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Ms. Sandra Berg, Vice Chair
Dr. John Balmes
Hector De La Torre
Mr. John Eisenhut
Senator Dean Florez
Assembly Member Eduardo Garcia
Ms. Judy Mitchell
Mrs. Barbara Riordan
Supervisor Phil Serna
Dr. Alexander Sherriffs
Professor Dan Sperling
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Ms. Edie Chang, Deputy Executive Officer
Mr. Steve Cliff, Deputy Executive Officer
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Ms. Ellen Peter, Chief Counsel
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Mr. Jack Kitowski, Division Chief, MSCD

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Mr. John Swanson, Manager, Criteria Pollutant and Toxics Reporting Section, AQPSD
Mr. Daniel Whitney, Senior Attorney, Legal Office

ALSO PRESENT:
Mr. Alan Abbs, California Air Pollution Control Officers Association
Mr. Eddie Ahn, Brightline
Mr. Sam Appel, Bluegreen Alliance
Mr. Thomas Ashley, Greenlots
Dr. Alberto Ayala, Sacramento Metropolitan Air Quality Management District
Mr. Nate Baguio, Lion Electric
Mr. Will Barrett, American Lung Association of California
Ms. Abhilasha Bhole, Jobs to Move America
Mr. Nico Bouwkamp, California Fuel Cell Partnership
Mr. Bill Boyce, Sacramento Municipal Utility District
Mr. Jack Broadbent, Bay Area Air Quality Management District
Mr. Bob Brown, Western States Petroleum Association
Mr. Todd Campbell, Clean Energy
Mr. Jon Costantino, Trillium
Ms. Noelle Cremers, California Farm Bureau Federation
APPEARANCES CONTINUED

ALSO PRESENT:

Mr. Jorge DeGuzman, Sacramento Metropolitan Air Quality Management District

Mr. Jake Donahue, Tahoe Transportation District

Ms. Alejandra Duran, BYD

Ms. Emily Fieberling, Environment California

Dr. Philip Fine, South Coast Air Quality Management District

Ms. Ericka Flores, Center for Community Action and Environmental Justice

Mr. Kenneth Folan, Metropolitan Transportation Commission

Ms. Genevieve Gale, Central Valley Air Quality Coalition

Ms. Hannah Goldsmith, California Electric Transportation Coalition

Ms. Christine Heckeroth, Soletrac, LLC

Mr. Steve Heckeroth, Soletrac, LLC

Ms. Emily Heffling, Union of Concerned Scientists

Mr. Norm Hickling, Antelope Valley Transit Authority

Mr. Paul Jablonski, San Diego Metropolitan Transit System

Mr. Dan Jacobson

Mr. Vazken Kassakhian, Southern California Edison

Ms. Anne Katten, California Rural Legal Assistance Foundation, Californians for Pesticide Reform

Mr. Bhavin Khatri, San Francisco Municipal Transportation Agency
ALSO PRESENT:

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

Dr. Amy Kyle

Mr. Kent Leacock, Proterra

Mr. Jamie Levin, Center for Transportation and the Environment

Mr. Sal Llamas, AC Transit

Mr. Randal MacDonald, Sierra Club

Mr. Bill Magavern, Coalition for Clean Air

Ms. Wendy Mitchell, L.A. County Metropolitan Transit Authority

Mr. Greg Nudd, Bay Area Air Quality Management District

Ms. Kathryn Phillips, Sierra Club

Mr. Michael Pimentel, Santa Cruz Metro

Mr. Ray Pingle, Sierra Club

Mr. William Quinn, California Council for Environmental and Economic Balance

Ms. Corinne Ralph, Los Angeles Department of Transportation

Mr. Sasan Saadat, Earthjustice

Mr. Tim Sasseen, Ballard

Mr. Ryan Schuchard, CalStart

Mr. Nick Segura, International Brotherhood of Electrical Workers
APPEARANCES CONTINUED

ALSO PRESENT:
Mr. Joshua Shaw, California Transit Association
Ms. Emma Shumway, Environment California
Ms. Paula Torrado, Physicians for Social Responsibility, LA
Ms. Stephanie Tsai, California Environmental Justice Alliance
Ms. Iris Verduzco, Urban and Environmental Policy Institute
Ms. Andrea Vidaurre, Center for Community Action and Environmental Justice
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PROCEEDINGS

CHAIR NICHOLS: Good morning. Good morning, ladies and gentlemen. If you could get ready, we are assembling here on the dais.

I want to welcome everybody to the December 14th, 2018 public meeting of the California Air Resources Board. We will begin the meeting before you all get too comfortable with the Pledge of Allegiance.

So please rise.

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

CHAIR NICHOLS: The clerk will please call the roll.

BOARD CLERK DAVIS: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK DAVIS: Mr. De La Torre?

Mr. Eisenhut?

BOARD MEMBER EISENHUT: Here.

BOARD CLERK DAVIS: Senator Florez?

BOARD MEMBER FLOREZ: Here.

BOARD CLERK DAVIS: Assembly Member Garcia?

Supervisor Gioia?

Senator Lara?

Ms. Mitchell?

BOARD MEMBER MITCHELL: Here.
BOARD CLERK DAVIS: Mrs. Riordan?
BOARD MEMBER RIORDAN: Here.
BOARD CLERK DAVIS: Supervisor Roberts?
Supervisor Serna?
BOARD MEMBER SERNA: Here.
BOARD CLERK DAVIS: Dr. Sherriffs?
BOARD MEMBER SHERRIFFS: Here.
BOARD CLERK DAVIS: Professor Sperling?
BOARD MEMBER SPERLING: Here.
BOARD CLERK DAVIS: Ms. Takvorian?
BOARD MEMBER TAKVORIAN: Here.
BOARD CLERK DAVIS: Vice Chair Berg.
VICE CHAIR BERG: Here.
BOARD CLERK DAVIS: Chair Nichols?
CHAIR NICHOLS: Here.
BOARD CLERK DAVIS: Madam Chair, we have a quorum.
CHAIR NICHOLS: Thank you.
A couple of announcements before we begin this morning. First of all, interpretation services will be provided today in Spanish for Item number 18-10-8, the Proposed Innovative Clean Transit Regulation. This is a replacement of the fleet rule for transit agencies; and 18-10-3, Regulation for the Reporting of Criteria Air Pollutants and Toxic Air Contaminants. Headsets are
available outside the hearing room at the attendant sign-up table, and can be picked up at any time.

And I will now ask the interpreter to repeat my remarks in Spanish.

(Thereupon the interpreter translated in Spanish.)

CHAIR NICHOLS: Thank you.

For safety reasons, please note the emergency exits to the rear of the room. In the event of a fire a alarm, we're required to evacuate this room immediately, and go down the stairs, and out the building. When the all-clear signal is given, we will return to the hearing room and resume the hearing. Anyone who wishes to testify should fill out a request to speak form. These little cards are available in the lobby outside the Board room. Please turn it into a Board assistant or Clerk prior to the commencement of the item you want to speak on. Also, speakers should be aware that the Board will impose a time limit. We usually give three minutes, but if we have many speakers on the same topic, and basically many saying similar things, we will reduce it to two minutes. So we hope you will simply summarize your views and not read your testimony, because that way we can follow you more easily.

And the only other announcement I want to make
before we start is that because it is Friday, and the second day of a two-day Board meeting, we're going to roll through the lunch hour without taking a break, so people can make flights that they've scheduled to go to different places. And so if Board members get up from time to time and go to the back room for a few minutes, it's because they're grabbing a bite of lunch. But the good news is that the sound system back there is actually better than the sound system out here --

(Laughter.)

CHAIR NICHOLS: -- I discovered yesterday, and so they will be able to follow the proceedings inside the auditorium even if you can't see them out here.

So with that, our first item this morning is the proposed amendments to the Innovative Clean Transit regulation, a replacement of the Fleet Rule for Transit Agencies. Last week, our joint meeting -- at our joint meeting with the California Transportation Commission, we heard about declining transit ridership. We also heard strong support by many of the Board members on the importance of this mode for providing mobility to all Californians by improving access to an efficient system, especially for low-income communities.

SB 1 provided historic increases in transit funding. And so there are some opportunities, but also a
lot to do here. We support transit and we need to work collaboratively to counter the declines in ridership as part of meeting our sustainability goals. That work is ongoing and overlaps with the regulation we are considering now. Of course, this regulation will not exacerbate the decline in transit ridership, given the flexibilities built into the regulation. Rather, in the proposed Innovative Clean Transit regulation, we're making sure that the buses on the road are the cleanest available and setting the stage for other clean, efficient, and innovative transportation solutions going forward.

Back in September, we heard the initial proposal. The regulation, as proposed, is structured to be consistent with normal bus purchases with the goal of making a successful and orderly transition to a zero-emission bus fleet by 2040. So in other words, it phases in over a number of years, but it starts with the message and the reality that there is money for new buses. And when old buses are replaced, they should be replaced with the cleanest possible vehicles. It's part of California's historic plan to address climate change and to reduce community and regional air pollution.

As you may recall, there were a number of comments made by the public and Board members. Staff modified the original proposal to address the concerns
while helping us to move forward with the cleanest and
most efficient transit systems possible. And they
obviously are back, and we will be hearing again to make
sure that they did what we asked them to do.

As a result of these efforts, we have a proposed
resolution today that the Board will be asked to vote on.

Mr. Corey, would you please introduce this item?

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

And as you noted, staff is proposing that the
Board amend the Fleet Rule for Transit Agencies and adopt
the Innovative Clean Transit regulation. The proposed
regulation is identified in the State strategy for the
State Implementation Plan, as well as the 2017 scoping
plan as a necessary component for California to achieve
established near- and long-term air quality and climate
mitigation targets, while resulting in benefits in
disadvantaged communities and to transit-dependent riders.

In a report you heard last month, heavy-duty
vehicles continue to be the largest sector contributing to
NOx emissions, as well as a significant GHG source. More
effective actions and maximizing electrification where
feasible are needed. Zero-emission buses serve as a
foundation for electrification of the heavy-duty vehicle
sector. And during the initial September public hearing,
many Board members, as you noted, transit agencies, and
members of the public supported the overall goal of the
program, but concerns were raised about potential
unintended consequences.

The proposal before you today has been updated
and includes expanded safeguards to ensure transit service
is not adversely affected, but rather encouraged. We're
also committed to providing periodic updates to the Board
and to conducting a comprehensive review of transit fleet
experiences and the future that includes assessments of
cost, performance, and reliability before any
zero-emission bus purchase requirement is scheduled to
begin.

The enhancements to the proposal before you help
to ensure transit agencies will continue to provide
critical services to Californians, including
transit-dependent riders, while leading technology
innovation and improving mobility and air quality.

Having a strong partnership with transit agencies
will continue to be a priority to ensure a successful
deployment of zero-emission buses, while continuing to
improve transit services.

I'll now ask Shirin Barfjani of the Mobile Source
Control Division to give the staff presentation.

Shirin.

(Thereupon an overhead presentation was
presented as follows.)

AIR POLLUTION SPECIALIST BARFJANI: Thank you, Mr. Corey. Good morning, Chair Nichols and Board members. This is the second of two hearings on this item.

In the first hearing back in September, staff presented the original proposal and recommended modifications based on the stakeholders' comments. Additional changes that reflected the Board direction were made available for a 15-day comment period, and are reflected in the proposal we are bringing to you today.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: In today's presentation, I will first highlight the leadership of transit agencies, then provide a short summary of proposed modifications, information on available incentives, and potential benefits of the proposed regulation will follow later. This presentation will conclude with the staff recommendations to the Board.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: A robust and sustainable public transit system, along with affordable transit-oriented housing is key to accomplishing California's transportation and air quality goals.

Transit agencies are the State's long-term partners in leading the way with innovative heavy-duty
vehicle technologies. They provide safe and reliable public transit services to reduce light-duty passenger vehicle miles traveled and congestion on roadways. They have played and will continue to play an important role in helping California meet air quality standards and climate protection goals by deploying the cleanest technologies and adopting innovative mobility options to increase ridership. Their leadership continues today with multiple transit agencies operating zero-emission buses in their regular revenue service.

This is important since zero-emission technologies and the experience developed for transit buses can be transferred to other heavy-duty applications.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: As you know, a successful zero-emission bus deployment program faces many challenges. However, as highlighted on this slide, transit agencies, bus manufacturers, utilities, related industries, and other government agencies are all working hand-in-hand to support transit agencies in overcoming barriers.

Along with increasing momentum, continued technology improvement, and cost reductions are also needed to meet our long-term goals.

--o0o--
AIR POLLUTION SPECIALIST BARFJANI: In working closely with transit agencies, we established overarching principles that are reflected in the ICT proposal. We have a shared goal with the California Transit Association and environmental groups on achieving a zero-emission transit system in California by 2040. We believe this proposal maximizes emissions reduction benefits while providing flexibility and sufficient time for transit agencies to address potential challenges and take advantage of available funds.

The proposal strives to not just maintain, but enhance service through increased mobility options. And the proposal has built-in technological and financial safeguards.

Finally, staff is committed to report back to the Board annually and to conduct a comprehensive review, which I will discuss in later slides. --o0o--

AIR POLLUTION SPECIALIST BARFJANI: This slide recaps major elements of the ICT proposal. You have heard the details of these elements in the September hearing. However -- therefore, I'm providing only high-level overview today.

As you may recall, each transit agency would be required to submit an individualized rollout plan on how
they would deploy a zero-emission bus fleet that would
meet the 2040 goal. These plans are not binding, but they
help shape future funding decisions and utility planning.

The zero-emission bus purchase requirements are
phased in starting in 2020 -- starting in 2023, but may be
discharged until 2025 with early actions. Some types of
buses such as cutaways and motor coaches have a later
phase-in date of 2026, because their technology is not as
advanced as the common 40-foot bus. And all small fleets
would be exempt until 2026. The regulation also includes
a number of credit options and compliance pathways.

Finally, the regulation includes requirements for
low NOx engines and renewable fuels, if available, when
purchasing combustion buses.

With that as background, I will now describe key
changes made during the 15-day comment period in the next
few slides.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: We briefed
you back in September on the proposed updates to the fleet
size definition and threshold for early compliance. And I
will recap those in more details on the next slide.

In response to Board comments, we also expanded
exemptions to guard against potential adverse service
impacts. These will also be discussed in more detail in a
later slide.

In addition, we made small changes to expand zero-emission bus bonus credits to include electric trolley buses. This inclusion would recognize their contribution in advancing zero-emission technology by allocating one-third of a credit for each trolley bus placed in service in 2018 and 2019. These credits would expire by December 31st, 2024.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: Back in September, staff proposed to make modifications in a 15-day notice to include, among others, the following two changes:

The first change, as proposed by the California Transit Association, is to update the fleet size definition to be more consistent with one that is commonly used by transit agencies.

The second change is to update the thresholds for early compliance in 2023 and 2024. Specifically, relaxing the first threshold to 850 and increasing the second threshold to 1,250. These thresholds were updated based on survey results from transit agencies.

Staff believes these targets are likely to be met and would result in early emission reductions benefits. Further, they would provide flexibility for transit
agencies and would increase access to available incentives.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: To ensure the proposed regulation does not have -- does not have potential adverse impact on transit service, staff has expanded exemptions on zero-emission bus purchases. These exemptions are designed to address the circumstances that are beyond transit agencies' control and will be granted upon request if supported by required documentation.

These safeguards address a wide variety of potential operational, technological, and financial concerns. They provide availability of a battery electric bus to meet the transit agency's daily mileage needs or gradeability. They also include specific concerns with funding the upfront cost or higher electricity cost, and they include delays related to infrastructure construction.

Overall, they allow the strong push towards zero-emission buses in a way that ensures no un -- no unintentional consequences on transit agencies.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: Even though zero-emission bus technologies have advanced rapidly in recent years, continued improvement are still needed for a
complete transition. As described in the resolution, staff is committed to provide the Board with a comprehensive review of program readiness at least one year prior to initiation of any zero-emission bus purchase requirements.

With the first two years of the purchase requirements like to -- likely to be discharged, the comprehensive review is most likely to occur in 2023 based on what we know of zero-emission bus planned, deployed, and delivered.

A successful tran -- a successful transition requires continued collaboration and coordination among CARB, transit agencies, bus manufacturers, and technology providers, utilities, and other State agencies. We plan to evaluate over 20 different metrics and different bus types to address at least the following areas:

First, battery and fuel cell performance. Batteries and fuel cells will degrade over time. This review will help identify how degradation may affect daily operate -- operating range as vehicles age.

Second, performance and reliability. Measurements could include bus availability, parts availability, road call frequency, and other performance metrics such as fuel efficiency.

Third, operating range. Understanding real world
operating range is essential for a transit agency to plan for its routes. Range assessment will take into consideration various factors, such as energy storage capacity, HVAC, passenger loading, and grades.

Fourth, costs. Costs include infrastructure and vehicle capital, as well as operating and maintenance costs for both battery and fuel cell electric buses.

And finally, workforce programs and job creation. An analysis of the impact of the regulation on job creation and the effectiveness of the State's programs and standards to provide high-quality green job training opportunities.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: A thorough economic analysis was developed to help form the proposal in front of you today. This economic analysis includes potential economic impact, and where the assumptions came from. Staff also understands there are indirect costs associated with the proposed regulation, such as workforce -- such as workforce training and development, and considered them in economic analysis of staff report.

The analysis shows there could be an overall cost savings from the regulation due to operational and maintenance savings of electric buses that offsets the higher upfront costs. Although, each fleet is different,
the analysis shows that transit buses could have a positive payback over their life even without incentives. However, funding is still important, especially in early years to help reduce or eliminate the higher upfront costs.

When funding opportunities are considered, these upfront costs can be reduced or eliminated and total savings for transit agencies would be substantial.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: As shown in this slide, there is broad financial support for zero-emission buses from multiple State programs. Not counting federal or local program funding, State programs currently have available more than $1.6 billion in competitive funding for zero emission -- for zero emission and clean technology, for which transit projects may apply.

These funds are not limited to vehicle purchases. To highlight -- to highlight a couple of these programs, the California Public Utility Commission program funds infrastructure and the low carbon fuel standard, also known as LCFS provide ongoing revenue that can be used for workforce development, operations, maintenance, and other needs.

--o0o--
AIR POLLUTION SPECIALIST BARFJANI: Shown here and in the following slide is the potential emission reductions from the proposed ICT regulation. It improves public health by providing -- by reducing air pollution, and mitigating climate change. The majority of these benefits will be in the state's most populated and impacted areas.

For tailpipe emissions, between 2020 and 2050, cumulatively, we can expect a total of over 7,000 tons of NOx and nearly 40 tons of PM2.5 emissions reduction.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: In addition, the proposed regulation is expected to reduce GHG emissions by 19 million metric tons of CO2 equivalent from 2020 to 2050 cumulatively. While the transit bus population is relatively small, these emissions -- these emissions reductions are important, because they're occurring in the heart of the communities.

In addition, the regulation will help advance zero-emission technology development in other heavy-duty sectors to further the emission reductions goal identified in the State SIP strategy and achieve carbon neutrality.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: Staff previously prepared a draft environmental analysis for the
proposed ICT regulation, and released it in August for a
45-day comment period. The draft EA concluded that
implementation of the proposed regulation could bring
beneficial impacts to energy demand and greenhouse gases.
It also concluded there could be some potential
significantly adverse impacts primarily related to
short-term construction activities.

While staff previously circulated proposed 15-day
regulatory modifications for public review that they
are -- that they are before you today, those modifications
do not change implementation of the regulation in any way
that is anticipated to affect the conclusions of the
environmental analysis.

Staff prepared written responses to all comments
raising environmental issues on the draft -- on the draft
EA. These -- these comments were received during the
45-day comment period, the previous Board meeting, and the
15-day comment period. The written responses were posted
on ARB's website on December 4th. And the final EA was
posted as a companion document on December 7th.

--o0o--

AIR POLLUTION SPECIALIST BARFJANI: The proposed
ICT regulation would provide a significant number of
benefits as listed here. After thorough analysis of costs
and benefits of the proposed regulation, we found the
following:

   First, the ICT regulation is a necessary program
for meeting the State's goals and requirements to reduce
emissions.

   Second, no alternative would be more effective
and less burdensome in carrying out the purpose for which
the regulation is proposed.

   And third, the proposed amendments are consistent
with the Board's environmental justice practices, and do
not disproportionately impact people of any race, culture,
or income.

   Among the benefits, transit workforce training
and green job creation will provide foundations for this
technology transition. CARB is committed to work with
transit community and other sister agencies, such as
California Workforce Development Board and Employment
Development Department to invest in workforce training and
development in the operation and maintenance of
zero-emission heavy-duty vehicle technologies.

   Staff effort in this area will seek to leverage
existing and scalable curriculum, such as Sunline Transit
Agency's Center of Excellence, that have been utilized by
eyearly adopters of zero-emission buses.

   --o0o--

   AIR POLLUTION SPECIALIST BARFJANI: Staff
recommends that the Board approve the resolution, which
would include approval of the written com -- written
responses to comments, certification of the final EA, and
adoption of the proposed amendments.

The ICT resolution includes the commitments to
provide an annual update to the Board and conduct a
comprehensive review as described in earlier slides.
--o0o--

AIR POLLUTION SPECIALIST BARFJANI: Moving
forward, we will keep monitoring the status of
zero-emission buses and market developments. We will also
continue working with transit agencies, manufacturers,
other State agencies to implement the ICT regulation
smoothly. We will annually report back to the Board, and
we will conduct a comprehensive review before the initial
zero-emission bus purchase requirements start.

This concludes my presentation. Thank you for
your attention.

CHAIR NICHOLS: Thank you. We have an initial
list of 32 people who have signed up to testify on this
item. If you think you're going to testify, please turn
your card in now, so we can get a better sense of how much
time we will need to allocate here.

I'm going to start off this morning with Norm
Hickling from the Antelope Valley Transit Authority. And
for others, if -- you probably know the drill, but if you can be ready to speak at either one of these microphones when your turn comes up, it will save us all time. Thank you.

MR. HICKLING: Thank you, Chair. Thank you members of the Board. And on behalf of the Antelope Valley Transit Authority, it's a pleasure to be here. And thank the Board and the staff for all the work that they've done over the years to bring this forum together and bring this regulation. And Antelope Valley Transit Authority fully supports this measure that's before you today.

We find it is bold, but it's reasoned. It's been made reasonable over the course of the process, and we fully support it. As a transit agency, some years ago we've already made the commitment. And by next year at this time, we will be 100 percent zero emissions all battery electric bus fleet. So we're very proud of that. We think that we -- what we've found though is that the regulation that you have it's very doable. To make that commitment, you can -- you can change over and be zero emission as a transit agency.

We've had many challenges. But working with our public and private partnerships throughout different agencies like Southern California Edison and other private
agencies, we've been able to overcome those challenges.

So again, on behalf of Antelope Valley Transit Authority, and just to keep the remarks somewhat short, we fully support this.

Thank you all.

CHAIR NICHOLS: Thank you so much. Your agency does have a reputation, at least in Southern California, for innovation and leadership. So thank you. You were up first.

Good morning.

MR. KASSAKHIAN: Good morning.

Thank you, Chair, Board and staff. My name is Vazken Kassakhian with Southern California Edison. We strongly support the Innovative Clean Transit Rule. We think it's an important driver of improving air quality and cutting greenhouse gases.

And I will keep my comments short, but just want to talk about how we, as a utility, stand ready to help in this transition. As you know, many transit agencies who are early leaders, like Antelope Valley, are -- who are transitioning to zero-emission bus fleets are in our service territory, and we stand ready to help.

And we're principally helping transit agencies in three ways: Through our charging infrastructure programs to help offset the cost of necessary infrastructure and
providing rebates for charging stations; favorable
time-of-use rates for electric vehicles that waive demand
charges to help reduce the cost of charging; and then also
support from our customer-facing teams who offer
assessments and consultative support from vehicle choices
to charging options and analysis on rates and avail --
information about available incentives.

So just want to say that we stand ready to help.
Funding is here today. There are programs here today.
And we strongly support the rule and think it's an
important driver, again, of air quality and greenhouse gas
emissions. And we want to do our part to work with you
and our customers throughout implementation to ensure that
we have, as you said, a successful and orderly transition
to zero-emission fleets.

Thank you.

CHAIR NICHOLS: Thank you.

MR. RALPH: Good morning, Board and staff. My
name is Corinne Ralph. And I'm the Chief of Transit at
the Los Angeles Department of Transportation. And I'm
here this morning again to offer support to the -- this
regulation -- this Innovative Clean Transit regulation.
We think it's a very important step forward.

Just to give a little brief background about L.A.
DOT. We are the second largest provider of transit
services in L.A. County. We have over 370 buses. And our
city council has committed us to being a fully electric
fleet by 2030. We have four buses in operation right now,
electric buses, since 2017. And we are getting ready to
buy another 155 buses as part of a TIRCP grant.

So we know there are challenges, but we know it
can be done. And we stand committed to making sure that
we have clean buses in the street that will provide clean
air for the environment as well as for riders. So again,
we want to -- appreciate this opportunity to be able to
say and to support the efforts of the Board and the staff.

Thank you.

CHAIR NICHOLS: Thank you.

MR. CAMPBELL: Good morning, Madam Chair and
members of the Board. Happy Holidays.

As you -- as you would expect or could
appreciate, the rule before you is troubling to us, not
just because we earnestly believe that near-zero buses
powered by renewables is a cost effective and comparable
solution that is available and ready today, but also
because the substantial public investments that have been
made to ready transit systems on renewable gas operations.

Transits will now be asked to make significant
investments again, but on a significantly great scale
requiring an enormous dedication of resources by State,
local, and State utilities, which we believe is still not
fully understood.

    Anticipating the unimaginable challenges to this
rule with -- and what it will present to transit agencies
statewide, Clean Energy stands ready to support our
transit customers in whatever capacity we can as we
ultimately are a clean energy provider to transit systems.

    Further, it is not lost upon us as to why the Air
Board is pushing transit agencies to go zero. Transit has
traditionally been used as a test bed for new
technologies, and we get that. But we also hope that you
will direct staff to backstop this rule with the cleanest
available technologies near-zero buses at 0.02 grams NOx,
if zero emission bus technology falls short.

    We are encouraged that Board members are
receptive to the continuous evaluation of the proposed
rule before you -- before you to evaluate daily operation,
reliability, range, cost, overall impact, and especially
impact on fareboxes. We believe this will be critical.

    And finally, we must stress to you the importance
of the Air Resources Board's support to provide broad
policy more akin to the ICT for near-zero trucks in the
Advanced Clean Transit proposal that ARB staff are
currently considering.

    Hopefully, and I'm sure you do, can appreciate
the hesitancy of owners and of fleets to choose clean
options today, if the Air Resources Board is continually
focusing on zero exclusively in broader policy mandates.
We believe that it's going to be critical for us to meet
our air quality goals, not just throughout the state, but
in the South Coast and the San Joaquin, by ensuring that
we have a future that brings all clean technologies
forward and requires them, and also, obviously, shows your
approval.

With that, I want to thank you, and I appreciate
your time and consideration.

CHAIR NICHOLS: Thank you.

MR. LEVIN: Madam Chair, members of the Board,
Jamie Levin with the Center for Transportation and the
Environment. We are a nonprofit organization that is
involved presently deploying battery electric and fuel
cell electric projects throughout the state and the United
States. We are funded with CARB funding to deploy the
largest fuel cell electric bus program here in California.
We'd like to acknowledge the hard work that staff has put
into this effort for this regulation, and we do endorse
it.

But we are not only involved in implementing
these on-the-ground projects, but we are working with a
number of major transit agencies here in California in
developing their transition plans. And it is extremely --
I think this -- your staff and the Board recognizes the
logistics that transit agencies have to incur in order to
deliver service day-in day-out.

And what we see, as we develop these transition
plans, there's a significant issue related to financing --
the ability to finance these new technologies, and also
there's the challenge of ensuring that the technology will
actually be able to provide the kind of service that these
agencies presently provide.

That said, I want to emphasize that there are two
electric drive technologies that are going to help us
achieve the CARB regulations. One we all know is battery
electric, and the other, as I said, is fuel cell electric
bus transportation.

Fuel cell buses are more expensive. The hydrogen
fueling technology has some significant investment
requirements. But we have seen over millions of miles of
fuel cell buses in day-in day-out operation performing
quite successfully as a one-for-one replacement for
conventional vehicles.

There are challenges with the hydrogen fueling
infrastructure. But the capability of hydrogen fueling to
scale up to large fleet numbers is very significant. And
we want to emphasize that it is so important for this
Board and your staff to fund that additional cost associated with fuel cell technology, so that we will reach parity with these two technologies to ultimately achieve our objectives here.

Thank you very much for your time.

CHAIR NICHOLS: Thank you.

MS. PHILLIPS: Kathryn Phillips with Sierra Club California. Thank you, Chairwoman Nichols and the rest of the Board for sticking with this issue for so many years. And thank you to the staff for the hard work you've invested in it.

I think what was most telling was that you had a couple of very important transit agencies coming up early and noting that this rule is bold, but reasoned, and that there are challenges, but we know it can be done. I think that suggests how hard your staff has worked to come up with a rule that the transit agencies believe they can work with, that will ultimately get us to zero-emission buses throughout our transit agencies by 2040, and that will satisfy the environmental interests.

I want to point out just a few reasons this is so important. One, it's about health. While we talk a lot about climate change when we talk about emissions these days, it's important to remember that the reason we started the drive to get to zero-emission vehicles in the
first place was to protect public health. And that's still a very important reason. And this will deliver public health benefits.

We need this rule now in 2018, not later. We have all heard the most recent reports about climate change from the National Assessment, the IPCC report, et cetera, et cetera. And there's no time to lose.

Zero-emission technology is here. It is cost effective. It is becoming even more cost effective. Ranges are expanding. And we -- you'll hear more about that later.

Zero-emission buses are creating jobs in the manufacturing industry in California. There is a real huge, huge opportunity here to advance California's manufacturing ability. We can become the center for these buses -- the center of manufacturing for these buses, providing good jobs, family-sustaining jobs.

And California needs to maintain our leadership in clean vehicles. We've seen reasons for that over and over and over again.

Finally, I want to say something about methane. You know, there was a time when methane was considered the bridge fuel. Well, that's no longer the case. We've moved to a place where the technology has advanced enough that we can go straight to renewable energy. We can go...
straight to zero-emission vehicles.

Methane is no longer a bridge. It's part of the problem. It's one of the most potent climate change gases, and we want to make sure that what we do in California is move as far away from that as we possibly can, as soon as we can. And this new rule will help us do that.

Thank you

CHAIR NICHOLS: Thank you.

MR. PINGLE: Hello, all. My name is Ray Pingle. I'm with Sierra Club California. We support the ICT rule and urge you to approve it today.

More than adequate funds are available to assist transit agencies in paying for the capital costs of the transition to ZEBs. The total cost of ownership for this transition is positive without any grant funds, and then the -- but in early years, additional capital is needed.

On electrical infrastructure, it's being paid for by utility programs under SB 350 and combined with HVIP incentive covers the majority, if not all of these costs. The difference in cost between electric and conventional buses is continuing to decrease as battery costs decline, and electrics are likely to reach parity with CNG buses in the next several years.

In the interim, there are a host of incentive
programs to pay for the incremental cost of electric
buses, including SB 1 is providing $750 million per year
for the next ten years. HVIP has averaged $150 million a
year for the last two years. The TIRCP program provides
300 million, and LCTOP offers 150 million per year. And
there are many other programs.

And with the additional revenue the transit
agencies will receive from these programs, the total cost
of ownership, which already started out positive, becomes
even more positive, producing even more savings for
agencies. If the agencies cannot get adequate incentive
funding, which is highly unlikely, they can lease the
buses and pay for them with operating savings.

And finally, if agencies still can't pay the
extra costs, they can apply for an exemption from the
rule. So agencies are well protected from financial
concerns caused by this rule.

Finally, we would like to recommend that CARB
develop several educational programs through the years to
help transit agencies learn how to do this transition.
Two subject areas of importance are what are all the
incentive programs available and how can we take advantage
of them, and how do we go about designing and implementing
the optimal charging infrastructure systems.

Our sincere thanks to you, the members of the
Board, and to the staff for all your hard work, for
listening and coming up with a rule that can move us
forward towards urgently needed climate mitigation,
healthier air, more jobs, and a growing economy.

Thank you.

MR. LEACOCK: Good morning, Chairman Nichols,
members of the Board. My name is Kent Leacock, and I'm
with Proterra, a battery electric bus manufacturer.

First of all, I'd like to thank the staff for
their hard work over these many years to come to a
rulemaking that, as stated before, many transits are now
able to support because they believe it's very doable.
Proterra stands poised to continue to work with State and
federal level officials to facilitate funding to help the
transit industry make this historic transition from fossil
fuels to zero-emission vehicles.

Furthermore, Proterra has pioneered innovative
financing tools that allow transit agencies to lease
batteries, to lease buses, all with the hopes of negating
the impact to their capital budgets.

We continue to drive down costs of these
zero-emission buses. And in addition, we continue to
innovate. The technology is keeping pace. Proterra has
recently introduced new high-powered charging options that
deploy universal industry standards, so they are not any
one OEM specific.

Proterra continues to build, design, and manufacture the battery systems and the buses here in California, and create jobs, good jobs, for all Californians. Let me reiterate. We will continue to work to secure public funding opportunities, such as the FTA's low or no emission grant to help offset the cost for battery electric transit fleets.

States across the U.S. are watching this rulemaking, so I would say thank you for leading the nation in the transition to zero-emission vehicles.

CHAIR NICHOLS: Thank you.

Before you leave the podium, at the risk of prolonging the discussion, I just want to ask you quickly, because you referenced your work with agencies on helping to facilitate getting charging. You're a bus manufacturer, right? But you -- and so that's your interest here, but you've also been involved on the charging side. So could you just say a word about what you're doing in that regard?

MR. LEACOCK: Well, we've established our own line of actual chargers, of 60, 120, and even up to 500 kilowatts. We're looking at solutions to allow for charging at scale, working with charge management software, working hand-in-hand with the utilities on the
infrastructure to design whether utility -- whether the
transits should become distribution level customers,
depending on their load.

So there's a lot of intricacies involved with the
charging infrastructure, which is now be -- going to be
the next challenge. And so we've been working hard to
respond to what we consider is the next challenge on the
horizon for electric buses at scale.

CHAIR NICHOLS: Thank you.

Okay. Mr. Bouwkamp

MR. BOUWKAMP: Good morning, Madam Chair, Board
members. I'm only going to give a few comments. I am
neutral in this case, because of our membership. We are
in support of fuel cells, because of the California Fuel
Cell Partnership. But I wanted to urge to -- urge you to
consider both of the options, as was mentioned earlier by
Mr. Levin from CTE to consider both battery and fuel cell
options equally. Especially, we're looking at a longer
timeline. We're not looking at the coming two years, but
we're looking at 2030.

With regards to funding support on the
infrastructure side of things, the challenge is that there
are a lot of unknowns, the cost of infrastructure,
especially for the fleets you're talking about is
significant. And I urge ARB to consider dedicated funding
for heavy-duty fueling infrastructure, both for hydrogen as well as for fast charging for buses, because there lots of unknowns at this point, because there are not really any large fleets in the state that operate like transit agencies do today.

Then the other thing is a dedicated person on the side of GO-Biz. They've been very supportive on the light-duty side of things. But now we're moving into the heavy-duty side of things, be it now buses and then later trucks, there is not a dedicated person in that area that can support transit agencies or infrastructure providers to address things that they run into with regards the implementation of the infrastructure.

So one consideration - I realize it's most likely not part of the language, but something to think about for the future - that a person dedicated to -- on the heavy-duty side of things full time.

Then one last point. I did notice in the staff presentation that there were -- were comments related to the incentives available. Yes, that is true, but that is today, and we're looking at 12 years ahead and possibly beyond that. That may not be a good indicator. And the needs for heavy-duty infrastructure and buses may be larger than we anticipate at this point, because we're only looking at buses, and we can only wait and see what
happens when the truck industry also gets motivated by
this Board, and by this organization to move towards zero
emission.

    Thank you very much

    CHAIR NICHOLS: Thank you.

    MR. AHN: Good morning, Board members. Eddie
Ahn, Executive Director of Brightline, an environmental
justice organization dedicated to local communities and
nonprofit service providers. Our issues are really about
local hiring, workforce development, as well as cleaning
our environments with technologies that are hopefully
equitably distributed.

    To that end, we believe transitioning the bus
fleets across the state of California are incredibly
important. Brightline, throughout the summer of 2018, has
worked directly with youth in Bayview-Hunters Point and
the A. Philip Randolph Institute of San Francisco, for
instance, to talk about green zones, and make sure that
bus routes are aligned with battery electric buses.

    So we appreciate the intent of this rule, and
believe that it will increase equitable access to our
communities in cleaning the air of our communities, as
well as more importantly perhaps increasing workforce
opportunities.

    So we appreciate staff's focus on that as it
relates to disadvantaged and underserved communities, and
would like to urge the Board for its immediate passage of
this rule today.

    Thank you.

CHAIR NICHOLS: Thank you.

MR. KHATRI: Good morning. My name is Bhavin
Khatri from San Francisco Municipal Transportation Agency.
I'd really like to take this opportunity to thank the
staff for working really closely with us on adding bonus
credit for our zero-emission trolley coaches and also
including the language for gradeability. We really
appreciate that.

The reg -- the proposed regulation has come a
long way. And I'd like to applaud the staff again for
integrating many of the feedback and addressing concerns
of many of the transit agencies.

We'd also like to thank the environmental groups,
particularly the Union of Concerned Scientists,
Earthjustice, and Brightline Defense for listening to our
concerns and providing the necessary support.

San Francisco Mayor London Breed and SFMTA fully
supports the proposed ITC regulation. We've been national
leaders in zero-emission technology, and -- due to our
zero-emission trolley buses. We've also released our RFP
to purchase nine battery electric buses as of November.
The proposed regulation also aligns with our transportation climate action strategy, which establishes a framework for reducing greenhouse gas emissions from the San Francisco transportation sector and increasing the resilience of San Francisco transportation system for future climate impacts.

In May 2018, our Board of Directors adopted a zero-emission policy, which includes the initial procurement of zero-emission buses starting 2025 with the goal of achieving 100 percent battery electric vehicle fleet by 2035.

This proposed regulation will allow us to implement our own plan -- zero emission plan. So we really want to, once again, thank the staff for all their work. Excellent.

Thank you.

CHAIR NICHOLS: Thank you.

MR. SASSEEN: Good morning, Chair Nichols and esteemed Board members. I'm Tim Sasseen with Ballard Power Systems. And I'd like to tell you a Christmas story this morning.

(Laughter.)

MR. SASSEEN: It's Christmas time again in Wilmington California in the year 2044. My little granddaughter Maria has hailed us a bus to ride down to
the port to spend the afternoon. The air is cool and
sweet with flowery smells from rooftop gardens. And the
vast parks that we pass reclaimed from immense parking
lots of long ago.

We take our seats on the bus and I can hear my
grinning granddaughter quietly humming an old U2 song. It
takes my mind back from all this abundance, the days of
scarcity long ago, back when what we now call the energy
wars kept us in constant conflict and fear. And it seemed
all -- we all had a dire sense of what the future would
bring.

We worked hard back then to grab the sun from the
desert, the wind from valleys, and the waves from the
ocean to save us from the choking excrement caused by
liberating millions of years of carbon in just a little
over a century.

We mined lithium, split water, turned mountains
of garbage into fuel to liberate our neighborhoods and
communities from the grips of petroleum addiction, and to
avert a downward spiral of climate disasters, conflicts,
war, famine, and global suffering. It still makes my eyes
water when I think of what we might have lost had we not
had the courage to act then.

Maria grabs my hand and snaps me out of it,
pointing excitedly out of the broad windows. We've
arrived, and we hop out of the immense container -- to see
the immense container ships and great hydrogen tankers
returning from the floating wind farms far over the
horizon, sun glints off electric scooters and bicycles
that whiz by the green paths and the lawns of the
waterfront filled with picnicking families and hustling
buskers.

We pass a small museum on the way and pictures in
the window grab Maria's attention, crowded highways, dingy
parking lots, and abandoned neighborhoods. Maria asks me,
"Grandpa, how did we clean up the cities"?

I stop to recollect and I tell her, "Well, Maria,
it all started with people who believed that a little bus,
just like the one we road this morning, could change the
world, and it did".

Maria smiles at me and says, "I love you,
grandpa". "I love you too, Maria. Merry Christmas".

(Laughter.)

MR. SASSEEN: Thank you.

CHAIR NICHOLS: Thank you.

(Applause.)

MR. BOYCE: That's a pretty hard one to follow.

(Laughter.)

CHAIR NICHOLS: Yes, it is. You could sing.

(Laughter.)
MR. BOYCE: Good morning. My name is Bill Boyce of SMUD. Greetings to the Board and the Chair.

SMUD supports the ICT regulation. We have a long history of supporting electrification in the Sacramento community and our various transit agencies, and even outside agencies that come to Sacramento. We stand ready to support the transportation electrification that will come from this regulation.

In fact, dialogue is already taking place with some of those customers with regards to detail planning on distribution grid and other things to support the charging infrastructure.

In addition, we've already been supporting customers with proposals, trying to acquire different types of rolling stock. And Sacramento also will have an early chance to actualize some of that with regards to some of the activities that were actually discussed yesterday with VW's Electrify America's Green City project.

SMUD looks forward to working with transportation electrification, commitment to zero-emission transit, and the benefits it will bring our community.

The last thing I'll say is we're also in the process of developing new rates to help address demand charges which we know are one of the key barriers for this
market to be successful.

Thank you.

MR. LLAMAS: Good morning, Chair Nichols and members of the Board. I am Sal Llamas, Chief Operating Officer at AC Transit. We serve 13 cities in unincorporated areas in Alameda and Contra Costa counties.

I want to express my sincere appreciation to the Air Resources Board members, and specifically to staff who have spent a significant amount of time really collaborating and working with transit agencies. And I can attest of the amount of time and effort that they put in, and the serious consideration to understand the complexity of a transit system, and how it operates and be able to merge this regulation into it. So I want to thank you for -- staff for doing that for us.

And I want to also reaffirm that AC Transit is committed to transition its fleet to a 100 percent zero-emission bus. In fact, AC Transit has been a pioneer and leader in deploying zero-emission buses for over 18 years. AC Transit is committed to continuing to collaborate efforts with CARB to move forward with implementing this regulation.

However, we believe that this partnership needs to include a funding commitment for infrastructure investments in fueling, charging, and maintenance.
facilities, and storage capacity.

AC Transit also appreciates including a performance review one year before the start of the purchase requirements, and we urge the Board to continue to periodically conduct performance reviews of zero-emission bus technology, the status and the advancements of the technology.

Lastly, AC Transit supports the clarifications made to the exceptions provisions with respect to financial hardship, the recent amendments allowed for exemption based on the inability to offset the electricity cost.

However, this does not include the potential high cost of electricity to produce hydrogen or the cost of purchasing hydrogen for fuel cell buses. We urge you to expand this exemption to recognize the fiscal impacts of both electricity and hydrogen costs.

On behalf of AC Transit, we support the proposed regulation, and we look forward to working together to implement it.

Thank you very much.

CHAIR NICHOLS: Thank you.

MS. DURAN: Good morning, Chair Nichols and members. I'm Alejandra Duran with the Weideman Group here on behalf BYD. BYD is a California-based manufacturer of
battery electric buses and trucks. And we have several deployments -- excuse me -- across the state.

First of all, we would like to thank the Board and staff for the opportunity to comment here today on this, and express our strong support for it. This rule we believe is a critical step in California's fight to reduce greenhouse gas and criteria air pollutants emissions, and creates a template for other states that can follow.

From BYD's experience, California is primed and ready for the transition to zero-emission buses. In California alone, BYD has delivered 79 buses to public transit agencies with another 122 orders on the way.

Beyond providing buses for public transit fleets, we have provided more than 100 buses of other fleets to LAX and several tech companies in the Silicon Valley. But we're especially proud of being a partner with California universities. For example, we've partnered up with Stanford, which has 40 of our buses, UCI, which is going 100 percent electric, UCLA and UCSF as well.

With adoption of this rule, we believe the enormous potential of battery electric buses will be truly realized while also creating a strong beachhead for other market segments like trucking to transition to zero emission.

Once again, thank you for the opportunity to
comment on this milestone rulemaking.

MR. SEGURA: Good morning, Chair Nichols, members of the board, and ARB staff. My name is Nick Segura. I am the business manager of IBEW Local 569 in San Diego, California. I traveled to attend this meeting so I could express our strong support of my 3,500 members for the zero-emission bus rule.

Your yes vote is very important to IBEW members for many reasons, including:

Reducing greenhouse gases; the health of our greater San Diego community; and all of California, and three categories of jobs:

First, California has become the capital of electric bus building in the U.S. and a considerable number of good manufacturing jobs have been created. With a yes vote today, thousands more will gain a ticket to the middle class. While not IBEW jobs, they are important to the people who get them and the economic health of the state.

Second, the additional electric infrastructure needed to charge electric buses will put thousands of IBEW electricians to work. And there will be even more electrical training, apprenticeship opportunities and jobs for disadvantaged communities. The IBEW is making sure that the communities that need -- that most need good
paying jobs will benefit.

With a substantial part of zero-emission --
zero-emission bus infrastructure workforce IBEW recruits
members of disadvantaged communities, women, veterans, and
into the 21st century California apprenticeship
training -- or, I'm sorry to the 21 California
apprenticeship training programs and turns out to be --
they turn out to be great electricians who have more than
a job, but a valuable career and a great trade. They will
play a major role in building the zero-emission bus
electrical infrastructure.

Finally, there is enthusiastic IBEW support for
the zero-emission bus rule all across California that
could be expressed by a number of IBEW speakers lining up
behind me, but we are conscientious of the time and the
concern about the long agenda you have that you're trying
to get through. Therefore, at this time, I'd like to ask
IBEW and NECA members here today from around California to
stand up in an expression of their enthusiastic support
for a yes vote.

Thank you.

(Applause.)

MR. SEGURA: Thanks for your time.

CHAIR NICHOLS: Thank you. That's an impressive
show of support.
MR. JABLONSKI: Good morning. My name is Paul Jablonski. I'm the CEO of the San Diego Metropolitan Transit System.

I guess in light of the Christmas season, what would it be without a Grinch, right? So I find myself in that --

(Laughter.)

MR. JABLONSKI: -- unenviable position.

But, you know, I want to thank Richard Corey and staff for continuing to collaborate with the transit industry throughout, I guess, it's been at least three years in this. And there's been a lot of hard work on each side. And that's important, because the consequences of not getting this right are very high. You know, we don't have unlimited subsidies. You know, I sat three hours yesterday through raising fares in San Diego, both in North County and with MTS, and it was heart-wrenching. And we don't want this issue to create a situation where we have to raise fares again or cut service.

You know -- and I have to take exception with the statement in the staff presentation that this technology will produce substantial savings to transit industry. As someone who operates over 800 vehicles and his operated a number of fleets over my career, this will not produce substantial savings to us.
MR. JABLONSKI: This has not gone down in price for me over the last five years. In fact, it continues to go up every time I change it out.

I'm very happy that the resolution calls for a review by this Board of the technology. It's vitally important that we not jeopardize transit service to our community as an unintended consequence of this regulation. And I know most of my colleagues are planning to implement this technology, but no one has yet figured out how to charge a fleet of 800 buses in an urban environment operating scenario.

I truly hope that the ZEB technology reaches the effectiveness and reliability that the manufacturers of them continually purport, as well as the CARB staff. And I really worry about how much it's going to cost us in terms of our electricity rates, which seem to go up every year.

Once again, I want to thank you for the degree of security that the resolution provides and the Board looking at this, because as I said, the stakes are very high.

Thank you and Happy Holidays.

CHAIR NICHOLS: Thank you, and we understand.

MR. SHAW: Madam Chair, members, Joshua Shaw,
Executive Director of the California Transit Association representing the public transit agencies that will be subject to this regulation.

As Shirin told you in her opening remarks, my association does support the goal of converting California's transit bus fleet to 100 percent zero emissions by 2040. And, in fact, the regulation before you today is significantly better than the regulatory concept that staff released last December. And it's even an improvement on the draft regulation you all looked at three months ago in this room.

So we thank you, Madam Chair, the Vice Chair, Board members, the staff for continuing to work with us to improve the mechanics of the regulation and for your assurances today that this ambitious plan to electrify transit fleets will not adversely impact transit services.

When I say transit services, forget about my public transit agencies that pay me to talk like this. I'm talking about the people that rely on public transit. Madam Chair said it's well documented, unfortunately, that we're in a period of transit ridership decline. We need all the help we can get to turn that around. That's more important, what the people who rely on transit need, rather than what the transit systems need.

Having said that, we do see several challenges on
the horizon for this regulation that could undermine the
electrification plans of even the most bullish transit
systems. And several of my dues-paying members came up
and told you they support this regulation.

They're professional staff -- many of the
professional staff at some of those agencies still share
corcerns with us about implementation. These challenges
include, but are not limited to, the availability of
funding to purchase ZEBs and install related
infrastructure, the high cost of electricity as a fuel,
the scalability of charging infrastructure, and the cost
and performances of zero-emission bus technology relative
to conventional fuels that we use today.

To protect transit agencies, and more importantly
the riders who rely on this service from these challenges
and any unintended consequences of this regulation, we had
called for establishing cost and performance benchmarks in
the regulation. We had called for mandating a regulatory
assessment in the regulation. We had called for funding
for transition, meaning compliance funding, not just
incentive funding. Most of those things are not in the
regulation itself.

While we think that's a grave mistake, we are not
taking for granted the fact that language has been put
into the resolution you're going to adopt today that
demonstrates your commitment. We thank you for those changes very, very much. We're going to need your help, when and if, those challenges we predict come on line. You just heard a speaker who talked about the practical challenges. We are going to rely on you and your staff to be realistic, if the cost isn't there, if the performance isn't there, and if the funding isn't there.

Please help transit systems serve the people who rely on public transit after today's adoption of this regulation.

Thank you.

CHAIR NICHOLS: Thank you. Could you stay for just a sec. Thank you. I think I understand your position, and you represent a broad range of districts with different needs, and different sizes, and funding, and all the rest. And so I'm not going to challenge you in terms of your position, but I am going to ask something of you.

As I read this rule, there are so many escape hatches, if you will, that it is frankly somewhat questionable from -- if you look at it from a purely regulatory enforcement perspective, how effective this rule is going to be. It cannot be effective if the agencies don't cooperate. And while I appreciate the support from the districts that have come up, your
comments, frankly, make me very nervous. Because clearly if an agency wants to find reasons why they can't get the buses, or they're -- the current buses aren't working the way they wanted them to, or the money wasn't quite as much as they thought it was going to be, they could make a case, and I think it would be hard for an agency like ours to resist, that they can't possibly comply with the goals of the regulation.

So how are we going to get to a point where we're all working together to try to make this thing a success?

MR. SHAW: Sure. Madam Chair, a couple points. First, early this year, we proposed a set of concepts for a regulation to get us there in a way that we thought would work. So as a whole, our industry has been cooperating with you this entire year. I simply this morning documented two major asks that we didn't get in the regulation. But I thank you for the pieces of that that went into the resolution, and I'm -- and that's on the assessment and the degree to which you're directing your executive officer and staff to come back and tell you about things we wanted documented in the regulation.

And then I also said, you haven't changed your stance on compliance funding. And I get why in a regulation you can't do that. We're going to ask you later when you do things like plan your next three years
of Cap-and-Trade funding to help us get there. We are asking for your help. We're not saying we're not going to do that.

You've also heard there are bullish transit systems who are already there or who will be there. That's happening. I stipulate to that. That -- I hope all of our agencies take that approach. Then, there are those who are going to struggle. There are smaller agencies who aren't going to be able to get their at least on the -- ahead of the incentive funding based timelines that are in this regulation. But they're still going to have to get and we're going to ask them and the legislature to work together with you on funding sources to get there.

And then at the end of the day, if you don't trust me, it's been demonstrated that my friends in the environmental community can get to the political appointees and electeds who run the transit systems who are forcing their staff to get there. So we're going to get there one way or the other.

We've just simply talked about how to get there in the way that does the least potential harm to transit riders. New costs, that's going to be scary. We're going to have to deal with that together. We are not recalcitrant. I didn't say we opposed the regulation
today. I just said please help us implement it the day
after you adopt it.

CHAIR NICHOLS: It's not exactly a partnership,
but I'm going to take it as an offer to have one.

(Laughter.)

MR. SHAW: Thank you.

CHAIR NICHOLS: Thank you. Appreciate it.

Okay. Before we take up the next speaker, we are
up to 40 people. We're not going to take anymore sign-ups
at this point. And I am going to ask -- sorry, more than
40.

BOARD CLERK DAVIS: There was one late addition.
We'll get you the card.

CHAIR NICHOLS: Excuse me?

BOARD CLERK DAVIS: There was one more addition.

CHAIR NICHOLS: Oh, okay, so 41. Thank you.

Thanks for the correction.

And so I am going to ask people at this point,
voluntarily if they can try, to limit their comments also
to two minutes, if you can do that. It's going to be much
appreciated, before we actually start, you know, buzzing
you or anything like that. Okay. Thanks.

MR. FOLAN: I will. My name is Kenneth Folan,
and I'm with the Metropolitan Transportation Commission
staff. And we certainly at MTC share the broad vision of
the regulation. And we -- it's been mentioned a couple
times about partnership and working together. We want to
make sure that the meeting last week between the CTC and
the CARB can serve as an example of how we can work
together with State agencies as well as partner with MPOs
and the transit agency.

We also share concerns on the funding side.
We're in the middle of a capital replacements for BART
cars for CalTrain electrification, Muni light rail
vehicles. So there's a lot on our plate down in the Bay
Area.

One thing I'd mention on the new information that
we received this morning is that operators usually start
planning for their purchase two years in advance, so I
would encourage your staff to start the review as soon as
you can, so that that can inform that process. The sooner
you get started with the review I think the better.

Thank you.

CHAIR NICHOLS: Thank you.

MS. SHUMWAY: Good morning. My name is Emma
Shumway. And I'm with Environment California. And I'm
also speaking on behalf of the thousands of UC students
who submitted photo petitions in support of this rule.
Outside of the U.S., other cities are already
demonstrating the immediate feasibility of these
large-scale electric bus transitions.

In December 2017, Shenzhen, China became the first city in the world to operate entirely electric buses. And their fleet is 16,000 buses, which is three times larger than New York City's bus fleet, which is the largest in the U.S.

And here in the states there's no doubt that California is taking the lead on the nationwide transition to electric buses with San Francisco, L.A., and other leaders in California making the zero emission commitment for their buses already, and the California Public Utilities Commission making the historic $760 million investment in electric charging infrastructure, including charging for electric buses. And today, we have the opportunity to continue this momentum with the passing of the Innovative Clean Transit Rule.

The time is right for pioneering rulemaking. Industry experts predict that the sound production of electric buses will skyrocket in the next decade. But the transition to electric buses is not inevitable, so in order to get the most benefit for our health and the environment, we need to start now and rapidly accelerate towards an all electric bus future.

Thank you.

CHAIR NICHOLS: Thank you.
MR. JACOBSON: Hello. My name is Dan Jacobson. And I'll keep my comments really brief. I am actual bus rider, and I take the EL4 on ETran every day from Elk Grove in here. And I'll tell you one thing, we should thank the bus drivers, because they really are the unsung climate heroes, who are keeping thousands, if not hundreds of thousands, of cars off the road every single day, and our doing us a great service, and we can't forget that.

The second thing I'll say is while this rule is great, we're going to come back to you fairly soon and say we need to do more. We've got to look at the delivery trucks. And I think really most importantly for the health and safety of our kids, we've got to look at the school buses. And so we're talking about transit here, but we're going to come back and talk about school buses, and we want to do that as quickly as we can.

And finally, I'll just say it was just a couple months ago where the Governor signed a bill to get 100 percent clean energy, and we should be applauding that. But at the same time, we should be setting a goal for zero percent childhood asthma and saying that we're going to get to there by 2030. And I would encourage all of us to adopt that as a goal as well.

Thank you.

CHAIR NICHOLS: Thank you.
MR. SAADAT: Good morning, Chair Nichols and members of the Board. My name is Sasan, and I'm here on behalf of Earthjustice. And we've been working with partners across several coalitions to move California's transit buses to zero emissions. Years in the making, this rule builds in flexibility for transit agencies and still provides the overdue relief to communities burdened by some of the worst air quality in the country.

And while we feel this rule missed an opportunity for much more decisive action, it's essential that we move forward. The surest risk we face now is inaction. For the health of our communities and the safety of our climate, further delay is far more damaging than the rule's limitations. What we need is to build momentum. And to do that, the immediate adoption of the ICT is essential.

CARB's own reports have shown the stubbornness of transportation emissions. The great news is that as soon as the ICT rule passes, the benefits amplify with time. The proposed rule has already spurred proactive measures from transit agencies here today demonstrating their bold leadership. And that early adoption is going to make existing trends of declining costs, and increasing range even more dramatic. Those technological developments will be able to be leveraged across the transportation sector,
for example, with heavy-duty trucks.

And unlike natural gas buses, electric buses get cleaner over time as California closes in on 100 percent renewable energy. With zero tailpipe emissions, there's no asterisk next to the enormous public benefit that these transit buses provide. Health advocates fighting for clean air, environmentalists fighting for a safe climate, and communities fighting for affordable mobility, we will all find our common champion in California's transit agencies.

And done thoughtfully, this transition will provide employment for under-resourced communities, and develop the workforce that's critical for our broader energy transition.

Earthjustice really appreciates the work that CARB staff have done to address these urgent concerns, and we thank you for the opportunity to underscore the need for this rule.

We look forward to applauding California's continued leadership and this agency's role in it.

CHAIR NICHOLS: Thank you.

MS. HEFFLING: Good morning, Chair Nichols and the Board. My name is Emily Heffling. I'm an outreach coordinator and policy advocate with the Union of Concerned Scientists. I'm also a bike commuter in
Oakland, so I'm really personally excited to be here to support this rule and appreciate AC Transit's further underlining of their commitment as well.

And on behalf of our 75,000 supporters in California, and 3,000 scientists, public health experts, and technical experts, we're here to thank you for your three years of really hard work and leadership on the innovative clean transit rule, and your commitment to cleaner air and healthier people in California.

I interface with our supporters regularly as part of my job on a variety of topics. And I can say that the messages that we got from people on this rule were some of the most excited, and enthusiastic, and highest rates of action that we've seen in a really long time. So people are really excited about this.

This is also a historic step for California, as -- as far as we know, it's the first legally binding transition to 100 percent zero-emission fleet. So while this is a huge step for California, we also recognize the impacts that this rule will have on other states and the rest of the country, and just the ripple effects that this leadership here today will have at a time that we really, really need it nationally. So thank you, and we strongly support the adoption of this rule today.

CHAIR NICHOLS: Thank you.
MR. DONAHUE: Good morning, Madam Chair and members. Jake Donahue on behalf of the Tahoe Transportation District. While we do not take a formal position on this proposed regulation today, we do want to express our gratitude to the Board and staff for taking steps to transform California's transportation system.

Tahoe Transportation has always been a proponent and leader in initiating clean technology in public transit. And we are pleased to see the Board taking up that causes as well. We do though want to stress the importance of funding being dedicated to support this new rule, and the importance that that funding be administered in a way that is truly technology neutral.

As many of you likely know, in the Tahoe region, we face cold temperatures, high and varying altitudes, long-range routes, steam terrain and other unique situations that make an array of technologies, including hydrogen, necessary to achieve our shared goals as outlined in this proposed regulation.

We look forward to engaging with staff and the Board as we move forward together to implement this new rule.

Thank you very much.

MS. GOLDSMITH: Hi. Good morning. Nice to see you all again today. Hannah Goldsmith with the California
Electric Transportation Coalition. And today, we want to briefly offer our support for adoption of the Innovative Clean Transit measure, and its principal goal of achieving a zero-emission transit system in California by 2040.

We find the rule and its flexibilities conservatively ambitious, reasonable, and necessary to meet our State's air, climate, and economic targets. Our members, including utilities, zero-emission bus manufacturers, charging station providers, and others see the transit agencies as our partners, and have been and will continue to work with them to make the transition to zero-emission buses as smooth as possible.

Many of our utility members have in place or are in the process of getting approved -- I have to make those caveats -- programs to cover a large portion of the charging infrastructure costs. They also are undergoing beneficial adjustments or seeking approval for adjustments to rates that will better serve transit agencies.

And I do want to highlight that CalETC's biggest priority in the legislature every year is securing funding for transit buses, trucks, light-duty vehicles, all zero-emission technologies. And so we will continue to do that with the gusto that we have in the past.

And I do want to say that CalETC does not oppose allowing this funding to continue through compliance of
the regulation.

We thank staff for the numerous meetings, phone calls, and opportunities to provide feedback during this regulatory process, and recognize staff's diligent work to strike an appropriate balance on this rule. We urge your approval today.

Thank you.

MR. COSTANTINO: Good morning. Jon Costantino on behalf of Trillium. They are a innovative provider of infrastructure for hydrogen, electricity, and renewable natural gas. So as a private infrastructure provider, we are agnostic to the fuel, and we believe this regulation provides enough flexibility, but would like to make sure that the operational needs of all our customers, which are the transit fleets, is -- are always satisfied.

We're happy to see the resolution have the annual number -- the annual review, as well as the performance review. One thing I will note is that the annual to the Board requirements do not discuss cost. And we can't wait four, five, six years to talk about that. So love to see some of those cost numbers brought back to the Board every year.

And with that, we look forward to working through some of these infrastructure issues as the years go by.

Thank you.
MR. BARRETT: Good morning. I'm Will Barrett with the American Lung Association in California.

I wanted to first start by saying we strongly support moving forward with this rule today. We've been working on it with your staff and members for quite some time, and think it's in a really good place to move forward and continue the advancement of public health through zero-emission technologies.

We think that setting the course to 100 percent zero-emission transit it a critical step for public health in California, and for climate protections that we know we need to achieve as quickly as possible.

The transportation sector is the leading source of harmful air and climate pollution in our state. And your direction today to zero emission will improve air quality and climate across California communities. Especially important for our disadvantaged communities to see that cleanup happen as rapidly as possible.

The staff have taken real care with the development of this rule, and we appreciate it advances zero-emission technologies across the heavy-duty sector, community mobility -- that discussion at the CTC meeting last week was so important on, you know, ways that we can really advance community mobility options and clean up the air at the same time.
Hitting our SIP commitments. This is an important rule for making sure that we are making those commitments and meeting those commitments made in the implementation plan.

And then also the cross-agency partnership. We see this as very important on, you know, making sure that the state is moving in lockstep with our local public agencies to make sure that we are achieving our clean air goals.

So on behalf of the 100 or more health professionals who signed the letter that the Lung Association submitted, gathered some of those signatures with the Union of Concerned Scientists and their outreach program, we urge you today to move forward to reduce dependence on harmful fuels that impact public health in California, and really make sure that we're moving forward as quickly as possible.

I think the transit agencies have made significant commitments already, and will continue to do that in partnership with this rule in place. So thank you very much again to the staff working on this rule for so long. We're here to work with you as it moves forward and really look forward to making sure that California continues this path down to zero-emission technology pathway, so that we can achieve our clean air and climate
goals as quickly as possible.

Thank you all very much.

CHAIR NICHOLS: Thank you

MS. TSAI: Good morning. Hello again. I'm
Stephanie Tsai with the California Environmental Justice
Alliance. We're a statewide coalition of grassroots
member-based organizations, who work directly with
low-income communities and communities of color across the
State. And we're here today to show our strong support
for this rule. We're very excited about it. You know, it's a very important step, as you've heard from many of
our colleagues today for both our climate change and air
quality goals.

In particular, I want to appreciate the work --
all the work that's led up to this point, and your bold
leadership in moving this forward. We encourage you to,
of course, pass it today. And we're particularly
encouraged by, you know, the connection between how this
can help us move forward in electrification of the
heavy-duty sector, and, in particular, trucks coming up
next after buses.

As you know, public transit buses have a much
more direct and widespread impact for our communities for
low-income communities and communities of collar across
the State, much more than, you know, other sectors of
electric vehicles like light-duty.

And so in implementing this rule, we strongly urge the staff to work closely with transit agencies to ensure that electric buses are deployed in disadvantaged communities as much as possible, and as early as possible to help alleviate some of the severe health impacts and air quality issues in our communities across the state.

And to complement this, we also strongly support the development of good jobs and strong workforce policy, particularly as targeted higher and other tools like that can help provide good jobs for our community members.

And, you know, in addition to that, since this is about public transit agencies, we really believe that public money should help support good local jobs for our communities.

In closing, I'll just say that there are a lot of categories of incentive funding to help support this, and we really look forward to continuing to work on some of those, and help target, and prioritize disadvantaged communities through that.

Thank you very much.

CHAIR NICHOLS: Thank you.

MR. KOTLIER: Good morning, Chair Nichols, members of the Board, and ARB staff. My name is Bernie Kotlier and I am the Executive Director of the California
Labor Management Cooperation Committee, IBEW and NECA.

For my office in San Jose, I represent thousands of contractors and electricians all over our state who urge you to vote yes on this zero-emission bus ruling. Members of the National Electrical Contractors Association, or NECA, include contractors of all size -- sizes and construction specialties in every part of California.

Collectively, our contractors employ more than 30,000 well-trained highly-skilled electricians. They care about our great state, our economy, our environment, and our climate. NECA contractors understand that any transition that involves changes in infrastructure can be challenging, especially for transit districts.

The transition to ZEBs will take considerable technical knowledge, skills, and abilities. And some transit agencies will need help. NECA contractors are ready and able to assist. NECA contractors support cleaner air, greenhouse gas reduction and decarbonization, a healthier environment, strong, available, and affordable public transit, outreach comprehensive training and employment of increasing numbers of veterans, women, and members of disadvantaged communities.

NECA believes that a yes vote today is the best way to achieve our State policy goals and do the right
thing for future generations.

Thank you for the opportunity to express our
support, and thank you all for your commitment and
dedication to public service and to the public good.

CHAIR NICHOLS: Thank you. We welcome your
participation. It's great to have you.

MR. APPEL: Good morning, Chair Nichols and
members of the Board. My name is Sam Appel. I represent
the BlueGreen Alliance. We're an alliance of large
environmental organizations and unions across the country
and in California.

We're very pleased to see you considering this
rule and hope that you vote yes on it today. We also
appreciate your mentions in the presentation and in the
resolution of attention to good jobs in ZEB manufacturing
operations and maintenance.

Although, we appreciate these mentions, and we
appreciate working with CARB to make these outcomes
happen, we know that high-quality jobs for disadvantaged
communities are not guaranteed per se by the
implementation of this rule. We know that you do
understand this, and we look forward to making sure that
you take the next steps to make sure that those jobs are
actually delivered to the disadvantaged communities that
we're talking about today, and to make sure that those
are, indeed, high-quality jobs with sustainable high pay, training, fair labor practices, and retention.

We know that proactive policies are necessary, because without proactive policies, like the U.S. employment plan, or the fair and responsible precedent, or other such proactive policies, just incentivizing the industry to develop itself does not guarantee that these jobs are good.

Disadvantaged communities we want to prioritize first for these jobs, and also for rollout of the buses themselves for the air quality benefits. We see this as a really important stage for the development of high quality jobs and access policies, especially because transit buses are the beachhead for the rest of the HD sector. And there's going to be a lot of potential for developing high-quality jobs and access for disadvantaged communities as we go down through drayage trucks, medium-duty and the rest of the heavy-duty technologies.

For example, we want to just highlight how the energy sector has made this just transition possible. In energy and the development of renewables, we've seen that proactive policies have ensured that high quality jobs and disadvantaged community access are built into the very policies themselves that develop the renewable mandates for California and the RPS.
Thank you for your consideration. We look forward to working with you.

CHAIR NICHOLS: Thank you.

MR. BAGUIO: Good morning, Chair Nichols and Board members. I'm Nate Baguio with the Lion Electric Company. We are a manufacturer of zero-emission battery electric transit buses, trucks, and probably most visibly here in the Sacramento area, school buses, the ones with the blue bumpers you see driving around the city here made possible by CARB. So thank you for that.

As a life-long Californian, I want to express my support of this rule for its -- for addressing climate change, and also the air quality in our great state, but also want to kind of give you a peek behind the walls at the Lion Electric Company. And that just the potential of this rule already has us creating new jobs. We're hiring here in California. We are looking at opening a couple of manufacturing centers here in California, not only because of this rule, but also because of the grants. And it's important to know, and I'm sure you know this, but there -- the grants and these type of rules are working.

The cost of our vehicles has dropped dramatically. The performance of the vehicles. The range has gone up dramatically in the last two years. We are spending not only just on jobs in California, but also the
development of technologies to address barriers and concerns, and even perceptions people have. We're looking at high-speed charging, and swappable batteries, and a number of different things to address the barriers that some folks may bring up.

Also, want to let you know that we've already started these things. We've opened a facility here in Sacramento in the Natomas area as an experience center helping educate people on the possibilities that zero-emission vehicles bring to their communities, and how wonderful they are.

I want to thank you for the hard work you do for the State of California, and for the work you've done on this rule, and the Lion Electric Company supports it fully.

Thank you.

CHAIR NICHOLS: Thank you.

MR. MAGAVERN: Good morning. Bill Magavern with Coalition for Clean Air. And I'll just make three quick points in support of this rule on emissions, technology, and funding.

First of all, we do need the reductions in air pollution from this rule. And as the staff presentation noted, those reductions will come especially in our disadvantaged communities that need them the most.
And, in fact, your State Implementation Plan counts on those reductions and counted on them starting already, because the rule was to have been adopted last year. But the process has been a sound one, and we very much support the proposal in front of you.

When it comes to technology, we do see this as a way station as we continue to develop zero-emission technology for heavy-duty vehicles. So we'd like to see that expand into other kinds of buses and other heavy-duty vehicles. And I'm talking about both battery electric and fuel cell electric both delivering zero emissions.

And finally when it comes to funding, there -- fortunately, we've had ample incentive funding available in recent years. I think it's incumbent on all of us who are involved in the annual budget process to make sure that that continues. And I guarantee that Coalition for Clean Air will be actively advocating for more funding for clean transportation. And we look forward to working with other partners in that efforts.

Thank you.

CHAIR NICHOLS: Thanks, Bill.

Hi.

MR. FLORES: Hi. Good morning. Good morning, Madam Chair and esteemed Board. My name is Ericka Flores. And I am a community organizer with the Center for
Community Action and Environmental Justice. We are located in the southern part of California. And we work within the inland valley region, which encompasses two of the major counties here in California.

Today, I'm not only here to speak as an organizer, but also as a community member who resides in one of the most vulnerable communities, which has been impacted by dirty diesel, specifically that created by the transit industry. I live in a community that has been -- who lives and is neighbor to one of the largest -- our only actually provider of public transit, OmniTrans. I know we're not here to talk about them specifically.

But for many years, they have -- they house natural gas on their sites. They transition now and they've now -- they're housing -- housing it underground. However, the adverse health impacts that our community, my community, my family has experienced due to not having zero emissions has been quite adverse, and impactful in a very negative way.

For this reason, my community and the organization that I represent we support this rule. We need it now in 2018. I'll admit that I am very hopeful to hear that there's a variety of agencies here today, big agencies, including transit agencies who are willing, and able, and happy, and looking forward to working today in
supporting this rule, and moving forward with this.

And so 2040 although is exciting as a milestone, we're in desperate dire need to have this sooner. I'm not sure if there could be any changes actually in terms of the time -- the timeline. But for us, I think there are various opportunities here. I heard through different speakers that there's a variety of programs that are able to fund some of the costs in order to make this transition happen.

As well as we are also in desperate needs of jobs. And residents in my community, like various of my family members, are more than happy and willing to enter into manufacturing industry that can train them, so that they are able to enter and help create the zero-emission buses. And so there are a variety of different opportunities that come with this rule that will benefit people like myself, benefit people like the community that we serve.

The oil industry lies all the time. I believe that going near zero is not the way. We've been doing that for a long time. We have clearly seen and observed that it's not working. Our residents in our communities are literally dying. And most importantly, I see a long-term opportunity to, as somebody also mentioned it, to transition to the heavy-duty sector.
So I look forward to working with you in the future, and I hope that you can pass this rule today. Thank you.

MS. VIDAU RRE: Hello, Board members. My name is Andrea Vidaurre. I am with the Center for Community Action and Environmental Justice. I am from the dry ports of the Inland Empire in Southern California, also widely known as one of the largest distribution hubs of the nation.

Today's decision is incredibly important for the State of California, for the State of climate change, and very specifically for the communities like mine that have been inundated by freight pollution.

Today is a chance to reverse all -- today is a chance at beginning to reverse all the wrongs that have been forcibly imposed on the most vulnerable communities here in California, the communities who, at their expense, much of the nation benefits from. These communities who are suffering from the slowest lung growth rates, asthma cases, and hospital visits due to the oversaturation of a dirty transportation system, and subsequent poor air quality.

We have a core principle within our various EJ communities, and that is that our solutions do not come at the cost or expense of another community. That is why we
cannot depend on an unreliable fossil fuel industry that

drags us into a prolonged and unnecessary commitment that
takes lives as its casualties. And I say this as someone
who is following the footsteps -- you might -- as you've
just heard of those that have passed away fighting for
their lives and those that are still fighting for their
lives in the Inland Empire.

    Much of the externalities we face have been
because a stand hasn't been taken in the past. A stand
hasn't been taken on investing on what we know is the only
way forward, which is the requirement and deployment of
zero-emission transportation technology. This rule is the
only way our environmental justice communities see moving
forward, because of the path it will create for clean
energy, technology that will inevitably bring clean
trucks, safer jobs, and healthier air into our
neighborhoods.

    The direction you all take today is monumental,
and the solutions we have been demanding for years, and
the only solution we can take moving forward from here on
out.

    We're excited to see our transportation agencies
take the lead as they always have, and be the precursor
for the energy infrastructure and zero-emission technology
deployment. We need and will get through this rule.
The solutions are right in front of us. They just need moral investment and leadership. So what's stopping us?

Thank you.

CHAIR NICHOLS: Thank you.

MS. VERDUZCO: Good morning, members of the Board, Chair Nichols. My name is Iris Verduzco. I'm a resident of the City of South Gate. And I presently work with the Moving Forward Network that's based out of the Urban and Environmental Policy Institute at Occidental College.

I'm here today in strong support of the Innovative Clean Transit regulation. The adoption of this rule serves as a necessary regulatory stance to get us to a zero-emission transit bus future. The adoption of this rule is monumental as it will serve as precedent for many states that look to California. We have the opportunity to be an environmental leader to commit to zero-emission buses.

As we've heard from previous speakers, the implementation is here. I want to echo that we have the technology. We have -- we are able to show that the costs are comparable to other buses. We have the will of transit agencies, such as L.A. Metro, who has committed to become zero emissions by 2030. And while in cities like
mine that need more access to bus routes, we want to
ensure that when these routes and these buses come to our
communities, we want these buses to be clean, to be zero
emissions.

As I briefly shared yesterday, the work I engage
with, the Moving Forward Network, is committed to
improving the freight transportation system in areas of
environmental justice, public health, quality of life, the
Environment, and labor. We are invested in co-powering
communities like mine that are disproportionately
suffering from the negative impacts of industrial and
freight pollution.

This rule mostly excites me when I think of how
the manufacturing of this technology will further support
the electrification of the freight transportation system
that will mitigate the negative impacts of emissions in
cities like South Gate. Our communities need zero
emissions now. As our community members often say, we are
just trying to breathe.

I look forward to the Board's support with this
mission and this regulation passage.

Thank you so much.

CHAIR NICHOLS: Thank you.

BOARD MEMBER DE LA TORRE: Mary?

CHAIR NICHOLS: I think Board Member De La Torre
wants to say a word.

BOARD MEMBER DE LA TORRE: It's -- I just want to acknowledge it's so incredibly rare to have someone come up here both from South Gate, which is my hometown, and where I live, and from Occidental, which is the school that I went to.

(Laughter.)

BOARD MEMBER DE LA TORRE: So -- and I'm on the Board of. So very much doppelgänger. Thank you for coming and speaking today.

(Laughter.)

CHAIR NICHOLS: So his vote was in danger before, but this has been --

(Laughter.)

CHAIR NICHOLS: You make a difference.

Seriously, we welcome you. Thank you.

All right.

MS. FIEBERLING: Good morning. My name is Emily Fieberling, and I'm with Environment California. And as my colleague said earlier, I also represent the thousands of UC students who took photo petitions in support of electrifying the California bus fleet, of which I'm a recent grad.

Buses are the workhorses of the transportation system. Yet, the majority of buses in California and
across the nation burn fossil fuels like diesel and natural gas that put the health of our communities at risk and contribute to global warming.

Our new report that we submitted for record on electric buses finds that whether community -- commuters are on or boarding buses, they're exposed to toxic air in high concentration. There's no reason why we should be running dirty polluting buses that contribute to global warming in communities when we have cleaner and better options.

Our report finds that if the state's seven largest transit agencies replace 3,130 of their diesel buses, it would be the equivalent of taking 34,000 cars off the road each year, when it comes to greenhouse gas emissions and reducing toxic air pollution.

Just imagine the benefits to our children, our communities, and our climate if all of Californians -- California's transit agencies and school districts achieved full electric bus fleets. And that's why we're in support of this ruling today.

BOARD MEMBER BALMES: Emily, before you leave, can I ask you what UC campus you're from?
CHAIR NICHOLS: Excuse me?
MS. FIEBERLING: UCLA. Go Bruins.
(Laughter.)
CHAIR NICHOLS: Okay. Everybody is going to have to state their affiliation from now on.

MR. PIMENTEL: All right. Madam Chair and members, Michael Pimentel here today on behalf Alex Clifford CEO of Santa Cruz Metropolitan Transit District. He regrets that he cannot be here today. But I ask that I give this remark -- these remarks on his behalf.

So on behalf of the Santa Cruz Metropolitan Transit District, I'd like to thank the Board and staff for the opportunity to participate in the development of this new zero-emission bus regulation. I'd also like to thank Mr. Kitowski and his staff for changes made to the draft ICT that have been developed as a result of numerous meetings with the California Transit Association and its members.

Santa Cruz Metro is committed to zero-emission buses, and supports the Governor and ARB's goal of achieving zero-emission bus fleets by 2040. We have some concerns with how we will meet these goals. But rather than go into the details of those, I'll simply align myself with the comments of Mr. Shaw, and say that we look forward to continuing to work with you to get this right in implementation.

Now breaking from the comments that Alex provided, I do want to note -- you know, to the point of
collaboration and partnership between the transit industry and ARB, minutes after this meeting I'll actually be meeting with your staff directly -- I've been the lead staff for the California Transit Association on this regulation -- to talk about how we make this feasible. I'm talking about the technology constraints, how we work past them, how we can partner on funding, on electricity rates to actually make this something that the transit industry can comply.

So thank you very much.

CHAIR NICHOLS: Thank you.

MS. MITCHELL: Good morning, Madam Chair and members.

CHAIR NICHOLS: Good morning.

MS. MITCHELL: Wendy Mitchell. I'm here on behalf of the L.A. County Metropolitan Transit Authority and in support of the ICT regulation.

As you all know, Metropolitan has taken a -- the Transit Authority has taken the position to go all electric by 2030 of their 2,300 fleet bus. And in the next year, we'll have -- we have ordered and will have in route 105 electric buses. So we're working hard on the infrastructure that's associated with that, and working with the utilities. And we thank your staff for all the hard work on this regulation and urge your support.
Thank you.

MR. SCHUCHARD: Good morning, Chair Nichols, Board members. I'm Ryan Schuchard with CALSTART. There's a growing body of evidence that around the world cities are, in large numbers, deploying zero-emission buses and they know they can do it. There's 25 cities that have commitments by 2025 to do 100 percent zero-emission buses, 16 to 17 thousand are in the City of Shenzhen, as we already heard, and around 270,000 in China more broadly.

So when CARB enacts this rule, it's doing so in accordance with many places around the world. And as it does so, the rule will drive significant economies of scale that will result in lower prices to make the transition easier. And, of course, it will also help to further drive the further beachheads, delivery vans, drayage, and so and others.

So with that, I want to thank you the staff and the whole CARB team for such a thorough and considerate process. Staff has done such a really good job of coming up with this and listening to and creating a number of important flexibilities to deal with ongoing uncertainties with the transition.

I do just want to say that as the rule is implemented, we do need to make sure that we do give the resources to the transit agency they need to succeed. And
just three points on that. We do wish to continue that there is sufficient incentive funding, as many others have pointed to, many of whom we will be working with in concert to help make happen.

Number two, if the total cost of ownership matters are not addressed as the regulation begins, it will be important that funding continue to be eligible for the transit fleets in the regulation.

And then finally in a nod to giving transit agencies even greater resources, we need to increase the levels and type of demo and pilot funding for demand responsive transit, and other innovative solutions that the transit agencies can use to increase ridership.

So to conclude, we commend CARB for their hard work on this difficult task, and look forward to helping everybody implement the rule.

Thank you.

CHAIR NICHOLS: Thank you.

MS. BHOLA: Hi. Good morning, Board members. My name is Abhilasha Bhola. And I'm the Senior Policy Coordinator at Jobs to Move America. Jobs to Move America is a national organizations partnered with six international unions, and is dedicated to creating good jobs in manu -- in the transit manufacturing sector and providing access to those jobs for disadvantaged
communities.

We are in full support of the Innovative Clean Transit Rule and urge you all to support it today. Not only will this rule reduce greenhouse gas emissions in environmental justice communities across the state, but this burgeoning industry could support tens of thousands of jobs in manufacturing, infrastructure installation and maintenance.

With the hopeful passing of this rule, we have a critical opportunity to provide good jobs to communities facing significant barriers to employment.

Furthermore, we really appreciate your commitment to both the resolution and the -- in both the resolution and the presentation to workforce development and training programs. But training is only one component of spurring good job creation. We encourage ARB to also adopt proactive jobs policies, such as the U.S. Employment Plan that incentivize manufacturers to provide good jobs to disadvantaged communities.

We look forward to continuing to work with you all, and again encourage you all to support the Innovative Clean Transit rule.

Thank you.

CHAIR NICHOLS: Thank you.

MR. ASHLEY: Good morning, Chair Nichols, members
of the Board. I'm Tom Ashley, Vice President of Policy for Greenlots. As a reminder, we're a leading electric vehicle charging software and services firm based in Los Angeles. Greenlots is strongly supportive of this regulation, but we do want to make a couple of important notes.

One, we do want to ensure continued support from the Board and indeed the stakeholder community to ensure that there is adequate funding for transit districts to make these transitions.

We also want to encourage sort of a continued eye on the state of the infrastructure to support these buses, both encouraging potentially further investments by the utilities, as well as considering important steps such as managed charging to ensure that costs of energy are as low as possible.

Finally, I would offer sort of a common refrain from Greenlots that while we're very supportive of this regulation, we also don't believe it goes far enough, or acts as quickly as we ultimately need to act. So we will encourage the Board and all of the stakeholders to continue to think about how we can accelerate this transition and ensure that, in this case, the cities and transit districts have the adequate support to continue to move forward.
Thank you.

CHAIR NICHOLS: Thank you. That concludes the list of witnesses. So at this point, we can close the record for the public hearing portion of this proceeding and move towards the resolution.

Do Board members have any questions for staff or comments?

Yes, Ms. Takvorian.

BOARD MEMBER TAKVORIAN: Okay. Thank you. I just wanted to say that I'm really excited to support adoption of rule today, and when the times comes, would be happy to make that motion.

I want to just say that I really appreciate CARB staff's works on this. It was at the first Board meeting that I was at as Board member. And so it's really great to see it come to conclusion today. And I really appreciate the transit agencies' collaboration with the staff and all of the revisions that have been made to make it really feasible.

The program has been in development for years, and I think it really is serving as a balance, and I'm going to stay hopeful about that, to really protect public health and the environment, as well as keeping the transit agencies viable.

I really appreciate the involvement of the
electrical workers especially, because I feel like they're our experts in the field to ensure that this transition occurs in a safe and stable manner. Really thank them and appreciate the important inclusion by staff of the workforce training, because I know that that's going to be a critical part to making this really work. And I know that San Diego's IBEW local has been a leader in solar installation training. And I know that's really made it a good option for folks in San Diego and around the country.

I guess I want to say, and I'm probably not going to do a great job of this, but despite being the home of Dr. Seuss, I really don't want San Diego to take the -- any pride in playing the role of the Grinch.

So I don't think Mr. Jablonski wants to do either. I don't think he takes any pleasure in that. And I certainly believe that MTS -- the MTS Board is very supportive of electrification of the fleet. And I think the current plan is going to provide an opportunity for all of the children Whoville to breathe --

(Laughter.)

BOARD MEMBER TAKVORIAN: -- clean air and pay reasonable fares. Whoville, more seriously, is Barrio Logan, South Gate, Riverside, Imperial, and all of the other disadvantaged communities and impacted communities that where we know children have elevated rates of asthma.
And we know that they need to get to work and to school, and their parents need to get to work. So we want those fares to be reasonable. These direct emission reductions that will come from this rule are critically important. So I think that's really an important aspect of this moving forward.

So I'm going to predict right here, and maybe it's my New Year's Resolution, that as a result of both the flexibility of the proposed rule, and the commitment to making it happen, that San Diego is actually going to -- a heart is going to grow by three times, if I remember this story correctly --

(Laughter.)

BOARD MEMBER TAKVORIAN: -- and their commitment, and that we'll back in a couple of years as a leader in zero-emission technology in buses and not be a naysayer.

So all that aside, costs are real. And I know that it was a very difficult decision to raise rates in San Diego. And I know that's not where the Board or staff want to be. So I really appreciate that the inclusion of incentives and the technical assistance that staff is giving, and the development of these plans will be critical to helping, not only San Diego, but the transit agencies across the state really move forward.

So I'm really putting my faith in those plans to
really match the incentives with the needs in each of the transit agencies. And I want to just echo our Chair's comment that we're going to need that commitment from the transit agencies to really work with the staff to really make it real and not take those outclauses or out opportunities, but to really be committed to it.

So I'm really looking forward to this, and I think we're all committed to really working with the agencies and the staff to make this a successful program.

So thanks so much.
CHAIR NICHOLS: I take that as a motion for the resolution.

BOARD MEMBER TAKVORIAN: Okay.

BOARD MEMBER SERNA: Second.

CHAIR NICHOLS: And there was a second from Mr. Serna.

Okay. Did you want to speak next or --

BOARD MEMBER SERNA: Yes.

CHAIR NICHOLS: Yes, go ahead then. Thank you.

BOARD MEMBER SERNA: Thank you, Chair Nichols.

So I do want to thank everyone that has come out this morning to support this. As someone who has recently taken the time to actually travel as far as Germany to recently do kind of an exploratory trip on the subject of innovative mobility to see what's happening in that
particular country, especially with regard to medium- and
heavy-duty battery electric applications. And then coming
back, and the following week going to the Proterra plant
down in City of Industry to see the advances that are
being made by that manufacturer in understanding how fast
the -- the range, in particular, is developing for these
battery electric buses.

It really does give me a greater sense of
comfort, not just as a member of this Board, but as
someone that also serves on a local regional transit
district board of directors here. I appreciate the
comments that were made by the Transit Association, but I
also appreciate the fact that even some of the members of
that association have expressed their strong support for
this. And I think that's probably a healthy indication
that we're making progress in terms of -- and hats off to
our staff for doing this, but making progress in terms of
really putting to rest, at least for the time being, the
fact that, yeah, there's going to have to make -- we're
going to have to have some investments made in, especially
the charging infrastructure.

And I know that there's been a great many
investments made on the natural gas side in the years
past, but that's how progress works. It's not always
neat. It's not always without a little bit of grief and
pain. But I think what we're seeing now is kind of almost
a logarithmic increase in the technology that is going to
really make this ultimately the future.

And so I think today's vote is really indicative
of a strong move in the right direction. And I appreciate
again everyone's comments this morning, especially from
the IBEW folks who had, I think, really articulated very
well the fact that this is not just about emission
reductions, which is obviously the main part of our charge
here, but this is -- has a great many intersections,
especially when it comes to workforce development. So
appreciate that.

Thank you.

CHAIR NICHOLS: Thank you.

Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Madam Chair.

As a long-time proponent of clean transportation
solutions for the health reasons that Ms. Takvorian
mentioned, I think I surprised people when I was one of
the naysayers three years ago whenever we started
embarking on this Innovative Clean Transit regulation,
because I also am a strong supporter of public transit.

And I really want to thank everyone, stakeholders
on both the environmental justice side, the environmental
health advocacy side, the transit agencies, and especially
the staff, for working, I think, a pretty reasonable compromise. It's not -- the fact that not everybody is happy, I think, is probably a good sign, because we can't make everybody happy all the time.

But I think we've got a reasonable compromise that I'm very supportive of, both to improve the health of especially environmental justice communities, but all Californians, and to try to keep the transit agencies able to move forward with this heavy lift.

And I'm especially pleased that we're going to have the review -- I don't know exactly when it's scheduled for, but the review of the technology and our progress to make sure that we stay the course. So I'm very pleased to support this regulation.

And I also want to join with Supervisor Serna in thanking the members of IBEW for being here today to support green jobs.

CHAIR NICHOLS: Thank you, Dr. Balmes.

Is there anyone else who wishes to speak before I call for a vote?

BOARD MEMBER SPERLING: Yes.

CHAIR NICHOLS: Yes, Dr. Sperling.

BOARD MEMBER SPERLING: So I also want to thank the staff for persevering and accommodating all of these concerns. It's been a long painful process, I know, for
many on all sides.

    And I do want to say, let me start with, I am
going to vote in support, but...

    (Laughter.)

BOARD MEMBER SPERLING: And I do want to say I --
as everyone knows, I strongly support the goal of
electrifying transportation and electrifying buses,
electrifying cars, and electrifying most trucks.

    And I would also note that actually our diesel
buses today are worse than cars per. I mean, excuse --
yeah, are worse than cars in terms of greenhouse gases per
passenger mile. So another reason to support it.

    But, you know, I'm kind of feeling like, you
know, how lawyers are so good -- I'm not a lawyer -- so
good at coming up with all their whereases. So I have a
list of whereases here.

    It's kind of my academic soul here, I couldn't --
couldn't let go.

    (Laughter.)

BOARD MEMBER SPERLING: First of all, buses -- I
think the big picture is buses are really a tiny part of
the transportation system, a tiny part of the pollution
problem, a tiny part of the climate problem.

    And, you know, for instance, it's -- I think we
estimated it's 0.25 percent of the criteria pollutants.
It's only one out of 15,000 vehicles in California. And I kind of tried to come up with a percentage. I think it's 0.001 percent.

China produces -- in one year, China produces seven times as many electric buses as we have buses in the whole state of California, and they've done it for the last couple years.

So this idea that it creates the platform for, you know, heavy-duty technology just is not very compelling to me.

And also, another whereas is, this is really a unique regulation. You know, we're asking an industry or a group to go to 100 percent ZEVs. We haven't told anyone else to do that.

Remember, I did say I support this.

(Laughter.)

BOARD MEMBER SPERLING: And it also, even more than that, it affects -- it's unique in that it affects exclusively one of the most fragile governmental institutions we have and one of the very important ones.

And on top of that, transit is in big trouble. A few speakers mentioned that. And I work with quite a few of the transit operators and I'm pretty familiar with what they're going through. And they're losing rider -- almost everyone is losing ridership. They have -- they've been
starved for so long financially, that they've really lost
a lot of their capacity in a lot of different ways.
They've been starved for 80 years. I mean, this is partly
an indictment to our State and our country about
transportation policy, and they've been kind of a victim
of that, our very car-centric approach to transportation.

And so the management of transit agencies now,
they need to focus on some big problems and big changes.
You know, they had to lose -- they're losing ridership.
There's this whole new wave of technology sweeping into
the industry, the information technologies, the
reservation technologies, automation technologies,
ticketing technologies. And on top of that, they serve
the most disadvantaged parts of our society.

And who's -- and I would point out, in contrast
to what most people here say is, I think the greatest need
with respect to transit is more and better transit, you
know, just at a time where it's getting worse and
deteriorating.

And so I do worry a lot about distracting
management and distracting these operators from what
should be their first priority.

Having said that, you know, it is really -- I've
been -- this is from my Chair. She's lectured me on this
in different ways over -- for many years is that signaling
and messaging really is important. And I think that is
the case here. We need to reaffirm we really are
committed to zero-emission transportation, and that is
hugely important.

But having said that, I think that we really --
that CARB -- you know, the staff has done a good job of
making accommodations. But I think I want to -- the
point -- I've gone through this whole little soliloquy.
It's not quite as good as a Dr. Seuss story.

But it's important that CARB -- this agency fully
embrace this partnership idea in the most generous and big
sisterly, not big brotherly way, but big sisterly way, and
be generous about it. You know, appreciating that a lot
of stuff is going to be happening for these transit
operators that -- I mean, of course, as people mentioned,
the technology is going to be changing, funding is -- you
know, this is a long-term thing. We don't really know how
funding is going to change. I was pleased to hear so many
organizations say they're committed to making sure there
is funding.

Serve -- even the nature of these transit
operators is likely to change a lot, especially the
smaller ones out -- you know, out -- when you get beyond
L.A. Metro and Muni, I mean, they're going to be changing
a lot, and in ways that are not really predictable, and

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probably be a lot more public-private partnerships, and there's going to be questions how do you provide funding to agencies that are actually partly private in the future.

So what I'm saying is, and this is a message more to our, I guess, our Executive Officer and our staff, is as we go forward, we need to be really -- embrace this idea of partnership, and support as much as possible. We need to bend over backwards, you know, to deal with this, and we need to take it really seriously.

And, I guess -- I don't know if it goes into the record for like ten years from now when there might be another Executive Officer. But I just want to make sure that we reaffirm that going forward.

Thank you.

CHAIR NICHOLS: Okay. Thank you for that.

And now Ms. Mitchell. Yes.

BOARD MEMBER MITCHELL: Thank you. Thank you.

Also, a big thank you to staff. I know they worked very hard on this, and probably worked with each Board member on a concern that each Board member had. So thank you very much for that work you've done, and for collaborating so well with the transit agencies, because they have had some legitimate concerns.

And I think the regulation has worked out a lot
of those concerns, at least gives us a vehicle for further
discussion as this rule comes into play and a way to
collaborate on that.

    I think the regulation -- and I'm fully
supportive of this regulation. It's -- it goes to the old
saying that the rising tide lifts all boats. And I feel
like this regulation does that, as it helps California
move to a completely zero-emission transportation sector
for all vehicle types. And I do think that it will help
the heavy-duty sector -- the heavy-duty truc sector as
well.

    But I also want to recognize that transit
agencies are public agencies, and they are highly
subsidized now. I sit on the board of a very small
transit agency that services my region. And the L.A.
County, as well as the cities that are involved with that
region, all pump in a lot of money every year to keep that
going.

    So they are, as Dr. Sperling said, fragile
agencies. And I think we need to recognize that as
they're public agencies, we need to give them maybe
special attention. And that's why I think the regulation,
which calls on these periodic reviews, is very essential.
That is also the key to making the regulation a success.

    The regulation provides for those assessments
that some of our speakers have asked for for cost, performance, technology, and incentive funding.

And I want to mention one thing with incentive funding. Much of the incentive funding that is provided through the various programs that we have does not allow incentives for an improvement that is already required. That requirement can come in the form of a statute. In some cases, it comes in the form of a policy. And I want to mention, and specifically with respect to that, that the HVIP incentive funding is a policy that requires that the upgrade be required by regulation.

And I mention that because it does provide us an avenue that we could use in Board discretion to help our transit agencies with additional funding. And I would not -- I would limit any change in that policy specifically to this situation, where we're dealing with transit agencies that are public agencies, that are already highly subsidized, as most of them are.

I also want to mention again the suggests that one of our speakers made to take a good look at hydrogen fueling infrastructure. Because as the gentleman from the Tahoe Transit Agency mentioned, hydrogen may be the best fueling technology available for buses that are going to deal with steep grades or maybe very long distances, at least in the immediate future.
So -- and I also think taking a look at that fueling pathway is important, because it will help us advance hydrogen fueling for heavy-duty trucks, and that's an important component in our California scheme to reduce criteria and greenhouse gas emission.

So I mention those things, because I think they're important to our whole process, as we move into this new realm of requiring a particular sector to go completely zero emission.

And so thank you, staff. And all of us are going to have to keep working this. And I urge strong partnerships among the transit agencies, and between the transit agencies and our staff.

Thank you.

CHAIR NICHOLS: Okay. Not everything has been said by everybody. So, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Thank you.

Although there are aspects of the environmental gains that may be small, but this is very critical, because this is highly visible. Bus and transit vehicles are visible and they are palpably visible. You know, they have localized adverse effects if they're not zero emission low polluting. Bus routes are routes that are active transit routes. This is where we see people walking, shopping, where we see bicyclists.
I think that visibility is important. And I've spoken before about branding. And I think, yeah, I always -- I always take pride every time I see a transit vehicle that, you know, clean air, and that -- well, I think, again, we need to be sure, I think particularly when our money is at play with these, that we be sure that message gets out, because these are billboards to the public. And I think the public takes pride when they see that their public agencies are embracing what is positive for the environment, positive for their health, positive in so many ways for the community that we've talked about.

So I don't know what kind of brand we might be moving forward on. But, you know, this is really leading the way to zero-emission transportation. I mean, I think that ought to be emblazoned on every vehicle that is involved in this. And that's the future. And I think the public takes pride in that, and it's important that they see that. So thank you.

CHAIR NICHOLS: I agree with you. And thank you for saying that. Is there anybody else who wants to comment before I call for a vote?

SENIOR ATTORNEY BREHLER: Chair Nichols?

CHAIR NICHOLS: This is the end of a long process and we've planted a flag.

SENIOR ATTORNEY BREHLER: Excuse me, Chair
Nichols, staff does have one response to comments.

CHAIR NICHOLS: You have to do the responses.

Okay. But you just interrupted me in the middle of my closing statement. All right. Go ahead.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

So we've heard a few comments from the public and the dais here today that raise potential service- and cost-related concerns. We have addressed those concerns in our previously prepared written responses to comments, which are before you today, to the extent that those comments raise any environmental concerns.

CHAIR NICHOLS: Thank you.

Does anybody else have anything that they need to add?

Okay. I just wanted to say before I ask the Clerk to call the roll, so everyone can be on record as casting their votes, that we're at the beginning of a process here of moving towards 100 percent. It is a highly visible act, because everyone of us who lives in a city, or visits a city ever sees buses and knows how awful they can be. When you're stuck behind one or next to one, you can see it, and you can feel for what people in the communities that they spend the most time in are breathing.

So it's a very important step forward. And I
just want to congratulate the staff and the transportation industry, the transit agencies for having come such a long way. And I'm looking forward to our staff of rule writers becoming technical assistants, and a very long and productive relationship.

So with that, Madam Clerk, would you please call the roll?

BOARD CLERK DAVIS:  Dr. Balmes?

BOARD MEMBER BALMES:  Aye.

BOARD CLERK DAVIS:  Mr. De La Torre?

BOARD MEMBER DE LA TORRE:  Aye.

BOARD CLERK DAVIS:  Mr. Eisenhut?

BOARD MEMBER EISENHUT:  Aye.

BOARD CLERK DAVIS:  Senator Florez?

BOARD MEMBER FLOREZ:  Aye.

BOARD CLERK DAVIS:  Ms. Mitchell?

BOARD MEMBER MITCHELL:  Aye.

BOARD CLERK DAVIS:  Mrs. Riordan?

BOARD MEMBER RIORDAN:  Aye.

BOARD CLERK DAVIS:  Supervisor Roberts?

Supervisor Serna?

BOARD MEMBER SERNA:  Aye.

BOARD CLERK DAVIS:  Dr. Sherriffs?

BOARD MEMBER SHERRIFFS:  Aye.

BOARD CLERK DAVIS:  Professor Sperling?
BOARD MEMBER SPERLING: Aye.

BOARD CLERK DAVIS: Ms. Takvorian?

BOARD MEMBER TAKVORIAN: Aye.

BOARD CLERK DAVIS: Vice Chair Berg?

VICE CHAIR BERG: Aye.

BOARD CLERK DAVIS: Chair Nichols?

CHAIR NICHOLS: Aye.

BOARD CLERK DAVIS: Motion passes.

CHAIR NICHOLS: Thank you all very much.

(Appplause.)

CHAIR NICHOLS: Thank you. We'd like to take a ten minute break now. And we will resume at ten past 11:00.

Thank you.

(Off record: 10:58 a.m.)

(Thereupon a recess was taken.)

(On record: 11:15 a.m.)

CHAIR NICHOLS: All right, ladies and gentlemen, if we could get back to our places here. While everybody is reassembling, I want to make an announcement about our schedule for today as follows: For those of you who may be listening or watching on your computers, the last item on our agenda for today is an update on the scoping plan implementation. This is the tenth anniversary of the adoption of our first AB 32 Scoping Plan. For those who
would like to celebrate, please do. I plan to myself.

But I talked to Mr. Corey during the break and we
don't think that this item is necessarily positioned as
well as it could be to lead to the conversation that I've
been sort of foreshadowing here about where we're headed
with the next scoping plan. I don't think we really need
much of an update on what we've done up until now.

What I think we want is an opportunity to talk
about where we're headed over the next year or two in the
new scoping plan. And so since there -- as far we can
tell, there was nobody who was actually signed up to speak
on the item anyway, we have suggested that this item be
moved to early next year. And so that would mean that the
last item for today's schedule would be the truck and bus
item that's on the agenda. It's not really saving any
particular time. It's just more a question of using the
Board's time as effectively as possible. So if I don't
see any objections, which I don't at the moment, that's
what we will do.

Okay. So let's get back to then the Proposed
Regulation for Reporting Criteria Air Pollutants and Toxic
Air Contaminants. This is -- this is a biggy. It's
important for all of our purposes, because emissions
inventories are the foundation of all of our programs.
They're a fundamental tool for all air agencies. And we
use them, of course, to understand what the sources are that are contributing to our air quality and climate challenges, how those contributions are changing over time. We use them to evaluate our performance and think about what we need to do next.

The passing of Assembly Bill 617 and Assembly Bill 197 has challenged us to look at greenhouse gases, criteria pollutants and toxics emissions data in tandem, and to work towards presenting the data in a clear, accurate, and concise manner that is accessible to the public.

The proposed emissions reporting regulation before us today is taking a step towards meeting the data transparency and public right to know goals of AB 197 and AB 617 by establishing requirements to support the annual reporting of these air criteria -- excuse me, criteria air pollutant and air toxics emissions data. So it is a step forward in the direction of the kind of system that we're trying to build.

I will call now on Mr. Corey to introduce the item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair. And with -- as you noted, with the passage of AB 197 and AB 617 the Legislature made it clear the need to collect information on criteria pollutant and air toxics
emissions across the state more frequently, transparently, and consistently. One of the main drivers for these bills is to provide communities with actionable information to mitigate emissions and provide better access to detailed emissions data.

The requirements under AB 197 call for both stationary and mobile greenhouse gas, criteria pollutant, and air toxics emissions sources to be updated annually. Today's proposed regulation focuses on creating annual reporting requirements for stationary sources to report criteria pollutant and toxic emissions. In order to ensure the effectiveness of the proposed regulation, CARB staff have worked closely with our air district partners, and stakeholders throughout numerous working groups, and have welcomed their participation throughout the rulemaking process.

They're engagement, feedback, and prior knowledge of stationary sources has been invaluable. But there's no doubt, there's a tremendous amount of work to be done, which is why the effort must be phased in.

I've discussed the workload concerns with the air districts, and most recently with Supervisor Serna, and believe we have a successful path for this comprehensive regulation.

I'll now ask Dave Edwards of the Air Quality
Planning and Science Division to begin the staff presentation.

Dave.

(Thereupon an overhead presentation was presented as follows.)

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Thank you, Mr. Corey. And good morning, Chair Nichols and members of the Board.

This Board item is to discuss staff's proposed regulation for the reporting of criteria air pollutants and toxic air contaminants.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS:

Emissions inventory data is an essential component of our work. Inventory data helps us to know what is being emitted into the air, by whom, and where. The data provides the scientific basis for CARB's and the air district's regulatory processes, and allows us to track progress for statewide and regional emission reduction efforts from stationary sources, area sources, and mobile sources.

While the regional level inventories that we have today work well for our regional air quality strategies, the new focus on community level air pollution requires a more detailed inventory at the community scale,
particularly for sources of criteria pollutants and air toxics for -- from both mobile and stationary sources.

Modernization and data display, driven by the need to better support public involvement in air quality issues, and spelled out in the mandates recently passed in AB 197, has led to significant improvements in public accessibility and data transparency for our emissions data.

The development of CARB's pollution mapping tool was our first step in providing a straightforward visual representation of criteria pollutant, air toxics, and greenhouse gas emissions in a single location.

In addition to its requirements for community emission reduction actions, AB 167 included two substantial inventory-related requirements. The first is to require annual reporting of air toxics reporting -- of criteria and air toxics reporting, and the second is to ensure statewide uniformity in reporting in methods, emission factors, and formats.

All of this requires a paradigm shift in how we view inventory emissions. This includes the size of the sources that need to report, more frequent reporting, more detail on location and activity, and finally, how the emissions are quantified. Today's regulation is the start of that.
This is a significant paradigm shift, and we will take time and resources to complete. Much of the work for stationary sources will fall to the air districts, while CARB staff are making similar changes for the mobile emission inventory. To support the transition, we are working now to provide reporting tools to a data collection, but we will also need to work with the air districts to find needed resources and look to how to phase in the requirements.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Our long-term goal is a complete, detailed, community-scale inventory from all stationary sources statewide.

Today's action is a first step toward that goal. This includes the minimum AB 617 requirements. But the level of detail in those requirements are not enough to fully support community-focused programs. So we are also proposing additional data reporting requirements to support community level analyses.

As we continue to move forward on this regulation beyond today, we will be adding consistent statewide reporting methods and emission factors, as well as additional sources to support the community-based activities.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: So the proposed regulation before you today sets forth the following:

First, it requires the annual reporting of emissions of criteria pollutants and precursors, as well as toxic air contaminants from specified large and impactful stationary sources across the state.

Second, it establishes uniform and consistent reporting requirements for what type of data must be reported.

And third, the proposal requires reporting of information about the facility and its air emission release points.

The regulation also gives CARB, at its discretion, the ability to audit or verify the data submitted by a facility under this program. And additionally, we are proposing 15-day changes to improve the uniformity of the data reporting applicability.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Here is an overview of some of the main components needed to have a successful reporting program. I will plan to first go over some features in the proposed regulation and then walk through some thoughts on implementation.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: The proposed regulation includes four applicability criteria. The first three criteria are the minimum AB 617 requirements. The fourth defines the more granular data needed to support community actions.

The first applicability criteria includes facilities currently subject to greenhouse gas emissions reporting under the CARB Greenhouse Gas Mandatory Reporting Regulation, or MRR. Under this criteria, about 800 to 900 facilities would be subject to annual reporting of criteria and toxics emissions. The reporting requirements do not apply to certain mandatory reporting facilities, such as transportation fuel suppliers, natural gas pipeline distribution networks, or electricity distributors, which do not have specific site or location of emissions.

The second applicability category in AB 617 includes facilities authorized by a permit issued by an air district to emit 250 or more tons per year of any nonattainment pollutant or its precursors. These emissions include oxides of nitrogen, volatile organic compounds, particulate matter, carbon monoxide, ammonia, et cetera. There are about 40 additional facilities in this category.

The third applicability category applies to
facilities that received an elevated prioritization score as identified in AB 617. Staff interpret this term to apply to high priority facilities, as designated by air districts under the AB 2588 Toxics Hot Spots Program.

Using current data, we are expecting this high priority category to include 500 to 1,000 additional facilities subject to reporting.

These first three applicability requirements will bring in about 1,300 to 2,000 sources into annual criteria pollutant and air toxics reporting.

The final applicability category, we are proposing a change through a 15-day change process to criteria pollutant and air toxics mass based reporting thresholds, rather than staff's original proposal to require all permitted sources to report.

We are also proposing with the 15-day changes to focus more on toxics emissions sources, rather than criteria emission sources. The next slide will explain in more detail the last applicability requirement.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Our proposed applicability threshold for criteria pollutants is four tons of a criteria pollutant or their precursor. This level is consistent with the South Coast AQMD's reporting threshold, which is one of the most stringent in
the state and would apply statewide.

For toxics, we are looking at a multi-year phase-in of an emission-based increasingly tightened threshold of aggregated air toxics emissions. One of the challenges we face is that with the inventory information available today, it is difficult to estimate how precisely -- or sorry, estimate precisely how many facilities will have to report their emissions for a given threshold. A phased approach will allow us to better manage the new workload and to assess the benefit and cost of acquiring lower reporting using the new data from the prior year.

A potential concept for a phased approach could be ten pounds per year in the first year, then five pounds per year, and the third year, one pound per year.

Additionally, staff is considering specific exceptions to the aggregated thresholds for the most potent toxic compounds. Some examples include a 0.5 pound per year threshold for nickel and cadmium for metal processing facilities, or -- and a 0.005 pound for Chrome VI from any facility.

Facilities that emit greater than the reporting thresholds would need to annually report their criteria pollutant and air toxics emissions data.

Examples of what type of facilities this approach
would add to the inventory are gas stations, auto body
shops, and dry cleaners. For example, a ten pound
reporting threshold would be the equivalent of a gas
station that sells about 200,000 gallons of gas a year.
And a one pound toxics threshold would be the equivalent
of selling about 20,000 gallons.

Another example is an auto body shop, which would
need to spray about 25 gallons of paint to reach ten
pounds of air toxic emissions.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: With
regard to the implementation schedule and reporting
deadlines, reporting begins statewide for all facilities
subject to the first three applicability requirements I
described beginning with 2018 data reported in 2019.

The reporting threshold applicability
requirements that I described on my last slide would apply
to all facilities within the six districts that have one
of the ten AB 617 communities beginning with 2020 data
reported in 2021. These districts include South Coast,
Bay Area, San Joaquin Valley, San Diego, Imperial County,
and Sacramento.

Those threshold-based reporting would then apply
to all facilities and all districts statewide beginning
with 2021 data reported in 2022. Staff believes it is
important to begin data collection as soon as feasible to help support the emission reduction and monitoring programs in AB 617 communities.

The proposed regulation requires that facilities that are subject to reporting the emissions for a given calendar year must report the emissions or activity or throughput data sufficient to quantify the emissions to the local air district by May 1st of the following year.

In most cases, facilities provide activity data, and the district staff calculate the emissions. The districts would then provide the emissions data to CARB by August 1st of the same year.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: As mentioned earlier, a primary goal is to establish statewide consistency in the emissions data that are submitted to CARB and the districts. To accomplish this, the regulation identifies which data are required to be submitted by facilities. The required data helps meet the needs of determining community-level impacts, supporting risk, modeling efforts, providing completeness and clarity in the data methods used, and allowing detailed mapping and graphing of emissions data, with tracking of increases or decreases in emission levels.

In terms of what pollutants need to be reported,
it is all criteria pollutant emissions, and any toxic air contaminant emissions included in the list of substances in Appendix A-1 of the Air Toxics Hot Spots, Criteria and Guidelines document. This list contains about 450 discrete air toxic chemicals.

We also have prepared reporting of specific facility location information, including where actual emission releases occur within the facility, which are used for health risk, evaluations, and other analyses.

Where feasible, data also must be reported for individual permitted devices or processes to identify specific sources and for evaluating potential emission control options.

For transparency and comparability between facilities and regions, we are also requiring that facility operations report which emission estimation methods and emission factors they use, if they are computing the emissions themselves. If the air district computes emissions based on activity, throughput, or other information, the air district will provide the method and emission factor information to CARB.

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AQPSPD ASSISTANT DIVISION CHIEF EDWARDS: CARB staff and the local air districts will have a closely aligned partnership in implementing the requirements of
the proposed regulation. The air districts have a long history of working directly with their facilities in collecting emissions data. Because of this, all submitted data will continue to be collected and processed through the air districts as it is now, prior to submission to CARB.

For this reason, it is necessary that the regulatory requirements be enforceable by both CARB and the local air districts to ensure success of the program. As with all programs, we understand that there are growing pains in the initial years. Staff plan to take that into account during the full implementation process.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: For efficiency, transparency, and accuracy, we need to transition to reporting data in electronic formats, using web-based online data systems. To facilitate this, beginning with 2020 data submitted in 2021, CARB will provide a new electronic data system to help facilitate consistent emissions data reporting. The new inventory submittal system is being designed and built now, and will allow substantial air district involvement and control over the submitted facility data, so the districts can continue their critical role ensuring the quality, completeness, and accuracy of the submitted data. We have
also provided district flexibility to deal with special cases, when it is impractical or inefficient to use electronic data reporting.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: An additional requirement from AB 617 is to establish a uniform statewide system of annual reporting of emissions. To create this consistency and comparability, CARB staff will work with the air districts to develop uniform emission estimation methods for primary industry sectors, which will allow direct comparisons between similar sources throughout the state.

In addition, we will coordinate with the air districts to engage with industry, academia, and other interested parties to ensure the methods are relevant and up-to-date. Staff will plan to develop the methods using a sector-by-sector approach. Two of the first to tackle are the refineries and power plants.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: As part of our initial public process, we received many comments on the proposed conceptual requirements for the reporting regulation. The current proposed regulation includes content that addresses many of the comments received after the earlier public workshops. During the official 45-day
Comment period, we also received 18 written comment
letters from various stakeholder groups.

In response, the primary proposed changes are the
reporting applicability changes I described earlier. We
also plan to remove the language regarding a potential
five year sunset of annual reporting at the Executive
Officer's discretion. This language was tied to the
original community boundary language and will not be
needed with the threshold applicability approach.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: This
slide is titled future implementation steps. Perhaps, it
would be better titled future, or additional actions
needed, for implementation of the regulation itself.

First, is the development of the uniform
statewide emission estimation protocols for key industry
sectors that I just mentioned, so that the reported data
will be comparable between similar facilities and between
air district jurisdictions.

Second, CARB staff understands that expanding the
scope of the facilities that report emissions data
presents a financial resource issues. Compiling,
quantifying, and reporting emissions data in conformance
with a uniform system will require additional resources
beyond current practices.
Staff are also working to update the toxics list referenced in the proposed regulation. This update is much needed as an exhaustive update to this list has not occurred in over 20 years.

Lastly, we will need a process to identify and bring into reporting sources of interest identified through the AB 617 community emission reduction program development in the selected communities.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: By approving today's proposed regulation, we are taking a large step forward towards developing a comprehensive facility-focused emission inventory, improving access to data, particularly through the CARB pollution mapping tool, and refining our analysis to support emission reductions across the state.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: The proposed action will significantly benefit the AB 197 data accessibility goals. The public access to emissions data will be improved by expanding coverage to more facilities. It will provide data for smaller facilities that are currently not available. And the data would be more consistent and comparable over time.

The mapping tool is already available to the
public, but the proposed regulation will allow the
addition of more consistent, comprehensive, and timely
emissions data to the tool.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: I wanted
to spend the last part of the presentation to go over
every type of analyses this improved, comprehensive,
and facility-focused reporting program will allow us to
do.

The first example is about assessing exposures.
With our existing emission inventories, we are able to
answer questions regarding which are the most important
source categories, and the most important toxic pollutants
on a county-by-county basis, and what are the relative
contributions of mobile versus stationary sources, and how
much do the aggregated minor -- aggregated minor sources
contribute in each county and air basin.

In cases where facility data is not reported
regularly, data is carried over from prior years to
provide an estimate. Many of the small neighborhood and
commercial sources, such as gas stations, auto body shops,
dry cleaners, and print shops are generally estimated
using top-down methods. And they are aggregated as county
level totals of emissions.

With this enhanced data, new analysis will cover
a much more comprehensive universe of not only the large
industrial sources, but also the individual and combined
effects of the numerous individual small sources, such as
these small commercial source categories.

Importantly, rather than the emissions from small
sources being lumped into a countywide total, the
emissions will be tied to a specific location within a
community and included into the CARB pollution mapping
tool.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: This
slides illustrates this last point. This slide shows the
West Oakland area, and on the left with just the
traditional stationary sources currently reported in the
CEIDARS inventory, and on the right with locations of
smaller sources, including gas stations, dry cleaners,
print shops, and auto body shops, which would previously
be treated in a county total aggregate for each of these
categories, but will now be addressed as individual
sources through the community inventory process.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Current
reporting cycles of every couple of years provide broad
general trends for the large traditional facilities for
purposes of regional air quality. We are able to track
regional air quality progress through the State Implementation Plans, as well as support SIP trends and projections.

In addition, today when we compare similar-sized sources in a given category, we may ask why the emissions from Facility A are different from Facility B, and ask: Are the methods similar? Are similar chemicals covered? Are their processes different?

In the future, we will have explicit annual data for a broader universe of sources to explicitly track trends both collectively and individually at community specific resolution for criteria pollutants and air toxics.

In our enhanced future analysis, we will be able to ask, given that they are using consistent methodologies and uniform reporting, what can we learn about:

Which processes are more efficient?
Which control technologies are more effective?
Which facility provides the best benchmark for others to follow?

And, compiling these data into a modern, comprehensive clearinghouse of comparable emission factors and chemical profiles will support greater transferability of source test information, chemical profiles, and process-specific emission factors.
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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Current analysis of the overall health -- of the overall exposure and health impacts of toxic sources has generally been a sector-based analysis, and we often must rely on other agencies' analysis, such as the U.S. EPA's National Air Toxics Assessment.

The regional air quality data also can be used to support estimates for PM mortality on a broad scale. In the future, the comprehensive annual data will support CARB's own modeling of spatially resolved facility-specific exposure and health impacts to address the combined or cumulative impacts of toxics on the community.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: For my last example, today's analysis that is used for emission reduction strategies is based primarily on statewide, countywide, with some regional data specificity.

However, many communities have unique characteristics and impacts, such as with regard to freight sources, distribution centers, truck idling, last-mile delivery, and clusters of small facilities. In the future, we will be able to evaluate local emission contributions and develop community-specific emission
reduction strategies tailored to the unique needs of each community.

In addition, the more detailed future reporting will ensure a more comprehensive universe of sources is covered to enhance the process of identifying and selecting future communities.

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AQPSD ASSISTANT DIVISION CHIEF EDWARDS: That completes our presentation. Our recommendation is to approve the proposed resolution, which includes adoption of the final regulation order. The proposed resolution also directs the Executive Officer to finalize the Final Statement of Reasons and submit the completed regulatory package to the Office of Administrative Law.

In light of the nature of the proposed 15-day changes, we do anticipate holding additional workshops prior to posting revised regulatory text to discuss the concepts we have presented here today, especially the applicability criteria.

Finally, as we have said throughout the presentation today, we are committed to work with the air districts to find the necessary funding that is needed to compile the inventory and support community-focused action to improve air quality.

Thank you
CHAIR NICHOLS: Thank you. I just want to clarify if we act today to adopt this resolution, what exactly happens next?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: So what we're planning to do is to develop the proposed 15-day changes, and share those through a workshop process and get some informal comments before we put it out for the official 15-day comment period, because this applicability change is a -- is a fairly substantial change from what was originally in the regulation.

CHAIR NICHOLS: Right.

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: So we're looking at an extended -- in a sense, an extended 15-day process that will last more than 15 days.

CHAIR NICHOLS: More than 15 days.

(Laughter.)

CHAIR NICHOLS: That's fine. I think that's a -- it think that's a -- it's a good process. I just wanted to be sure that I understand and the rest of the Board did.

Yes, Supervisor Serna.

BOARD MEMBER SERNA: Yeah. If I can just put a finer point on that, and that would include immediate outreach to CAPCOA, I would assume?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Yes.
BOARD MEMBER SERNA: Okay. Thank you.

CHAIR NICHOLS: Good. Thank you.

Okay. Well, we have a list of witnesses here, so we might as well get started with Alberto Ayala.

BOARD MEMBER EISENHUT: A quick a question.

CHAIR NICHOLS: Yes. Yes, while he's coming forward.

BOARD MEMBER EISENHUT: I think your term was "precursor" -- an inventory of precursor materials, and is ammonia considered one of those materials?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Ammonia is actually considered a criteria pollutant and an air toxic. For purposes of that 250 ton, the -- or the Title 5 applicability that was in AB 617, that does include ammonia. For the thresholds applicability moving forward, there will be discussions as to whether include ammonia as the criteria or an air toxic.

BOARD MEMBER EISENHUT: Okay. Thank you.

CHAIR NICHOLS: Okay.

DR. AYALA: Thank you. I should know how to do this, right?

CHAIR NICHOLS: You know, I should be giving instructions.

(Laughter.)

CHAIR NICHOLS: You can raise it up. You can
lower it down with a knob on the side. And you're
supposed to be just about a hand's width away from the --
from there. Yeah, perfect.

    DR. AYALA: I can do that. I'm am engineer.

    (Laughter.)

    DR. AYALA: Good morning, Board. Alberto Ayala
with the Sacramento Metro Air Quality Management District.
Thank you for giving us the opportunity to be here today.
I want to keep my remarks brief, because much of what we
had expressed initially to your staff, and to some of you
as a concern is moving in the right direction that we
would like to see it.

    And first of all, I want to acknowledge
Supervisor Serna who obviously sits on our board, and is
representative of not only the Sacramento Air District,
but I think I can speak on behalf of the other four
surrounding districts, Placer, Yolo/Solano, Feather River
and El Dorado, who collectively make up the federal
nonattainment area in Sacramento. So a lot of the air
quality planning we do in -- as a team.

    And I want to keep my remarks to two areas, just
to put a finer point for you. One is process and
resources.

    First on process, as Dr. Edwards just said, some
of the changes that you're contemplating are substantial.
And I understand that sometimes you, the Board, is under pressure to move quickly. Many of the most significant changes that you just heard about, we also learned just on Monday. So my appeal to you is we do need to allow ourselves for a process where we, the districts, can work with ARB staff to make sure that we're understanding how we are going to tackle this new direction that you want to go into.

Again, I appreciate and acknowledge the fact that there's been a recognition to include the districts in the discussion. We are ready to engage, and to be part of the solution.

The second thing I want to emphasize for you is the issue of resources. And the point I want to make to you is you may be under the impression that the State has already committed resources for the districts, and that is true. We very much appreciate that. But the commitment for the districts for implementation of AB 617 is short lived. It's finite. To date, there's only a commitment for two years. And most importantly, some of the changes that you're contemplating today go well beyond the resources that have been allocated by the state for the air districts.

So again, I just want to make sure that you understand some of the nuances that go into a greater
level of detail than what you're contemplating today.
    Again, we want to work with you. We want to be part of the solution. We very much appreciate you taking the time to listen to us. But I do need you to be mindful that we districts do have constrains that go above and beyond what may be perceived by you as an ARB Board.
    So thank you.
    CHAIR NICHOLS: Thank you.
    Mr. DeGuzman.
    MR. DEGUZMAN: Good morning, Board. I'm Jorge DeGuzman with the Sacramento Air Quality Management District. And one of the concerns that I have - I manage the permitting section, and I've been in charge of the toxics program at the district for many years - is that over the years for probably at least 30 years, the district and all the districts in California have had a toxics emissions inventory as well as a criteria emissions inventory.
    Back in '87, it was recognized that we needed more information about toxics, many of the same concerns that I have heard here today. And California enacted the Air Toxics Hot Spots Information and Assessment Act of 1987. In that Act, it requires the districts to inventory toxic emissions throughout the district. And this is not a regional assessment. This is a facility-by-facility
assessment of risks. And it calls for any source that emits more than ten tons per year of criteria pollutants, and then it directed CARB to identify smaller sources that could have the potential to have a health impact in the communities.

So CARB came together with a list that eventually became known as Appendix E to the regulation, that addresses all the types of facilities that are smaller than ten tons that could potentially have a health impact. And we have been regulating these facilities for over 30 years, and we have found that many of those facilities that wanted to fall towards the lower end of the spectrum there have emissions that are really insignificant.

So one idea that I have is we really -- this is a perfect opportunity to combine all three inventories. We already have two. Now, we're talking about creating a third inventory. That's a lot of resources, expenses, and confusion for the districts, as well as the community and the facilities.

This is a perfect opportunity to combine all three inventories into one, and make it very clear to everybody who needs to report and what. And we can amend the existing 25 inventory if necessary to bring in any criteria pollutants that need to be added or any toxics or
any facilities that CARB feels that should be included in
this new toxics inventory.

That's all I have. Thank you.

CHAIR NICHOLS: Thank you.

Thank you. Mr. Broadbent.

MR. BROADBENT: Good morning, Madam Chair, members of the Board. My name is Jack Broadbent. I'm the Executive Officer for the Bay Area Air Quality Management District. And on behalf of the air district, we want to thank the California Air Resources Board for providing this opportunity to provide comments on the proposed regulation for reporting of the emissions of criteria and toxic air contaminants, and very much appreciate the close working relationship with the staff, between the Bay Area and CARB.

We're in support of the proposal with just some clarifications a little bit on some key issues. So I want to just make a few points here at the very beginning. First, since the air districts have literally decades of experience in regulating stationary sources, we strongly support the principle that the air districts retain the function of having the facilities report the criteria and the toxic air contaminants directly to us.

This principle kind of lining up with our enforcement capabilities really, I believe, is going to be
critical to ensure accurate emissions reporting.

Secondly, we also support the goal of developing an emissions -- a uniform statewide emissions reporting system. We just think that maybe the agency needs a little bit more time to revise our business processes, so that we can report all of our facility emissions by August 1st. I think this is something we can work through in the 15-day process that the staff described.

Third, we also strongly agree that the local air districts and CARB need to work together to develop the best and most accurate emission methods for calculating emissions. We look forward to the detailed technical discussions that was outlined by your staff to ensure that there's some consistent reporting, and there's a high accuracy of emissions estimates. We think that's going to be very critical for 617 implementation.

I'm going to ask, if you don't mind, just real briefly to have Greg Nudd of my staff describe the clarification we need relative to the 617, and the explicit thresholds, Madam Chair. There's this connection here that we just want a little bit of a clarification on.

I've asked Greg --

CHAIR NICHOLS: Sure. Go ahead.

MR. NUDD: Thank you, Madam Chair. My name is Greg Nudd. I'm the Deputy Executive Officer for Policy in
charge of AB 617 implementation in the Bay Area.

We are, as Jack said, very supportive of this rule, but we have some concerns about the explicit thresholds that CARB was talking about today. As we do our detailed community-based inventories for AB 617, we're finding that it's difficult to take particular thresholds in order to determine what's going to be impactful at a local scale. And we want to be careful in how we design this, so we don't end up with results that don't make sense.

There was some discussion earlier about whether ammonia is a TAC or criteria pollutant. Just to give you a little bit of perspective, every bottle of Windex is about 1/5th of a pound of ammonia. So you start talking about a pound of ammonia -- a pound of TACs per year, you get in a situation where you're chasing really small sources, rather than focusing your resources on those, that are most impactful for the community. So we look forward to working with CARB, with representatives from the communities, and representatives from industry on this 15-day process to come up with a way to rationally prioritize the tracking and reporting of these facilities that are maybe impactful in local communities.

Thank you.

CHAIR NICHOLS: Thank you.
MR. BROADBENT: So Madam Chair, your next person is Alan Abbs, who is currently is a CAPCOA employee, soon to be a Bay Area employee, so --

(Laughter.)

BOARD MEMBER BALMES: Good catch.

BOARD MEMBER TAKVORIAN: Can I -- Chair? Chair Nichols?

CHAIR NICHOLS: I'm sorry. You've got too much time allocated to one district. Sorry.

(Laughter.)

BOARD MEMBER TAKVORIAN: Could I just ask a -- maybe a dumb question. I don't know. Are consumer products included in this rule?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: No.

BOARD MEMBER TAKVORIAN: Okay. So Windex is not a worry, right?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: No.

BOARD MEMBER TAKVORIAN: Okay. I just want to get clear, because I thought it was about permitted facilities. Okay. Thank you.

CHAIR NICHOLS: Good clarification.

CAPCOA EXECUTIVE DIRECTOR ABBS: Good morning, Madam Chair and members of the Board. My name is Alan Abbs. I'm the Executive Director for the California Air Pollution Control Officers Association. I'm here to
express support for the presentation by staff today. And
I'd also like to acknowledge the work that Dave Edwards
and his staff have done in traveling around the State and
meeting the air districts in their air district offices
and I believe Dave has been to all 35 air districts where
they reside and do their work. And so I think -- you
know, I should probably give him an award for that some
da.

(Laughter.)

CAPCOA EXECUTIVE DIRECTOR ABBS: The -- so
CAPCOA, we support the concept of the visualization tool
showing the emissions that people in their community want
to see or -- you know, want to see, you know,
transparently what's being emitted in their communities.
And at the same time, we want this tool to be meaningful
and impactful. And as staff mentioned, there are some
business processes at the district, and some -- when you
talk about differing thresholds that really ramp up fast
the number of facilities, and the amount of district work
it would take to populate the tool and provide this data.

And so we're looking forward to participating
with CARB and other stakeholders in this 15-day comment
period to figure out the appropriate phase-in time periods
to do this, as well as the resources that the districts
would need to be able to get this done and meet those
timelines.
And so with that, we've had a great working
relationship with CARB in the past, and I know we're going
to be able to do it in the future, even through I might
not be around to be part of that. I have confidence that
we're going to be able to figure this out during the
15-day comment period.
Thank you.
CHAIR NICHOLS: Thank you.
Just a reminder that both podiums do work, in
case you wish to use the other.

DR. FINE: I'm just getting exercise. I've been
sitting here a long time.

(Laughter.)

DR. FINE: My name is Philip Fine. I'm a Deputy
Executive Officer at the South Coast Air Quality
Management District. And the AQMD staff strongly supports
the goal of not just the Legislature and the CARB staff,
but also most of the stakeholders of making more accurate,
consistent, detailed facility-level emissions data
available to the public, accessible to the public for both
criteria pollutants and toxics.

Not only will this increase transparency and
accountability. It will aid in the implementation of many
other planning and regulatory programs, including AB 617.
We all recognize how AB 617 is a fundamental reshaping of how air quality is addressed by air districts and CARB. And this is the first major regulation that CARB is undertaking as part of that. And we really appreciate CARB staff in recognizing the effect this regulation will have on our programs. And we appreciate their ongoing willingness to work with us to ensure successful development and implementation of this reg.

So staff, over the process of the last many months, has expressed some concerns over -- over some aspects. We had issues with the quote redlining of AB 617 communities with potentially different requirements for facilities that might be on different sides of an arbitrary boundary, like a street. We had some concerns with equity issues, since different districts have different permitting requirements and thresholds. If, in fact, permit -- a permitted source could be very different from one district to another.

Concerns on resource requirements for potentially little gain if the smallest facility is needed to calculate and report emissions that ended up to be insignificant or negligible.

We suggested the need for flexibility for other potentially more accurate methods of calculating facilities level emissions, other than strict
self-reporting of emissions themselves. And then we
expressed the need for outreach and training for some
facilities that may not even know they emit toxic air
contaminants, or at least a level that would require
reporting.

But over many months of rule development, and
including all the staff recommendations being made today,
AQMD staff believes the regulation is workable and can
support the path forward as outlined by staff.

Implementation will be very resource intensive.
It will require considerable software improvements, rule
development at the district level, technical work on
emissions estimation, and most importantly outreach to
those smaller facilities.

And we're committed to work with CARB and the
other air districts to find sources of funding and other
cost recovery methods.

There are still some remaining issue, and I won't
go into details, because they've been mentioned by the
previous speakers. But we really support a closer look at
individual toxics air contaminants based on risk and
potency to avoid unintended consequences, and to focus our
limited resources on what's important.

We're also -- the implementation time frames are
extremely aggressive. For instance, if data for that
fourth category is going to be reported in 2021 for emissions in 2020, that's a very small amount of time for those facilities to be able to keep the records they need in order to do that.

So all in all, overall this is a good first step. But getting the details right in implementation is critical. And we look forward to working with CARB staff as this moves forward.

Thank you.

VICE CHAIR BERG: Thank you very much, Mr. Fine. I do have a question for you. Help me understand on the current 25 -- AB 2588. We have been publishing and it is -- citizens can look up facilities and what is being emitted now under that regulation, is that correct?

DR. FINE: I can speak for South Coast.

VICE CHAIR BERG: Yeah, South Coast. Thank you.

DR. FINE: So for South Coast, that's correct. We have an emissions reporting program. And facility that emits over four tons per year of criteria pollutants is in that system. It's available on the website. Could that interface be improved? Absolutely.

And then facilities in that program that are also required to report their toxics. This would bring in more facilities that perhaps emit toxics, but don't hit that four ton per year threshold.
VICE CHAIR BERG: So I'm very much in favor for this regulation and the improvement and everything. I'm very concerned -- and I'll talk more with staff about this in my follow-up questions. The perception of how this is -- what we're going into is how is this going to increase transparency? And what accountability are we talked about? I'm just very concerned. This is a very large regulation, which we need. But what's our goal and how do you see this really happening to become more transparent and more accountable? Can you help me on that?

DR. FINE: Well, from -- again, from my perspective, or the South Coast's perspective, I think on transparency we do have all this emissions data. It is available on our website. It is transmitted to CARB. There are various ways to access that data. Is it easy to access? Is it easy to understand? Is it consistent across different air districts? There's a lot of work to be done there.

So I think transparency can be improved there. And definitely accountability. We are often challenged that when we go into a community or have a town hall meeting, like how do you know the missions are what you say they are?

And if we can -- if we can show that we have a
system, methods, and make all those methods and procedures
open to the public, more transparent to the public, then
that leads to accountability.

VICE CHAIR BERG: And you feel you don't have
that under 2588?

DR. FINE: We do. The emissions are there. You
know, we have guidelines for how to report those
emissions. It's all available. It's just not easily
accessible by the man on the street.

VICE CHAIR BERG: Okay. Great. Thank you for
helping.

MS. CREMERS: Good afternoon. Noelle Cremers
with the California Farm Bureau Federation. I appreciate
the opportunity to comment this morning on staff's
presentation, and really appreciate that there will be
more time to discuss the potential impacts that this
regulation will have on our members going forward through
the 15-day comment period.

I did want to talk about some of the potential
impacts that we have concerns with in the regulation.
This is going to be a new day. This is much beyond what
we expected when AB 617 was being passed. We were not
expecting a statewide regulation that could potentially
require reporting from farms throughout the state.

So we would really like to focus on reporting
from the highest priority locations, those that are identified through the AB 617 community selection process. So we're getting the data from those facilities in the areas that are highest priority, rather than asking for folks outside of those areas to be reporting when it may -- those resources could be better spent in other ways.

So one clarification that we would request is -- and now this changes with the potential 15-day notice, but that fugitive emissions not be included in the counting whether or not some is subject to the rule. Right now, certainly, we could have farms brought in and required to be reported, if that -- if fugitive emissions are included in that count.

Because, especially we'd much rather see limited resources focus on addressing those fugitive emissions, which is happening in the valley, rather than being focused on reporting.

We would ask that current systems in place be utilized for those facilities subject to reporting, so that they can use the current systems rather than creating new pieces.

Finally, we would like clarification on the enforcement piece. Right now, the regulation seems to allow enforcement at both the State and air district
level. And we don't think that it would be appropriate for a facility that has a fine placed on it by the State to then also be fined by the district. We think it's appropriate for either one to be able to, but don't allow both. So have the State and district work together.

And we think this especially important, because it appears that the regulation -- the goal is to require reporting of emissions prior to the implementation of the -- and the effective date of the regulation, which could be challenging for some facilities that may not have all that data available, and didn't know that they needed to be collecting it.

So, to us, it makes more sense to have when it takes effect that that -- from that point on is when you're reporting.

Thank you.

MR. MAGAVERN: Bill Magavern with the Coalition for Clean Air. And the Environmental Defense Fund could not be here today, but asked me to say that they also agree with our position.

There's an axiom that you cannot manage what you do not measure. And that is definitely true when it comes to air pollution. So we see this emissions reporting improvement as being essential to the successful implementation of AB 617 and AB 197.
And I want to thank Assembly Member Garcia for his authorship. I think that those pieces of legislation reflect an acknowledgement in the Legislature that air pollution at the community level is not being sufficiently addressed. And so people in the communities are asking, tell us what are the sources of pollution and then reduce that pollution and do it very soon.

So I think we have to recognize that the status quo is not working. And I think that CARB has recognized that in undertaking this rulemaking. We need reporting from all sources, and we need that every year. I know that when you talk about small amounts like a pound, that sounds like it couldn't be a lot of pollution.

But actually when we're talking about persistent bioaccumulative toxins, a pound actually is a lot, and we're talking here about a reporting limit, not a regulatory limit. So we would argue that for those persistent bioaccumulative toxins, anything that can be detected should be reported.

And we also need to cover all the sources of pollution. And so it's not just the big ones that you see the big smokestacks, that includes neighborhood sources, like chrome platers. I know having been active in my own neighborhood association in a disadvantaged community, people really do want to know what's being emitted from
those sources.

That also would include pesticides. And with the growing body of science about toxic effect of pesticides emitted into the air, we want to include those. And I will endorse in advance comments that you'll hear later from Anne Katten.

When it comes to resources, we agree with the direction to staff to minimize the workload. New technology might make it possible to reduce those burdens. And we also agree with the need to have a dedicated source of funding. And it probably shouldn't only come from the Greenhouse Gas Reduction Fund. Let's find a dedicated source.

So we think there's an urgency to this, because we've got the 617 plans that we need to get underway, so we need to find out what all the emissions are. So we ask you not to delay. We agree with the importance of the 15-day process, and we'll participate in that. We think this is a good first step, and there's a lot more to do.

MR. BROWN: Good afternoon, members. Bob Brown with the Western States Petroleum Association, Bay Area director. I'd like to thank you for the opportunity to address you here today. And I'd like to start by saying that WSPA continues to support the successful implementation of AB 617. And this regulation is a
critical component to that success.

And we also greatly appreciate the collaborative manner in which CARB has gone about this rulemaking effort. And hats off to our Bay Area Air District as well for the collaboration, the many community meetings, and the hard work that both entities have put into hearing concerns and input on this.

We recently submitted a letter, December 10th, and I just wanted to highlight a few elements from that letter here today. The revised definition of best available data and methods is certainly concerning to WSPA, as it -- as changes to the definition appear to limit an owner or operator's ability to apply best available data and methods without prior approval by the air district or CARB. We recommend that the staff retain the existing language that references facility determined factors and methods.

And in addition, we support an open and transparent discussion during the anticipate methods development process.

And with respect to the emission reporting requirements, WSPA strongly recommends that CARB consider a first-year reporting deadline of July 1st, rather than May 1st and/or adjust for the local district's timelines as well.
And finally, we support the direction of the 15-day changes identified by staff today, particularly as they apply to the first two years of the program. Consistency with commitment made during the stakeholder process is the key to establishing trust in that process. And these changes reflect that consistency.

Thank you again for the opportunity to address you today, an Happy Holidays.

MR. QUINN: Good afternoon, Vice Chair Berg and members of the Board. My name is Bill Quinn. I'm with CCEE, the California Council for Environmental and Economic Balance.

We want to start by thanking David Edwards and John Swanson and their team at CARB. The rule -- this rule establishes a major new program for CARB. And they've made real progress toward working to understand the technical complexity involved in aligning the State program with reporting at 35 air districts.

While CCEE supports the general framework, we offer these comments to highlight that -- the needs that still need to be done. The single most important issue is coordination with the air districts. They must have time to update reporting schedules and practices, according to what this Board seeks to adopt today.

Unless that time is provided, thousands of
facilities will be in immediate compliance jeopardy as of May 1st of this next year. So through no fault of their own, again there can be compliance issues if we don't have this alignment worked out.

We ask that the Board work the -- direct staff to work with CAPCOA and stakeholders. We hear a lot about working with CAPCOA. We completely agree with that, but all stakeholders need to be at the table. We need again enough time for the district propose -- the staff proposal to be in alignment with the air districts.

Separately, CCEEB continues to evaluate the inclusion of all permitted facilities. We note this category goes beyond AB 617 and significantly expands CARB's authority. These minor sources include things likely emergency -- emergency back-up generators in commercial buildings, hospitals and hotels, small boilers in laundries and dry cleaners, commercial cooking equipment, and agricultural equipment.

Emissions from these sources are currently characterized through modeling, meaning all Clean Air Act inventory requirements. So new community monitoring will help validate and improve these models.

At a minimum, we ask CARB to engage with these facilities, particularly small businesses and essential public services. We ask the Board to carefully consider
what needs to be reported versus what can accurately be
monitored and modeled.

So again, thank you for your time and we look
forward to working with CARB, CAPCOA, and the air
districts to get a consistent statewide reporting process.

Thank you.

CHAIR NICHOLS: Thank you, Mr. Quinn.

MS. KATTEN: Good afternoon, Chair Nichols and
Board members. I'm Anne Katten from the farm worker
advocacy organization California Rural Legal Assistance
Foundation. And I'm here also representing Californians
for Pesticide Reform, a coalition of over 190
organizations working to reduce pesticide exposure in
rural communities.

We appreciate greatly the work of the Board and
staff in developing this regulation. And in recognizing
in the regulatory notice that pesticide use is a source of
toxic air contamination that impacts the air quality in
many communities.

As you're working on the 15-day revisions, we do
ask you to include pesticides and possibly fertilizer
emissions in the reporting.

We also think you might need to broaden -- either
broaden the definition of stationary sources to include
commodity fumigation facilities and agricultural fields,
or include them in the community inventory.

The most heavily and highly toxic volatile pesticides used in California are soil and commodity fumigants, all of which are either carcinogens, reproductive toxins, and/or very potent respiratory irritants.

More than forty million pounds of fumigants are applied on California fields every year, with -- and this use is concentrated on the Central and South Coast and certain parts of the Central Valley.

Emissions, at least to start, could be estimated from the pesticide use reports that are already required comprehensively for ag and commodity fumigation use. And the Department of pesticide regulation has emissions data that could be used to help estimate it. I'm certainly more -- monitoring is also needed, and we appreciate that some has been funded under the program.

It's also -- we also think that the estimation should go beyond fumigants to other high toxicity pesticides, including, but not limited to, organophosphates.

Ammonia and other fertilizers are also quite toxic, and significant source of greenhouse gas emissions and NOx. And so we urge you to consider them also. And just in closing, you know, we urge you to develop a plan
to incorporate these emissions into your reporting plans.

    Thank you.

    DR. KYLE: Hello. My name is Amy Kyle. And I
don't have an affiliation right now because I'm retired
from active paid employment, but -- and I'm working on
this issue in conjunction with a number of groups as a
volunteer. But I'm speaking for myself here today. And I
had a academic career at UC Berkeley. And before that, a
career in environmental protection at another state.

    So -- and the area of my work is the relationship
between science and policy, and how we can advance that.
So that's -- you know, I'm not a regular here, so --

    (Laughter.)

    DR. KYLE: -- I thought you might need to know
who is that. She doesn't have a thing up here.

    (Laughter.)

    DR. KYLE: So I want to say, first of all, we've
entered a real new world when we start to talk about
community-scale pollution, and how we look at that. It's
very pertinent to discussions of environmental justice,
because a lot of the higher burdens of pollution are at
the community level.

    And so we do need different tools, and data, and
ways of thinking about these issues that are different,
even from what we have in the Hot Spots Program, which
was -- didn't consider cumulative impacts. You know, it
looked at individual facilities, but there's not a
provision to look across the various sources.

And I wanted to add my thanks to Dave and his
staff for all the many conversations we've had about this
over the last year; and also remind you of the map that he
showed you about when we look at the community level and
we see the co-location of sources, the proximity of
sources. When you just see the locations, it can suggest
that there are probably places where there's too much even
though no one of them is very big.

And that's what we're talking about learning to
recognize and address. And a lot of communities want to
do this. They know that they have sources in their
communities that affect them, and they're looking for
action on that, and that's what's behind a lot of the
legislation that I thought was very ably referenced in the
resolution actually. It gives a really nice summary of
all the threads of legislation that support this.

But it's why we're thinking different, you know,
why this is not just about finding the biggest sources.
It's not about that. It's partly that, but it's also
about finding the 20 smaller sources that are close
together that are affecting some communities; and those
will tend to disproportionately be communities of color
and low-income communities, because social forces push emitting facilities often into those communities.

So simply looking at this this way is related to the movement toward environmental justice, and I think is very -- it's just very key to the role and responsibility of the ARB at this time.

Okay, I'm already on yellow.

So what we're looking for here - and this is -- it's kind of ironic. Here we're coming to you to ask for something that's technically competent. That's really what this is about. We want consistent, complete, and accurate inventory of emissions from all sources that are pertinent to communities and across the State.

Thank you.

VICE CHAIR BERG: Could I ask you a quick question, please. Thank you so much for coming.

On those sources that you are talking about, the 20 sources, do those tend to be small- and medium-sized businesses in your experience?

DR. KYLE: Not necessarily. It a -- it's an accum -- what can accumulate can be a mix of big sources and small sources. It's not all the same. That's why the community scale assessments are so important and why, you know, we need to look across what's out there. We need to see what's out there so that we know what we're talking
But, no, I can't -- I can't say that it's always the same. It can be quite different.

VICE CHAIR BERG: Great. Thank you very much.

MS. TORRADO: I'm so glad I'm wearing heels today.

Good afternoon, Board members. My name is Paula Torrado, and I am the new air -- toxic -- air and toxics policy analyst at Physicians for Social Responsibility. I am working on a community air protection grant which intends to build the community capacity of south L.A., communities to engage in air quality policy efforts.

I previously worked on air quality monitoring and advocacy for cleaner air policies in the Houston area.

The core to PSR-L.A.'s mission is to ensure that the principles of environmental justice and the prevention are at the center of environmental policy and the regulations take the precautionary approach which is a key component to prevent harm.

Throughout my experience as an air quality advocate from Houston, Texas, I have learned the value of reliable and accessible emissions reports. Houston's area is widely monitored. However, air emissions reports sometimes are often hard to find or there are data gaps that places difficulty on communities and academics to
assist the need for solutions and to track their efficiency. How could I as an air quality activist prepare for my communities to prevent exposure to air contaminants and advocate for regulatory action if I am not equipped with the resources to do so.

California has a chance to reduce emissions and protect frontline communities by incorporating a complete emissions inventory with all sources and contaminants. A complete, consistent -- oh, thank you.

A complete, consistent, accurate, and annual inventory can bring valuable knowledge to communities and agencies to work together on emissions reduction solutions. Communities in the air industrial sites and hazardous contaminants already have higher-than-average exposure to air chemicals. Those -- California Air Resources Board has the need to assess cumulative impacts including co-pollutants and pesticides emissions that should be incorporated in this proposal.

In addition, throughout this process CARB and air quality districts need to spread the communication with communities and other organizations to ensure the process is guided by transparency and justice.

Finally, as a new member of PSR-L.A. and a long air quality advocate, I'm looking forward to working with CARB and PSR-L.A.'s allies of over 2,000 physicians,
academic partners, and community members to ensure that
this proposed regulation has the data and resources to
support the sustainable implementation of AB 617.

If we don't get this right, we run the risk of
again breaking the trust with the communities who have
stepped up to participate in this process and who are most
impacted by air pollution and climate change. CARB needs
to have robust inventories, cumulative impacts
assessments, better communications with communities,
co-pollutants and pesticides emissions incorporated in
this proposed regulation for reporting toxics, air
contaminants, and criteria pollutants, because, frankly,
these communities are the ones that are having health
threats as a result of breathing contaminated air.

Thank you very much.

CHAIR NICHOLS: Is Will Barrett still here?
Yes.

Oh, I'm sorry, Lizette. I -- pardon me. I
misread -- excuse me. Go ahead.

MS. HERNANDEZ: All right. Good afternoon. My
name is Lizette Hernandez, Director of Environmental and
Health Programs with Physicians for Social
Responsibility - L.A. I'm not a physician. However, I am
an urban planner and an engineer. And I have a cold, so
I'm sorry.
I am here in support of the staff proposal to implement the criteria and air toxics emissions reporting rule because, one, there seems to be no existing inventory for air toxics, only pieces of one. We basically don't know for certain how many sources of air toxics emissions there are in California, and estimates vary widely, with up to 80,000 air toxics sources, of which only 10,000, or an 8th, of these air toxics in our state are in any publicly accessible inventory.

Two, the reporting system for air toxics is simply irregular. It seems that many facilities don't consistently report emissions, and there are different practices in every district. This is simply not scientific. CARB needs to embrace sound scientific methods if it also expects to effectively implement State legislation such as AB 617, of which we are one of the many grantees.

Three, enhancements to our reporting system may allow us to account for localized impacts of air pollution, which is an area of weakness in the current system because it primarily accounts for only regional pollutants and impacts, as you know. So we request that first we have annual reporting.

Current reporting methods are erratic and confusing for those like myself, my colleagues, our 2,000
physician members who want to understand what's actually happening. We need criteria pollutants, air toxics, pesticides, and greenhouse gases to be reported on a consistent periodic time frame across all districts. We would like deadlines for data to be submitted as well as a stronger mandate which will include penalties for failure to report on a timely basis.

Second, specific inclusion of pesticides and fugitive emissions. Pesticides and fugitive emissions are often a large source of pollution for communities, and we often lack the evidence to assess the health impacts of these emissions on everyone including sensitive populations such as children, the elderly and those with existing respiratory illnesses.

Third, we need to strengthen the capacity for an independent accurate audit of data submittals by CARB or independent contractors to help ensure that we are using sound scientific methods in our new inventory methods. This will also help us make needed corrections to the system in an efficient way in the future.

And, lastly, we should have a unified data system based on modern standards such as the use of electronic data. After all, we do have Silicon Valley and whatnot in our state. It's important to expand beyond the simple use of paper records that aren't accessible to the agencies,
much less the public. Using modern technologies will produce robust data that we -- that will allow communities and regulators alike to ground-truth our understanding of the behavior of co-pollutants and their cumulative impacts. It will also potentially allow for the interface with digital apps and mapping tools such as PSR's own mapping tool, the 500-foot tool.

So please pass the staff proposal; and that way I can also look at my 11-year-old son, lifelong asthmatic, and know that we are doing the best that we can to correct the wrongs of the past.

Thank you.

CHAIR NICHOLS: Thank you.

Now, Will Barrett.

MR. BARRETT: Thank you, Chair Nichols. If nothing else, I'll always answer the bell. So thank you.

(Laughter.)

MR. BARRETT: Will Barrett, the American Lung Association. And we definitely appreciate that the Board and staff are taking seriously your commitment to expanded monitoring and reporting. It's important to keep in mind always that this is a reporting rule. It's a critical step in informing the actions we need going forward to protect public health from local sources of pollution as envisioned by AB 617.
The data is key to action, bluntly. And we just
don't have the robust enough data inventory right now to
inform all of those actions that we'll need to take.

It's important for us to see a strong program in
place with annual reporting of all sources of harmful
emissions across the State. We've heard a number of
speakers talk about the need for consistency, accuracy,
completeness, comparable across the state data, and to see
that as soon as possible.

The original proposal that we've worked with
staff on over the past several months didn't quite get
there, but we do appreciate that the staff is working and
through the 15-day changes process really taking into
account ways to make this program stronger.

It was interesting to hear though the one-pound
threshold discussed by the district by some of the other
advocates in the room. And we'd very much like to
understand that more as the 15-day process goes forward.
One pound may sound like not that much, but it -- it's not
insignificant. So we do want to understand kind of the
rationale for that.

You've heard from our colleagues that there's
more work to be done. There is definitely a solid start
here with this long 15-day changes coming ahead. We'll be
there every step of the way, no matter how long 15 days
really is.

As far as the districts, we definitely understand there's significant work involved in the processing and reporting of the data. There's no doubt about that. This is a great exp -- or grant expansion of that. And from the Lung Association's perspective, we'll be there in the legislature fighting for implementation funding. You know, we've done that in the past. We're committed to doing that in the future to ensure success of AB 617 and that the districts can really carry out the mandates here. So I think that's really important. I just want to put that out there for the districts to hear.

We're also happy to hear that the districts will try to move forward with a more unified system for reporting. I think that's going to be helpful for streamlining data accessibility; and really making this more responsive to the public as we've heard from some of the other speakers as well.

So ultimately, I just want to thank everybody involved in this discussion so far. We know that there's a lot more work to be done. We have 15 days ahead of us that will be a long and exciting process. But I really do appreciate the opportunity to extend the conversation into that discussion.

And, again, thank you all for your work and all
the stakeholders' engagement here. So thank you.

CHAIR NICHOLS: Thank you.

And Stephanie.

There you are.

MS. TSAI: Hi again. Stephanie Tsai with the California Environmental Justice Alliance. So I want to align my comments with Bill at Coalition for Clean Air and Amy Kyle, and as you've probably seen me sign on to a letter with a bunch of our fellow advocates here today -- some of whom are here today.

So also really want to appreciate the staff efforts on this, in particular Dave for really making I think a very commendable extra effort to, you know, not only visit all the air districts but also to reach out to the advocates and include us in the process, which we really appreciate.

So we're supportive of the late changes being proposed, and I think, you know, agree with Will that we look forward to the 15-day process, however long that actually takes.

We, you know, in particular, support and appreciate the effort to expand the reporting requirements to more sources and remove the sunset provision. This is a really good step forward.

At the same time, we do remain concerned about
some small sources that still may not be included. Many
small sources, as you've heard, are highly toxic and
harmful on their own and do cause serious health
consequences in our communities. And in addition, small
sources contribute to cumulative impacts. You know, in
order to accurately assess the cumulative pollution
burdens in our communities, we really need data on all
emissions from all sources.

So with that, I also want to point out a couple
of other things that CEJA in particular requests. We
would like to see a clear process for independent review
and a way for communities to petition for review and
corrections when inaccuracies are found. I want to point
to the example of refinery emissions. Those in particular
have been frequently grossly underreported. Our recent
joint study by AQMD and the Swedish scientists, a group of
Swedish scientists found that benzene emissions from
refineries are on average 34 times higher than reported.

So in addition to statewide standards, we also
request that CARB, you know, step in to correct the
reporting when standard methods result in underreporting.

We also support the ask that pesticide emissions
be brought in and included. And, again, overall we
support the progress on this and are encouraged to see
this, and we really urge the Board and staff to move
forward quickly with the next steps to finalize and implement this. And also on follow-up steps and actions once we have the regulation, I think has been recognized there's, you know, still a lot to do and this is a really great first step.

I'll also agree with Will that we -- you know, CEJA does engage in the budget advocacy process every year, and we will continue to support funding for implementation of this.

Thanks very much. We look forward to continuing to work together.

CHAIR NICHOLS: Thank you.

And Genevieve Gale, yes.

MS. GALE: Made it onto the list.

Hello, everyone. Genevieve Gale, Central Valley Air Quality Coalition.

Today is my data day. I'm actually up here getting briefing from some of your staff. They're so gracious to offer briefing on emissions inventories to myself and a few other San Joaquin Valley advocates, also on emissions' fate and transport, toxics, and the accessibility of data. So I'm having a lot of fun today.

And we are talking about the resources that do exist and the databases that do exist, and CARB has a whole array of them. We also spoke with someone from
OEHHA. So I'm learning more about what's out there.

But also learning about the gaps in accessibility to those databases. For instance, to learn about cancer risk of facilities I now need to download a massive program on to my computer and get a couple-hour training on how to use that program and then input data, so I can figure out how dangerous a facility near my house is.

And so that's kind of a lot of the work. And I think we have some work to do, and I'm excited to do it with your staff, on how we can make the data that we do have more accessible to the public.

Then there's also gaps in the data. And I really do support the changes that were presented today. And I thank Mr. Edwards for all of his outreach that he has done with the districts and advocates. And appreciate the change of -- changing the enhanced reporting requirements, not just for facilities in the 617 communities, but going statewide for the major facilities. That's really going to help with this community boundary fight that a lot of communities across the State are having. You know, in Fresno a lot of facilities were left out of the proposed community. So this really, really helps for that.

But there are still data gaps, especially in the San Joaquin Valley. We're really concerned about dairies and agricultural fields. Right now dairies in the San
Joaquin Valley are considered an area source. So we
don't -- we can't map out where dairies are in the valley
unless you use Google satellite and look for some cows.
And we also don't know what emissions are coming
from different dairies. And I think this is really
important as we start to put in millions of dollars into
methane reduction strategies that supposedly have toxic
co-benefits. Are those working? Are certain practices
resulting in reduced emissions at certain dairies? We
don't know because we don't have the reporting for that.
So I know that it's not included in this proposal. But
hopefully as we move forward, we can -- we can work to
fill that in.

And I will concur with my colleagues on
pesticides and fertilizers as well. As we all know, the
UC Davis study that came out this year saying that NOx
from ag fields is actually potentially as much as NOx from
mobile sources, the fact that we don't have any reporting
on that shows definitely a gap in our understanding and
obvious ways to move forward.

So our thanks again to Dave and all the work
done, and I look forward to keep going.

CHAIR NICHOLS: Thank you. Glad we were able to
provide so much entertainment as well as enlightenment
today.
CHAIR NICHOLS: You know, I don't think it was mentioned before but with respect to methane and the cows in the field, the satellite that we're working on, which will be launched in another year or two, is being designed and instrumented by folks here in conjunction with the jet propulsion laboratory. And one of its goals -- its primary goal is to be able to observe constellations of emissions, including things like dairies, and collect data, which then would be under our formulation available to the public. That's the whole -- the point of it. There's a lot of work to be done to figure out how this is going to work and how the data can be made available to all kinds of different institutions, and there are other entities that want to work with us on it. But this is not -- it's not actually a pipe dream. It's a -- it's a serious project that we're working on.

So I think that concludes the public hearing, and I'm going to close the record.

And I now will recognize Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Madam Chair. So first off, I want to say that Professor Sperling's not the only professor on the Board.

(Laughter.)

BOARD MEMBER BALMES: And he often goes on a long
soliloquy about transportation issues. This regulation's
in my wheelhouse. So --

(Laughter.)

BOARD MEMBER BALMES: -- you'll excuse me if I go
on a bit.

CHAIR NICHOLS: So you're feeling empowered
today, are you?

BOARD MEMBER BALMES: So, first of all, I want to
add to the chorus of praise for Dave Edwards and his
efforts along with the other staff members supervised by
Michael Benjamin on this. And I want to underscore that
Dave's comment about this being a paradigm shift fits in
with what I've been saying about AB 617 all along, which
is transformative, because it involves the paradigm shift
from regional air quality monitoring and control to
community air quality monitoring and control.

And this is a key part, this improved emissions
inventory is a key part of implementing AB 617 properly
with its goal of trying to deal with decades of
environmental injustice because, as many of the testifiers
pointed out, there are decades of emissions -- high
emissions or multiple emissions from smaller sources
impacting these communities.

But because it is a paradigm shift, and
transformative, it does require time and resources. So I
totally appreciate the air districts' concerns about yet another heavy lift associated with AB 617. And as -- I forget who, but one of the district representatives, maybe Alberto, pointed out that the funding from AB 617 from the State is only like two-years worth. And I'm already hearing complaints on the AB 617 Consultation Group that I chair about there aren't enough resources even to do what we're already planning to do and this is another additional time and resource investment.

So I would call on Assembly Member Garcia as one of our legislative members to bear that in mind. And I think we do -- we will need more resources to properly implement this regulation.

So I do want to remind everybody, it's been stated, the goal here is uniform statewide inventory of all stationary sources.

And I take issue with DeGuzman's suggestion that there are insignificant emissions from some of these facilities. Well, maybe from one single facility. But when you combine 20 facilities in one neighborhood, those multiple insignificant -- in quotes -- emissions may be significant, and we need to know whether they are or not.

I don't want to bash Mr. DeGuzman because he had a great idea that I think we should -- that I want to underscore, it'd be great to have one system. You know,
not one for criteria pollutants, not two for toxics; but one system. And so I heartily agree with that idea. So thank you.

I think some of the air districts are already well positioned to implement this assuming they get adequate resources.

But I don't think all districts are the same, all 35 districts. So to achieve that goal of the statewide inventory that's uniform, I think CARB is going to have to have a major role in monitoring the quality of local air district data gathering. And, you know, while I heard Jack Broadbent correctly saying to align the enforcement require -- or responsibilities of districts with the emissions reporting, they want to see the emissions continue to be reported to the districts, I'm totally supportive of that. But I think then it should automatically electronically go to a statewide system that we have to develop and that's going to take work.

And that, you know, brings me to: The system that we currently use really is from the eighties. You know, it follows the 1987 law that Mr. DeGuzman mentioned. And, you know, we should bring this reporting system to the modern era, to the 21st Century. The technology's available. So I think if we do it right -- there'll be some upfront costs in developing the system. But if we do
it right, it should save money over the long haul. And I
would -- I hope we could do that. And it would also
increase public access, which is -- I didn't go back to
look at the exact language of AB 197, but I think it's
clearly -- there's clear target about -- or clear mandate
to have publicly accessible emissions data so that the
public in communities knows what they're being exposed to.

And then I agree with including pesticide
emissions. You know, it's not just environmental justice
stakeholders that have lobbied me about this.

Colleagues -- I won't mention names -- from our -- the
CalEPA Scientific Review Panel, SRP, and the Office of
Environmental Health Hazard Assessment, a sister agency,
they have both lobbied me -- or folks from both agencies
have lobbied me about including pesticides. And if we
want to talk about toxicity, ambient exposures to
pesticides are as toxic as they come.

So I think that wraps up my soliloquy. But I
want to say that -- I want to echo several people who have
said that this is an important step forward. You know,
we're not going to get all the way where we want to be
tomorrow, not even after an extended 15-day review. But
this is an important step forward and we have to take it.
And so I'm very supportive of this first step. And I look
forward to participating in that extended 15-day review.
process.

Thank you.

CHAIR NICHOLS: Yes. We'll just go down the line here.

Supervisor Serna.

BOARD MEMBER SERNA: Thank you.

First of all, I want to thank my colleague Dr. Balmes for his articulation of some very valid observations and points. I think I agree with almost everything you mentioned.

I wanted to specifically start by thanking both Dr. Ayala, who's my boss, so to speak, at the local level when it comes to my service on the local air district; and also especially to Mr. Corey. Just in the last day or so, there's been a lot of concern expressed because of the nature of shifting paradigms. And I know that that makes for a certain level of discomfort, given the uncertainty about what might be presented in the context of a hearing like this.

So I think we've actually kind of come a long way in a very short amount of time in terms of a place that I think is fair for both -- some of the local districts that have expressed that concern about the uncertainty involved with this, especially when it comes to, as Dr. Ayala mentioned, the resources that are going to be necessary at
the local level. And let me tell you, as a county
supervisor, the whole concept of unfunded mandates is not
lost on me.

(Laughter.)

BOARD MEMBER SERNA: So I can appreciate from a
real practical standpoint wanting to have as much
certainty around that as possible.

And again, as Dr. Balmes just mentioned, with an
uncertainty out there about the funding after two years, I
think it's a valid point, that both at the State level and
the local level we have to be working towards working with
our legislative representatives to figure out how that is
going to evolve. I don't think you can reasonably expect
that, you know, kind of, you know, fees out in the future
that would be imposed at a local level will cover it,
because we don't know what "it" is. We're kind of, you
know, flying the plane that we're building at the same
time. And those concerns are not lost on me.

So I want to end where I started, with thanks to
both Richard and Dave and your staff and to Dr. Ayala and
his staff at the local air district here in Sacramento.
And I too would like to continue in my role as perhaps a
shuttle diplomat to some degree between the two as this
continues to evolve.

Thank you.
BOARD MEMBER RIORDAN: Madam Chair, if I may.

CHAIR NICHOLS: Yes, please.

BOARD MEMBER RIORDAN: Let me build on that just a bit, because I certainly agree with Supervisor Serna. Let me speak for the small and midsize air pollution control districts. We have very little money. We balance our budgets, but they are very tight. And I think the smaller districts have a lot of concern about how much workload this will cause and how they will fund that, because it truly means perhaps bringing on additional staff to make it successful – and we want it to be successful. So the efforts that were made in the last few days I think are extremely important. And if I can say anything to both CAPCOA and to Mr. Corey and staff, the inclusion in the resolution of your efforts into the future to work on resources are most important. We want this to -- to succeed; commendable goals, very important to a number of people who are residents of California.

But if we don't provide the resources to do it right, then we're going to have a product that just isn't going to be workable.

So thank you for your efforts. I will be supportive based on that effort of cooperation with the local air districts.

CHAIR NICHOLS: Go ahead.
VICE CHAIR BERG: Thank you.

I'm also in full agreement with what has been said, but I think I'm going to bring in a larger conversation. And the larger conversation, well, it's really twofold. I appreciated that Bill Magavern's quoting what we cannot -- we cannot manage what we cannot measure. I'm not convinced that it isn't the tools to manage that we don't have versus what we haven't measured. We've measured an awful lot of things. We've required a lot of data to come in. And I'm not thoroughly convinced that it isn't some of the tools that we're missing to be able to manage this; and would be very interested in another conversation to have with staff is, what have we learned from other regulations that haven't produced what we wanted best -- to be able to make sure that this regulation that we're putting in place is going to get what we want. So number 1.

Number 2 is, when we get all of this information on -- the next thing I wrote down, which really struck me, if we don't get this right, we risk breaking further trust with the communities.

Well, what is it we're trying to get right? We're really trying to reduce emissions from all these businesses. And these businesses and these environmental justice areas, a lot of them have been there for a hundred
years. And it's right, society has moved, these communities have grown because of the poverty issue. And so what is the end goal? If we expect that these businesses can in fact become non-emission oriented, is that realistic? Or are we going to close them down and have them move elsewhere?

So I think we've been talking about importance of jobs, we've been talking about all these different things, and a conversation with maybe the 617 people and these communities of what is the end goal here? I'm from -- my business is in Boyle Heights. And I can tell you right now, we have a critical lead problem from a hazardous waste facility that recycled lead batteries. It's currently out of business. We got 7,000 homes that have lead contamination, and we're looking at a projected 10-year cleanup.

Well, I would suggest that that's not acceptable. And so what are the priorities, how are we going to address these, and how are we going to set expectations and so that we can have wins in all the columns, and we keep the integrity with the communities, and we make things better?

I'm absolutely all for that.

So it's a big job and it does fall on the data people. And so I just want to make sure that as we set
this up, that the expectations between the resources that are truly needed to not only monitor but to analyze, to answer those questions that you had in the staff presentation, Mr. Edwards, those are great. But it takes real people to be able to look at this, to analyze, to ask those questions. And so I just want to be cautiously optimistic but also cautious as to what can we do and how can we give it and make sure we're communicating with our EJ partners to keep an eye on the ball as to what are the priorities, and how at the end of day can we truly make a difference, which is going to require getting a partnership with the businesses within those -- especially the EJ communities to come up with solutions.

Thank you.

CHAIR NICHOLS: I usually wait to speak until the end, but I want to add something to what Vice Chair Berg just said.

I was at EPA when we were rolling out the requirements of Title 5 under the 1990 amendments to the Clean Air Act that required -- essentially required real-time in-stack monitoring for every source over a certain size. It was one of those items that was fought for hard in the Clean Air Act. And there was a lot of -- a lot of time spent on what kind of monitors, and whether people would really have to, you know, put them in, and
what the data could be used for and so forth. And it was
a huge achievement for the environmental community that
they were able to get it.

And then over the years, it transpired that a lot
of the data that was being collected wasn't being used for
anything because there was nobody there to look at it.
And in fact the most useful thing, as far as I know, about
that whole very expensive exercise was that we collected
CO2 data at the same time because we used it as an
indicator of whether the monitoring systems were working
correctly. And so when it came time to build the system
for monitoring greenhouse gas emissions, we already had a
really well-placed system that enabled us to do it.

This is not an attack on the well-meaning and
well-thought-through initiative that was there. It's a
point about data and the lure of data; that we all think
that if we just have the data, then we'll be able to make
the right decisions.

And the point that I think my vice chair is
making here is that we really want to know going into this
exercise as much as we can about what we think we're going
to do with the data so we can build a system that will
accomplish that goal, because there's an almost infinite
number of ways you could do this.

John, go ahead.
BOARD MEMBER BALMES: Well, I just think just think that again we need this -- these data to better implement 617. And that to me is the goal of these data.

CHAIR NICHOLS: Right. But what do you mean --

BOARD MEMBER BALMES: The community emission reductions plans.

CHAIR NICHOLS: Yes, right. But having said that, you know, at what level of fine granularity, by what definition of, you know, the geographical, what form of data collection? I'm really not arguing against the goal. I'm arguing in favor of taking the time to think through and talk through these issues. That's all.

Okay. Yes.

BOARD MEMBER SHERRIFFS: Thank you.

I'm -- boy, staff, you are the paragon of fitness. You know, you've had the endurance to go to all the air districts, which is fantastic. And the last two weeks, and maybe the last 48 hours particularly, you have demonstrated your flexibility and nimbleness; real masters of yoga as well as endurance. So very impressive.

And it's important, because, you know, there have been some important changes, and focusing early on the better understood toxics in term -- instead of casting that net widely and collecting masses of data before in fact we really understand what we might do with it. You
know, focusing on chromium and nickel.

Has been highlighted the shared concerns with the air districts regarding funding for the work that we're asking them to do, because it is a different level of work. And obviously this Board recognizes specific funding for districts is not optional in getting this work done.

One thing I want to highlight is how important -- we're bringing a lot of small businesses in as we do this. And we really need to be doing this in a respectful way; really paying attention to the work that we're asking small businesses to do. The difference between a one-page form and a two-page form cannot be overstated. So we need to think about how to keep these things simple so that reporting is minimizing people's time. It's good data, and we're not asking people to use -- come up with metrics that -- it's not their metrics. We need to be doing that calculation or whatever. But very, very, very important, particularly because, as had been suggested, if -- to make this actually work in the end we need partnerships and collaboration at that granular level, and we -- we -- we don't need to be exasperating people.

One question, and sort of along those lines, that came up, a specific question, because there've been a number of concerns, understood community concerns about
pesticide exposure, big concern in the valley: How does
what we're thinking of here interface with what's already
required in farming, you know? If you apply a pesticide,
you're filing a report with the county ag commission. So
I'm wondering how we're going to take advantage of those
existing systems.

DEPUTY EXECUTIVE OFFICER KARPEROS: I'll ask
Michael Benjamin to talk through the process that we use
currently. And you are correct, it starts with a filing
of a Pesticide Use Report with a farmer and the local ag
commissioner and then flows to the State.

CHAIR NICHOLS: Let's continue on.
Comments or questions? Anybody at this end --
Mr. Eisenhut, if you --

BOARD MEMBER EISENHUT: That's the problem with
being at the left end of the table is much has already
been said.

(Laughter.)

CHAIR NICHOLS: That's not a problem.

(Laughter.)

BOARD MEMBER EISENHUT: I want to --
CHAIR NICHOLS: That's a good thing.
BOARD MEMBER EISENHUT: But I'll do it anyway.
(Laughter.)
BOARD MEMBER EISENHUT: I wanted to endorse
Mr. Magavern's comment that -- about needing to measure. And I think, in my mind, that's what we're discussing here. And Dr. Sherriffs already went there in terms of we've had a lot of discussion about the impacts of these -- of this data collection on the districts and on staff, less so about the reporting enterprises. And speaking -- I don't know other industries, but speaking specifically for ag, pesticide use is reported to county ag commissioners and to the Department of Pesticide Regulation. Fertilizer and manure use and management is reported to regional water quality and water coalitions.

So if this data is to be captured electronically, I would encourage during the 15-day period, not just with regard to ag but with other industries that may already be reporting, we capture the available data rather than going back to those folks and asking them for duplicate reports.

And then I did have a question. Do we have a common understanding of the term "fugitive"? Is that an unexpected emission? Is that an expected emission that's a byproduct and an expected byproduct of some other activity? I'm -- I heard it discussed and I'm not clear what the definition is.

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: This is Dave Edwards.

The definition of a fugitive is something that
does not necessarily come from a stack that is on site at a facility. So that examples: It could be as simple as dust. It could be metal tailings. It even could be different NOx emissions and so forth that come from sources that is not easily sort of captured by a stack or vent.

    BOARD MEMBER EISENHUT: Okay.
    CHAIR NICHOLS: Ms. Mitchell.
    BOARD MEMBER MITCHELL: I'll make this very short, since a lot has already been said.

    Three main issues got raised: The concern about the thresholds; the phase-in and the timing period of phase-ins; and then the resources, having enough funding and actually personnel to carry out the duties.

    So I just want to urge the staff, which they've already done, but have them keep working in the 15-day plus period with all of the districts, because we know the districts differ from one -- one from another. There's differences as to what they measure and what they permit. And so this new direction requires us to coordinate all of that. And that is going to require some time and work on the part of the staff with all of our districts. So I encourage you to keep doing that.

    Thank you.

    CHAIR NICHOLS: Okay. Next? Any comments?
Comments.

BOARD MEMBER TAKVORIAN: Thanks.

Okay. So I just wanted to add my appreciation to staff's good work and I guess dexterity. They've stopped being grumpy about not getting the briefing, when I saw the slides today and the good report. So thank you for all of the great changes that you've made.

I wanted to appreciate the districts for their openness and the EJ and environmental activists for being kind of nerds in the pursuit of EJ and health. We need you, so thank you for doing that.

I just want to say that, you know, community right to know was early to mid eighties. 2588 was passed in 1987, 30 years. And it was -- the threshold for 2588 was always too high, and it was stated at the time, that it was to start with the largest sources and was going to go down to the smaller sources, that we would have a cumulative and community-level assessment of what communities were being exposed to. And that just never happened. And I don't even think that 2588 was -- its goal was realized. And I appreciated Mr. Fine's candid response to Ms. Berg that 2588 reporting just may not be as easily accessible or transparent as it needs to be. So I think we're on this path.

And I want to thank Assembly Member Garcia for
helping us with 197 and with the 6717 work. I really think that community scale assessment's important, so I hope that we can include that -- continue to include that.

I want to agree with everyone who said it, that pesticides absolutely should be included, not only from a rural-agricultural perspective, but also from the commodity fumigation perspective that was raised. Having an elementary school two blocks from a commodity fumigation facility at the Port of San Diego, we fought for five years to have methyl bromide be banned from that -- from use there. And it was an isolated situation. But communities next to ports all over the State are exposed to these pesticides, and that should be included.

I'm concerned about -- or I want to ask a question about elimination or -- yeah, I guess elimination of the third-party verification that's on page 9 of the resolution. I wanted to ask a question and ask if you could think about that. It seems like districts are saying you don't have the resources, and we want to ensure that they get those resources. But third-party verification could be helpful in reducing the resources that the districts have to use. Not that they'd be doing a job for them, but they would help to actually ensure that it's -- the ground truthing essentially gets done.

So I have a question about that. And if you all
can answer that, that would be great; or it could be responded to in the 15-day period.

I also think another cost reducer is the uniform system, and I really appreciate that and am glad you're including that so that that's not something that each district has to do, that it's something that we can have across the state.

And, lastly, I really appreciated Mr. Eisenhut and others' thoughts about capturing existing data that can be plugged in. So it's not that all this data has to be gone out and gotten in a new way, that it's -- some of it's out there and it gets put together so we can look at what the community scale impacts are and what the cumulative impacts are.

So thanks.

And if you have thoughts about the third-party verification, I'd love to hear that or it can wait until after the 15-day.

CHAIR NICHOLS: Do you have a response on that?

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Yeah. So we don't have sort of a process as rigorous as, let's say, the mandatory reporting program for third-party verification. But I did want to highlight that we do have a section on emission report audits. So that at our discretion, we can conduct audits across the state on
facilities, either ourselves as CARB or a third party. So
we do have that provision in the regulation.

BOARD MEMBER TAKVORIAN: So does it make sense
that this -- you would state that third-party verification
is not necessary? Because it sounds like you're kind of
going to use it if -- as you just stated.

AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Yeah,
I -- I don't know if we can modify that. I guess that
might be reflected slightly incorrectly in the resolution.

BOARD MEMBER TAKVORIAN: So is that something
that can be addressed in the 15-day --

DEPUTY EXECUTIVE OFFICER KARPERSOS: Ms.
Takvorian, we certainly can take that up in the --

CHAIR NICHOLS: Yes, we could make that change.

BOARD MEMBER TAKVORIAN: Thank you. I didn't --
I wasn't sure what the process was. Thank you.

CHAIR NICHOLS: Thank you for catching that.
Mr. Garcia, would you like to add some thoughts
here?

ASSEMBLY MEMBER GARCIA: I would, Madam Chair.

Thank you.

Let me begin by thanking the staff for bringing
this item forward. And certainly we've seen tremendous
amount of progress in a very short period of time to get
to where we're at.
The presentation addressed several issues that were highlighted in a letter that was written to the Board by the principal author, Christina Garcia, and several other co-authors, Mr. Bloom being one of them, represents Santa Monica area.

One of the issues that they highlighted was addressed, and that had to do with the five-year sunset and annual reporting period.

Two other points that were made in the letter I think will probably require some further conversation and hopefully some corrective action measure. One is ensuring that we really understand the intent of the two pieces of legislation, which would then really lead to the two points that I'm going to be making.

And the legislative attempt in order to understand that, and as my colleague and principal author of the bill has written here, we modified Health and Safety Code 39607 requiring the State Board to require and create a program to ensure air quality data is collected in each air district. That data requirement wasn't just limited to stationary sources, but was meant to include all sources air pollutants and came along with a directive to assess population exposure and methods for reducing the exposure.

AB 197 amended that section to require the State
Board the publish stationary and mobile sources data on
line. And so, you know, my colleague, Ms. Garcia, wanted
me to make sure that I really highlighted and stated what
the intent of those two policies.

AB 617 added a new section right underneath the
section amended by AB 197 when it asked ARB to work with
air districts to establish uniform statewide reporting
emissions.

All these ideas are meant to work together toward
one goal, timely data that can be useful by stakeholders
in communities to understand and address pollution
exposure.

So the last two points that were highlighted in
the letter had to do with making sure that information was
consolidated at one place; not two separate sites but in
one place, making it that much more accessible and
friendly user to the communities that are directly
impacted and that have become part of this stakeholder
committee in moving with the implementation.

Lastly, there's no question that -- and these are
my comments -- that there needs to be more funding for the
purpose of the implementation. There's no question.
There hasn't been one issue in my four years in the
California Legislature that hasn't come before us that the
comments have been we need more funding to do our job.
Right? Seldomly have we committed that funding on a long-term range. We have an annual budget. And very few items that we've committed four-year, five-year funding. The last significant one being the efforts related to the fires, right?

But we put forward a budget for two years. Some would argue that that may not be sufficient. And I, as many of my colleagues and the authors of these pieces of legislation, are committed to making sure that we continue to fund these efforts, at the local air district level and of course supporting us here at the Air Resources Board to make sure we can carry these things out.

So I just wanted to close with those comments and thank you for all of the work that's being done; and most definitely thank you for being inclusive, as the law asked us to be, of our environmental justice communities and the stakeholders and the communities that are disproportionately affected by pollution.

Thank you.

CHAIR NICHOLS: Thank you for that, for bringing us back to grounding and what the intent is for doing this exercise. I think it's pretty clear that the expectations are very high from the community, that they will begin to see improved reporting of information. And I again want to stress that setting up the structure for this so that
not only what's received but also what is displayed is accessible by various types of publics who are interested in this is equally important, that we have to have a system where people can relatively easily and without having to have many days of training go and find the information that they're looking for about what's being emitted in their community. Seems to me to be as important as the quality of what goes into it.

So this is a major undertaking, and it does require effort and funding. I think it's also going to require some redirection of existing resources as well in order just to support something that's as big a shift as what we're talking about here. This is going to be a very exciting 15-day changes period --

(Laughter.)

CHAIR NICHOLS: -- perhaps one of the most interesting ever. But very important I do want to remind people that that's what we're doing here as we're launching a period that will respond to and report on these issues that have been identified. So there will be another public comment period when that is ready to be exposed, and then we'll hear again. But we are leaving it to the executive officer to take action in accordance with the information that comes in and keep us posted about what's going on. I'm sure those who are on local air
districts will be hearing a lot from their staffs no
matter what. And the rest of us will have to rely on our
staff to keep us up to date.

But I think with that, we should probably be
prepared to act on the resolution.

Do we have any additional legal requirements
before we can do that?

CHIEF COUNSEL PETER: We do not.

CHAIR NICHOLS: We do not.

All right. Thank you.

In that case, I think we just need a motion and a
second.

BOARD MEMBER BALMES: So moved.

CHAIR NICHOLS: Moved by Dr. Balmes.

BOARD MEMBER SHERRIFFS: Second.

CHAIR NICHOLS: Seconded by Dr. Sherriffs. He
got there first.

All right. All in favor please say aye?

(Ayes.)

CHAIR NICHOLS: Opposed?

Any abstentions.

Seeing none.

Thank you all. This has been a really
interesting and important discussion, and we look forward
to carrying it on as we move forward.
We're going to take another 10-minute break and be back at 1:30, I hope. And we have one more important item to deal with which has to do with trucks.

Thank you.

(Off record: 1:18 p.m.)

(Thereupon a recess was taken.)

(On record: 1:34 p.m.)

VICE CHAIR BERG: We're going to go ahead and start our final item. I wanted to remind everybody that the Board members who are just finishing up lunch in the back can hear the report, and they will be filtering back in. So please know your hard work is being listened to.

Our next agenda item is an informational update on the implementation of Senate Bill 1's requirement that ties compliance with CARB's Truck and Bus Regulation to the registration of heavy-duty vehicles with the Department of Motor Vehicles. This requirement builds on a long-standing essential interagency partnership that will help ensure the Truck and Bus Regulation achieves its intended reduction of harmful pollutants and puts everybody on an even playing field.

The health impacts of the diesel particulate matter are substantial, and compliance with the Truck and Bus Regulation is crucial for accelerated turnover of older and dirtier vehicles. Compliance with this
regulation means a step forward in reaching our health
protective air quality standards.

Today we will receive an update on the
implementation of this new compliance verification
process, on the work that is being done and actually has
been done over the last couple of years to ensure
successful rollout of this new legislation and on the
streamlined enforcement process for reducing the number of
current noncompliant vehicles as we prepare for the new
law to take effect.

Mr. Corey, would you please introduce this item.

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

In April, 2017, the Legislature passed Senate
bill 1, as you noted, the Road Repair and Accountability
Act, which included the requirement the Department of
Motor Vehicles verify compliance with CARB's truck and bus
regulation before registering heavy-duty and medium-duty
vehicles.

CARB, in partnership with DMV, is working to
ensure the successful implementation of this new law prior
to 2020, when compliance verification is required to
begin.

At the beginning this year, the Truck and Bus
Regulation had a compliance rate for California-registered
vehicles of approximately 80 percent. The new automatic compliance verification under SB 1 is design to increase this rate substantially, bringing with it improved air quality and a more level playing field for businesses in California.

To ensure the new compliance verification process runs efficiently, CARB is working to create the systems needed for the data handshake between CARB and DMV.

CARB staff is also cognizant that without the additional efforts staff will describe, many owners could be caught unaware. To minimize the impact of this new compliance verification process on businesses in California, while still achieving the maximum compliance rates, staff has included as key components of the program implementation an awareness campaign and funding opportunities.

Today's informational presentation will review staff's implementation progress and enforcement efforts to reduce the number of noncompliant vehicles for the new DMV compliance verification process.

I'd now like to turn the presentation over to Jennifer Gray with our Mobile Source Control Division, who will be providing the first part of the staff presentation; then Adam Gomez from our Enforcement Division will share the current enforcement efforts.
related to the Truck and Bus Regulation.

    Jennifer.

    (Thereupon an overhead presentation was
    Presented as follows.)

    AIR POLLUTION SPECIALIST GRAY: Thank you, Mr.
    Corey. Good afternoon, Vice Berg and members of the
    Board.

    We will share with you today the work that staff
    from across the agency are undertaking together to address
    a new law, the Road Repair and Accountability Act, which
    was signed into State law in April 2017.

    This new law includes requirements that medium-
    and heavy-duty diesel trucks and buses must be in
    compliance with CARB's Truck and Bus Regulation before the
    California Department of Motor Vehicles can issue the
    vehicle's registration.

    You will also hear from our Enforcement Division,
    who will conclude the presentation with an update on their
    work with currently noncompliant fleets.

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    AIR POLLUTION SPECIALIST GRAY: First I'll give
    you an overview of what the new law's requirements are
    regarding the DMV compliance checks. Then I'll cover some
    relevant details of the Truck and Bus Regulation. Next,
    I'll share with you some of the compliance challenges that
CARB has faced, why this law is important, and some of the
tasks CARB staff have been working on to provide a smooth
rollout of this new process.

Then Adam Gomez will relate the Enforcement
Division's strategy, efforts, results, and future
activities. Adam will also provide what's next on our
to-do list as we approach 2020.

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AIR POLLUTION SPECIALIST GRAY: Beginning January
1st, 2020, diesel-fueled medium- and heavy-duty trucks and
buses must be compliant with or be exempt from CARB's
Truck and Bus Regulation before DMV will issue vehicle
registrations. This new law phases in from 2020 to 2023,
consistent with the Truck and Bus Rule requirement, and
allows for temporary permits if necessary.

This augments our existing enforcement efforts
and how we currently work with DMV. Today, if our
enforcement staff sites a vehicle as noncompliant, they
may request that DMV place a registration hold on that
vehicle. However, this new law changes the timing and
nature of the registration process, so that there is an
automatic compliance check before DMV authorizes annual
registration, instead of a reliance on our Enforcement
Division finding all the noncompliant vehicles that are
already on California roads.
AIR POLLUTION SPECIALIST GRAY: The Truck and Bus Regulation has been in place since 2008, and the final turnover deadline is 2023.

While this new law doesn't change the number of trucks and buses that are supposed to comply with this regulation, it does provide an automatic compliance verification process that will help ensure vehicle owners take the action that the Truck and Bus Rule requires of them. We estimate that between 2020 and 2023 over 200,000 California-registered trucks and buses - so half of all of California's trucks and buses subject to this rule - they will need to take action to come into compliance.

AIR POLLUTION SPECIALIST GRAY: The Board took an important task by approving the Truck and Bus Regulation to protect public health, especially in already-overburdened disadvantaged communities.

The rule requires most trucks and buses to eventually turn over to 2010 or newer engines. This was needed to help reduce emissions of diesel particulate matter, or PM, and oxides of nitrogen, or NOx, along with other criteria pollutants from diesel trucks and buses already on our roads.

This rule is one of the most significant parts of
the Diesel Risk Reduction Plan and the State implementation Plan, or SIP, in helping us meet the federal and State health air -- health-protective standards.

There are 1 million medium- and heavy-duty diesel trucks and buses operating in California and subject to this rule, 400,000 of which are registered in California and 600,000 registered in other states.

Adam will talk more about what our enforcement team is doing to address noncompliance of the vehicles registered in other states, since the new DMV registration requirements won't capture them.

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AIRC POLLUTION SPECIALIST GRAY: CARB has had a dedicated compliance assistance program to help truck and bus owners since 2011. We provide individualized support through our diesel hotline and email services, and we send out letters to remind those with upcoming compliance deadlines that they will need to take action soon.

To reach many people at once, we developed the TruckStop website, which provides a variety of tools and information regarding all diesel regulations and funding options. We also offer a dozen different courses that provide guidance on complying with diesel equipment regulations. Coupled with OneStop and other events, staff
take part in an average of 50 training classes and events per year.

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AIR POLLUTION SPECIALIST GRAY: Even though we've had robust compliance assistance and active enforcement programs, full compliance has been a serious challenge. We knew going in this would be a tough rule to implement because it required turnover from in-use fleets and because there were a lot of small fleets. Then the recession that began at the end of 2007 made compliance even more difficult.

To address these challenges, CARB amended the rule twice to provide fleets with compliance flexibility options for a limited time. While most of these options are drawing to a close, the engine model year compliance schedules have been in place unchanged since 2008 and fleets have had a decade to prepare for compliance.

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AIR POLLUTION SPECIALIST GRAY: This graph shows in the first bar the PM2.5 emissions in 2010 before implementation of the Truck and Bus Rule began, just under 25 tons per day. The middle bar indicates in blue what the emissions should be today if we had full compliance with the rule.

And the hashed bar above that indicates the
excess PM2.5 emissions resulting from all the vehicles
that are currently out of compliance.

The third bar shows again in blue what the PM2.5
emissions should be with a full compliance.

And the red bar on top indicates what the
emissions would be without implementation of this new law.
It shows there would be an excess -- there would be excess
PM2.5 emissions if we keep going as we are today. We have
made great progress, but we need full compliance to help
meet our goals.

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AIR POLLUTION SPECIALIST GRAY: We see a similar
story with NOx emissions; although since this rule's
initial focus was on PM emissions, you might notice we are
closer to our NOx emissions goals today. The rule
anticipated greater NOx emissions reductions to come in
2023; but without this new law, we would be farther from
achieving our future NOx goal.

These two graphs give you a picture of why this
new law is needed; that is, to reach the compliance levels
and thus the emissions reductions expected under the Truck
and Bus Rule.

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AIR POLLUTION SPECIALIST GRAY: As I've
mentioned, the Truck and Bus Regulation has a compliance
phase-in period. While it was adopted in 2008, it didn't require any changes to engines until 2011, and owners could choose to delay buying replacement trucks or buses by following one of several compliance flexibility options. But by 2020, these options will have almost all expired. This means that most vehicle owners will need to replace their noncompliant trucks and buses with compliant vehicles.

In 2020, people can select from just two flexibility options: Maybe the truck or bus can be driven under a thousand miles a year. If so, the owner might choose to use the low-use exemption. Or maybe the owner can limit the geographic area in which he or she drives their vehicle to one of the cleaner rural areas of the state, and therefore can commit to the NOx exempt area exemption, driving only in those applicable counties.

These two flexibility options remain available in perpetuity for the Truck and Bus Regulation.

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AIR POLLUTION SPECIALIST GRAY: This law brings a big change for the regulated community, and preparing for this truck -- new truck and bus compliance verification process requires a many-pronged approach to work out the intricate details that must be considered in order to successfully implement it. To achieve this:
We've established the new registration steps with DMV;

We are compiling a refined list of vehicles that will be allowed to register, that DMV may have otherwise rejected;

We have robust outreach and enforcement strategies; and

We are promoting funding opportunities to help with the purchase of new vehicles.

These efforts represent the key steps to smooth implementation.

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AIR POLLUTION SPECIALIST GRAY: So, how is the new registration process going to work if you're a truck or a bus owner? DMV staff will run through a few checks as the first step. They will check the age and weight of the vehicle, and they will check model codes to rule out some exempt vehicles. They will also check CARB's list of compliant and/or exempt vehicles. If any one of these checks indicates that it's a compliant or exempt vehicle, DMV will send the vehicle through the normal registration process.

If any one of these checks indicates that it's a noncompliant vehicle, DMV will tell the owner that the vehicle appears to not be compliant with CARB's air
pollution control requirements and will provide CARB's contact information for follow-up. Temporary permits are available from DMV and CARB if owners need time to get in touch with CARB and discuss the details of their vehicle. Staff will analyze the circumstances and let DMV know if registration should be allowed.

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AIR POLLUTION SPECIALIST GRAY: There are a few categories of vehicles that aren't so clear cut for DMV to filter out of its registration denial process, which is where CARB's data is needed. We already have databases of compliant vehicles, so we will use these reporting systems to compile a list that goes to DMV each business day to indicate which vehicles they can register.

We will also add to this list those vehicles that might appear to DMV to be subject to the Truck and Bus Rule but are actually subject to other regulations like the solid waste collection vehicle rule instead.

And there are other vehicle types such as heavier personal-use pickup trucks that are exempt from the Truck and Bus Rule but are not in a CARB reporting database. Owners of such vehicles will be able to provide information on a simple form, including proof that they are compliant or not subject to the rule, so we can determine if they belong on the compliant or exempt
vehicle list. We may audit documentations that owners provide.

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AIR POLLUTION SPECIALIST GRAY: The outreach program for this new law builds upon our 10 years of interaction with the public to inform them of this regulation. Wide-ranging outreach is a crucial part of successful implementation, so truck owners know what to expect and how to prepare for 2020. Staff is using two main strategies to reach everyone. The first is to provide direct and proactive outreach to fleets that are currently compliant but have an upcoming deadline. And the second is a broad outreach strategy for all of the regulated community and the general public too.

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AIR POLLUTION SPECIALIST GRAY: The direct outreach approach involves sending postcards two years prior to a vehicle's model year deadline and promoting available funding programs. We are also sending more specific letters to fleet owners whose vehicles are one year away from a compliance deadline. We started sending these new law notifications in 2017 and we are currently working on a one-year reminder letter which will have both CARB and DMV logos and will be sent in a DMV envelope to help it stand out in a truck owner's stack of mail.
Additionally, we'll send mailers to those fleet owners who might need to get on our list of compliant and exempt vehicles.

We have also added more operators to our diesel hotline to help field the increase in calls that we expect to see as word of this new law spreads and as the deadlines draw nearer.

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AIR POLLUTION SPECIALIST GRAY: DMV is helping with our broad outreach approach too. DMV field offices are already showing a video we created, and DMV commercial offices have displayed posters we created to help get the attention of and to inform truck and bus owners. Additionally, DMV will distribute some of our other outreach materials at their commercial offices and at their outreach events.

We are also coordinating with several trucking industry associations. They've offered to include articles in their magazines or newsletters, and have invited us to participate in their member events.

For those who want online support, the TruckStop website now includes a new interactive tool that allows users to determine their engine compliance dates and provides information about the remaining compliance options. We are pleased to see that this tool is already
drawing in a lot of activity, with an average of 300 visits per week. We expect the use of this tool will help reduce the number of vehicle owners that will need to call for information.

To raise further awareness about this new DMV compliance verification process, CARB has contracted with a marketing company to roll out a multi-media outreach campaign.

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AIR POLLUTION SPECIALIST GRAY: A media contractor has implemented the rollout of our outreach message, reaching markets throughout California and neighboring states. The campaign message also reaches Spanish- and Punjabi-speaking audiences.

Truck and bus owners are now noticing advertisements in or on radio stations, billboards, trade publications, fuel pump toppers, Internet ads, social media, and streaming television services. The media contractor has also organized several live radio interviews with CARB staff.

This media contract spans two years, and after the first year, CARB will assess the outreach impact and decide on the best strategies for the second phase.

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AIR POLLUTION SPECIALIST GRAY: CARB has put
billions of dollars over the past decade into multiple incentive programs when the emissions reductions were still early and extra; that is, prior to compliance deadlines and above emissions reductions requirements of the rule.

At this point there are just two funding pathways left:

Vehicles that are currently compliant, and are more than one year from a compliance deadline, are eligible for replacement with help from incentive fund; or

Small fleets, even if out of compliance now, may be able to take advantage of the Truck Loan Assistance Program.

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AIR POLLUTION SPECIALIST GRAY: There are a few incentive programs that fleet owners can consider applying for as long as their fleets are already compliant. Two of these are the Hybrid and Zero Emission Truck and Bus Voucher Incentive Project, or HVIP, and the Low NOx Engine Incentives. These programs are available if an owner is interested in an advanced technology or natural gas trucks or buses.

Carl Moyer and AB 617 funds are available, but for a limited time, and some additional funds may be available from local air districts.
AIR POLLUTION SPECIALIST GRAY: However, for the majority of truckers, their primary option remaining is loan assistance. As mentioned, there are more than 200,000 vehicles that will be out of compliance by 2023 if owners don't take action before then. Many of these are small businesses that need help getting a low-interest loan.

In 2009, CARB developed a Truck Loan Assistance Program, which is a loan loss reserve program that provides loans to qualified small businesses who meet the requirements of having 10 or fewer trucks in their fleets, along with some other criteria. Since its inception, CARB has contributed over a hundred million dollars to this program, which has resulted in more than 20,000 loans and has leveraged $1.2 billion in financing.

We expect this program to see a very large increase in applications as a result of the current enforcement activities and as a result of the new law. As such, we will be increasing our contribution by approximately $35 million over the next couple of years, the largest amount CARB has been able to put into this program yet. This program fills a critical need of small businesses that we know need help to purchase compliant vehicles.
Now, Adam will tell you about the enforcement activities underway.

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AIR POLLUTION SPECIALIST GOMEZ: Thank you, Jennifer.

Today I will be presenting on the Enforcement Division’s efforts to address noncompliance prior to the new law taking effect on January 1st, 2020. The role of enforcement is to identify noncompliance; notify the responsible party; provide compliance assistance; and, if necessary, take enforcement action against the responsible party.

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AIR POLLUTION SPECIALIST GOMEZ: Over the past decade, we enforced the Truck and Bus Regulation and other CARB regulations applying to diesel vehicles through comprehensive compliance audits. These audits were thorough but time consuming. As we reported to you earlier this year in June, over the past 18 months we implemented a streamlined, more efficient process to enforce the Truck and Bus Rule. This process has dramatically increased our productivity, and today we are updating you on our progress. However, despite these efforts, there are still tens of thousands of vehicles that are noncompliant and will be noncompliant in 2020.
AIR POLLUTION SPECIALIST GOMEZ: We estimate approximately 82,000 California-registered vehicles are noncompliant today. This analysis includes both heavy and lighter trucks and buses subject to the rule, and is based on an analysis of vehicle registration, compliance reporting, and inspection records.

The average fleet subject to enforcement today owns two vehicles; noncompliant fleets registered and operating in California are almost uniformly small businesses.

In addition, there are 260,000 non-California-registered vehicles in fleets that report operation in California and do not meet regulatory requirements. We do not have the data to confirm whether a subset or all of these vehicles actually operate in California. Nevertheless, these data demonstrate the need to focus on non-California-registered vehicles operating in California in order to help ensure a level playing field across industry.

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AIR POLLUTION SPECIALIST GOMEZ: We call the new enforcement process the Streamlined Truck Enforcement Process, or STEP. In this process we use vehicle registration, compliance reporting, and inspection data to
identify non -- the compliance status of every vehicle in
every fleet that is registered in California. Once
identified as noncompliant, we send a Notice of
Noncompliance to the registered owner. This letter
initiates a process driven by strict timelines, designed
to resolve cases as quickly as possible. All
communications with each owner are recorded in the central
database. If a fleet fails to properly demonstrate
compliance, a Notice of Violation is issued. The Notice
of Violation assesses administrative penalties and informs
the fleet owner that registration holds will be placed on
their noncompliant vehicles until penalties are paid and
compliance is demonstrated. The Notice of Violation also
offers due process by giving fleets an opportunity to
request an administrative hearing. The STEP process has
shown to be very effective at resolving cases.

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AIR POLLUTION SPECIALIST GOMEZ: We began
implementing the STEP process at the beginning of 2018.
To date, we have sent Notices of Noncompliance to 10,500
fleets, covering 20,500 vehicles. We have placed 10,000
registration holds on noncompliant vehicles. This process
represents a fivefold increase in productivity relative to
the previous enforcement efforts. We can address about
20,000 vehicles per year given current resources dedicated
to this process.

To date, we have collected $1.6 million in penalties. Any unresolved notices of violation may be referred to the court for judgment, and if judgment is issued, collection methods may follow.

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AIR POLLUTION SPECIALIST GOMEZ: Despite this increased efficiency, our current staffing levels will not allow us to enforce against all 82,000 noncompliant California-registered vehicles prior to 2020. Moreover, the STEP process does not address noncompliance with vehicles operating in California that are registered in other states.

To address these considerations, we are implementing a four-part enforcement strategy. First, we will focus enforcement on the oldest and most long-standing noncompliant vehicles. Second, we will send Notice-to-Comply letters to instruct other noncompliant fleets to meet regulatory requirements before registering their vehicles in 2020.

Third, to reinforce the proactive outreach message, we will send targeted warning letters to currently compliant fleets that will become noncompliant in 2020.

Finally, we are focusing field inspections on
non-California-registered trucks.

I will now discuss each of these elements in more
detail.

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AIR POLLUTION SPECIALIST GOMEZ: We are focusing
our enforcement efforts on the oldest, highest emitting
California registered vehicles. These vehicles have been
noncompliant for a long period of time and tend to operate
in disadvantaged communities. As a result, this approach
achieves near-term emissions reductions from enforcement
activities in disadvantaged communities.

Our plan is to focus enforcement using the STEP
process on a total of 35,000 noncompliant vehicles by
December 2019. This is the maximum we can accomplish
given the resources available to the program, and will
reduce the magnitude of noncompliance in 2020 when the new
law takes effect.

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AIR POLLUTION SPECIALIST GOMEZ: We will also
send Notice-to-Comply letters to the remaining 47,000
noncompliant California-registered vehicles and warning
letters to an additional 44,000 vehicles that are
currently compliant but will need to take action to meet
regulatory requirements in 2020.

All letters will be sent using certified mail and
tracked in our database. We will provide compliance assistance for fleets that reply to these letters.

Using this approach, every current or future noncompliant fleet owner in California will be notified of their compliance status for each vehicle in advance of the new law taking effect in 2020.

We will maintain records of every communication with every notified fleet.

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AIR POLLUTION SPECIALIST GOMEZ: At the same time, it is vitally important that we continue to focus enforcement efforts on noncompliant vehicles operating in California and registering in other states. We are continuing to focus inspections at border crossings and issue citations to the noncompliant vehicle owners. We are also investigating the use of automated license plate readers to identify noncompliant vehicles operating in California.

Additional enforcement will be accomplished with the help of local air districts and the U.S. EPA.

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AIR POLLUTION SPECIALIST GOMEZ: Prior to 2020, we will have completed enforcement on 35,000 noncompliant vehicles. We will have conducted an extensive outreach campaign and notified each owner of a noncompliant vehicle
what they must do to comply. We will have provided compliance assistance and offered truckload assistance. We will have then, and will continue to, conduct inspections to level the playing field between vehicles registered in California and trucks registered in other states that operate in California.

On January 1st, 2020, we expect more than 80,000 California-registered vehicles, primarily in very small fleets, will be impacted. With our efforts and this new law, we should achieve compliance with the Truck and Bus Rule; and in doing so, achieve the emissions benefits that California needs to help attain ambient air quality standards and reduce exposure to toxic diesel particulate matter in disadvantaged communities across the State.

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AIR POLLUTION SPECIALIST GOMEZ: As we approach 2020 and the deadlines required by the new law, we will continue working to develop a seamless process to ensure only noncompliant vehicles are denied registration.

Education and outreach regarding the new law and enforcement efforts will be crucial for successful implementation. We will provide the Board with periodic updates of our implementation. Most importantly, we will continue to protect public health by getting dirty vehicles off the road.
Thank you.

VICE CHAIR BERG: Thank you.

I'd like to open up the comments by saying how impressive it has been how staff has tackled this program. I've been very involved in the Truck and Bus Rule since we passed it in 2008. I worked with the original implementation group. I've -- I've seen how staff has evolved over these years, looking at the needs of the truck owners and the outreach and the education. I'm also on the listserv for all of these notices and the constant reinforcement. It has really been impressive.

But also impressive has been the branding of the program. And so really staff is to be highly commended in this really difficult -- we knew it was difficult in 2008 when we heard the item, and we were not incorrect on that.

And here now, this very important part of the registration which was critical to get us to the next level is going to come to pass in 2020.

So I'd like to open it up to my fellow Board members to see if there's any questions.

Well, nobody signed up for public comment.

(Laughter.)

So maybe you could -- it would be difficult --

BOARD MEMBER DE LA TORRE: Then I guess it is to me.
VICE CHAIR BERG: Do you know it would be
difficult to come in here and rather indicate that you are
out of compliance and needed more time. So I can kind
of --

BOARD MEMBER DE LA TORRE: That would be kind of
like a confession, wouldn't it.

VICE CHAIR BERG: -- understand why we didn't get
a run on public comment.

But a critical item. We have a truck shortage.
We have driver shortages. And so this -- it is a
complicated issue.

So, Mr. De La Torre.

BOARD MEMBER DE LA TORRE: First of all, 82,000
sounds like a whole lot to me. 82,000 potentially smoking
trucks out there really is troublesome. Clearly my
efforts to report smoking trucks on the 710 Freeway -- I
mean, how many lifetimes would that be to be able to get
82,000?

So I appreciate the magnitude of the problem.
And I know there's multiple efforts. We had an event
right before -- well, in late October with the Truck Loan
Program that the Treasurer's Office helps with. That was
very impressive. So we're not just doing this -- the
stick. We're also doing the carrot to this.

So when I was briefed, I was told about the
possibility of false positives. And clearly that's part
of the package here, to make sure that folks don't
accidentally get wrapped up in this. It happens all the
time. It's -- you know, it just happens. So it's to be
expected it will happen here.

But I appreciated the temporary permits that
people can get while they work things out, the appeals
process, et cetera. So that's very good.

In terms of outreach, there are three things; one
of which we've talked about before is these lots --
parking lots for heavy-duty trucks, that are certainly in
Southern California and in my area. They're just lots,
and the owners rent out parking spots to big rigs without
the containers, just the big rig. And they fill up in the
late afternoon, and they empty out first thing in the
morning; and, you know, they're just going back and forth
doing their runs. So these are mom-and-pop operators.
They're one truck, two trucks. They don't have their own
facilities.

So I think we need to identify these places, and
maybe get some cooperation from cities to say, you know,
if you have one of these or a few of these in your
jurisdiction, let us know. Because to me that will be
a -- a place where you're going to get a lot of folks who
are out of compliance.
So that's one.

Two: Truckstops up and down the state. The -- you know, the jet -- is that what it's called, Jet, those fueling stations that are for the heavy-duty trucks up and down the state on the highways. Other brands too, but that's one that comes -- Jet or Jetro. Those kind of places. And putting signage around there, getting cooperation from those stations to put signage around those places, because that's where the truck drivers are.

And then, finally, if there's any possibility we could get some PSAs from some radio stations. These guys are on the road a lot, and radio stations can run PSAs, country stations and others --

(Laughter.)

BOARD MEMBER DE LA TORRE: -- to let them know. Maybe, you know, somebody could do some pro bono PSAs, I mean, around this town. We usually have trouble with the media activities of folks who have interest before us. But it would be really nice to get some help from these people. They make so much money off of us indirectly, that maybe we could get some of them to help us do some PSAs and place them on those radio stations.

So those are just some ideas. I know this is a really tough audience, a tough group to communicate with; and despite our best efforts, we're not going to get
82,000 on our own. So maybe some of these things can pan out.

And then, finally, thank you. We really need to make this happen. I'm absolutely supportive of any enforcement efforts. I think this is a great idea. And whatever help we can provide, I'm certainly there.

Thank you.

VICE CHAIR BERG: Thank you.

Additional comments?

Yes, Dr. Sherriffs.

BOARD MEMBER SHERIFFS: Let me start with a question. And then I have some comments.

But clearly we should be commissioning a song for playing on the airways about it's time to get a compliant truck.

(Laughter.)

BOARD MEMBER SHERIFFS: So those truck inspection stations on the freeway, what percent of the trucks out there do they actually capture? Of course is, you know, ignorant public, you're looking at it, well, every truck must go through one of those once a week or once a month or at least once a year.

ENFORCEMENT DIVISION CHIEF SAX: So we do about 17,000 truck inspections a year. And there's about 400,000 California-registered trucks and a million trucks
operating -- up to a million trucks operating in California. So that gives you an idea of what the percentage is. It's not huge.

BOARD MEMBER SHERIFFS: But the -- like the State truck inspection stations - not necessarily an ARB inspection - but they stop and CHP checks their insurance and log.

ENFORCEMENT DIVISION CHIEF SAX: They do. So they have a -- each of those truck inspection stations they have sort of a layered inspection process. So they will divert a small fraction of the trucks that are driving past the weigh station, and then a small fraction of those are actually inspected maybe.

BOARD MEMBER SHERIFFS: Okay. So it's not a very big net?

ENFORCEMENT DIVISION CHIEF SAX: It's not huge.

BOARD MEMBER SHERIFFS: Yeah, okay.

You know, and you mentioned the parking areas as an important place to find people. Obviously distribution centers, it's another place there are lots of trucks.

You know, your emphasis on outreach and education, huge. You know, that's the way you get buy-in. That's the way you get people to believe that we're trying to level the playing field here.

Thank you for your emphasis on enforcement in
this, because it is really critical for buy-in in terms of
the level playing field.

It certainly highlights -- this is paper
compliance. You know, if they've got a 2010 engine, we
are assuming that the emissions fit with what we think.
But we know that doesn't always work out that way. And so
ultimately it's a reminder one of the next steps is --
it's the legislative step in terms of we need a tailpipe
emission at the DMV level, a smog check, just the way we
do for cars. And that's something we need to continue to
keep our eye on.

So what does happen to these 80,000 vehicles?
Because even if -- even if everybody's going to actually
come to compliance by 2023, where do those trucks go?
What happens to them? Obviously we don't want them
reappearing at the border the next day.

ED DIESEL PROGRAM ENFORCEMENT BRANCH CHIEF
QUIROS: So there are enforcement efforts. What we mostly
see are trucks being sold currently out of state or out of
the country.

We also see vehicles that turn out to be low use
and can demonstrate that they remain below the low-use
mileage.

Some of them are scrapped and they're just
retired.
I think those are the main things that we tend to see.

BOARD MEMBER SHERRIFFS: All right. But most are continuing service somewhere?

ED DIESEL PROGRAM ENFORCEMENT BRANCH CHIEF QUIROS: Somewhere. Some of them are, yes.

BOARD MEMBER SHERRIFFS: Okay.

VICE CHAIR BERG: But Dr. Sherriffs, when they're sold, it is a requirement of the regulation that the seller has to indicate that it is a noncompliant truck to the CARB rule; and so that is part of the actual bill of sale.

Any other comments?

Okay. Well, I just emailed my compliance officer, of which I, as you all well know, have several trucks. I happen to know they are all 2010 or newer. But he does know about this rule, and so I'm feeling very positive about that.

(Laughter.)

VICE CHAIR BERG: Thank you very much, staff. You have your work cut out in front of you, no question, for next year. And we'll be interested to hear your next update, and of course January of 2020, the launch and how it goes. So thank you very much. Let us know how we can help.
Well, it's 2:15, and we do have four people who signed up for public comment. And they were given some information that we would be done round 3 o'clock.

So Professor Sperling and I, unbeknownst to him, have volunteered to stay until 3 o'clock for -- no.

And we have emailed and called. But they did come and they're -- they're here to talk about the electrified tractor certification in Farmer & Carl Moyer, all four of them. And I would feel very badly if they did come back and have no one to talk to.

So we have email to do and things like that and -- but certainly I know there are planes and trains to catch, and so although I'm not officially closing the meeting, we will wait until 3 o'clock. I want to wish everybody a very, very Merry Christmas and a Happy New Year - Happy Holidays, however you celebrate them - and we'll see you in January, if you need to catch a plane or train. If you want to hang out with us, you're welcome to. But please continue to meet your other obligations.

So thank you very much, Board.

(Off record: 2:16 p.m.)

(Thereupon a recess was taken.)

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

VICE CHAIR BERG: Well, thank you very much to the Board members that were able to stay.
We want to welcome our general public comment period for our Board meeting today. And so, we'll have you introduce yourself, and we have three minutes for each speaker. And thank you very much for coming back.

MR. HECKEROTH: Yeah, so sorry. They told me that it would be 4 or 5. So I --

VICE CHAIR BERG: No. And that's why we stayed for you, and so we're happy to do that. And thanks for coming back a little bit early.

MR. HECKEROTH: I wanted to show a little video that was done by my daughter. I've been making electric agricultural tractors for 25 years, and nobody knows about them.

My name is Steven Heckeroth. I've lived in California all my life. I attended every zero emission mandate hearing from 1992 to 2004, and was very disappointed to see that it went from an electric vehicle program to a hydrogen program and then sort of evaporated; and was resurrected by Elon Musk.

During that time I -- of building electric cars, I found that battery weight was the biggest issue with electric vehicles. And I saw a tractor with a big cement block on the back to balance the weight of the forklift on the front. And I said, "That cement block could be a battery." And that led me to think that tractors were the
And the advantages of electric over diesel are huge, because electric motors have instant torque, as we now know because of Tesla. And it has torque throughout the low speed range that tractors operate.

I can tell you stories about -- I'm in commercial production and I've got them out in Canada, in Norway, and in Missouri. But I can't make it into California because you guys have a Carl Moyer Program and a new Farmer Program that pays for up to 80 percent of the cost of replacing old diesel tractors with new diesel tractors. And my electric tractor has not been certified, and it's zero emission.

And I think it was the intent of the Legislature to reduce emissions. And the new diesel tractors actually produce more greenhouse gas emissions because they're less efficient than the old ones.

So I'm hoping to short circuit somehow the process that get -- that gets the certification for electric tractors so that I can start providing jobs and selling tractors in California.

And I don't know if they've got the video tuned up, but it would be nice just to show it.

There it is.

(Thereupon a video was played.)
MR. HECKEROTH: So if you'd give me another
second, I just wanted to tell you a story about an
80-year-old woman who wanted to farm all her life but she
never wanted to get on a tractor because they're so noisy
and smelly. And they got -- her and her husband got a
farm, and I loaned them the electric tractor for -- to
plow and harrow and seed two acres. And when she got off
the tractor, I asked if I could interview her. And I --
she introduced herself, and then I asked her, "How did you
like the tractor?" And she started crying, because -- she
said, "I'm sorry I'm so emotional but I've wanted to do
this all my life but I've never wanted to get on a diesel
tractor." So that's the power that silence and power
this -- the electric tractor has, is to change people's
lives who've never -- the smart people in the room, the
ones who wouldn't put up with that noise and that smell,
to finally give them the opportunity to do the things that
they wanted to do and to grow food for people.

And food is kind of important.

VICE CHAIR BERG: Very important. Thank you so
much for coming. We're going to refer this to Steve Cliff
and staff, who will get in touch with you. And let's
see -- and we do have some feedback here for you. But
what we're going to do is get back with you and look at
that certification process. And this is really exciting,
comes at a great day that we did our first zero emission
regulation today. And so, then looking at the future,
this is very exciting. Thank you.

And, Ms. Riordan.

BOARD MEMBER RIORDAN: Mine is just a quick
question. Where are you making these?

MR. HECKEROOTH: Making them in Mendocino County
right now.

BOARD MEMBER RIORDAN: All right.

MR. HECKEROOTH: And I'm working with Garton
Tractor, who has 10 distribution centers throughout
California, seven of them in the San Joaquin Valley. So
we'll be able to distribute to all the places that really
need them.

BOARD MEMBER RIORDAN: Good, logical place to
start.

Thank you.

BOARD MEMBER BALMES: I have one question.
VICE CHAIR BERG: Oh, good. Dr. Balmes.

BOARD MEMBER BALMES: Have you already met with
John Eisenhut, who's an ag representative on the Board?

MR. HECKEROOTH: No, I haven't. But I'd love to.
VICE CHAIR BERG: So we'll turn also this
information over to Mr. Eisenhut, and make sure that he
can get in contact with you and hear some more. Love to
have him see that individual as well.

MR. HECKEROOTH: Great, yeah.

VICE CHAIR BERG: So that'd be good.

MR. HECKEROOTH: And there's several more on my
website. So...

VICE CHAIR BERG: Oh, good. Well, we'll look
those up.

Well, Happy, Happy Holidays days and the best to
you for the New Year. And, again, thank you very much for
coming.

MR. HECKEROOTH: Best to you too.

VICE CHAIR BERG: Thank you.

Is there any other -- would you like to also?
Christine.

MS. HECKEROOTH: Christiana Heckeroth.

Madam, Vice Chair members of the Board. Thank
you so much for staying. We appreciate your time very
much.

My name is Christiana Heckeroth. I'm a
practicing physical therapist and I've been working with
my husband Steve on climate-change-related issues for over
two decades. From architecture to electric cars, and now
to electric tractors.

We find ourselves at a time when acting on
reducing greenhouse gas emissions is more important than
ever. And according to the Intergovernmental Panel on Climate Change, we have 12 years left for significantly reducing our greenhouse gas emissions to avert catastrophic change.

When CARB adopted the zero-emission mandate in 1990 we were excited about the prospects of electric propulsion coming to the market. But it took another two decades before that became a reality and countless trips to board hearings to plead for more expedient implementation.

At the time it was the fossil fuel and auto industry that attempted to maintain the status quo, of burning fossil fuels for transportation.

Members of the Board, Madam Vice Chair, we are running out of time. We don't have two decades to address greenhouse gas emissions in California's agricultural sector.

With your help, we won't need two decades. You can expedite rules for inclusion of electric tractors in the Farmer & Carl Moyer Program to assist farmers to purchase zero emission instead of diesel-powered machines for their farm operations. An electric tractor can be fueled with renewable energy. Its efficiency is unmatched, and health benefits for the planet and the operator, it's quiet and does not admit any exhaust are
unparalleled.

I stand before you today because I hope that the Board will have the foresight to see that it is all hands on deck and that we must put zero-emission electric tractors into the field now.

I appreciate your time very much.

VICE CHAIR BERG: Thank you very much for coming.

And then, Randal.

MR. MacDONALD: I have copies of my testimony.

VICE CHAIR BERG: Thank you.

VICE CHAIR BERG: Randal MacDonald from the Sierra Club.

MR. MacDONALD: That's correct.

Madam Vice Chair, members of the Board. My name is Randal MacDonald. I serve on the executive committee of the Sierra Club's nine-county Redwood Chapter. I also chair the chapter's Climate & Energy Committee.

We're concerned that CARB has not included electric tractors in your agricultural equipment replacement programs. The Redwood Chapter is home to Solectrac, and which manufactures America's first commercially available electric farm tractors.

For the record, I have no financial stake in Solectrac whatsoever. Our interests in this breakthrough technology, this breakthrough zero-emissions technology is
for its potential to dramatically reduce agricultural air pollution and greenhouse gas emissions.

    Since March, Solectrac has asked your agency again and again how electric farm tractors can be included in the existing Carl Moyer Program or your new Farmer Program, which subsidize replacement of old polluting farm equipment.

    But after months of messages stating that the process was underway, in November CARB staff told Solectrac that the agency would, quote, begin discussions on requirements for advanced technology inclusion in Farmer this December, for completion sometime next year.

    But back in April, when CARB announced the Legislature's allocation of $135 million for the Farmer Program, your press release stated, quote, legislators place special emphasis on purchasing vehicles and equipment that use advanced technologies such as clean diesel or electricity in order to accelerate improvements in air quality.

    So why hasn't your agency promptly implemented this clearly expressed legislative intent? This has been a missed opportunity which you can help rectify. It seems to me that the delays by CARB staff incorporating electric farm tractors may be due to the fact that this new technology is so unique.
For example, during field work -- and I've worked in the field, perhaps some of you have -- diesel tractors are typically left running at idle between uses, whereas electric tractors only run when they're in active use. So program requirements for a certain number of hours of operation cannot be applied to electric tractors the same way they would be applied to diesel equipment.

And so-called clean diesel machines often produce more CO2 than regular diesels because so much of their energy is used up to reduce particulates.

Electric farm tractors are truly a zero-emissions technology that is desperately needed in California's fields right now.

Madam Vice Chair, members of the Board, this is a golden opportunity for you to investigate and motivate your agency to promptly include electric farm tractors into your ag equipment replacement programs, as legislators encouraged you to do. This will help California meet our urgent goals of reducing harmful air pollution and achieve carbon neutrality as soon as possible.

Thank you.

VICE CHAIR BERG: Thank you very much for coming. We had a fourth person.

Oh, we're good?
Okay. The last thing I want to put in the record before we call it a day is we did -- the Board did receive yesterday written comments only from Idle Free as part of the general comments. And I just want to put in the record that we received the letter, and we'll all take a look at it and refer that over to staff as well.

So with that, I officially close the December Board meeting. Thank everybody for staying. Thank you very much for coming back. It is very exciting and we will follow up.

Thank you.

(Thereupon the Air Resources Board meeting adjourned at 3:01 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 28th day of December, 2018.

JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063