category, and especially environmental justice communities participating in the process to ensure that the measures included address the issues in the communities.

So I'm very grateful, I want to say, to the Chair for announcing that there will be a permanent EJAC. It's so long overdue. And it's been a request since the first EJAC, which I had the privilege of sitting on. I think it provides the opportunity to ensure authentic environmental justice participation in the measures that make up the Scoping Plan. So there's a continuity that comes with developing the Scoping Plan and then the measures that obviously are necessary to make it deliver on its promises. So that's something I think is essential.

So I just want to point to a few areas where I really hope that we can discuss in the EJAC and CARB conversation as well as have these included the modeling.

As we all know, half of California's GHGs come from the interconnected sources of transportation system, the light- and heavy-duty vehicles, fossil fuel refineries, and extractions. And getting to zero-emission in these four areas is going to be really critical to
meeting our targets. And we've provided -- I think CARB
has provided and paved the way for the world really in
decarbonizing transportation, but we just heard in the SIP
discussion that we're not going far enough. We really
have to double down.

So I think in this regard, the Scoping Plan
really should show an acceleration of goals for medium-
and heavy-duty vehicle sales to be at a hundred percent
ZEV by 2030 with perhaps only ZEVs on the road by 2035.
I'm sure there will be some exceptions and an equitable
investment in ZEV charging infrastructure. So we really
need to prioritize the investments in the disadvantaged
communities to ensure that these are -- that these changes
are really benefiting EJ communities fees. And I think
per Tania's point during the SIP discussion, we real have
to change the system, so we don't leave -- the whole
incentive system so we don't leave low-income businesses
and residents behind and should really abandon the
first-come first-served kind of mentality with these --
with these programs.

The second area I think in transportation that we
really need to prioritize in the Scoping Plan is
investments in all forms of transportation, like mass
transit, that increase opportunity for EJ communities.
While it's a lot about cars and trucks transitioning to
ZEV, we really need to focus on transit as well. And we can do that by setting VMT reduction targets. And I know that's starting to be considered by the staff as part of the Scoping Plan, which I appreciate. I think looking at targets of around 11 percent transit mode statewide by 2035 with a corresponding VMT reduction of about 30 percent would really get us to where we need to go.

And along with that, the Scoping Plan can really look at higher SB 375 targets for the MPOs, accelerating walking and biking, which was mentioned in the staff presentation as a positive health action.

Next, I think the direct emission reduction, as we've heard from so many of the stakeholders who testified that the Scoping Plan process really needs to rely heavily on direct emission reduction strategies and regulations. And I think EJAC will be making additional recommendations related to that and we look forward to that. I've said this before, but I really hope that the 617 community CERP measures, many of which are direct emission reductions as they are required to be, are included in the Scoping Plan. And I'd like to see that actually listed out, so that we can see where the Scoping Plan is making progress for the CERPs. I think it's something that will be very important and the permanent EJAC will play a huge role in ensuring that these measures are brought forward in a timely
Next, I would -- I would say that in relationship to Cap-and-Trade, which has been discussed by public members today, that this has been a heavy -- this has been a controversial item obviously in all of the Scoping plans, and there's been heavy reliance on Cap-and-Trade to meet the state's climate goals. I think the current Scoping Plan includes a 38 percent reliance on Cap-and-Trade.

And I was a little bit surprised actually that that wasn't addressed in the staff presentation or that the Independent Emissions Market Advisory Committee report that Mr. Cullenward gave us a very brief summary of, was not addressed either. And so I'd like to hear more about that. It's clear that there are excessive allowances. It could really hurt our ability to meet the State's goals. The Legislative Analyst has also said that the allowance bank is so substantial that large emitters may not be required to reduce at all between now and 2030. And many of these emitters are in the fossil fuel sector, which is the focus of the Scoping Plan. So I think we really have to address this.

And I did hear from the update from the Senate Committee hearing yesterday that it was announced that we won't begin a robust discussion on those allowances and on
Cap-and-Trade until 2023 after the Scoping Plan. That seems a little unwise to me and I wanted to hear from staff about how this report will inform the 2022 Scoping Plan and how we might revise the extent to which the State's climate strategy should rely Cap-and-Trade. And I did ask these questions in my briefing and hope to hear more about it today.

I'd also like to commend the staff on including a broader reach on health analysis and appreciate the addition of some of the health outcomes. I am concerned about how we utilize the health analysis in the Scoping Plan to evaluate what more we can do to get additional health benefits. And to my knowledge, that's not how we're using the health analysis. So in the same way that we look at the technological feasibility and the economic impacts, it seems like we're looking at health benefits in that same way, so that we could look at options to say, you know, where do we get more of those health benefits. And I'd appreciate knowing if that is something that we could incorporate.

And lastly, I'd say again that I think it's important that pesticides be included and the -- all the emissions from the ag industry be incorporated into the Scoping Plan, which you did mention as being important to the development of the Plan.
Thank you. Those are my comments.

CHAIR RANDOLPH: All right. Thank you.

Dr. Pacheco-Werner.

BOARD MEMBER PACHECO-WERNER: Yeah. Actually, I had a -- thank you, Chair. I had a similar question to Board Member Takvorian in terms of the Cap-and-Trade conversation. I'm just trying to get a clear sense of what the timeline on having that conversation is, also tied to the timeline by which we have to meet this Scoping Plan. I guess I'm a little concerned -- you know, if the conversation is going to happen, when is it going to happen and are we still going to be, you know, in compliance with, you know, whatever deadline we have to meet, or, you know, does the December -- end of the year feels overly ambitious to tackle this. So that was -- yeah, if -- just kind of getting a little more clarity on that would be helpful.

And also to the extent as has been questioned before by Board Member Kracov just making sure that we have a clear point of what is -- what is in the modeling that's helping us achieve those near terms and then the longer term pieces separating that out a little bit more might be helpful for us and the public.

One of my concerns, also as Board Member Takvorian mentioned, is how much were capitalizing or not
capitalizing on what we could be doing in terms of public transportation. In particular, I'm thinking about wildfire events that while they're being treated, you know, in a specific category, you know, they are -- they are going to be part of our yearly reality at least for me, you know, living close enough to the Sierras. You know, that's an unexpected part of my summer and fall reality now. And I think that we could -- we could be doing more by thinking about how we capitalize on freight public transportation during emergency events and just kind of thinking about those sort of more drastic investments, but that are -- that are -- that can address some of the things that are -- that are going to be part of our reality before 2030.

Thank you.

CHAIR RANDOLPH: Staff, do you want to go ahead and address Board Member Takvorian and Dr. Pacheco-Werner’s questions around the Cap-and-Trade Program, and in particular the kind of inputs and data that you need to analyze for the -- to deal with this question about the allowances and recommendations around that.

EXECUTIVE OFFICER COREY: Chair, I'm going to start and then Rajinder will follow up in terms of the underlying analysis. And I wanted to get to both Board
Member Takvorian's and Dr. Pacheco-Werner's comments, and it's an interesting comment that was made by both in terms of that really is connecting, which is actually fortuitous that we did the SIP presentation and the Scoping Plan presentation because a fundamental driver -- with respect to meeting both these targets ambient air quality NAAQS, National Ambient Air Quality Standards, the community protection, and GHGs, the fundamental driver is combustion. It's across the board.

Now, there's certainly some non-combustion sources. But the good thing is when we're talking about many of these strategies, the response of this strategy actually speaks to both GHGs and criteria pollutants. The challenge is one of time frame and the real challenge is one of legacy fleets. Someone mentioned that comment in terms of achieving the Governor's Executive Order, a hundred percent ZEVs in 2035. You still have a lot of combustion in use on the road and 2045. How do we turn that over? Lower income vehicles, how do we turn that over? How incentives, what role do they play?

So with respect to the Scoping Plan in terms of the fundamental analysis, in terms of 2030 and carbon neutrality is what's already in the hopper and where is that going to take us? How far along does that take us? What's the gap? That's really the fundamental underlying
analysis. And what are the opportunities of the package of managers, not in specific regulatory detail? That follows. But it really looks at what is the mix to close the gap. That is what the Scoping Plan is.

But to the question about the Cap-and-Trade Program, this is really important, as I was reflecting on a number of commenters that spoke, as well as yesterday's hearing, and even though some would say, hey, we've been running the program ten years. Actually, the program has been one year. Let me say why that is.

AB 398 effectively created a new Cap-and-Trade Program. The stringency doubled, doubled to four percent year over year starting January 1 of 2021. And integrating the additional AB 398 provisions and the change in the offset provisions, price containment points, how the cap is established and, set, and triggered, it established a new program we've been running for one year and also we also did take allowances out. So there's conversation about, well, should more be taken out. Certainly, there's a range of opinions on that.

We have one year under this program. We need to run it for a few more years, report back to you all, report back to the Legislature, and have that experience under our belt to really inform -- have informed recommendations in terms of going forward. So I really do
think it's just important to underscore that point about
the fundamental step change that was made just one year
ago to this program.

So with that, I want to see if Rajinder can
fill -- backfill the underlying follow-up analysis on the
Scoping Plan side.

DEPUTY EXECUTIVE OFFICER SAHOTA: Sure. Thank
you, Executive officer Corey.

I will address the one outstanding comment I
think that is still out there, and that is the timing
question that Dr. Pacheco-Werner asked. So we are still
on track to get the Scoping Plan completed by the end of
this year. That is the legislative mandate of update at
least once every five years. As soon as a Scoping Plan is
done or even close to it being done, we do start looking
at the programs that we have at ARB and programs that may
exist at other agencies to understand if they need to be
adjusted, strengthened, or new program need to be added to
make sure that we remain on track to hit our targets.

And so it's really difficult to try and
understand what adjustments to make, if you actually can't
take a step back, as we do in the Scoping Plan, and do an
overall assessment across all the sectors and all the
programs, because our metric is a single GHG mass
calculation each year. It is a mass based target of 1990
levels of 431 million metric tons. And so we have to look at that and understand are we on track or not on track? And once we understand if we're not on track, we have to then go a little deeper to understand what's going on in the sectors that make up that total target and then look at the programs that are overlaid on those sectors, and whether those programs need to be adjusted.

And I'll give you one example, and that 1383 has a methane reduction target for dairy digesters -- or dairies, and it's a 40 percent reduction from 2013 levels by 2030. Cap-and-Trade doesn't cover fugitive methane emissions and so it would not be a logical choice to think about making Cap-and-Trade more stringent on source that is outside of its coverage. It would be more about looking at the direct regulations, or programs, or incentives that feed into that sector adjusting those.

And so that is the type of analysis that we do after we complete the Scoping Plan. And as Executive Officer Corey said, it is important for us to have a data-informed package of regulatory amendments. And so all of the questions that are being raised in that IEMAC report about allowance supply, et cetera, those are about calculations, and data, and modeling. And so we want to make sure that we actually have an understanding of what this program looks like, and that is that legislatively
designed program that began about a year ago. And even though we keep calling it a new program, as we set the caps for this decade, we did actually remove allowances through this decade, knowing that we were ahead of schedule meeting our 2020 target.

And so it's easy in short conversations and comments to throw down numbers and make relationships across numbers, but the complete story is a lot more than a number. And that's why it's important for us to have that public conversation, have modeling, and time to do that more thoughtfully before we come back with any recommended changes.

CHAIR RANDOLPH: Okay. Board Member De La Torre. Are you there?

CHAIR RANDOLPH: Okay. I'm going to go to Board Member Riordan and maybe Board Member De La Torre can come back after that.

BOARD MEMBER DE LA TORRE: Hello.

CHAIR RANDOLPH: Oh, there you are. Okay. There he is.

(Laughter.)

BOARD MEMBER DE LA TORRE: I'm sorry. It's very different to do it on the phone than it is to do it from the screen.

I just wanted to make a couple of general
comments. One, that the Scoping Plan is a holistic approach, and essentially what Rajinder just said, that it informs the major programs that we have and we shouldn't be moving on those major programs that we have until we've done the holistic approach of analyzing everything in the context of the Scoping Plan number one.

Number two, that -- you know, I want to get this -- as Rajinder just said, we're going to finish later this year. I want to finish this, because it's already, you know, for all intents and purposes 2023 by the time we finish and our target is 2030. We have to get to work on the actual work. And so dragging out the planning phase doesn't necessarily help us.

And then finally, in terms of specific sectors, we know the sectors that did not contribute to us hitting the 2020 target, namely transportation, natural and working lands, and short-lived climate pollutants. And the short-lived climate pollutants are, as you all know, carbon -- black carbon, hydrofluorocarbons, and methane.

So, you know, I'm going to be looking as we do this process this year to see how we step it up on those three sectors to make sure that they contributing to us hitting the 2030 target and not just riding on the other sectors delivering GHG reductions.

So that's -- those are my comments. But thank
you, staff. Wonderful work to this point. Thank you to
the EJAC for their work. I know that there's a lot of
work being put in there. And I hope that we get some good
priorities out of the EJAC for us to include in the final
product.

   Thank you.

CHAIR RANDOLPH: All right. Thank you.

Board Member Riordan.

BOARD MEMBER RIORDAN: Thank you, Madam Chair.

   I really just wanted to say to the staff
particularly how appreciative I am of all the work that
you have put into this over the years. I mean, this is
not easy work. And I just think you've done a terrific
job. I mean, it's sort of like new territory at times.
We don't have a lot of history for these scoping plans.
We haven't been doing them for years, and years, and
years. And so I just want to say thank you and I hope
everybody appreciates what you do.

   Thank you.

CHAIR RANDOLPH: All right. Thank you.

Okay. Any other comments on this informational
item?

Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Madam Chair. So
first of all, I want to thank staff for all the hard work
they've done so far with regard to the Scoping Plan. It's a really lot of work that they have to do. And there's really not enough time to do everything that everybody wants. As I think Ms. Takvorian said, you know, every stakeholder group has something that they want to include in the Plan and we -- as Mr. De La Torre said very well, this is a high level holistic plan, and we can't put every bell and whistle in.

That said, I have some specific -- no, not requests. There's one.

(Laughter.)

BOARD MEMBER BALMES: But I mostly want to ask staff for a little bit of clarification. So I missed the specific discussion, most of it, because I had to give a talk in a nearby hotel, and I didn't hear about the inclusion of ambient pesticides in the SIP. And I really want to endorse having pesticides and their life cycle included in the Scoping Plan. I realize it's probably not a super high driver of greenhouse gas emissions. But it's so important that we've heard so much from the communities that are affected about this that I really feel like we have to step up. And I'm sorry, I didn't hear the SIP discussion, but I just wanted to endorse those who want to include pesticides in the Scoping Plan.

I would also like to hear from -- I'm probably
going to get the acronym wrong, but the Economic Advisory Committee. Mr. Cullenward said that his group would be reviewing the Cap-and-Trade component of the Scoping Plan. And I'd -- he volunteered to give a presentation, a briefing, and I would very much endorse that.

I'd like to ask, not Dr. Sahota, to respond to the concern about refinery conversions in terms of -- because I think there's some misconceptions out there.

DEPUTY EXECUTIVE OFFICER SAHOTA: Yeah. Thank you for those questions. And I know that in the SIP -- or the -- yes, the SIP presentation, there was a discussion about looking and coordinating on the pesticide inclusion there. And we are going to have some discussion of the pesticide issue in the Scoping Plan as well.

For the refinery conversions, that is part of that idea about how -- do we phase down all the things we don't want and how do we bring up the things that we really need to transition to, because it's not going to be satisfying politically or to most of society if we just start turning things off. And what we're seeing in a couple of the refineries across the state is that they are starting to request permits and undergo the permitting process to be able to produce the kinds of low carbon fuels that we think we are going to need for a while. So things like renewable diesel that deliver diesel PM
benefits, fuels like sustainable aviation fuel that are not regulated at the federal level, but are incentivized through tax credits at the federal level and can earn LCFS credits here.

And the footprints for the refineries in the Bay Area that I'm aware of are going to be smaller than their existing footprints for the petroleum production. And this conversion process is also consistent with language in the Governor's Zero-Emission Vehicle Executive Order, which talks about a report from CalEPA on how to streamline the process on these types of conversions, but then also highlights the need to make sure that there's community involvement, and that all of the environmental protections and public health protections remain in place.

And so there is a strong signal that is being sent that this is the kind of conversion that we want to see, the use of these assets, as we think about quickly phasing down out of fossil fuels and bringing up the new fuels that we need, and it is part of that Executive Order.

Now we as ARB are not involved in that permitting process and many of these conversations are happening at the local level. We -- and for full disclosure, we have been asked questions about our Low Carbon Fuel Standard Program. And so to the extent that we are hearing from
local agencies or local advocates on trying to understand
the LCFS Program and how it plays into the role for
conversions, we are going to respond to those to make sure
that the facts about the Program are clear and are out
there.

BOARD MEMBER BALMES: And while I have you, yeah,
I've been hearing, and I just heard it at the public
health workshop that we could delay implementing the -- or
getting the Scoping Plan out, not implementing it, for a
year, that the Governor has the power to authorize that.
But could you explain why we don't think that's a good
idea?

DEPUTY EXECUTIVE OFFICER SAHOTA: So the language
in AB 32 is updated at least once every five years. The
last time we updated it was the end of 2017, which puts us
at the end of 2022. And honestly, the longer we delay in
putting out the markers that are going to attract some of
that private investment and spur that action on the ground
to build the things we need, status quo will persist. And
status quo is currently fossil fuels in the economy. And
so not only is there statutory language, but there has to
be this conscious thought behind what we're trying to
achieve and that the longer we take in forwarding through
the perfect solution or debating the perfect solution,
we're still burning fossil fuels in the meantime, because
nobody is investing in anything clean and nothing new is being built.

BOARD MEMBER BALMES: And so thank you. To my environmental justice friends who would like to see a delay in the Scoping Plan development, to do a better job at addressing public health concerns, especially at the community -- disadvantaged community level, I hear you, but I think my own assessment of the public health impacts of the current situation with fossil fuel combustion is that to try to get a more complete and thorough public health analysis, which I'd like to see.

As a public health person and the public health representative on the Board, I don't think we should delay the Scoping Plan development process. I think the tradeoff there is not one that's good for public health. That said, I'm very committed to the endgame. I think in every regulation that we've -- or every policy we put forward under the Scoping Plan, we should have a public health lens, especially a public health environmental justice lens.

And so, as Mr. De La Torre said, this is the big picture framework for our push to carbon neutrality and our push to eliminate fossil fuel combustion. We have to put details forward and -- when we implement policies to reach the Scoping Plan, you know, targets. So I'm
pledging that attention -- and I know other Board members feel the same way, that attention to public health, but about I don't think we should delay the Scoping Plan development to get a better public health impacts assessment. But I'm going to -- I will say that the staff is trying to do more with public health this time than any other Scoping Plan we've done. I appreciate that. I would like to see them pushed, as much as possible, to do what's -- what is possible, what is feasible within the time frame.

And so then the last thing I want to say is I really appreciate Chair Randolph's commitment to develop a permanent -- or to set up a permanent EJAC. I think it's the right thing to do, it's about time, and I thank the Chair for that.

DEPUTY EXECUTIVE OFFICER SAHOTA: May I make one comment on the public health assessment in the Scoping Plan?

BOARD MEMBER BALMES: Sure, I would like to hear it.

DEPUTY EXECUTIVE OFFICER SAHOTA: Because this ties back to direction that the Board gave us in 2017 when the last Scoping Plan was adopted. The direction was to try and expand the public health analysis looking into the future. And so a lot of the new expanded health
endpoints and the new work that we're trying to do on status quo versus a reimagined future without fossil fuel combustion is directly related to that resolution, where we want to try and show the path we're on versus the path that we could be on.

And we also realize there are research gaps. Like, we actually don't fully understand all of the health impacts of some of the fuels and combustion that is out there. And we know that it is -- there are different responses in different populations. We also don't have that data. So we do have gaps. But to the extent that we have the data and the tools to analyze it, we're going to be trying to do that in the Scoping Plan, and then hopefully more as we move forward.

CHAIR RANDOLPH: Okay. I think that's it for Board comments and questions and so -- oh, sorry, Dr. Pacheco-Werner has her hand up.

BOARD MEMBER PACHECO-WERNER: Sorry. I just wanted to just have it clarified, because I'm still a little confused based on the hearing yesterday and then some of what we heard today, in terms of will there be a signal in the Scoping Plan that we will be looking at Cap-and-Trade once the data comes in? I guess it's still not very clear to me as to what commitments -- what different commitments, if any, are we making in the
Scoping Plan on that. And if no new commitments, that's helpful to know too. It's just I'm -- I want to be clear.

Thank you.

DEPUTY EXECUTIVE OFFICER SAHOTA: Dr. Pacheco-Werner this is Rajinder. Secretary Blumenfeld sent a letter last year or two years ago saying that we would look at the role Cap-and-Trade plays in achieving the 2030 and he cited a percentage number for what it would have to lift in the 2017 Scoping Plan to hit that 2030 target. We will be able to do an analysis to show is that role for the Cap-and-Trade Program the same level or a different level as we have new data on emissions.

And the landscape has changed on the modeling. We had a global pandemic that in just 2020 reduced emissions by 40 million metric tons from 2019 to 2020. We never would have been anticipated that and we never would have modeled for that in 2017.

And so it is absolutely our intent and the right thing to do to go back and remodel what we think the emissions are going to look like over this decade and deliver on that letter as promised at looking at the role of the Cap-and-Trade Program through 2030.

Now, we may find that we have to make adjustments to some programs based on that review and we may say this requires agencies to go back and review programs in the
light of the new modeling data et cetera. So that may be an outcome of the modeling. But we are not going to try and redesign or design any specific program in the Scoping Plan, because the actual changes to any of the existing programs, especially regulations, are through a separate APA, Administrative Procedures Act, process that has its own requirements for CEQA, public process, economics, and health analyses. And so it is a stepwise process, but we have some information coming out of this Scoping Plan on whether or not we actually need to go back and look at our programs. So the signal will be there.

BOARD MEMBER PACHECO-WERNER: Thank you. That's help --

DEPUTY EXECUTIVE OFFICER SAHOTA: Oh, and I -- Yeah, and I'm sorry. I also forget to mention that Secretary Blumenfeld committed to a report back to the Legislature at the end of 2023, after the Scoping Plan modeling is completed and after we have more data under the AB 398 Cap-and-Trade Program, because we also do have to think about the very prescriptive requirements in AB 398. And maybe through our technical assessment, we decide that some of those provisions in AB 398 may not allow us to make the changes that we need to make to have a efficient and cost effective program that is going to keep reducing emissions, and we will have to actually
explain or recommend changes to the legislative intent or
the legislative provisions. So we do have a very
prescriptive framework in which we are also working in
over this decade for the program.

BOARD MEMBER PACHECO-WERNER: That's helpful.
Thank you so much.
CHAIR RANDOLPH: Board Member Hurt.
BOARD MEMBER HURT: Thank you, Chair, and thank
you fellow Board members for all the great questions, some
of which I've had as well, but I just wanted to make a
quick statement. You know, despite this being a big
picture document, if we don't show in the Scoping Plan
policies giving direct relief to overburdened communities,
where people can feel and see a difference in their
everyday lives, and if we further don't give
accountability and transparency around EJAC
recommendations that are being adopted or not, and why, I
have a feeling that we're going to repeat all the feelings
that came out of the last Scoping Plan.

And I don't think we want to be there in this
future. So I just want us to be very thoughtful about all
the time that communities are putting into these
recommendations and how we integrate them, and how
communities will directly feel change in this future. And
I think we all want and need change.
But I look forward -- I know we're early in this process. I look forward to the May draft, so we can really take a deep dive on how to make that an impactful and improved future.

I'll end there. Thank you.

BOARD MEMBER BALMES: Thank you, Supervisor Hurt. In my comments, I didn't mean, in any way, to disagree with the importance of carefully reviewing what EJAC recommends. I agree with you that if we end up at the same place we were in the past, that that -- in terms of dissatisfaction -- severe dissatisfaction from EJAC, that that's not a good outcome.

CHAIR RANDOLPH: And so --

BOARD MEMBER HURT: And through the Chair, could I make one more comment?

I just wanted folks -- if you don't mind. That comment wasn't directly to your comment, Dr. Balmes, but thank you for clearing that up.

Thank you.

CHAIR RANDOLPH: Thank you. I was actually just given -- remind the Board that we have a joint EJAC and Board meeting coming up very soon on March 10th. So that will be a good opportunity to talk through some of these issues.

Okay. I think that is it for this agenda item.
Now, we need to go to open public comment, public comment on items that are not on the agenda. And you can raise your hand on Zoom or dial star nine.

Clerk, can you call the commenters.

BOARD CLERK ESTABROOK: Yes. Thank you, Chair. We currently have one person with their hand raised to speak for open comment. And that is a phone number ending in 433. I will give you a -- send a prompt for you to unmute and then you can unmute and give your comments. And it should be star six to unmute.

HARVEY EDER: Hello. Am I being heard?

BOARD CLERK ESTABROOK: Yes, you are.

HARVEY EDER: Okay. You'll have to excuse me. I'm outside and I missed most of the meeting.

My name is Harvey Eder. I'm speaking for myself and for Public Solar Power Coalition. I've been coming to you folks for decades, in the South Coast and other -- the PUC, and CEC, et cetera.

I've been around 45 years and the first solar proceedings. We worked with Commissioner Grimes on the equity issue and published the low income solar equity program in '81 and litigated along with some of your expert witness on solar.

So the concept there on equity is to get its housing equity -- you could get -- the example he gave us,
we could get tax credits which are refundable, up to $3,000 for hot water, space heating, and electric, nine grand, you could put a down payment on a house and get equity, buy into a partnership or a solar cop-op, et cetera. You could vertically and horizontally integrate solar renewable industries and equity into that, incorporating by reference into all of the comments we made to all states and local districts including that Piketty the French Economist working the Berkeley's Saez on equity that -- and 14 published capital in the 21st century and 20 capital and ideology.

Sixty, seventy percent of our population in the lost 30, 40 years plus have seen no increase in income or equity, all right? And it's all gone to the top and gets more concentrated now. And that threatens our democracy. We can see what's happening with the Republicans. They're not party. They've got to be called out straight up. We've got extreme stuff happening now. The hundred of these climate models were evaluated on the 7th of this month in case 1 through 9 Wall Street Journal.

They said that they're doing super computer models with a hundred models and that -- and we had much more extreme worst cases what's happening with the fires, and the floods, the Neil Youngs, the band -- this is incorporated by reference.
Anyway, look, there's going to -- there is now -- I want to find out what's happening on the SIP and scoping -- and I guess (inaudible) deficiency findings.

Okay. We put in the '16th Solar New Deal. It wasn't evaluated by you or by the --

BOARD CLERK ESTABROOK: Thirty seconds remaining.

HARVEY EDER: Pardon?

Hello.

BOARD CLERK ESTABROOK: Oh, just 30 seconds remaining.

HARVEY EDER: All right. Okay. I want -- is there -- is there a deficiency finding now? I tried to get the '91 plan and the deficiency findings themselves. I'm trying to get it from you. What's up with that? Please answer me now. And if -- we're working on it ourselves. There's -- you know, and the two consumer groups in October 6th of '20 brought the stuff up. You're in violation. You have been in violation. You're not going to -- you tried to spend another three years on the plan. The numbers used for deaths are all wrong and everything. It's ten hundred times bigger --

BOARD CLERK ESTABROOK: Thank you.

Thank yo. That concludes your time.

HARVEY EDER: Thank you.

BOARD CLERK ESTABROOK: Our next speaker is a
phone number ending in 050. You can unmute and begin.

SEAN EDGAR: Hi, can you hear me?

BOARD CLERK ESTABROOK: Yes, we can.

SEAN EDGAR: Great. This is Sean Edgar, the director of Clean Fleets. And I captured from the Board comments on the SIP and the Scoping Plan items earlier today that near-term emission reductions of short-lived climate pollutants are needed. Consistent with my prior testimony and that you heard from Julia Levin earlier today, CARB really has a golden opportunity to reduce short-lived climate pollutants now to help South Coast and San Joaquin.

And to be clear, I'm not talking about the use of fossil gas or expanding use of fossil fuels, but instead encouraging the use of renewable fuels, renewable biogas specifically, as the (inaudible) into a one-to-one replacement for petroleum fueled trucks and the billions can be found to construct the EV infrastructure.

I reference Mr. Corey's introduction to the Scoping Plan to wit that the perfect should not be the enemy of the good. I interpret his statement to mean that if there are good, cost-effective emissions reductions to be had, it behooves us to look at those. In that spirit, I'd like to take a few minutes to draw from the statewide aggregated data, that your staff released last week as
their summary of the Advanced Clean Trucks large entity reporting that the Board approved in June 2020 for the largest fleet operators, meaning those that are greater than 50 trucks or 50 million in annual revenue.

The first issue that I found from the staff's data is the fueling infrastructure. That's Table 13 in the document for those of you that would like to read it. It shows the 763 sites reported having electricity available for charging, but not ZEV infrastructure currently built. So that number represents about 10 percent of all large fleets respondents are estimating they have electricity to support ZEVs installed in the future. This means that about 90 percent, which is about 7,000 facilities, owned or operated by the folks that you want to migrate to ZEVs don't believe they have adequate subsidy. (Inaudible) natural gas fueling sites.

We know that renewable biogas from State sources is being used at many of these sites today and it's very feasible to increase the amount of in-state carbon negative biogas from implementing Senate Bill 1583. You heard very impassioned testimony from CASA and the sanitation districts of Los Angeles. There's public sector agencies in addition to private investment is really critic --

BOARD CLERK ESTABROOK: I think -- Sean, I think
we lost you. I think the call dropped.

And so Chair, that concludes the commenters.

CHAIR RANDOLPH: Okay. That concludes our open session for today. And tomorrow morning at 8:30 a.m., we will be doing the agenda item on Community Air Grants. So looking forward to that discussion.

And we are now adjourning into closed session.

Thank you.

(Off record: 4:23 p.m.)

(Thereupon the meeting recessed into closed session.)

(Thereupon the meeting reconvened open session.)

(On record: 4:46 p.m.)

CHAIR RANDOLPH: All right. It is 4:46. The Board has completed closed session. No action was taken. And we will adjourn to -- the rest of this meeting tomorrow morning at 8:30.

Thank you.

(Thereupon the Air Resources Board meeting adjourned at 4:47 p.m.)
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
License No. 10063