MEETING

STATE OF CALIFORNIA
AIR RESOURCES BOARD

CALEPA HEADQUARTERS

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SACRAMENTO, CALIFORNIA

THURSDAY, OCTOBER 25, 2018 9:04 A.M.

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

APPEARANCES

BOARD MEMBERS:

Ms. Sandra Berg, Vice Chair

Dr. John Balmes

Hector De La Torre

Mr. John Eisenhut

Supervisor John Gioia

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Phil Serna

Dr. Alex Sherriffs

Professor Dan Sperling

Ms. Diane Takvorian

STAFF:

Mr. Richard Corey, Executive Officer

Ms. Edie Chang, Deputy Executive Officer

Mr. Steve Cliff, Deputy Executive Officer

Mr. Kurt Karperos, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Ms. Emily Wimberger, Chief Economist

Ms. Veronica Eady, Assistant Executive Officer

STAFF:

- Mr. Michael Benjamin, Division Chief, Air Quality Planning and Science Division (AQPSD)
- Ms. Michelle Buffington, Manager, Off-Road Agricultural Strategies and Incentives Section, Mobile Source Control Division (MSCD)
- Ms. Lucy Cheadle, Air Resources Engineer, Oil and Gas Section, Innovative Strategies Branch (ISD)
- Mr. Peter Chistensen, Manager, Innovative Heavy-Duty Strategies Section, MSCD
- Mr. Jason Crow, Innovative Strategies Branch, MSCD
- Mr. Joshua Cunningham, Branch Chief, Advanced Clean Cars Branch (ECARS)
- Mr. Lou Dinkler, Manager, Vapor Recovery Regulatory Development Section, Monitoring and Laboratory Division (MLD)
- Ms. Catherine Dunwoody, Division Chief, MLD
- Mr. Wesley Dyer, Attorney, Legal Office
- Mr. Rhead Enion, Senior Attorney Legal Office
- Ms. Ariel Fideldy, Air Pollution Specialist, South Coast Air Quality Planning Section, AQPSD
- Mr. Mark Fuentes, Assistant Division Chief, ECARS
- Mr. Jason Gordon, Air Resources Engineer, Advanced Clean Cars Regulation Section, ECARS
- Mr. Jason Gray, Branch Chief, Climate Change Program Evaluation Branch, Industrial Strategies Division
- Ms. Annette Hebert, Division Chief, ECARS
- Ms. Deborah Kerns, Senior Attorney, Legal Office
- Mr. Jack Kitowski, Division Chief, MSCD

STAFF:

- Mr. George Lew, Branch Chief, Vapor Recovery and Fuels Transfer Branch, MLD
- Mr. Jack Lourenco, Branch Chief, Emissions Compliance, ECARS
- Ms. Shannon Martin Dilley, Attorney and Tribal Liaison, Legal Office
- Mr. Tony Martino, Manager, Aftermarket Parts Section, ECARS
- Mr. Richard Muradliyan, Air Resources Engineer, Aftermarket Parts Section, ECARS
- Ms. Claudia Nagy, Senior Attorney, Legal Office
- Mr. James Nyarady, Manager, Oil and Gas Section, ISD
- Ms. Lucina Negrete, Branch Chief, Innovative Strategies Branch, MSCD
- Mr. Nick Rabinowitsh, Senior Attorney, Legal Office
- Ms. Shobna Sahni, Manager, Advanced Clean Cars Section, ECARS
- Ms. Rajinder Sahota, Assistant Division Chief, ISD
- Ms. Carol Sutkus, Manager, South Coast Air Quality Planning Section, AQPSD
- Ms. Sylvia Vanderspek, Branch Chief, Air Quality Planning, AQPSD
- Mr. Daniel Whitney, Senior Attorney, Legal Office
- Ms. Michelle Wood, Air Pollution Specialist, Vapor Recovery Regulatory Development Section, MLD

ALSO PRESENT:

- Ms. Li Ang, Coalition for Clean Air
- Mr. Bob Angell, Atlas Disposal
- Mr. William Barrett, American Lung Association
- Mr. Naveen Berry, South Coast Air Quality Management District
- Mr. Cory Bullis, California Vanpool Authority
- Mr. Todd Campbell, Clean Energy
- Mr. Nico Chavez, California Association of School Transportation Officials, School Transportation Coalition
- Mr. Jon Costantino, California Independent Petroleum Association
- Ms. Noelle Cremers, California Farm Bureau Federation
- Mr. Steven Douglas, Alliance of Automobile Manufacturers
- Ms. Alejandra Duran, BYD Motors
- Mr. Sean Edgar, CleanFleets.Net
- Mr. Zach Franklin, Grid Alternatives
- Mr. Rich Frick, HINO Trucks
- Ms. Genevieve Gale, Central Valley Air Quality Coalition
- Mr. Paul Gonsalves, Port of Long Beach
- Mr. Stuart Gosswein, Specialty Equipment Marketing Association
- Mr. Jesse Glickenhaus, Scuderia Cameron Glickenhaus
- Mr. Brian Holland, Shared Use Mobility Center
- Mr. Roger Isom, California Cotton Ginners and Growers Association, Western Agricultural Processors Association

ALSO PRESENT:

- Mr. Ryan Kenny, Clean Energy
- Mr. Thomas Lawson, California Natural Gas Vehicle Coalition
- Mr. Jamie Levin, Center for Transportation and the Environment
- Mr. Braden Liberg, Edelbrock
- Mr. Bill Magavern, Coalition for Clean Air
- Mr. Kevin Maggay, SoCalGas
- Mr. Robert Naylor, Metropolitan Transportation Authority of Los Angeles County
- Ms. Kathryn Phillips, Sierra Club California
- Mr. Mark Rose, National Parks Conservation Association
- Mr. Ryan Schuchard, CALSTART
- Mr. Samir Sheikh, San Joaquin Valley Air Pollution Control District
- Ms. Sylvia Solis Shaw, California Transit Association
- Mr. Lance Stander, Superformance
- Mr. Tom Swenson, Cummins Westport Inc.
- Mr. Peter Treydte, Specialty Equipment Marketing Association
- Ms. Eileen Tutt, CalETC
- Ms. Jhana Valentine, Beneficial State Foundation
- Mr. Cameron Wynne, De Lorean Motor Company

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PROCEEDINGS

VICE CHAIR BERG: Good morning, everyone. We would like to bring the October 25th, 2018 public meeting of the California Air Resource Board will come to order. And we'll start our day today with the Pledge of Allegiance. Please join me.

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

VICE CHAIR BERG: Well, I want to wish everybody a happy fourth quarter. It's hard to believe that we're rolling into the end of the year very quickly. You'll notice that many of our staff today and many of our Board members are wearing pink. And we're aware that October is breast cancer month. And so Judy, would you comment?

BOARD MEMBER MITCHELL: Thank you. This is a mission that is dear to my heart, because a member of my family is also fighting breast cancer. So we wear pink today to memorialize this effort. And it's breast cancer awareness month, so we wear pink as sign of hope for the many women who have fought and are continuing to fight this disease.

So this -- we do this in support of own employees, specifically one of our very own managers who is watching from home while she conquers and wins this battle. And we urge all women out there to vigilant about

their health, to periodically get mammograms, and to help us fight this terrible disease.

Thank you.

VICE CHAIR BERG: Thank you, Judy. And our absolute heartfelt wishes go out to --

BOARD MEMBER BALMES: Your mic is not on.

VICE CHAIR BERG: Thank you, Judy. And our absolute heartfelt wishes go out to all of our colleagues, but our special colleague that is watching today. So I do have a few announcements this morning, as we get started. First and foremost, we have interpretation services that we'll provide -- be provided today in Spanish for Item 18-8-7, the San Joaquin Valley supplement to the 2016 State Implementation Plan. Headsets are available outside the hearing room. And an attendant can sign you up at the table outside, and they can be picked up at any time.

(Thereupon the interpreter translated in Spanish.)

VICE CHAIR BERG: Thank you.

For safety reasons, please note the emergency exits are at the rear of the room. In the event of a fire alarm, we are required to evacuate this room immediately, go downstairs, out of the building. When they all-clear signal is given, we will return to the hearing room, and we will resume the hearing.

Anyone who wishes to testify should fill out a speak -- a request to speak card, also available outside in the lobby. Please turn it into the Board assistant or the Clerk of the Board prior to the commencement of the item.

Also, speakers should be aware that we do impose a three-minute speaking limit. Please state your first and last name when you come to the podium for our court reporter. And it's very helpful to us if you put your testimony in your own words. If you have written testimony, that will become part of the record. But it helps us to understand the issues you want to bring to the Board members if you sum up that testimony for us.

So with that, I also would like to lay out today, we have eight items we will be hearing, and one consent item, so we will not be taking a lunch break. But what we will take is two small breaks, one later this morning, and one mid-afternoon. Board members will be taking their lunch breaks. I want everybody to know that we do have speakers in the back, and so they will be listening to testimony. And I encourage my fellow Board members to keep an eye when we need a vote, that everybody is back at the dais for us to move forward.

So with that, let's jump into our first item.

Our first item on our agenda today is a consent --

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1
             CHIEF COUNSEL PETER: Excuse me, Vice Chair, we
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   need to take roll.
3
             VICE CHAIR BERG: Oh, that would be helpful,
 4
   wouldn't it? Thank you very much.
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             Clerk, would you please take the roll.
             BOARD CLERK DAVIS: Of course.
 6
7
             Dr. Balmes?
8
             BOARD MEMBER BALMES: Here.
9
             BOARD CLERK DAVIS: Mr. De La Torre?
10
             BOARD MEMBER DE LA TORRE: Here.
             BOARD CLERK DAVIS: Mr. Eisenhut?
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             BOARD MEMBER EISENHUT: Here.
12
             BOARD CLERK DAVIS: Senator Florez?
13
14
             Assembly Member Garcia?
15
             Supervisor Gioia?
16
             Senator Lara?
17
             Ms. Mitchell?
             BOARD MEMBER MITCHELL: Here.
18
             BOARD CLERK DAVIS: Ms. Riordan?
19
20
             BOARD MEMBER RIORDAN: Here.
             BOARD CLERK DAVIS: Supervisor Roberts?
21
22
             Supervisor Serna?
23
             BOARD MEMBER SERNA: Here.
24
             BOARD CLERK DAVIS: Dr. Sherriffs?
25
             BOARD MEMBER SHERRIFFS: Over here.
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1
             (Laughter.)
             BOARD CLERK DAVIS: Professor Sperling?
 2
 3
             BOARD MEMBER SPERLING: Here.
 4
             BOARD CLERK DAVIS: Ms. Takvorian?
             BOARD MEMBER TAKVORIAN:
 5
                                      Here.
 6
             BOARD CLERK DAVIS: Vice Chair Berg?
7
             VICE CHAIR BERG: Here.
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             BOARD CLERK DAVIS: Chair Nichols?
9
             Madam Vice Chair, we have a quorum.
10
             VICE CHAIR BERG: Thank you very much.
11
             I was excited in my own count that I checked that
   off my list.
12
13
             (Laughter.)
14
             VICE CHAIR BERG: So thank you very much, Ms.
15
   Peter.
16
             Okay. Now, let's jump into our first item.
                                                           Ιt
17
    is on a consent item. And it is 18-8-1 con -- The
18
    Consideration of Six Research proposals. I would like to
19
    ask the Board clerk if any witnesses have signed up to
20
    testify?
21
             BOARD CLERK DAVIS: No.
22
             VICE CHAIR BERG: Would any Board members like to
23
   bring the item off of consent?
2.4
             BOARD MEMBER BALMES: No, but I need to recuse
25
   myself, because of being an employee of UC Berkeley.
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1
             VICE CHAIR BERG: Thank you very much. We will
 2
    show that Dr. Balmes is recusing himself from the vote.
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             With that, I will close the record on this agenda
 4
           Trusting that the Board members have had an
    item.
5
    opportunity to review the resolution, may I have a motion
    to move this item?
6
7
             BOARD MEMBER EISENHUT: Move consent.
8
             BOARD MEMBER RIORDAN: Second.
9
             (Ayes.)
10
             VICE CHAIR BERG: Thank you.
             All in favor?
11
12
             (Unanimous aye vote.)
13
             (Dr. Balmes abstained.)
14
             VICE CHAIR BERG: Any opposed?
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             And we have one abstention.
16
             Our second, Item 18-8-2, is the proposed
17
    submission of the California Greenhouse Gas Emission
    Standard for Crude Oil and Natural Gas facilities into
18
    the -- to bring that into the California State
19
20
    Implementation Plan. This item is being taken off of
    consent, as we have had a -- a major item that was
21
22
    submitted in writing, as well as we do have somebody who
23
    has signed up for testimony.
2.4
             So with that, Mr. Corey, will you please
    summarize this item?
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Chair Berg. So the U.S. EPA requires the submission of State Implementation Plans, or SIPs, for ozone nonattainment areas classified as moderate or worse to demonstrate that emission sources meet Reasonably Available Control Technology, or RACT, level controls. In 2016, U.S. EPA published a control technique guideline, or CTG, that established RACT control levels for sources in the oil and natural gas industry that emit VOCs.

In 2017, CARB adopted the oil and gas methane regulation, which reduces methane emissions from oil and gas extraction and related facilities. Since VOCs in methane are both found in field gas, in oil and gas operations, methane controls in the oil and gas industry can also reduce VOCs as a co-benefit.

We're proposing to submit the oil and gas methane regulation as a revision to the California SIP to satisfy the RACT requirement for sources in the oil and natural gas industry field. This is based on our assessment that this regulation applies to all emission sources covered in the CTG, and that the regulation achieves equivalent or better emission reductions compared to the RACT level controls.

And as you said, we pulled this item off the consent calendar because we received a comment letter from

the Western States Petroleum Association, or WSPA. WSPA contends that the submission of this regulation into the California SIP is not necessary to meet the requirements of the Clean Air Act.

Submission of the oil and gas methane regulation into the SIP is necessary to comply with the Clean Air Act, which requires RACT-level controls that reduce VOCs in order to meet the ozone National Ambient Air Quality Standard. Controls mandated by this regulation, such as vapor recovery on tanks and leak detection and repair, reduce both methane and VOC emissions simultaneously. Our regulation, in combination with local district rules already in the SIP, achieves equivalent or better emission reductions compared to the RACT level controls.

Our submittal of the regulation avoids the need for five separate districts to make individual SIP submittals through CARB to satisfy the RACT requirements.

Staff work with the districts subject to the CTG, shared our draft staff report with them, and incorporated their comments. None disapproved of our submitting CARB's oil and gas regulation into the SIP. Thus, by submitting this regulation into the SIP, we are assisting the districts, not undermining their authority to determine RACT for stationary sources.

Having now addressed WSPA's comments, staff

recommends that the Board direct staff to submit the oil and gas methane regulation to U.S. EPA as a revision to the California SIP.

That concludes my remarks.

VICE CHAIR BERG: Thank you very much Mr. Corey. We do have a speaker this item. Jon Costantino.

Jon.

2.4

MR. COSTANTINO: Thank you. Good morning.

Hi. My name is Jon Costantino. And many of you know me. Today, I'm representing the California

Independent Petroleum Association, who has worked with ARB on lots of measures over the course of the last couple years. And this item is related to CIPA, so that's why taking the opportunity to present today, even though it's not directly impactful on the imposition onto the SIP.

I'm going to read my comments, because they're a little more than I normally speak.

The mission of CIPA is to promote a greater understanding and awareness of California's independent oil and gas producers, highlight their economic contributions to the State and national economy, and foster the efficient utilization of California's petroleum resources. CIPA members do all this in a very regulated environment.

In addition to the methane rule you're talking

about today, members are subject to many other rules not found outside of California, including the pioneering cap and trade rule, which puts a differentiating price of carbon on their product. Innovation and creativity are fundamental to continuing the operation in this environment. CIPA members are pursuing carbon capture and storage, Increased biogas usage, innovative renewable production methods, including the largest solar project in California history the Aera GlassPoint co-venture, and much more to assist the State in meeting its aggressive climate goals.

Industry is currently facing many regulatory research and monitoring activities on which there -- we would request additional coordination and integration.

Over the last few months, there have been more revisions to the cap-and-trade and LCFS, which are economy-wide measures which do put a price on carbon, which get the innovation that we are talking about Aera.

But there are other similar items which have a singular focus on just the oil and gas sector, which is a minor sector in the overall economy. Including the oil and gas methane rule, the SNAPS program, which is a ambient air monitoring program, which has the name of petroleum sources in the title, and then there's a research proposal which you just approved which is

characterizing the health impacts associated with facilities around oil and gas facilities, that is going to look at many things, including poverty level and smoking. But the name of it again is studying ethnic diverse -- ethnic -- make sure I get this right -- potential health inequity impacts in oil and gas extraction.

So CIPA has been active. And as a participant, we just ask that things -- not everything is brought to the stakeholders early enough to have us help and participate and make the process better. So we just want to highlight that CIPA is here to be a partner and look forward to working with you in the future.

VICE CHAIR BERG: Thank you very much, Jon.

Having no other witnesses. I am going to close the record on this agenda item.

Do Board members have any questions of staff?

Knowing that the Board has had an opportunity to review this resolution, do I have a motion to move this resolution forward?

BOARD MEMBER MITCHELL: I move adoption of resolution 18-44.

VICE CHAIR BERG: Thank you.

BOARD MEMBER BALMES: Second.

VICE CHAIR BERG: With a first and a second.

All those in favor?

(Unanimous aye vote.)

VICE CHAIR BERG: Those opposed?

Any abstentions?

Motion passes.

The next item on our agenda is Proposed

Amendments to Enhanced Vapor Recovery Regulation to

Standardize Gas Station Nozzle Spouts Dimension to Help

Address Storage Tank Overpressure. We're actually going
to be hearing two items back-to-back related to this
issue.

For our consideration is the adoption of a regulation that would amend existing certification procedures for vapor recovery equipment designed for use at the gasoline dispensing facilities throughout California.

California's vapor recovery program is one of our most -- a major stationary source emission measures that the Board has adopted over four decades ago, and one of our success stories. The program not only serves to attain and maintain ozone air quality standards, but also reduces public exposure to benzene and air toxic contaminants. The Board, from time to time, has amended these regulations to obtain additional reductions, improve equipment durability, and clarifies certification and testing procedures.

Today, we will hear future improvements that will be made to this program, as well as the improvement that we'll be hearing today. While we're working hard to reduce gasoline consumption, it will be with us for decades to come.

To ensure we continue to innovate and to protect the public health is critical, and that is the goal of our agenda item today.

Mr. Corey, would you please introduce this item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Vice Chair Berg. So as you noted, the vapor recovery program is over 40 years old. Over the last few decades, the Board has periodically adopted new performance standards and amended existing standards designed to control hydrocarbon emissions associated with the storage and transfer of gasoline by marketing to operations such as service stations and loading terminals.

Today's regulatory proposal involves standardizing nozzle spout dimensions to ensure compatibility with the new generation of motor vehicle fill pipe designs, while at the same time maintain the current level of performance with our existing vehicle population.

You'll hear that an incompatibility exists between some nozzles and certain vehicle fill pipe designs

that result in increased emissions.

Later, as you noted, you'll hear a related proposal from staff to amend the vehicle regulations to include improved vehicle fill pipe specifications.

The intent of both proposals is to improve compatibility between nozzles and vehicle fill pipes to reduce air ingestion at the nozzle, which will help reduce storage tank overpressure related emissions.

And with that, I'll ask Michelle Wood of the Monitoring and Laboratory Division to begin the staff presentation.

Michelle.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST WOOD: Good morning, Vice Chair Berg, and members of the Board. Thank you for this opportunity to discuss staff's proposed regulatory amendments to standardize gas station Nozzle spout dimensions.

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AIR POLLUTION SPECIALIST WOOD: We designed these amendments to work together with amendments you'll hear during the next agenda item about vehicle fill pipes to help address one problem: gasoline vapor emissions resulting from overpressure in gas station storage tanks.

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about gasoline vapor emissions, because gasoline consumption is a significant source of ozone-forming emissions and benzene, a toxic air contaminant.

California currently consumes about 15 billion gallons of gasoline per year. Measures in our climate change scoping plan will reduce gasoline demand significantly in the coming decades, for example, by transitioning to zero-emission vehicles and reducing vehicle use in general. Even so, gasoline consumption will remain a significant source of ozone-forming emissions and benzene.

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AIR POLLUTION SPECIALIST WOOD: California's Vapor Recovery Program focuses on reducing these emissions at each step in the gasoline distribution network, beginning with bulk storage facilities, to fleets of cargo tank trucks, to about 14,000 fueling facilities, and ultimately to more than 26 million vehicle fuel tanks.

To protect air quality and public health, CARB has adopted regulations that control emissions at each step in this process. Phase I, vapor recovery controls, focus on emissions during transfer of fuel from the cargo tank truck to the storage tank. And Phase II vapor recovery controls focus on reducing emissions during

vehicle fueling. Today's proposal focuses on gas station nozzles, which are one element of the Phase II vapor recovery system.

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AIR POLLUTION SPECIALIST WOOD: Over the past 40 years, increasingly stringent vapor recovery controls have reduced emissions by more than 90 percent, in spite of the fact that statewide gasoline consumption has increased by almost 50 percent over that time frame. These emission controls have resulted in reductions in ground level ozone in nonattainment areas and reductions in exposure to benzene.

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AIR POLLUTION SPECIALIST WOOD: The success of California's gasoline vapor recovery program can be attributed to a partnership between CARB, local air pollution control districts, and industry. CARB is responsible for establishing performance requirements and for certifying equipment that controls gasoline vapor emissions.

The air districts are responsible for enforcing vapor recovery requirements at gas stations. In addition, the air districts provide essential data that help CARB to quantify emissions and identify areas where the program can be improved, and equipment manufacturers and gas

station operators develop and implement innovative control technologies that meet CARB requirements.

CARB staff continues to collaborate with the air districts and industry to find opportunities to improve the vapor recovery program, which leads us to today's proposed amendments. One of the issues identified through this collaboration is overpressure of gasoline storage tanks.

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AIR POLLUTION SPECIALIST WOOD: CARB and air districts field studies have found higher than expected overpressure emissions, especially during the winter. We're particularly concerned about the increased benzene emissions, which raise potential health risk concerns at some of the worst case sites for people who live and work nearest the gas stations.

We're also concerned about the dramatic increase in in-station diagnostic system alarms for overpressure, when there's no equipment malfunction. These alarms are like the check engine light we have in our cars. They're intended to be an early indication that there might be a vapor recovery system malfunction that may require repair.

The alarms require an authorized service provider to respond. And if the alarms are ignored, they will lead to site shut down. However, we found that during the

winter about 90 percent of the overpressure alarms and associated emissions are not caused by equipment malfunctions.

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AIR POLLUTION SPECIALIST WOOD: Our collaboration with industry and air districts has identified several causes of the increased overpressure alarms and emissions. The primary causes are the higher volatility of winter-blend gasoline, and excess air ingestion due to an intermittent poor seal between nozzles and newer vehicle fill pipes.

Today's regulatory proposals focus on the nozzle-fill pipe interface. I'll focus on the nozzle, and in the next agenda item today, my colleague Jason Gordon will focus on the vehicle fill pipe.

In about a year and a half, CARB staff will bring another regulatory proposal to the Board that addresses additional site-specific factors.

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AIR POLLUTION SPECIALIST WOOD: So how does a poor seal at the nozzle-fill pipe interface result in overpressure emissions?

When we fuel our cars, as gasoline enters the vehicle tank, the displaced gasoline vapor exits the tank.

Many cars have a carbon canister that captures much of the

vapor, and the vapor recovery nozzle captures the remaining vapor, which is then transferred to the storage tank at the gas station.

When there's not a good seal, a lot of ambient air is also introduced and transferred back to the storage tank.

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AIR POLLUTION SPECIALIST WOOD: This excess air causes increased pressure and leads to increased vent and fugitive emissions.

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AIR POLLUTION SPECIALIST WOOD: We're particularly concerned about excess air ingestion because there's been an increasing trend over the last decade. Our field studies show that in 2004 less than five percent of fueling events had excess air ingestion compared to about 30 percent a decade later.

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AIR POLLUTION SPECIALIST WOOD: CARB staff, air district staff, and nozzle manufacturers conducted several field studies to identify the reasons for the increasing trend in excess air ingestion. Our study results demonstrate the need for the refinement of nozzle and fill pipe specifications to improve their compatibility and provide a better seal.

We found an increasing number of new cars have capless fill pipes, and some of these have built-in drain paths and other openings that let in fresh air. In addition, some capped fill pipe designs have deeper locking lips or bigger diameters that cause a loose latch with vapor recovery nozzles. And one of those nozzle designs was more prone to loose latch with these fill pipes, even though the nozzle complied with current CARB dimension requirements.

And some European vehicles have bayonet style file pipes with a secondary outer ring that blocks the nozzle boot from sealing with the fill pipe.

Now, I'll describe the changes we were proposing to the nozzle dimension requirements.

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AIR POLLUTION SPECIALIST WOOD: We are focusing on the parts of the nozzle that contact the vehicle fill pipe. For vapor recovery nozzles, this includes the nozzle spout, the anchor, which we also call the latch ring, and the bellows which we also call the boot.

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AIR POLLUTION SPECIALIST WOOD: The current standard has only three dimensions for the nozzle spout. These dimensions have not been updated since the 1970s, when the federal government and industry agreed to

dimensions for nozzles that dispense unleaded gasoline. We propose expanding this to include 15 spout dimensions --

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AIR POLLUTION SPECIALIST WOOD: -- and four dimensions for the nozzle bellows, for a total of 19 dimensions. The proposed dimensions include a range of values that provide the level of detail and certainty required for the automotive industry to produce a compatible fill pipe, while at the same time offering nozzle manufacturers some design flexibility.

The design proposals is consistent with the recommended practices developed by the Society of Automotive Engineers Task Force over the past two years. The development process considered multiple dimension factors, including ability to form a good seal between the nozzle and fill pipe, as well as compliance with other CARB regulations, customer effort needed for fueling vehicles, and likelihood of the nozzle becoming caught within the vehicle fill pipe pocket.

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AIR POLLUTION SPECIALIST WOOD: The task force meetings, shown on the blue arrow on this timeline, were not open to the public. But CARB has held five overpressure public workshops since 2012 that focused on

the design of field studies, and the discussion of study results and early regulatory proposals, including amendments to nozzle spout designs.

And in May 2018, we had a public workshop that focused specifically on our proposed amendments for nozzle and fill pipe specifications. We've also had numerous one-on-one meetings with nozzle manufacturers, one of which voluntarily modified their design to resolve an identified issue.

As a result, this proposal will not have a negative economic impact on gas station operators, and nozzle manufacturers.

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AIR POLLUTION SPECIALIST WOOD: There is at least one nozzle model that complies with the proposed dimensions for each type of Phase II vapor recovery system, balance and assist. These slides show the voluntary design improvement for the latch ring of the assist nozzle spout that helps prevent loose latches, and improve the seal between the nozzle spout and vehicle fill pipe during fueling events.

The manufacturers stopped making the prior design at the end of last year, and our recent survey indicates most distributors have already depleted their existing stock of that older design.

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AIR POLLUTION SPECIALIST WOOD: We estimate that installation of the improved assist nozzle will reduce annual pressure-driven emissions by nearly one ton per year, and wintertime emissions by nearly three tons per day. Excuse me. That was one ton per day on an annual basis, and three tons per day during wintertime.

In addition, we predict installation of the improved nozzle will reduce the frequency of gas station overpressure alarms, which could reduce the frequency of cost and cost of service calls for gas station operators by more than \$3 million.

While we know it won't solve all the overpressure problems, it will provide a significant benefit for many stations with little to no cost. We plan to bring you another regulatory proposal in about a year and a half to resolve the remaining overpressure concerns.

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AIR POLLUTION SPECIALIST WOOD: Implementing the proposed amendments has minimal cost. We predict that including 16 new dimensions and refining three existing dimensions in CARB's certification process will cost nozzle manufacturers about \$20,000 through 2030.

If this cost were passed to gas stations, the amendments could cost each station about \$2.

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AIR POLLUTION SPECIALIST WOOD: To conclude, we ask the Board to adopt today's proposed amendments by adopting Resolution 18-46 because they help address storage tank overpressure by improving compatibility between nozzles and fill pipes with minimal cost to nozzle manufacturers, and they preserve emission reductions and savings for gas station operators that result from the voluntary improvement of the assist nozzle.

During the 45-day commend period, we received three types of comments. First, comments about the fill pipe amendments. These will be addressed with the next agenda item.

Second, minor adjustments and clarifying edits to nozzle dimensions. These are not controversial and do not affect the cost of the proposed amendments. We recommend providing these changes for public review after the hearing with a notice and 15-day public comment period.

And third, technical questions and suggestions for alternatives. These do not affect staff's recommendations today, and we will address them in our Final Statement of Reasons. In fact, the suggested alternatives will be important for our future regulatory proposal that will address site-specific factors that cause overpressure. We think the nozzle and fill pipe

amendments are needed now to halt the increasing trend in air ingestion at the nozzle fill pipe interface and should not be delayed.

Going forward, the vapor recovery program will remain an important part of California's efforts to reduce regional ozone levels and to reduce benzene exposure. We will continue to work towards gas -- reducing gasoline vapor emissions and overpressure alarm frequency in the most efficient and cost-effective manner possible.

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AIR POLLUTION SPECIALIST WOOD: Thank you very much for your time and consideration.

VICE CHAIR BERG: Thank you very much for that great report. We do not have any speakers for this item. But I think it's important to note that is not an indication of lack of interest. That truly is an indication of congratulations, staff, you did a great job in interacting with the stakeholders. So we do truly appreciate your efforts.

I will turn to my Board members and ask do we have any questions of staff on this item?

And you've done an excellent job answering all of our questions as well. So congratulations on that.

So I will now close the record on this item. However, if we do have a 15-day change, and if it's

determined that additional conforming modifications are appropriate, the record will be reopened and the 15-day notice of public availability will be issued.

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If the record is reopened for a 15-day comment period, the public may submit written comment on the proposed changes, which will be considered and responded to in the Final Statement of Reason for the regulation.

Written or oral comments received after the hearing date, but before the 15-day notice is issued, will not be accepted as part of the official record on this agenda item. The Executive Officer may present the regulation to the Board for future consideration if warranted. And if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

The Board has before it Resolution 18-46. Do I have a motion and second to move this item forward?

BOARD MEMBER RIORDAN: Madam Chair, I would move approval of this resolution.

BOARD MEMBER SHERRIFFS: Second.

VICE CHAIR BERG: Thank you.

Having a first and a second, all those in favor?

(Unanimous aye vote.)

VICE CHAIR BERG: Anyone opposed?

Is there any abstentions for this item?

VICE CHAIR BERG: The motion has passed.

Our next item, 18-5 -- 18-8-5 is really companion item to our previous one. It is the Proposed Amendments to the Fill Pipe Specifications to help ensure new motor vehicle fill pipes continue to be compatible with the California gas station nozzles and reduce the storage tanks overpressure emissions. The original fill pipe specifications were adopted in 1976 and changes were made over time to ensure the vehicle fill pipe and nozzle remained problem-free during refueling.

Today, the Advanced Clean Cars Program is introducing further improvements to the fill pipe specification to reduce gasoline vapor emissions during refueling in conjunction with the amendments for the gas station nozzle specification, which we just previously hear.

These two rulemakings together will help
California to attain its ozone standard and reducing the
public's exposure to benzene, an air contaminant.

Mr. Corey, will you please introduce this item?

EXECUTIVE OFFICER COREY: Yes. Thanks Vice Chair
Berg. And as you noted, this regulatory proposal
introduces a new performance leak standard an additional
dimensional specifications for new fill pipe designs.
These changes are necessary to prevent fill pipe designs

that do not properly seal and latch with California's certified gasoline dispensing nozzles.

And the intent -- rather the intent of this proposal, as was the case with the proposal you just acted on a moment ago is to reduce air ingestion at the nozzle, and which will help to reduce storage tank overpressure emissions. And with that, I'll ask Jason Gordon of the Emission Compliance and Automotive Regulations and Science Division to give the staff presentation.

Jason

(Thereupon an overhead presentation was PRESENTED as follows.)

AIR RESOURCES ENGINEER GORDON: Good morning, members of the Board. Thank you for the opportunity to walk you through staff's proposed amendments to vehicle fill pipe regulations.

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AIR RESOURCES ENGINEER GORDON: In the last agenda item, you heard about nozzle improvements to help address overpressure in gas station storage tanks. This item addresses the vehicle side of the solution involving improvements to fuel fill pipes.

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AIR RESOURCES ENGINEER GORDON: This slide will give you some background and illustrate what this proposal

is addressing. The picture on this slide points out that the vehicle fill pipe is where the nozzle is inserted to refuel the vehicle, and it leads to the fuel tank. For today's proposal, the focus is on the fill pipe's head, which interfaces with the nozzle.

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AIR RESOURCES ENGINEER GORDON: The previous item described how excess air ingestion into the gas station underground storage tank leads to overpressure emissions. We found that there are certain vehicle attributes that lead to an improper seal, and therefore lead to excess air ingestion of -- three types of vehicle fill pipes are particularly prone to an improper seal.

The first type is a capless fill pipe, which may have an open drain path to the atmosphere. The second is a traditional capped design, which has a deeper locking lip, or larger outer diameter, that can cause a loose latch with vapor recovery nozzles. When there's a loose latch, you can end up with a gap between the nozzle and the fill pipe face and excess air can then be ingested.

Lastly, some European vehicles have bayonet style fill pipes and a secondary outer ring that can obstruct the nozzle from sealing. This design can also cause a gap between the nozzle and the fill pipe.

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AIR RESOURCES ENGINEER GORDON: Before we talk about the staff proposal, which includes a new performance leak standard, I would like to walk you through how the performance leak standard proposal was developed. Early on, field studies were conducted at gas stations with the auto industry and CARB staff. These studies narrowed down the maximum leak size that could still be allowed while yield -- while still yielding adequate performance at the gas station.

Staff worked with industry and the SAE Fuel
Systems Task Force to develop the bench test and the
performance leak standard. This was followed by
performing the test procedure in CARB's lab in developing
a specific leak standard. Throughout the development
process, staff coordinated with the SAE Fuel Systems Task
Force in order to listen to input and share ideas with
industry members of that Committee.

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AIR RESOURCES ENGINEER GORDON: The equipment set-up for the bench performance leak test is shown here. The nozzle is latched into a fill pipe, which would be secured in a vise on a bench. Vacuum would be applied to the nozzle to fill pipe interface, to a degree which results in a vacuum pressure of negative 500 Pascals. The resulting flow rate would be the output of this test,

which would need to come in at or below the proposed standard.

This test is a surrogate to actually testing with California gas station equipment, which would -- which would require more resources and would be more expensive.

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AIR RESOURCES ENGINEER GORDON: This leads us to the main staff proposal of 2.5 liters per minute, or LPM, performance leak standard. This standard assures minimal leak paths in the new vehicles' fill pipes, and verifies a good seal with the nozzle. Although zero leak rate would be the ultimate goal to guarantee no air ingestion, staff worked with industry and developed a maximum all -- maximum allowable leak rate for the fill pipe and nozzle interface, which would minimize the chance for air ingestion.

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AIR RESOURCES ENGINEER GORDON: The second part of our proposal involves dimensional specifications for fill pipes. These dimensions are being improved in areas which are known to interfere with making a good seal with the nozzles used at California's gas stations. These changes would only affect new fill pipe head designs. In other words, this would come into effect when a manufacturer is changing their fill pipe head design.

Therefore, manufacturers would be able to continue using their current designs that meet the current dimensional specifications along with the previously mentioned new leak standard. This minimizes burden to manufacturers and minimizes compliance costs.

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AIR RESOURCES ENGINEER GORDON: Staff estimates that the proposed changes to the fill pipe specification will provide statewide emission reductions of 0.6 to 1 tons per day reactive organic gases including benzene. The total cost to industry is projected to be \$175,000 for performing and reporting on the performance leak test.

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AIR RESOURCES ENGINEER GORDON: Staff has worked with stakeholders throughout this process and did receive supportive comments for this proposal. The industry also requested a relaxation of the performance leak standard during the 45-day comment period, and also minor clarifications of the dimensional specifications and the bench test.

Staff would like to work with industry to propose a 15-day change to clarify the dimensional specifications and the test -- and the bench test procedure.

Additionally, staff may propose an alternate leak standard, but only if sufficient data and justification is

shown by industry.

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AIR RESOURCES ENGINEER GORDON: To sum things up, this proposal includes a vehicle fill pipe performance leak test and additional dimensional specifications. These improvements, along with the change to the nozzle described in the previous Board item, will improve vapor recovery system performance. This will also reduce the frequency of In-Station Diagnostics, or ISD, overpressure alarms at gas stations.

Reduction in emissions of reactic -- reactive organic gas, or ROG, and benzene from this proposal are especially important in sites where people live and work near gas stations.

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AIR RESOURCES ENGINEER GORDON: The proposed improvements to California vehicle fill pipe specifications will result in emission benefits at a reasonable cost to industry, because of the built-in flexibilities. The proposal was formulated with the help of a variety of people in the automotive and nozzle industries, including the SAE task force.

Staff believes that this proposal is fair and effective, and therefore recommends that the Board adopts these amendments.

Thank you for your time and consideration.

VICE CHAIR BERG: Thank you, very much, Jason for a thorough report.

We do have one speaker signed up for this item. Steve Douglas, Alliance of Automobile Manufacturers.

Good morning, Steve.

MR. DOUGLAS: Good morning, Vice Chair Berg, members of the Board. Thank you. I'm Steve Douglas with the Alliance of Automobile Manufacturers representing 12 of the world's leading car companies or about 70 percent of the U.S. -- the California new car market. I realize that fill pipe specifications are a bit mundane. They don't get the media play of electric cars or fuel economy or CAFE. The President's is not Tweeting about them.

(Laughter.)

MR. DOUGLAS: The Governor is not responding to those Tweets, and even Chair Nichols hasn't -- hasn't Tweeted about fill pipe specifications.

Nonetheless, like many parts of the car, they are critically important, not only from the environmental standpoint, but also from the safety standpoint. As you might imagine, the fuel components are safety related, and the fuel pipe specifications -- design changes may require additional crash worthiness testing to ensure the vehicle's safety and integrity. And any changes, of

course, would require the development and modifications at the assembly plants around the world.

So and likewise as the staff has suggested, it has environmental impacts as well, that interface between the nozzle and the vehicle. So, it's really a balance between the most expeditious changes to meet your goals as well as the -- as doing so in a cost effective manner.

And with that said, we really want to thank the staff, Jason, Shobna, for all of their work. They really have gone above and beyond they've worked with the Alliance, as in the trade association. They worked with individual OEMs. They've done testing. And they've worked very hard with the Society of Automotive Engineers. And we think they've developed a rule that provides the environmental benefits in the most expeditious manner possible, and in a cost effective way.

And consequently, we fully support the staff's recommendation today, and we look forward to working with them. And again, thank you for all your -- your work on that.

Thank you.

VICE CHAIR BERG: Thank you very much, Steve.

Again, this agenda item shows by the -- I'm glad that Steve Douglas had the opportunity to be here to bear witness that staff has done an excellent job in reaching

out to stakeholders. In some cases, we're lucky. And in all of the staff's research on the last item and this item, many of the turnover of the equipment that we're looking at is due over the next four or five years. And so allowing manufacturers and the gas station owners to be able to adopt this new equipment after the useful life worked out really, really well.

And so congratulations on attaining all the goals and having 100 percent support of the stakeholders.

That's very impressive.

Is there any follow-up questions?
Yes, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Thank you. Thank you, staff for all your work on that and the engagement with stakeholders. And thanks to the auto industry for those comments. I love your triangle try, where we have really that sweet spot of balance, right, and cost, and input, and the benefits helping balance that triangle of what we're achieving here. So I want to see more of those perfectly balanced triangles and presentations.

(Laughter.)

BOARD MEMBER SHERRIFFS: You know, as manufacturers are more and more successful with their roll-out of electric vehicles and hydrogen fuel, this will be less and less of an issue, isn't that sweet?

This -- this -- it's small, but it's really important. We've talked about benzene and reactive organics. Benzene is a known carcinogen. It's one that's -- it's a very clear. And so small, small benefits are important.

For places like the Central Valley, the reactive organics are hugely important in terms of our ozone problems in the winger. So it may -- it may be small, but, you know, small depends on location. And something that's small in one place can be very big in another. So great work, and I love the triangle. Keep on -- keep on rolling.

VICE CHAIR BERG: Thank you.

Professor Sperling.

BOARD MEMBER SPERLING: I want to -- I want to note that even though Mr. Douglas and President Trump might not Tweet about this after this meeting, I did actually lecture about this in my class yesterday.

(Laughter.)

BOARD MEMBER SPERLING: And so it is small, and my doctor colleague things think it's important. So I just want to note that some of us are paying attention.

(Laughter.)

VICE CHAIR BERG: So with that, I will close the record on this agenda item. However, if determined that

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

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Written or oral comments received after this hearing date, but before the 15-day notice is issued will not be accepted as part of the official record on this agenda time.

The Executive Officer may present the regulation to the Board for future consideration, if warranted. And if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications. With that, we have in front of us Resolution number 18-47.

Do I have a motion and second to move this item?

BOARD MEMBER BALMES: I move that we adopt this resolution.

BOARD MEMBER SHERRIFFS: Second.

VICE CHAIR BERG: All in favor?

(Unanimous aye vote.)

VICE CHAIR BERG: Any opposed?

Any abstentions?

Motion carried.

Well, we're doing really well, group. We're just ticking these off.

(Laughter.)

VICE CHAIR BERG: While we have -- while we have our staff change, we'll go ahead and introduce our next -- our next agenda item, which is the Proposed Fiscal Year 2018-2019 Funding Plan for Clean Transportation Investments. The plan serves as a blueprint over the expenditures over \$480 million in incentives appropriated to CARB this year.

This includes the annual funding for the low carbon fuel transportation investment from the cap-and-trade auction proceeds. Now, entering its sixth year, and the Air Quality Improvement Program, or AQIP. It represents another significant zero -- investment in zero and near zero-emission technologies with a priority on directing funds to disadvantaged communities low-income committees, low-income households to ensure that cleanest technology are deployed in the most impacted parts of our State.

We are making great progress towards meeting our ZEV deployment goals and helping advance the technologies needed to meet our near-zero and long-term emission reduction needs. With more widespread adoption of these

technologies, we get closer and closer to establishing sustainable markets for these technologies.

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Mr. Corey, will you please introduce this item? EXECUTIVE OFFICER COREY: Yes. Thanks Vice Chair Incentive programs, as you noted, are a critical Berg. part of CARB's comprehensive strategy to accelerate the introduction of the cleanest mobile source technologies complementing our regulatory programs. These incentive -these incentives provide important early steps to transform the transportation sector to zero tailpipe emissions powered by the lowest carbon energy sources supporting the emission reduction strategies identified in the Climate Change Scoping Plan, State Implementation Plans, California's Sustainable Freight Action Plan, and the ZEV Action Plan, as well as the Governor's Executive Order calling for California to deploy at least five million ZEVs by 2030.

These incentives are all designed to increase access to clean transportation for disadvantaged communities, and low-income Californians. These investments will help implement the recommendations from our Senate Bill SB 350 study on overcoming the barriers to clean transportation.

And in the budget appropriations for these programs, the Legislature provided specific direction to

continue with the programs we funded in the past budget cycles. This funding will help meet the growing demand for consumer rebates, for ZEV passenger cars, clean truck and bus vouchers, and transportation equity projects, including car scrap and replacement, and car sharing, among others as staff will describe in their presentation.

This year, the proposed heavy-duty investments are focused on implementing the freight and heavy-duty vehicle and equipment recommendations identified in last year the -- rather the last year's three-year investment strategy. This will help to support the long-term transition to zero-emission vehicles in the heavy-duty market, as well as support investments in near-term technology, needed to help meet health-based ambient air quality standards.

And while we're investing a considerable amount of money with this plan, we must recognize that these investments are one piece of the state's overall clean air, clean energy, and climate investment portfolio, which includes other State and local agency investments. We've designed our program, so that it complements these other programs.

And with that, I'll ask Jason Crow of the Mobile Source Control Division to give the staff presentation.

Jason.

(Thereupon an overhead presentation was presented as follows.)

MR. CROW: Thank you, Mr. Corey. Good morning, Vice Chair Berg, members of the Board.

Today I'll be presenting staff's proposed funding plan for clean transportation incentives for fiscal year to 2018-19

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MR. CROW: I'm going to start with a brief overview of CARB's clean transportation incentive programs to provide some context as to how today's proposal fits into the larger portfolio programs, as well as our own program goals. I'll report on the status of past investments, and then describe our proposed funding plan and recommendations.

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MR. CROW: The investment recommendations laid out in this funding plan are made in coordination with our other incentive programs. This plan continues to provide funding for transformative technologies at their earliest stages when they're just coming to market, funding for fully commercialized technologies, and projects for transportation equity, that is projects that help to ensure access to clean transportation for our priority populations, or those in disadvantaged communities,

low-income communities, and low-income households.

The plan also funds projects designed to encourage the turnover of fleets to the cleanest commercialized technologies. Overall, CARB has developed a comprehensive and balanced portfolio of investments that maximize criteria pollutant and greenhouse gas emission reductions.

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MR. CROW: The programs shown here make up CARB's clean transportation incentive portfolio. Each of our incentive programs has its own statutory requirements, emission reduction goals, and eligible projects making the portfolio diverse and far-reaching. For today's discussion, our funding plan will cover just the low carbon transportation and AQIP programs shown on the top of this slide. This is a total of \$483 million for fiscal year 2018-19.

We will be coming back to you in February to provide a more comprehensive overview of the incentive programs and how they fit together.

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MR. CROW: Also, guiding and informing the decisions in this year's funding plan are the detailed three-year investment strategies for light-duty and heavy-duty invest -- heavy-duty projects. Updated

projections for both strategies are included in this year's plan, and next year we will be conducting a second comprehensive review, and providing our findings for both plans as required by SB 1275 and SB 1403.

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MR. CROW: The funding plan must also consider and address barriers to adopting advanced technology. These are also discussed in more detail in the three-year heavy-duty investment strategy. While the costs associated with these technologies tend to be one of the most significant barriers, others include insufficient consideration and awareness of outreach, infrastructure, job training, and secondary markets. As we expand beyond the most proactive fleets, we need easier and more streamlined ways for fleets to transition.

We've asked CALSTART to establish a group to focus on these barriers and develop strategies for overcoming them. And the initial meeting is being planned for early December.

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MR. CROW: The priorities for this year's funding plan are built on supporting the long-term transformation of the fleet to zero-emission vehicles and equipment:

Building on investments from our previous budget cycles; Incorporating refinements based on the lessons

learned and recommendation from our SB 350 study on overcoming the barriers to clean transportation in low-income and disadvantaged communities, which will help to continue to increase access to clean transportation and mobility options; and, Designing our investments to benefit priority populations.

I also want to highlight that staff is proposing increasing the AB 1550 priority population target from the 45 percent initially proposed in our funding plan to 50 percent based on the latest available project performance data. We're asking you today to include this increased target as part of your approval action.

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MR. CROW: Now, I'm going to share with you an update on the status of our current projects.

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MR. CROW: As we continue to build on our prior years' investments, here's a look at how these investments are making a real difference in transforming the light-duty fleet in California. The significant number of zero-emission and plug-in hybrid passenger car rebates we've issued are helping to grow the market. These vehicles now make up over five percent of new care sales in California. We're brining more low-income participants into the program with increased rebate amounts and more

focused outreach with over \$35 million in increased rebates issued to low-income consumers to date.

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MR. CROW: We continue to see our equity projects grow. Car share programs have now launched in Los Angeles and Sacramento. Four additional projects will be launching in late 2018, early 2019 in the Bay Area, the San Joaquin Valley, and Watsonville. The agricultural worker vanpool project is underway with over 150 hybrid commuter vans starting delivery this month.

Also, new this year is the statewide financing assistance pilot project, which launched just this past June. This project is helping low-income consumers make clean car purchases, including those who may not have an existing car to scrap by offering low cost loans and grants. And so far, over 150 of these have been funded.

The EFMP Plus-Up or Clean Cares 4 All project has helped us scrap and replace over 3,700 old cars with new cleaner vehicles. And the Rural School Bus Pilot Project has funded 40 school buses for rural school districts with another 75 buses to be delivered as part of last year's funding allocation.

Many of these projects are in high demand, and today's plan proposes to continue investing in these critical equity projects.

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MR. CROW: On the heavy-duty side, we've seen tremendous growth in the clean truck and bus market with dearly 5,000 vouchers reserved or issued, and over 1,000 different fleets participating. The number of manufacturers and eligible vehicles keeps growing far faster than we would have envisioned just a year or two ago.

We've gone from 20 to 25 manufacturers since last year offering 90 eligible models in HVIP compared to just 60 last year. Class 8 electric truck models are now entering the market and eligible for the program. And over 3,000 HVIP funded trucks and buses are now operating in disadvantaged and low-income communities. This program supports both freight and transit.

Just last month, you heard an item on the Innovative Clean Transit proposal. And now, I'd like to talk for a moment about how our funding is helping to support and grow a clean transit future.

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MR. CROW: In our HVIP program, the typical electric truck -- electric bus is eligible for a voucher of \$180,000 up to as much as \$315,000 for a fuel cell bus. CARB's overall transportation funding portfolio is projected to meet current transit demand. This includes

funding available through the Volkswagen Mitigation Fund, the Carl Moyer program, and the AB 617 Community Air Protection Program.

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Transit will continue to be fully eligible for incentive funding until at least 2023 or 2025. And we're also continuing to build in our freight investments.

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MR. CROW: For our freight focused heavy-duty investments, the introduction of last year's zero- and near zero-emission freight facilities project has resulted in a number of transformational projects demonstrating a wide range of advanced technology vehicles and equipment around the state.

The yellow dots on the map shown here represent these projects, as well as all of our other freight demonstration and pilot projects. As you can see, they range from San Diego to the South Coast air, through the San Joaquin Valley, up to Sacramento and the Bay Area. The red areas represent all of the areas throughout the state where these clean vehicles will be operating.

Staff is also getting ready to launch the zero-emission off-road freight voucher project in the coming months.

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MR. CROW: And he's just a snapshot of some of

the major providers and purchasers of advanced technologies. Many of these are based here, bringing jobs to California. As you can see, tremendous progress has already been made in growing clean transportation.

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MR. CROW: Now I'm going to talk about the funding available for this year's plan.

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MR. CROW: The Legislature appropriated \$455 million in low carbon transportation funding for this year. This appropriation was further suballocated with specific amounts designated to go to the following categories: The Clean Vehicle Rebate Project, including increased rebates for low-income recipients; transportation equity pilot projects; the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project; and Freight Equipment Advanced Demonstration and Pilot Commercial Deployment Project.

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MR. CROW: This year's budget also provides just over \$28 million for the Air Quality Improvement Program. AQIP funds projects that reduce criteria pollutant and air toxics emissions from mobile sources. We're proposing to continue to focus AQIP dollars on projects that primarily deliver criteria pollutant reductions and to programs that

currently do not have another source of funding.

The majority of the AQIP dollars will continue to go to our Truck Loan Assistance Program, which a small portion going to fund a new truck filter replacement project that I will talk about shortly.

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MR. CROW: Now, let's move to this year's low carbon transportation investments starting with equity and transportation equity. The projects shown in green here are focused on transportation equity, and the projects shown in blue are our CVRP projects.

There's a total of \$275 million for these projects. This continues our focus on investments in CVRP to support broad zero-emission vehicle deployment coupled with equity focused investments that increase access to clean transportation and mobility options for priority populations.

As you can see on this slide, our funding plan now has a diverse set of equity projects which have grown in size and number. Starting with CVRP and moving counter-clockwise, they range from consumer vehicle purchases to clean mobility options for transportation equity.

Now, I'm going to talk about our proposal for CVRP.

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MR. CROW: This year, staff is not proposing any major changes to CVRP. The funding available this year should be sufficient to meet anticipated demand for the year. Coupled with direct equity funding to support low-income rebates, we would be able to ensure continuous funding for low-income applicants. As the market grows, we will need to continue to refine and better target the program, increasing awareness of and accessibility to incentives, especially for our priority populations.

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MR. CROW: Our proposed investments for transportation equity funding will help to increase access to and awareness of clean transportation and mobility options, as well as expand and adapt the existing transportation equity projects based on lessons learned.

These investments share air quality and equity goals with CARB's AB 617 Community Air Protection Program. They help to promote cleaner transportation and mobility options for all Californians, but especially those in low income and in disadvantaged communities.

In total, these projects are helping to address the barriers to clean transportation access for low-income residents identified in our SB 350 study. Many of these projects have been more complex and have taken longer than

anticipated to launch and/or scale up, due to a variety of huddles. Projects that have launched are seeing substantial interest and participation. Even though these projects are still in the early stages, we are learning and already seeing positive results.

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MR. CROW: Our funding plan includes two new projects this year. The first of these is the Clean Mobility in Schools Pilot Project. This new \$10 million equity project focuses on creating an overall transformation of the entire school transportation system, showcasing a variety of creative greenhouse gas emission reduction techniques at one or two K through 12 schools in disadvantaged communities.

This is an exciting opportunity for students and the community to learn about the potential for a zero-emission lifestyle. It would fund things like the electrification of school buses and administrative vehicle fleets, infrastructure improvements, education for both students and parents, and community outreach. It could also incorporate light-duty car sharing and other clean mobility elements like bicycling.

It's designed to encourage increased awareness and equitable access to clean transportation and mobility options, which is a core goal of SB 350, and critical to

overcoming barriers in low-income and disadvantaged communities. We will also be designing the project to be replicated in disadvantaged communities throughout the state.

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MR. CROW: For our heavy-duty vehicle and equipment projects, this year's funding plan includes \$180 million in low carbon transportation funding and about \$29 million in AQIP funding.

Collectively, these investments will support a broad range of clean and efficient vehicle technologies with opportunities for battery electric, fuel cell, hybrid, low NOx, and clean diesel engine technologies, as well as engine and system efficiency improvements, and the use of low carbon renewable fuels.

It includes support for technologies along the commercialization spectrum with funding for demonstrations, early commercial pilots, and vouchers and loans for commercially available technologies.

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MR. CROW: This year's plan includes \$125 million for HVIP and low NOx engine incentives, which we anticipate will meet demand for all eligible technologies through the fiscal year. Changes this year include revising some voucher amounts to better reflect

incremental cost.

We're recommending some changes to the low NOx engine incentives, including discontinuing the \$10,000 voucher for new 8.9 liter low NOx engines used in transit and refuse fleets; providing a new \$45,000 voucher for the repower of 8.9 liter CNG transit and refuse engines, and increasing the 11.9 liter low NOx engine voucher from \$40,000 to \$45,000.

And additional modification that we're proposing today is adding a \$45,000 voucher to convert diesel refuse fleets to the 8.9 liter low NOx CNG engine. We'll be holding a work group to flesh out the details for this.

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MR. CROW: Last year's funding plan included \$150 million for the zero- and near zero-emission freight facilities project, which will fund advanced technologies used in freight movement, and at freight facilities, including the necessary infrastructure to support their deployment. We mentioned last year that if our solicitation was oversubscribed, that we would like to use any new freight money from fiscal year 2018-19 to continue to fund down the list of qualified applications.

Earlier this year, we announced 11 preliminary awards contingent on Board action today that will be supporting a large variety of vehicles and equipment,

everything from a battery electric locomotive, to hundreds of zero-emission trucks, to an entire facility shifting away from diesel.

Staff is proposing that the \$55 million all -\$55 million allocated to us for freight be spent on
supporting all 11 of these amazing projects, bringing this
total investment in the freight system to \$205 million.

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MR. CROW: As I noted earlier, the majority of this year's AQIP allocation will continue to fund the Truck Loan Assistance Program. To date, the program has received almost \$100 million, allowing it to leverage nearly \$1.2 billion in financing for truck loans. Just last week, Board Member De La Torre spoke at a press event with the Treasurer's Office celebrating the 20,000th loan enrolled in the program.

For many small businesses, having access to the Truck Loan Assistance Program makes the difference between obtaining truck financing or not. We're expecting the demand will begin to increase as truck and bus enforcement activity increases, and DMV registration ties to truck and bus compliance in 2020. And so we know that we will need significantly more funding to meet demand in future years.

We do believe, based on current loan enrollment trends, that the \$25.6 million proposed allocation for

this year will meet expected demand of around 8,200 new trucks.

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MR. CROW: The other new project in this year's funding plan addresses existing heavy-duty vehicles that were originally equipped with the now recalled Cleaire LongMile diesel particulate filter system and will help to reduce uncontrolled criteria pollutant and air toxics emissions.

Between 2015 and 2017, CARB directed funds to help make vehicle owners whole first under the Prop 1B program for freight trucks, and then under a separate program for school buses. This will help to fund replacements for vehicles that were not able to participate under the two previous just funding cycles.

Staff is proposing \$3 million in funding to support these filter substrate replacements on a first-come, first-served basis. We expect that this will cover 270 to 500 substrate replacements or about 150 new diesel particulate filter systems.

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MR. CROW: And now I'd like to summarize our proposed recommendations

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MR. CROW: Staff's proposal advances access to

clean transportation, it builds on our previous investments to reduce greenhouse gas criteria pollutant and toxic emissions by advancing the cleanest available technologies, and it expands rebate and voucher projects to meet affordability and consumer and fleet demand.

These projects will continue the focus on achieving emission reductions for priority populations with increased emphasis on community outreach to help people better access funding.

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MR. CROW: The suite of investments is part of our coordinated strategy to make progress toward multiple climate change and air quality goals. As you can see, we strive to develop and fund projects that support multiple agency objectives.

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MR. CROW: In conclusion, staff recommends that the Board approve the proposed funding plan with staff's modifications to the AB 1550 priority population funding target, and the HVIP funding proposal as noted.

Thank you very much for your time and consideration, and we'd be happy to answer any questions you have.

VICE CHAIR BERG: Thank you very much for a very good report, Jason.

And we do have about 23 people signed up to testify. I think we'll go ahead and move to that testimony. And so it is posted up here to my left. And we'll start with Mr. Berry from South Coast Air Quality Management District.

Good morning.

MR. BERRY: Good morning, Vice Chair Berg and Board members. My name is Naveen Berry and I'm the Assistant Deputy Executive Officer in the Technology Advancement Office of the South Coast Air Quality Management District.

SCAQMD staff appreciates the opportunity to comment on agenda item number 6 that pertains to the funding plan. Specifically, South Coast AQMD staff fully supports the proposed funding levels of the \$55 million for the Freight Equipment Advanced Demonstration and Pilot Commercial Deployment Project, including projects for ships at berth.

Specifically SCAQMD staff thanks that Air Resources Board and the staff for recent award to the South Coast AQMD, and believes that the warehousing and freight, or ZANZEFF solicitation was really truly instrumental in attracting large manufacturers into the near zero and zero-emission freight vehicles and equipment development and commercialization discussions.

So we're very thankful for that.

The level of awards for cargo handling equipment on the broader perspective were on-road off-road locomotive and marine applications truly are transformative and expected to provide significant near-and long-term benefits to the South Coast region.

The awards will provide critical data to various manufacturers involved to refine the eventual commercial products that we think will be deployed. And on the on-road Class 8 truck projects, we'll certainly provide a direct comparison between battery electric trucks and fuel cell trucks. And we think this is important. And especially funding the infrastructure for both of those technologies as part of these projects will continue to provide benefits well beyond the life of the demonstrations for the vehicles under this area.

Specifically the award given to the South Coast AQMD, Volvo is our truck partner. And they're the second largest market share holder for Class 8 trucks in the U.S. They're truly committing to commercializing the heavy-duty battery electric trucks over the next few years. So this is fantastic news for air quality, not only in the South Coast region, but for the state as a whole.

So thank you again.

I do have a couple of other minor comments

however. South Coast is completely -- our staff is completely supportive of the \$125 million for the clean truck and bus vouchers, under the HVIP program the staff described. SCAQMD staff supports the increase in the voucher amount for the purchase and repowers of the 8.9 liter engine to \$45,000. I think that will go a long way to help fleet turnovers.

However, in one minor area, SCAQMD staff respectfully suggests that the transit and refuse sector should be able to continue to apply for vouchers for new purchases. All of the zero-emission transit bus market has commercial offerings. And transit agencies are committing transition to zero-emission buses. The battery electric refuse truck market is not nearly as mature. And no current commercial products are available, at least best of our knowledge.

Additionally, refuse trucks using near zero-emission natural gas truck engines readily use renewable natural gas mainly from landfill gas that cost effectively reduces criteria Pollutant and greenhouse gas emissions.

Based on the recent survey conducted by NREL, refuse trucks typically turnover their trucks every seven years, because repowering causes additional maintenance expenses with other ancillary components on refuse trucks.

So we suggest that we continue to allow new purchases for both of those as well.

For the 11.9 liter near zero engine --

VICE CHAIR BERG: Mr. Berry, I need you to wrap-up for me, because we do have a full agenda today.

MR. BERRY: Sure.

VICE CHAIR BERG: Thank you.

MR. BERRY: I will certainly do so.

So the suggestion is to increase that voucher amount to \$70,000. We think that will help accelerate that turnover. That incremental cost is based on other funding programs that the South Coast Air Quality

Management is involved in under Carl Moyer, Prop 134 -- or Prop 1B, and AB 134.

Thank you very much.

VICE CHAIR BERG: Thank you.

Good morning Mr. Naylor.

MR. NAYLOR: Good morning. Vice Chair Berg, members of the Board, I'm Robert Naylor. I represent the Metropolitan Transportation Authority of Los Angeles County, L.A. Metro. We represent 26 percent of the state's population, 47 percent of the disadvantaged communities, and the worst air quality in the country. And as such, we applaud the Board for its significant investments in this plan, and as well as its cutting edge

regulations on clean cars, and trucks, and buses.

I have written comments that I'm submitting, but I'll just highlight a couple of points. For our part, Metro is investing over \$400 billion over 40 years in transit, including 16 new rail and transit lines. That is projected by the year 2057 to reduce vehicle miles traveled by four million vehicle miles per week day.

Metro is also, as -- as you learned in the -- the electric bus area converting its entire fleet -- CNG fleet by the year 2030. That, however, is at a cost of more than \$500 million over our baseline. And that is money that is not yet fully accounted for.

We thank you for maintaining the full HVIP voucher amount beyond the 100 buses. That is critical to our success. Even with all the funding streams highlighted today and identified four weeks ago in the innovative clean transit presentation, the available funding for charging infrastructure is still very limited. We want to work together with you to find ways to increase it in future plans.

And finally, one of the greatest remaining challenges and clearly recognized in this -- in this plan is in the goods movement and freight area. In Los Angeles, the I-710 corridor is a major contribute -- contributor to pollution and greenhouse gases and

congestion. And we're just beginning to wrestle with the challenges of that corridor. It's going to take a focused comprehensive coordinated effort by all agencies to deal with that.

That said, metro supports the 2018-19 funding plan and thanks the Board for its fine work.

VICE CHAIR BERG: Thank you.

(Thereupon an overhead presentation was presented as follows.)

VICE CHAIR BERG: So as Mr. Frick comes down, if you could keep your eye on the list please, and make your way down. And so when you're up to speak, we can cut down our time walking down, please.

Good morning.

MR. FRICK: Good morning, Vice Chair Berg and esteemed Board members. My name is Richard Frick. And I work with HINO Trucks. We're a Toyota Group Company, the commercial division of Toyota. I'm here mainly to highlight a line item change in the HVIP program that will significantly impact our success in positioning this product and deploying it in the marketplace, namely a change in the voucher amount that will cut it nearly in half.

And that will put us in a uncompetitive market position. And the take rate, we fear, of the product and

the benefits of it being a lower emissions option in the local business and communities, will have a negative impact. You could see from the slides --

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MR. FRICK: -- the overwhelming number of -- or overwhelming percentage of participation that HINO has in the -- in the HVIP program. And as you progress through it, you can see sales statistics and then some voucher amounts by fiscal year, and the most important is on page three --

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MR. FRICK: -- the second slide, the number of vouchers by voucher amount. I think that graphic will show you kind of where the sweet spot of the voucher program hit home with the success in adopting this technology.

And if you can go one more slide --

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MR. FRICK: -- will be -- yet another. There we go.

So you can see that at the \$23,000 voucher amount, we were very successful in selling this truck, and consumers adopting the technology, many of which are small business owners, many of them in disadvantaged communities, and emissions -- high emissions areas of the

State.

So we definitely want to continue to work with HVIP and provide our vehicle as a solution as the only Class 5 vehicle solution in the goods movement market in the state.

And you can see the numbers as the voucher amounts go down the take rate lessons. And over time, we have felt that impact, but we have steadied the course with the technology to have a viable option out there.

So, in summary, I'd like the Board to consider a revision to the proposed changes, specifically to align item for hybrid vehicles that would cut the voucher amount to half the incremental cost of the enhancement.

Not only would we like to see the voucher amount stand where it is today, but we would also benefit from an increase in the amount, possibly for fleet owners of less than three vehicles, which is an area we've been very successful in penetrating. But these companies are small business owners, they're small fleet operators, and they do not have the resources to pay the upfront premium for the technology, even though they'll yield the benefit over time.

Thank you.

VICE CHAIR BERG: Thank you very much.

MR. BULLIS: Good morning. Cory Bullis on behalf

of the California Vanpool Authority. We are a JPA that provides vanpools to farmworkers across the state.

We really just wanted to express strong support for the funding plan, especially as it relates to the Agricultural Vanpool Project. We really want to commend staff on their work getting this program up and off the ground. We've been fortunate enough to receive a grant to help with deployment of the vanpools. And I can tell you firsthand that, you know, we had a recent event in the Fresno region that was pretty well attended from the farmworker community. They're very excited about getting access to a resource like this.

And this is one of those really unique programs that is making a difference in people's lives economically sneaking, given low-income folks access to a great transportation service, while simultaneously doing something great for the environment.

So really just wanted to commend staff, wanted to draw attention to the fact that this program is making a difference in folks lives. And thank you for your continue support.

Thank you.

VICE CHAIR BERG: Thank you.

MR. CHAVEZ: Good morning.

VICE CHAIR BERG: Good morning.

MR. CHAVEZ: Nicholas Chavez on behalf of the California Association of School Transportation Officials and the School Transportation Coalition.

I want to start by thanking the Board and staff for their commitment to cleaning up California's old dirty school buses, specifically the investment in time and resources to identify the problem with the California school bus fleet survey, where thousands of school buses were identified in need of an immediate and imminent replacement, and the investment in Rural School Bus Pilot Project, which are giving the smallest districts, hard pressed to replace their school buses on their own, the opportunity to take their old dirty buses off the road and replace them with clean zero-emission vehicles.

And now with this funding plan, the clean mobility and schools pilot project, where schools can take a holistic approach to implementing the latest in zero-emission energy efficient technology. The benefit of each -- of school bus replace is immense.

Older school buses emit harmful emissions that our students breathe every day on their way to and from school. Older buses can emit up half of those emissions back into -- into the -- into the school bus cabin. New buses are zero-emission or near zero-emission vehicles.

School buses manufactured before 2006 do not have

seat belts in California. These new buses do. If approved, 10 million will go to the Clean Mobility and Schools Project and 15 will be purposed for the Rural School Bus Pilot Project, a program which as already replaced 40 buses in the first year, and 75 in its second year.

The previous proposed -- the previous and proposed funding is no way a drop in the bucket in replacing the thousands of school buses that need replacement in California. However, we do appreciate your understanding, and there's a lot of work left to be done in cleaning up California's school bus fleet. On behalf of the school transportation directors, managers, instructors, and drivers, we thank you for your commitment and look forward to working with the California Air Resources Board to continuing to remove California's old dirty school buses off the road.

Thank you.

VICE CHAIR BERG: Thank you.

MS. DURAN: Vice Chair and members, Alejandra Duran, here representing BYD motors. We're an electric vehicle manufacturer. We submitted written comments on October 22nd, so Monday of this week. We made comments regarding the HVIP and freight project money. We want to actually retract our comments regarding the freight

project money.

After we submitted our comments letter, we had follow-up conversations with staff. So we want to thank staff for walking us through the language. There was obviously a misunderstanding on our side, so we just want to say that we're in full support of that funding and thank staff once again for taking the time in answering our questions.

VICE CHAIR BERG: Thank you for coming.

BOARD MEMBER BALMES: I just want to say, Vice Chair Berg, that the staff is really rocking today.

(Laughter.)

VICE CHAIR BERG: They are rocking today.

MS. SOLIS SHAW: Madam Chair and Members, Silvia Solis Shaw here today on behalf of the California Transit Association. The Association enthusiastically supports the adoption of the fiscal year 2018-2019 funding plan for clean transportation incentives.

In particular, the Association supports the proposed investment of 125 million for the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project.

As you know, the Association believes robust incentive funding that offsets the incremental cost of zero-emission buses is vital to hastening the adoption of these vehicles. The funding plan before you today

acknowledges our position and makes several smart changes to HVIP that will ultimately allow transit agencies to electrify their entire fleets.

These include removing the reduced voucher amount for more than 100 vehicles in a fleet and providing the Executive Officer with discretion to increase voucher amounts if global pressures require it.

As you move to adopt this funding plan and consider your obligations in future years, we'd like to call several items to your attention. Deploying zero-emission buses involves more than just purchasing the vehicles and installing supporting infrastructure.

There are softer costs associated with deployment that could serve as deterrents to some agencies, and which should be addressed in some form by the State. These softer costs include technical assistance for initial project scoping and project scaling and workforce training.

Funding for infrastructure is still woefully inadequate. It's true that as the SB 350 proceeding brought new funding online for building out charging infrastructure in the SCE and PGE -- PG&E service territories, but it totals just over 50 million over five years.

Finally, for the foreseeable future, access to

incentive funding by transit agencies will be critical to avoiding the service impacts or fair increases that could result from deploying still more expensive zero-emission buses.

As ZEBs become mandated purchases under the Innovative Clean Transit Regulation, the importance of incentive funding will only increase. We again urge you to remove the existing restrictions on the use of incentive funding to meet regulatory compliance and fund compliance with the ICT.

We appreciate this opportunity to comment and look forward to continuing working with you on making the transition to zero-emission buses a reality.

Thank you.

VICE CHAIR BERG: Thank you.

MR. ANGELL: Vice Chair Berg and members of the Board, my name is Bob Angell. I am the fleet manager for the Atlas Disposal, which is your local refuse and recycling hauler here in Sacramento and headquarters here in Sacramento.

I want to thank you for the opportunity to comment on the proposed fiscal year 2018-19 HVIP program. Atlas Disposal Industry will support, if amended, the proposed fiscal career 2018-19 funding plan for Clean Transportation Incentives related to the Hybrid Voucher

HVIP Program.

The HVIP Voucher Program incentive for the 8.9 liter low NOx engine should remain available for new purchases in repowers for all locations, specifically the refuse and recycling industry. Disallowing the refuse sector to apply for new purchases is not the right approach.

Regulations drive us to have the cleanest fleet possible, which support our company's clear clean action air core values an investment strategies.

Atlas Disposal has embraced the conversion to CNG since 2009 in the use of renewable diesel the last three years. We are proud to say we are 100 percent renewable fuel fleet in our efforts to be an environmental pioneer in the refuse and recycling industry.

We have benefited from current HVIP voucher program and other available incentive programs because it enables us to do early replacements of our aging diesel fleet. And this offsets the additional investment approximately 40 to 50 thousand dollars per vehicle required to purchase a CNG vehicle.

We hope that you will consider and continue making the refuse and recycling industry as part of the future HVIP program and not carve out our industry.

Thank you again for allowing me to comment on

1 | this important proposal.

VICE CHAIR BERG: So could I just ask you one quick follow-up clarification question?

MR. ANGELL: Yes.

VICE CHAIR BERG: I understood that these trucks did have a delta difference between 40 and 50 thousand dollars. Are you seeing that difference still today?

MR. ANGELL: Absolutely.

VICE CHAIR BERG: It is -- is it shrinking at all?

MR. ANGELL: No. The reason being is it mainly is not just an engine Chair Berg, it's mainly the infrastructure for the fueling part in the tank systems on the trucks.

VICE CHAIR BERG: Okay. Thank you very much.

MR. ANGELL: You're very welcome.

Good morning, Mr. Barrett.

MR. BARRETT: Good morning. I'm Will Barrett with the American Lung Association. I appreciate Kathryn Phillips letting me jump in the queue here for a minute.

The American Lung Association appreciates staff's work on the plan and supports the adoption today. We view the transportation investments as a helpful complement to strong regulatory actions needed to ensure the rapid transition to zero-emission technologies across the board.

The transportation sector relies heavy on fuels that contribute to asthma attacks, heart attacks, cancers and a wide range of other respiratory and cardiovascular health impacts along with premature deaths.

The transportation sector is also the leading source of help threatening climate pollution that must be rapidly addressed. The plan is the well aligned today with he goals of meeting our air and climate policy standards to protect public health. We appreciate that the Board continues to focus on zero-emission technologies, and zero-emission goals.

We believe these funds will work to advance the roll-out -- continued roll-out of zero-emission technologies and work in concert with other funding opportunities that can advance cleaner fuels in all sectors.

We also appreciate the focus on the pilot projects for school -- school buses and mobility options. Both of my children have active transportation routes to schools, and I think every child should have that opportunity. So I'm hopeful that that program can expand into that realm as well.

We think that the staff has done a good job with less resources to allocate this year. The Lung Association is committee to working on creating a more

stable and sustainable source of funding, especially for the heavy-duty sector, so that we're not looking at feast or famine every year. We think that's an important way to move forward and we're committed to working on that.

We also encourage you to continue on the path that you've laid out today with a specific focus on maximum investment in communities most impacted by harmful pollutants, especially those identified in the of 617 process this year and going forward.

We think that the minimum requirements in the law should be treated as minimum requirements for investments and appreciate the staff is looking at a 50 percent allocation to disadvantaged communities. We think that's very important, and again support all of the work today and ongoing. Look forward to working with you all.

Thank you.

MS. PHILLIPS: Kathryn Phillips with Sierra Club California. If there was a me-to button, I would just press that right now. We agree with what Will said, and just want to underscore our appreciation for the recognition of the need to transition to zero-emission vehicles, and that shows up in the plan.

VICE CHAIR BERG: Thank you, Kathryn.

MR. SWENSON: Hi. Good morning. Tom Swenson with Cummins Westport. I wanted to speak specifically to

the HVIP portion of the item. Just maybe a shameless plug on the technology and update on the commercial deployment of the near zero platforms. Both 8.9 and the 11.9 liter engines are now in full production as a standard build option with no minimum order requirements. So if you order one, it just goes into the order queue, and we build it.

We're -- we also both offer -- we offer both of those engines with the identical and equivalent warranty to its diesel counterparts. So it's a two-year 250,000 mile warranty with extended coverage options also available, which we're actually decreasing the price of those extended coverage options next year. And that's due to our experience in improvement in product quality.

We're also pleased that fleets are seeing a -- an equal to or less than maintenance cost associated with the product when compared to diesel. If -- and this is -- I think this is the case with really any technology, if they follow the recommended maintenance schedule. So folks that are driving our cars follow your maintenance schedule. We put a lot of work and effort into those.

I do want to kind of echo some of the comments around including refuse in the discussion and in the eligibility. They have the option. We build diesel engines too, and they have the option to buy those diesel

engines and be compliant in the state of California.

Now, it's true that we only build one version of the natural gas engine, the near zero, but the fleets do have an option to buy -- to buy diesel in many -- in many areas.

The other piece would be on the 11.9 liter, we're seeing these applications from local like drayage that are going maybe 20 to 50 miles a day into longer regional hauls, so L.A. ports up into Bakersfield and even to Sacramento and back. And as we look at the fuel systems that are required for those, as you scale up the fuel system, the cost goes up. And so a one size fits all isn't -- it doesn't work as well in 11.9 as it does in the 8.9, just because of the variety of applications.

So I guess my suggestion would be that we look at some mechanism to scale it based on maybe fuel system size or -- I mean, that's kind of where I land I guess with fuel system size. So with those comments, we're in -- you know, we're in general support of the -- of the proposal. And I can also note that we've, in advance of this, been meeting with fleets on the repower piece, and it's been very well received. And, in fact, they're anxious to get started. So we're anticipating starting to have folks sign up as early as tomorrow.

VICE CHAIR BERG: Thank you very much. Before

you jump off, could you just help me on this cost issue?

MR. SWENSON: Yeah.

VICE CHAIR BERG: Are you seeing parity from the 8.9 liter to the diesel on the engines, they're close in the cost or is there still a cost difference?

MR. SWENSON: At -- so I -- there is a cost difference between diesel and natural gas for what we sell to the OEM. I can't address the OEM price. I mean, they set their own pricing.

VICE CHAIR BERG: No, I understand that. I just meant the trend, because we're always looking at new technology and closing that Delta --

MR. SWENSON: Yes.

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VICE CHAIR BERG: -- that you have between new technology --

MR. SWENSON: Yes. So I think Bob had it pretty right. A lot of the cost is in the -- in the fuel tanks.

CHAIR BERG: Okay.

MR. SWENSON: So even -- you know, there is -- there is some cost in the engine, but the fuel tank piece is probably where the -- where the largest piece is.

VICE CHAIR BERG: I appreciate that clarification. Thank you.

MR. SWENSON: Um-hmm. Sure.

BOARD MEMBER BALMES: Can I make one comment?

1 VICE CHAIR BERG: Yes, please.

BOARD MEMBER BALMES: I just want to thank your firm for leadership in developing low NOx --

MR. SWENSON: Thank you.

BOARD MEMBER BALMES: -- engines for heavy-duty vehicles.

MR. SWENSON: Thank you.

MR. DOUGLAS: Thank you, Vice Chair Berg, members of the Board. I'm Steve Douglas with the Alliance.

First, I'd like to thank the staff. This is just a massive undertaking. Every year, they take input from a very large group of very passionate stakeholders. And the staff I believe has listened to the stakeholders and they've put together a package that I think properly balances the stakeholder input, their statutory requirements, and this Board's direction, and we appreciate their work on this.

I'd just make a few points. First, from our standpoint, from the manufacturers' standpoint, we offer over 40 different zero-emission vehicle models today, and twice that are coming in the next couple years. And that's not 10 years, 15 years down the road. It's just a couple of years.

So we're getting there. And these cars come in all shapes and sizes from large cars, to small cars, SUVs,

minivans, two-wheel drives, all-wheel drives. And they come in all the different technologies that this Board has identified from plug-in hybrids, to battery electrics, to fuel cell vehicles. And in total, I imagine the industry's investment in this technology will exceed \$100 dollars before 2025.

So -- and for your part, for California's part, thanks to the leadership of this Board, the legislature, the Governor's office. California has the most comprehensive and consistent set of complementary measures in the country. It's -- the incentives include HOV lane access, reduced parking, and, of course, the most important and the one that's the subject of today's hearing, the Clean Vehicle Rebate Project.

So the combination of the State's commitment and complementary measures and compelling vehicles from manufacturers is making a difference in the ZEV market. In 2018, we're approaching seven percent ZEVs in California. Seventy percent. So that's remarkable. It's great news, and it's -- and it's quite an accomplishment.

However, we're not -- electric cars are not mainstream cars yet. And we hope they will be very soon, but they're not today. So it's really important that we not take our foot off the accelerator or all this progress could be lost in an instant. And I'd refer you to

Georgia, who was the number one electric car state in the country. For several years, they had a much higher sales rate than California. And then they dropped their incentive, and their sales plummeted over 80 percent 90 percent. It's never recovered, so -- and that's -- so we don't want to lose the progress that we've made.

The final item is fuel cell vehicles we fully support the staff's proposal to continue the fuel cell vehicle rebate where it is today. Fuel cells are kind of a unique item. They're an important element of California's transportation program, and -- but the technology is fairly new. And despite all the best efforts of the OEMs, the Board, Air Board, we don't have the infrastructure in place that we expected. So those still need help, and they will continue to do so in the foreseeable future, so we support that.

In summary, we support the staff's funding plan. Thank you.

VICE CHAIR BERG: Thank you, Steve.

MR. SCHUCHARD: Good morning, Vice Chair Berg, members of the Board. Ryan Schuchard with CALSTART. We fully support the plan, and we thank staff, Lucina, Peter and team for listening to the industry, to understanding needs and gaps, comparing that with the state's climate and air plans and assembling a really good funding plan.

Just a few things to point out in particular. On the freight proposal, we support the plan to allocate the FY 18-19 demonstration pilot funds to the high quality freight facilities projects that were already identified and have been discussed. We think it's a really good idea to add to the existing really nice proposal. So we fully support that.

I would say on freight more broadly we're concerned that there's additional crucial demonstration in pilot funding, which is needed for -- you know, to fully support the plans that the CARB has in future years.

On low NOx, we -- we're excited to see that the program for 11.9 liter engine vehicles is moving along.

We've now got I believe around 60 vouchers that have been awarded in that category. And we're committed to really addressing the barriers to getting what is over about 1,000 low NOx vouchers altogether into the order of magnitude large numbers that we need to see to achieve the SIP plans.

So we look forward to supporting the work group process that was mentioned, which will be later in the year, and to really and address and resolve barriers among -- with different agency leads as well for low NOx and other advanced tech.

And then finally, just another word on funding

sources broadly. Staff has done a really nice job, we believe, of using the money that's been allocated for this plan. Nevertheless, the funding plan -- well, the investment plan for three-year medium- and heavy-duty does call for quite a bit more funding, around 700 million a year. And next year, the minimum would be round 450 million just for medium- and heavy-duty. That would be the minimum.

So we continue to look forward to working with staff, with the Board to securing the legislative appropriations and other resources we can get to to get this funding that the Board needs.

Thank you very much.

VICE CHAIR BERG: Thank you.

MR. LAWSON: Good morning, Chair Berg, staff, and Board members. Thomas Lawson with the California Natural Gas Vehicle Coalition. We're here to provide some comments. We've submitted two comment letters, one in August and one today that you should have in front of you.

So I'm not going to get in to much. I do want to highlight a few points. I do want to take some time to thank Peter, Jack, and their staff for all the time we've engaged with them on this program and on these issues. I want to say I started this position in 2016. And one of the first chances that I had to meet Peter was to ask him

for more money for the vouchers.

So we are doing well. And in my first comments, I want to thank them for the increase in the voucher amount for diesel fleets in the waste and refuse industry to be able to have access to a \$45,000 8.9 liter voucher. We think that that's going to be a game changer, and we appreciate that change.

There is some comments from the waste industry. As members of my association, there are small and large fleets. And some of those are waste and they have some concerns about some of the mechanisms, which I think goes right into my third comment, which is very thankful for the formation of the working group.

We are a member of the 1383 Dairy Working Group. And while most people don't want more meetings on their calendar, they have been very informative and influential and provide us some great recommendations on how to implement some of these things.

And we look forward to engaging with staff and other stakeholders in that working group, because I think that one of the problems that has happened is trying to go back and forth with staff and our industry, in a short amount of time when a proposal is to be made is kind of unfair to both sides. But to be able to hash out this working group over a longer period of time kind and kind

of get into the weeds on some of this stuff is going to be I think beneficial for everyone.

So we thank you for those, and, you know, we look forward to an ongoing conversation. We do want to say though there needs to be -- one of the things we're looking forward in the working group is the difference between 8.9 liter and 11.9 liter. We heard CWI talk a little bit about that. And we think trying to get that down is, you know, make sure we get agreement on that number is going to be key. And like I said, I don't know if this is the time to do that, but we look forward to doing that in the working group.

So there's some -- general still some concerns, but we know that the staff has been working hard and we appreciate what we've been able to do. And we look forward to some future changes.

Thank you.

MR. CAMPBELL: Good morning, Chairman Berg, and members of the Board. First of al, I want to thank staff for, again as Thomas mentioned, working with us. Peter and Michelle have been doing a great job and -- under Jack's leadership. And we're very thankful for the ongoing dialogue. It's been helpful. I'd also like to thank many of the Board members who have met with our industry and to discuss the HVIP program under the current

proposal.

And for the most part, we're very -- we're very happy in terms of the direction. The direction is going in the right direction in terms of increased voucher amount of \$45,000 for both the 8.9 liter and the 11.9 liter. We also like the fact that there's flexibility in doing new purchases and repowers. Flexibility is key. And so that's very, very helpful.

The exclusion of the refuse industry for new purchases that are already CNG fleets we don't see as helpful, and let me explain why. First of all, these are fleets that are going above and beyond current regulation. There's no requirement for them to purchase a low NOx engine. And, in fact, if they wanted to go out and buy a diesel engine today, they could do so.

Most rules are 2010 compliance. And the fact that the near zero engine is a low NOx engine that meets a optional low NOx standard means it's above and beyond current existing standard.

Second, we appreciate the fact that these fleets can repower or have the option to repower under this HVIP program. But in this industry, they typically don't repower. These trucks get banged up. They are used after, you, know 7, 10 years, and then they get new ones.

And so the question is, is it good policy for

refuse industries to have the opportunity to repower or to replace entirely with a new purchase and actually have more years of benefit by having the ability to apply for that new purchase. And I would argue, we would want to encourage the new purchase just as much as the repower, if not more.

So that's where we differ a little bit and we're between a little bit with staff's recommendation. I get the fact that they want to expand low NOx to other vocational applications. We do too. And I guess what we are typically concerned about in this particular program is last year \$5 million was transferred out of it, because it wasn't oversubscribed. This year the proposal is \$3 million.

We want to get to 18-19 to be a fully subscribed program. And my recommendation to fix this is prioritize the other vocations. And then if there is a additional money left over, at a minimum allow for new purchases for all refuse applications. Don't exclude them from the program. We need over 900,000 low NOx engines on California's roads, that's in and out of the state, to meet our SIP goals.

So now is not the time to place any type of restrictions on fleets. Second, for the 11.9 liter, very different than the 8.9 liter. It is a non-return to base

fleet. It's a fleet that goes from point A to B to C to D.

And so I would just recommend, in summary, that the voucher amount not be \$45,000, that it be at least \$60,000, if not the AQMD recommendation of \$70,000 to be able to cover the cost of the tanks, which answers your question, Madam Chair.

VICE CHAIR BERG: Thank you very much.

MR. CAMPBELL: Thank you.

MR. KENNY: Hi. Good morning --

VICE CHAIR BERG: Good morning.

MR. KENNY: -- Vice Chair Berg, members of the Board. I'm Ryan Kenny with Clean Energy. And we thank the staff for their time. They're always very gracious with their time to discuss the important issues that we have. We do have general agreement in support of the funding plan. But, of course, the devil is in the details.

And we're here to ask that the Board does consider a incremental voucher amount of 60,000 and not the proposed 45 for the 11.9 liter low NOx engine. We do appreciate staff's willingness to come up from the 40,000 that it was last year. But we don't believe the 45 will even increase market demand sufficiently enough to move off of diesel trucks.

And we have some empirical data that we'd like to share. Last year, the fiscal year 2017-2018 only 69 vouchers were used for the 11.9 liter engine. And if you assume with the full allocation of \$18 million at last year's \$40,000 voucher amount, that should have funded 450,000 vouchers. Instead, it was only 69. So we think that adding just \$5,000 is not going to effectively move the market more than marginally like last year.

It's worth noting that the \$60,000 voucher would actually help fund the low NOx engine, the fuel system, the warranty to match a diesel engine, potential maximization of onboard fuel capacity and regional haul applications, and other general costs associated from switching diesel to low NOx.

Also, the \$45,000 voucher proposed is pegged to 120 DGE, diesel gallon equivalent, fuel system. And, of course, the industry does have different sizes that are beyond -- that are more than 120.

If the \$60,000 voucher cannot be approved by the Board today, we do ask for consideration for stacking, so that the goal of 60,000 is met. That might include also some local level programs as well.

And also, if more information does come about, that perhaps the Executive Officer would be provided discretion to increase the voucher amount as well over the

funding year.

Just wrapping up, it is worth noting that zero-emission platforms of \$33,000 or greater of that category, they do have a voucher level as much as \$300,000. So we do suggest that a \$15,000 marginal increase for a low NOx engine is a worthy investment by ARB, and would also help meet the SIP goals of getting 900,000 low NOx engines on the road by the year 2031. So thank you for your consideration and we do ask that the 11.9 liter voucher be increased to \$60,000 today.

Thank you.

MR. MAGAVERN: Good morning. I'm Bill Magavern with the Coalition for Clean Air. And as in past years, the staff conducted an extensive public process to develop this plan. We think the end-product is sound, and urge you to adopt it today.

We know that the impacts of transportation pollution are felt particularly acutely in our disadvantaged communities. And those communities often have barriers toward adopting clean mobility. Those barriers were identified in the SB 350 report that you did.

And therefore, we urge that as in past years, you make sure that at least 50 percent of this funding is spent in disadvantaged or low-income communities.

And we also believe that while these funds are legally geared towards reducing greenhouse gas emissions, that the project should also make sure they're improving air quality, creating jobs, and providing mobility services to our communities.

We know that to really reach all communities in need requires an extensive outreach program. And we also believe that these different projects should be coordinated, not only within the low carbon transportation program, but also among different agencies, so that, for example, a low-income driver who is purchasing a plug-in vehicle could link up with the energy program and get solar on their roof, so that the vehicle would be fueled with solar energy.

Some specific comments in support of the plan.

We urge when you do the next round of planning that you look at making sure that the vehicle rebates go to plug-in hybrids with sufficient battery strength that we're really advancing the technology and knowing that those vehicles would be making most of their trips on electricity.

And if you set that in advance, it will send a signal to the manufacturers that they need to continue to advance that technology.

In the Clean Mobility Program, we're particularly thankful that electric bikes and bike share programs will

now be eligible. You only need to walk outside and see the red JUMP bikes to know how successful that program has been here in Sacramento. And we want to expand that to disadvantaged communities across the state.

The clean mobility in schools new pilot is also exciting. We do urge that you incorporate more active transportation into that in the future.

And when it comes to the freight demos and pilots, we would like to see at least 90 percent of that money be spent in disadvantaged communities. And we support the proposal to prioritize the hybrids that have electric range of at least 35 seconds.

(Laughter.)

MR. MAGAVERN: Sorry, I'm thinking about my time. Yeah, 35 miles.

(Laughter.)

MR. MAGAVERN: And as my time is running out, I'll say we support the comments of the South Coast AQMD on refuse trucks, and join others who will be working in next year's budget to get more money, especially for heavy-duty.

And now, I'd like to introduce Li Ang who is visiting us from China. And ask that if she needs a little extra time, that you give her that, because English is not her first language.

VICE CHAIR BERG: Thank you very much, Bill.
Welcome Li Ang.

MS. ANG: Good morning, dear Vice Chair Berg and the Board members. My name is Li Ang representing Coalition for Clean Air. And I'm working with CCA on exchange fellowship program sponsored by the U.S.-China Relations Commission. And my home team based in Beijing named Innovative Green Development Program. We're working on climate change policy analysis.

And California is not a strange place for Chinese, not only because the Hollywood and NBA teams, but also because of the leadership on climate change issues. I've been coordinate one of the events during the first U.S.-China Climate Smart City Summit in 2015. And Senator Kevin De Leon was one of the speakers introduced the Clean Action -- Clean Energy Actions in California. And we also draw on the global climate action summit this September.

So we've seen the active cooperation before and after the federal government withdrawing from the Paris agreement.

And today, I would like to make two remarks for this funding plan. Firstly, I think investing in EVs is a cost-effective measure for cutting GHG emissions, as well as the air pollution. And as you may know that several countries has already announced the time for stopping

selling conventional fossil fuel energy -- fossil fuel vehicles, including the UK, France, India, and Norway.

And China is also drafting a roadmap to phase-out fossil fuel vehicles.

And there's no official garment announcement yet, but subnational entities has already showed tremendous evidence to realize it. For example, Shenzhen the southern city in China will electrify this public transportation by early 2019. That will be like two months later.

And we see California contribute to these efforts. And a series of MOU has been signed between California and the Shenzhen, and the cleantech fund has been established. And we see the technology innovation is connected with the potential market.

And secondly, I would prefer to see a greater number of the incentives for heavy-duty vehicles. They are -- represent a large share of air pollution in the air in California. We have the same problem in China as well.

And the technologies applied in heavy-duty vehicles require greater capacity batteries, and shorter charging time, and more charging stations. All of this will require higher -- higher investment in technology innovation, and infrastructure cost.

So my colleague and I join the North California

Cleantech Expo last week. One of the gentlemen made a statement in his slide saying his products have no major components from China.

And there could be a lot of interpretation about his statement. But I would like to take it from a positive perspective, like he is considering China as a strong competitor in EV market. I think it's good to have competition in both U.S. and China, especially to our race to the green growth. Thank you for listening.

VICE CHAIR BERG: Thank you very much Li. And I don't disagree with Mr. Magavern very often, but your English is fabulous.

(Laughter.)

2.4

VICE CHAIR BERG: Thank you very much.

MR. FRANKLIN: Good morning. My name is Zach Franklin. I'm the Chief Strategy Officer with Grid Alternatives. We're a national nonprofit that makes renewable energy accessible to low-income communities and communities of color.

We are thrilled to have been selected to administer CARB's new one-stop shop pilot project to streamline and improve access to clean transportation related incentives, available to income-qualified consumers around the state.

As staff discussed earlier, California currently

has several clean transportation equity programs, and currently each has its own application process. The pilot will provide coordinated community-based outreach for these programs, as well as a single multi-lingual application for low-income consumers to upgrade their existing older vehicles and apply and qualify for zero-and near zero-emission cars and clean mobility options.

The one-stop shop pilot addresses a core recommendation of the Senate Bill 350 low-income barriers study that was discussed earlier to increase low-income resident's awareness of clean transportation options by expanding education and outreach.

The pilot is also intended to lay a foundation for a centralized approach to accessing opportunities for clean energy, energy efficiency, and other upgrades serving low-income residents, so we can have opportunities to bring these programs together for great impacts similar to what Coalition for Clean Air was describing earlier.

CARB's long-term vision and making it easier to access clean transportation and clean energy equity programs is a major step towards our broader vision of a transition to clean renewable energy that includes everyone.

This project is not replacing the current equity incentive programs. I want to make that clear. This will

improve and streamline access to the existing programs and in the process support a statewide community of practice, so that the existing program administrators, can share best practices and increase end-results for the communities that we work in.

So thank for your partnership.

VICE CHAIR BERG: Thank you very much.

Good morning.

2.4

MR. GONSALVES: Good morning, Vice Chair Berg and members of the Board. My name is Paul Gonsalves. I'm the law firm Joe A. Gonsalves and here today on behalf of our client the Port of Long Beach. The Port of Long Beach is very supportive of the CTI funding plan. And we'd like to thank your staff for all their work on this.

The funding for the heavy-duty and off-road applications really demonstrates your commitment to the transformation of the current State fleet to the cleanest technologies.

The Port of Long Beach is committed to our goals outlined in Clean Air Action Plan update. And your investment in these emerging technologies will aid us in the commercialization and the widespread deployment, along with -- aid us in ours goals to meet our zero-emission goals as well.

So the Port especially supports the

recommendation to allocate some of next year's funds to the ZANZEFF applications that were submitted in the latest round. The recommendation enables zero-emission projects to get off the ground more quickly and allowing us to use those demonstration findings to advance the commercialization. The Carl Moyer Program, the HVIP Program and others greatly aid our terminal operators and other stakeholders in transitioning to alternative technologies and fuels. And the proposed updates to these various programs, especially including infrastructure as being an eligible project, is imperative and will aid in the widespread adoption.

Our current ZANZEFF, seaport, and VeRail projects that we're working with in conjunction with the Port of Los Angeles on are great examples of the pilot projects funded in part by the CTI funds. And we are enthusiastic to lead -- to lead that charge.

So again, we'd like to thank you and your staff for the leadership on this issue, and we're in strong support.

VICE CHAIR BERG: Thank you.

Good morning.

MS. TUTT: Good morning, Vice Chair Berg and members of the board. My name is Eileen Tutt. And I'm with the California Electric Transportation Coalition.

Lisa, I just want to acknowledge you, and I want to et you know that I and our entire coalition that you work so closely with, we appreciate you.

And I want to say that we fully support the proposal in front of you and hope very much that you'll approve it today. We also really thank the rest -- all of the staff. The CARB staff has been fabulous. They're incredibly accessible. They're responsive.

It's -- this is tough. This is a -- we're a tough crowd. I mean, you've heard us today. And we're -- you're -- it's not possible to please all of us. So I feel like this staff has done a tremendous job finding a balance that I think we can all live with, and certainly CalETC can fully support.

I do want to say that as most of you know, we coordinate a very large group of stakeholders, both industry and NGO stakeholders. We work with Charge Ahead. We're very anxious to make sure that this Board and this staff has adequate funding every year for these very important incentive programs, and that it's reliable. So we don't have to come back two or three times a year to this Board to approve and reapprove a plan that is changing in the legislature.

So we're going to keep at it, appreciate any help that you can provide. And again, I just want to thank the

staff. We do fully support the proposal in front of you. Thank you.

VICE CHAIR BERG: Thank you.

MR. HOLLAND: Good morning.

VICE CHAIR BERG: Good morning.

MR. HOLLAND: Brian Holland with the Shared-Use Mobility Center. I also want to just acknowledge everyone's efforts in putting this together, and also express our full support of the plan.

Shared-Use Mobility Center we're a non-profit organization. And we work with cities, community organizations, and the private sector to promote car sharing, bike sharing, ride sharing, all the sort of new mobility modes. And because of this mission, we're really focused on the clean mobility options element of the incentive programs, and pleased to see, you know, a good deal of support for that program and the plan.

We've been sort of the primary technical advisor on three of the projects that have been funded through clean mobility options so far. The most notable probably is the BlueLA EV car share program in Los Angeles. And now to see that another 15 million will be invested in these programs statewide is very encouraging. You know, we're very focused on serving disadvantaged communities, and realize that, you know, despite the purchasing

incentives and the financing incentives, there's still households that can't afford to go out and buy or lease electric vehicles.

And by providing access to shared vehicles, reduces transportation costs, and ultimately just improves mobility and access for some of those households. So we're very encouraged by that. And we also think there is a great deal of potential in terms of GHG emissions reduction potential.

Where, you know, we see the idea of not -- as not just moving folks into electric vehicles, but really shifting travel demand into electric miles. So not just more vehicles on the road, but more electric VMT, and less sort of dirty VMT.

And we think that shared mobility can do that.

It's kind of illustrated by the fact that a shared EV is used 60 to 80 percent of the time. Whereas, a personally-owned EV may only be used two to five percent of the time. So, you know, you're really getting the bang for the buck in investing in shared electric vehicles.

We're already seeing results in L.A. We launched in late April, and we've got over 1,000 members signed up for car share. Have reached almost 5,000 trips in, you know, low-income central neighborhoods in Los Angeles.

Most of those members are taking advantage of low-income

pricing to be able to use those vehicles. And a lot of them are using it for kind of first/last mile solutions to get to transit. So it's got this complementary effect supporting the multi-modal system.

So all-in-all, we see these investments as, you know, being multi-benefit and reaching both our climate and equity goals and really appreciate your support.

Thank you.

MS. VALENTINE: Good morning, Vice Chair Berg and the Board. Thank you for the opportunity to comment, and big thank you to the staff of ARB for putting this funding plan together.

My name is Jhana Valentine with Beneficial State Foundation. We were awarded the \$5 million dollar grant under the 16-17 cycle to administer the statewide financing assistance pilot program. So I'd like to comment on number six of this funding plan regarding the financing assistance pilot program. We are very excited to have launched this program in June of this year, and believe that it's critical that equity programs continue to be funded. So thank you for showing that support.

I'm happy to share that since launching this program, which we call the Clean Vehicle Assistance

Program in June, we've been able to give out 99 grants to lower income Californians. This is a really unique

program, because it's statewide, and it's open -- therefore open to all lower income Californians.

We've seen applicants from across the State. And over 75 percent of the vehicles that we've given grants for have been for plug-in vehicles, which we're very excited to see.

We working with over 2,000 applicants currently. So there's a huge potential for this program and we really appreciate your continued support.

It is also a unique program that has great potential, because of the coordination. This Clean Vehicle Assistance Program has a strong financing component, which builds in consumer protection and provides lower income individuals access to fair, transparent, and affordable financing, which is a critical barrier to overcome for lower income individuals who need to acc -- who want to access clean vehicle technology.

So in closing, thank you again for continued funding for this project. We believe there is incredible importance to these equity projects and their coordination, and we're excited to work with you to implement these projects.

VICE CHAIR BERG: Thank you for coming today.

BOARD MEMBER BALMES: Vice Chair Berg, might I

25 just say, you know, I was pleased to participate --

represent CARB at the opening event for this program. And I really want to compliment Beneficial State Bank and Foundation for their efforts to support this program.

MS. VALENTINE: Thank you so much, Dr. Balmes.

MR. MAGGAY: Good morning, Vice Chair Berg, Board members. My name is Kevin Maggay. I'm with SoCalGas.

First off I want to thank staff for being open with us -to the natural gas industry throughout this process. In
fact, peter reached out to us several times over the last
couple of weeks even. We really do appreciate that. We
think that the program has taken some steps forward. But
we do have -- still have a lot of remaining concerns.

We've commented several times that the voucher amount is
not enough to cover the incremental cost. And we continue
to be concerned about this.

The incremental cost is basically made up of two main components. The fuel system and the engine, and we reached out to fuel system providers and the engine providers, and we found that the incremental cost, according to them would be about 58,000 -- up to 58,000 for the smaller tank configurations. The larger tank configurations, as explained earlier, would cost even more than that. And so the 45,000 amount just won't cover it.

Mr. Berry from AQMD, he shared we me, and I think what we was trying to say, before he ran out time was that

based on their incentive plans -- the recent incentive funding programs, that they found the incremental cost to be \$70,000 per truck. And we think that the voucher should be increased to reflect that.

Also, we previously commented that the RNG procurement contract requirements is too burdensome for users. This requires grantees to enter into a fuel contract for renewable and natural gas. This essentially means that you can get your -- only get your fuel in one place. If I were offered an incentive for a car, but I was required to fuel it at the same place every time, I wouldn't take the incentive.

We think that this is going to continue to be a significant deterrent for potential participants. We think that a working group on some of the natural gas issues is a worthwhile effort. However, we think it would be more effective if this covered -- if it wasn't limited to low carbon transportation incentives or incentives in general. We think this is a chance to look at low NOx engines and renewable natural gas, and how it can meet the state's goals holistically from climate change, criteria pollutants, short-lived climate pollutants, climate adaptation, forest management, and all of the above.

Lastly, we want to thank staff for acknowledging that there is demand for the low NOx trucks. AQMD in

their funding programs, they're consistently oversubscribed. Last week, they took to the technology committee a proposal to fund 140 low NOx trucks. This is off of their over subscription list. So there is demand for these trucks. There just isn't demand -- unfortunately as much demand for these trucks through this program. So something isn't working. Something is not connecting the dots here, if there's demand for the trucks, but people aren't flocking to this program. And we think that some of the changes that we've proposed would help to alleviate that.

Thank you.

VICE CHAIR BERG: Thank you.

MR. LEVIN: Vice Chair Berg, members of the Board. Jamie Levin with the Center for Transportation and the Environment.

First, I would like to acknowledge your fantastic, excellent staff. But I would also like to emphasize that the programs -- the revenue programs and the regulations that this Board has adopted makes me proud as a Californian.

So we are recipients of prior grants, and we are building fuel cell electric port equipment and transit buses. And just a couple of weeks ago, I was at the factory doing an inspection of the first of those buses

that are going to roll-out this next year. And I could barely contain myself. They're excellent vehicles. And I hope that we will get everyone of the members of this Board on those vehicles next year in order to see what the progress is towards commercialization.

But I'd like to emphasize it's so important to keep that HVIP differential in favor of fuel cell technology because in order to meet our zero-emission goals, there are two electric drive options and we need to continue to pursue both of those.

We're also very fortunate to be recipients of three ZANZEFF grants to deploy UPS Class 6 fuel cell vehicles, and Class 7, 8 battery electric delivery trucks. And so the staff recommendation with respect to the \$55 million that goes towards that ZANZEFF program, we consider that critical because we have shovel-ready projects that we want to deploy these vehicles very soon in order to continue to prove the wisdom of your staff as well as the Board.

Lastly, I want to acknowledge the three-year strategic plan update. It is really exciting to see that the staff continues with the idea of pilot programs, specifically with respect to fuel cell buses and infrastructure. We are on the very tip and verge of commercializing fuel cell transit buses.

We have OEMs that are at the table to manufacture these vehicles. They're looking for continued commitment, ongoing commitment. We have transit agencies that are interested in this technology, both battery electric and fuel cell electric, but we need to support the additional infrastructure funding that will be necessary to make those projects happen.

I can guarantee I'm quite aware of the dynamic and the push and pull between the legislature and this Board in terms of control. Our organization is working very actively with the State legislature to give CARB more money in order to support these projects, and especially these pilot demonstrations.

But at the end of the day, we strongly support the staff's plan, and we thank you for your support.

VICE CHAIR BERG: Thank you.

Good morning, Sean.

MR. EDGAR: Good morning, Vice Chair Berg and Board members. Sean Edgar. I'm the director of CleanFleets.net based here in Sacramento. And I come bearing visual aids. I have some nice pictures of trash trucks here in a packet before you.

And also, I'll associate my comments. You have written comments that I believe are tab 15, and that's a coalition letter of local refuse companies that are

commenting on today's proposal. And I'll also associate my comments with the written letters you received from Republic Services, as well as the California Refuse Removal Council. And the CRC letterhead speaks on behalf of 100 refuse and recycling companies here in California. And I think I can characterize all of your comment letters as saying the refuse industry overwhelmingly supports HVIP as a program.

There are some surgical items that we're asking you to amend specifically. We don't want to leave here today with a ban on new purchase of a 8.9 liter engine, because that has been a cornerstone of our success in implementing near zero engines across the state.

And so, my only message would be before we ban let's perhaps have a little bit more of a plan, because removing that ability of our companies to buy the near zero engines, you already heard from multiple sources, the cost differential to get into those trucks is in excess of \$30,000 up to \$70,000, as you heard. And the incentive is what really enables companies to get into those cleaner vehicles. Without the incentive, they wouldn't get there.

And in the time I have left, I'll just touch on the comment letter, both CRC and the comment letter of the local companies. I'll just say it's personal. Your staff does a great job, but I'll say the refuse collection is

personal. And the reason that -- Dr. Sherriffs the reason in Southwest Fresno you have clean NZ engines that will run -- there -- you have natural gas engines running today in Southwest Fresno. But the reason you'll have more running is because the Caglia family there is making use of the voucher program. You'll hear from Samir Sheikh on other Central Valley fleets.

Ms. Takvorian, the reason EDCO disposal, who's letter is in your packet, is able to run near zero engines today in National City and down toward the border zone is because of the incentives. It doesn't -- you know, the -- natural gas is not self-sustaining. Even 20 years I've been doing this, I now celebrated my 19th year coming in front of your Board talking about clean vehicles, and the natural gas technology is still more expensive.

Supervisor Serna, you heard from Atlas Disposal here in town. It's all personal. It doesn't make sense to buy the vehicle but for the incentive. So removing the 8.9 liter incentive is something that we'll ask you to not take action on today.

The other elements of increasing the voucher amounts, I think our industry is supportive of that. We want to be your partners, but really to design a program that's not going to work for the refuse industry won't deliver the results that we want to give you.

And the last thing on my slide, there are 12,000 -- if you look at the inventory, 12,000 vehicles statewide still running on diesel. We can knock those out with the help of the voucher.

Thank you.

VICE CHAIR BERG: Thank you.

Samir, good morning.

MR. SHEIKH: Good morning, Vice Chair --

VICE CHAIR BERG: You're going to wrap us up.

Thank you very much.

MR. SHEIKH: -- and members of the Board, I can't you saved the best for last here.

(Laughter.)

MR. SHEIKH: I wasn't planning on initially commenting. And I'll be brief. I'll cede the rest of my time to your continued clean air efforts here on the agenda.

I did want to connect this item to the next item on the agenda, which is the mobile source SIP that you're going to be considering today. As you know, there was a lot of reference to the 900,000 vehicles by 2031. In our case, for PM2.5, we need tens of thousands, if not hundreds of thousands of vehicles by 2024 and 2025.

And so you're going to be hearing very soon about an item that really highlights the importance of this

program. Your staff have done a tremendous job in balancing a lot of issues in developing this program.

We've actually been heavy participants in the valley and taking advantage of a lot of this funding.

The ZANZEFF opportunities are bringing some really great projects to the valley that really demonstrate some cutting edge technology in the freight sector, locomotives, trucks, and a variety of infrastructure elements to that. We're very exited about that funding.

The EFMP project is one that we've piloted in the valley and has now become this great statewide effort. It's really exciting to go to our events and be able to couple residents with that funding, not only for new electric vehicles that have been talked about quite a bit with the rebate program, but also use electric vehicles, because we've been doing this for so long. There's this growing market of electric vehicles that we can actually deploy in our disadvantaged communities.

I wanted to thank Lucina, Michelle, Peter, Sam and others that are here. They put a lot of effort into this program. We've taken advantage of this over the years. It's going to be a critical part of a much broader suite of billions of dollars of funding actually that we have to put into these vehicle efforts.

Our commitment is to work with your staff and to work with -- with CARB to really make sure that we have more funding available of natural gas obviously. Some of the concerns there are valid concerns. We have a lot of local funding that we've been bringing to bear. Yeah, we need to continue working in the State legislature to bring even more funding to really help deploy those projects and programs.

So we stand here in support of the proposal. And in working with staff, I think we can address hopefully some of the concerns that have come up today and make those projects a reality as well moving forward.

So thank very much for your time, and that concludes my comments.

VICE CHAIR BERG: Thank you very much. And we'll look forward to your opening comments on our next agenda item

So with that, I'd like to conclude the -- close the record on this agenda item and turn it over to the Board. I think to kick us off what would be helpful -- we certainly have heard a lot of testimony on the low NOx, and in two areas, one the 8.9 and the 11.9 funding, as well -- and included in that was the discussion of the engine and the fuel systems.

Also, we heard some questions about the ability

for, I heard the term, "stacking" or some "co-funding",
And so I think we would appreciate to hear some comments
on that. And then, of course, we did also hear some
comments on the hybrids, the Class 5s, that also came up.
And so that will kind of tee us off.

But I'm going to have the Board members give you their comments as well. And then maybe you could wrap us up so that several of us aren't talking about the same thing. So shall I start at this end and do we have any comments?

BOARD MEMBER SHERRIFFS: No. I would just echo exactly the points you highlighted, that I'd like to hear some more feedback from staff on.

VICE CHAIR BERG: Okay. Diane.

BOARD MEMBER TAKVORIAN: Yeah. It seems like we're -- we're all in on this. And there's lots to like about this proposal. So I just wanted to thank staff and all the stakeholders who worked hard on it. I really wanted to point out that I appreciated the significant shifts to what I think are truly low-income households for eligibility for the incentives program. I think it represents a significant change, and one that you're been working on for a while. And I think that low-income consumers are really appreciative of. The school bus program is exciting and I had some of the same questions

on freight, so thank you.

VICE CHAIR BERG: Great. Thank you. And we could certainly ask clarifying questions as staff responds too.

BOARD MEMBER SERNA: Thank you, Ms. Vice Chair.

I think your structured questions for staff have captured what I was going to suggest that we do, which is specifically ask staff to respond to the Atlas testimony. But I think you did that by another means.

VICE CHAIR BERG: Great. I appreciate that.
Ms. Mitchell.

BOARD MEMBER MITCHELL: Yeah. A couple things. Our Chair did pretty adequately sum up what we're concerned about. You heard testimony on the 11.9 liter low NOx truck, and that the voucher amount doesn't cover the incremental cost. And we've heard testimony that that voucher amount should be, well, from AQMD 70,000, and from some of the other people on the industry 60,000.

So that's something I think we need to take a look at. And we're talking about fuel tank differences too on this truck. So there may be a way to scale it as was suggested in the testimony, depending on what that incremental cost actually is based on fuel tank and other hard costs associated with the -- with that particular truck.

The other thing that was of concern was taking out the voucher for the purchase of new refuse trucks for fleets that have the natural gas engine, because we heard a lot of testimony that we don't repower refuse trucks. They last seven or eight years. It isn't worth it to repower them. I'd like to have a take a -- take a look at that.

Now, maybe not -- what we'd like to see is those trucks move to battery electric, or hybrid, or fuel cell, what's ever available. But we'd really like to see them, if they're CNG, go to the low NOx CNG. And I don't know whether -- what staff's thinking is on that. But that would certainly be an option to reduce pollution, reduce the NOx emissions in the area. So those are -- are two areas, and -- that I'd like staff to take a look at.

I've noticed that the amount of money in the program isn't fully subscribed for the low NOx truck. So what could be done is that could be prioritized when it's taken up by another type of truck. What's left over, you could not just take it out of the program, but allocate it to -- to the -- to the low NOx truck issuance.

Thank you.

VICE CHAIR BERG: Thank you.

BOARD MEMBER RIORDAN: I think you've covered what I needed.

VICE CHAIR BERG: Thank you.

Dr. Balmes.

BOARD MEMBER BALMES: And not that staff doesn't have enough to respond to already, but I have a specific addition. On slide 6 supporting the clean transit future, talks about funding also available in VW mitigation, Carl Moyer, and AB 617. And as I indicated to staff when I was briefed earlier this week, I'd like a little more detail about how AB 617 funding fits into this.

VICE CHAIR BERG: Thank you.

Dr. Sperling.

BOARD MEMBER SPERLING: I'd like to build on what the idea that Dr. Balmes was just starting to hint at, and that is that something that's not been mentioned at all is in transportation perhaps the biggest challenge or certainly a really big one is that we are seeing vehicle use increasing. VMT is increasing. And all the evidence is it's going to get a lot worse as we start moving into automated technology.

Early research is showing already that partial automation, such as we see in the Tesla auto pilot, and the General Motor cars with Cruze, that we're seeing a significant increase in VMT in people that use those vehicles. It's going to get a lot worse.

We have -- so we have that challenge. And then

we have the other challenge of how does this all relate to disadvantaged travelers and disadvantaged communities?

And I'm not sure -- so I think the staff is starting to move in the right direction with some of these clean mobility ideas, and the vanpools, and car share -- electric car sharing. But I'm very concerned, I think we need a lot more creativity, and a lot more focus on this. There's a lot more opportunity to do this right, to use the money much more effectively.

So, for instance, we have the -- starting out with just a small example, the electric car share programs. I'm starting to hear stories already that there's fears that the funding lasts for maybe two years. After two years, there's -- I don't know if it's called a -- it would be a threat, but a -- assertions that the operators could pull -- would pull out because there's not enough money to keep these going for disadvantaged riders. These need permanent support and permanent institutional commitment to it.

And one little digression on that is there's that vanpool organization in the valley that we heard testimony from. You know, there might be organizations like that that could take on a bigger role, and we should be thinking about administrative support for entities, such as that, because we're going to need it. Otherwise, these

efforts are going to just disappear, and they're not going to be effective. And it's going to be essentially maybe not wasted money, but, you know, not well utilized money.

So I'd like to see a lot more creativity, especially how we can take that VMT issue, and the mobility issue and link it better to the equity concerns. And so, for instance, you know, the cart -- the electric car share is a very small but moving in the right direction. I think there's a lot of opportunity in the valley, and a lot of the communities there, to do that.

But it's going to take more than just handing out checks. It's going to require partnership. It's going to require institutional commitments. And this is not something CARB has, you know, historically done. But we need to change our culture. We need to change how we approach this.

And another little digression that goes, when we meet with the CTC, California Transportation Commission, in a month or so, I think some of these ideas should be on that agenda.

So the creativity we need could be things like focusing on a lot of -- what we can do is we need pooling strategies that make sure that as we move to automated cars, as we use even today, getting people to ride together in the -- and the vanpools are one tiny little

example of that, but we have Lyft and Uber, we have microtransit companies, moving into this area. We should think about ways to support and perhaps subsidize low-income riders to use the pooling services.

And again, this requires partnerships, public-private partnerships. It requires new ways of spending money. But we really need to do this. And I was really disappointed with MTA, where they didn't talk about any of this. And they're like the kind of organization that should be engaging in these issues. We did hear it from Mr. Holland, and Ms. Valentine, and Bill Magavern was kind of heading in that direction.

(Laughter.)

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BOARD MEMBER SPERLING: So -- and the staff is kind of heading in that direction. But we need to really focus much more. And so I'm -- you know, and I would suggest that, you know, I'll offer up the university -- some of the university programs I'm involved with to help with us.

But I think this is a major rethinking of how we go about clean mobility and equity.

Thank you for that, allowing me to give that little speech.

(Laughter.)

VICE CHAIR BERG: Thank you.

BOARD MEMBER SPERLING: I'm not sure there's immediate response to it. Maybe there is, but thank you.

VICE CHAIR BERG: Thank you Professor Sperling

We will -- we will circle back to it

BOARD MEMBER SPERLING: Thank you, ma'am.

VICE CHAIR BERG: Mr. Eisenhut.

BOARD MEMBER EISENHUT: I'll defer to Hector.

VICE CHAIR BERG: Okay. Thank you.

Good morning, Hector.

BOARD MEMBER DE LA TORRE: Yes. Two things. And I know they were part of what you mentioned. But on the clean mobility pilot, because we've brought it up over and over again, how -- in terms of scale, what's the size of the problem, meaning diesel -- dirty diesel school buses out there, and -- versus this pilot program? So when you make those comments, how much of a dent are we going to make, whether through this program or any other programs that we out have there? Because again, we've -- we've been on this for awhile and we want -- we want to make a real impact there.

And then secondly, I'll just throw in my support for including the trash trucks for the new vehicles as the secondary. Not as a primary, as a secondary. If there's money left over after you've done the first batch, and we have applications from trash haulers, then go through that

batch as well. That's just my two cents. Thank you.

VICE CHAIR BERG: Thank you. So staff I think we could break this up. We have the detailed things on the current proposal. And then I think it would be good to just have a short discussion on how to follow-up on Professor Sperling's ideas. And so, Richard, do you want to kind of lead us, so that we could give the Board back the information?

EXECUTIVE OFFICER COREY: Sure. Sure. In fact, I'm going to take a stab at the second part of it, just a brief response to Dr. Sperling's comments, because as he noted, we have an upcoming hearing on this issue. And then I'm going to punt to Jack in terms of the questions on low NOx, the incremental cost, and where the flexibilities already exist and whether -- as well as the follow-up on the trash truck comments.

With respect to Dr. Sperling's comments, as I think we've all observed, although we met -- as a state exceeded our GHG target. We've already exceeded the 2020 target in 2016, verified emissions. We have more to go. And we need to continue to stay on point to continue to drive emissions down to get to our SB 32, 40 percent below 1990 in 2030 and even further.

But what we noticed, I think the point to note on this, is the transportation sector emissions actually went

up. It was actually the energy sector and some of the sectors that drew down. We also know, as Dr. Sperling knows, and the other Board members, VMT actually went up as well.

So we have a report to the legislature under SB 150 that really requires an assessment of how are we coming along with respect to our SB 375 targets?

And that report will be out shortly, and is a key topic for discussion amongst this Board and the California Transportation Commission at our meeting on December 4th, which is a key issue.

And it gets to a complex challenge that Dr.

Sperling was getting at, which is the intersection between the investments and the transportation sector, equity issues, mobility opportunities, air quality and climate.

And really what today is a lack of alignment between the basic incentive structure. And I'm talking about the incentive structure all the way down from local land-use decision making to broad billion dollar investments in the transportation sector, and getting, not just MPOs to the table, planning commissions, local land-use related issues, Caltrans, CalSTA.

So we're not going to solve all this at the December 4th meeting, but what we're going to do, I think, is tee up the -- basically to actually get our arms around

this. And to really have a strategy that moves forward is real going to require a collaborative amongst all these entities to align my point about air quality, transportation, mobility, and the investments in the transportation sector.

So I think we have made, I'm going to say, collective progress at framing the problem, probably better than we ever have. And I think -- I think the next step is really going to be getting the right folks at the table, and really working through this through a collaborative way.

And again, a -- I think a -- I'm not downplaying at all the challenge involved here. But I think the December 4th conversation is the beginning of a -- what I truly believe is an opportunity here, but a very, very important one.

VICE CHAIR BERG: And also what I'm hearing is volunteering from Professor Sperling maybe in 2019 -- (Laughter.)

VICE CHAIR BERG: -- we have an opportunity to get some of these key stakeholders together in some kind of symposium or forum to really discuss options, and how to incentivize these things moving forward. It seems to me getting more stakeholders around the table, as he recommended, might be also fruitful and tee'd up based on

this December 4th.

So maybe Professor, UC Davis would consider following up with Richard and seeing how we might further that conversation?

EXECUTIVE OFFICER COREY: Yeah, we picked up on that loud and clear. He tee'd up issue and what went with that was a significant volunteering, so we appreciate the --

(Laughter.)

EXECUTIVE OFFICER COREY: Look forward to it.

So what I'd like to do now is to pivot to Jack and staff in terms of some of the specific comments, particularly on the low NOx and 8.9 liter engine and refuse truck issues that were raised.

VICE CHAIR BERG: Appreciate that.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Hi. Yes, still good morning. Jack Kitowski.

So there's a number of questions that you raised, and I'll start with the one that was discussed the most, and that was really the HVIP vouchers and the different amounts. We have a set of proposals related to this on the HVIP that is refocusing the natural gas incentives that we think provide real emission reductions, and look to actually grow the market. And so in -- consistent with what Mr. Sheikh was saying, it's an opportunity to

actually expand the market in ways that meet the SIP needs.

There's a lot of numbers thrown around. So I think it may be useful if I just clarify what the current situation is and what the proposal is. So we're kind of all clear on that. Right now, the HVIP Program provides a \$10,000 voucher for transit and refuse new purchase. And that \$10,000 is based on the differential cost between a conventional natural gas truck and a low NOx natural gas truck.

And then HVIP also provides \$10,000 for a repower, and it provides \$40,000 for other industries, and for the 11.9 liter.

What we -- what we've proposed now here today is eliminating the \$10,000 for the low NOx transit and refuse. And I'll get into the rationale for that in a second. But for the diesel -- for diesel refuse fleets, we've proposed to allow that to be \$45,000 instead of the current \$10,000, in other words, again, growing that market. For repowers, \$45,000 also instead of the 10,000.

And then for that 11.9 liter and other categories increasing it from 40,000 to 45,000.

So we heard a lot about eliminating the \$10,000 voucher, and then about sort of appreciation for the 45,000, but that it wasn't enough at the 11.9 and it

should go higher. So I'll kind of touch on both of those.

The reason for the proposal on eliminating the \$10,000, it's -- it's basically -- it's based on a lack of being able to identify emission benefits at this point in time for that vehicle, for that category for a new purchase.

Cummins is no longer manufacturing the conventional natural gas engine. And basically, the cost of the low NOx natural gas engine has gone down steadily until Cummins got to the point where it didn't make sense to make two engines in that category.

Now, it's still more expensive than the diesel version, but the differential, which that \$10,000 was paying for, was no longer significant to justify two engines.

So those who are purchasing natural gas vehicles regularly, those people really only have one choice. That is the low NOx engine today.

So for us, we couldn't calculate an emission benefit. We couldn't calculate an incremental cost. And that's why we're proposing to eliminate that, and then refocus it. A question will come up or a statement came up, well, could they buy conventional diesel? Could they revert to diesel? And theoretically, yes, but, you know, our discussions and our indications are very much like

what we see in any advanced technology, the electric is the same case, higher upfront costs, but lower operating costs. The fuel costs are significantly less with the natural gas.

The conversion is the hard part. And once people have gotten over the conversion, it makes sense for them. It's actually costs effective for them to buy -- continue to buy natural gas. So we didn't see a switch back to diesel likely. And we were in the spot where, well, how do we calculate an incremental cost, how do we calculate emission benefits to show here?

And we thought that made sense then to eliminate that cost. Where we still -- but I wouldn't say -- I mean the point was brought up about banning it. I mean, far from it. I mean, we still see these as viable options. They're still eligible in Moyer. They're eligible in 617. And so these are places where -- in those programs, there is a scrap component. And that scrap component provides that, you know, extra emission reductions that we can use. We just didn't see a place for it in this program anymore.

Moving to the 11.9, we heard lots of comments.

And it -- it would be useful to bifurcate those a little bit on how much money is useful to help move market. And certainly if we provide more money, more people will jump on board. I mean, people like getting more money back and

I get that.

We've based the dollar amount on the incremental cost that we've seen. We have invoices -- many, many invoices that we've used over the last year to gather from the projects that we've already funded. And so we're using those invoices. We're using the actual data from that. We'd be happy to entertain additional data. And look at that, but from all of the data we've gotten so far, the invoices indicate to us where we ended up last year that 40,000 wasn't right, but 45,000 is fully paying for that incremental cost.

One addition to that, that came up very recent -in this context was some of these trucks want to serve
regional longer service. We're very supportive of that.
That means they're going to put more miles on it. And if
that's the case, then they will need bigger tanks. The
tanks are a more expensive part. That did not weigh into
our calculation of the 45,000.

So that is a case where we could see, okay, we do need -- that is additional data. We could see looking at that and saying, all right, we want to revisit that number. And for larger tanks it does make sense to apply and additional adder there and provide additional funding.

We had talked about, during our presentation, that the -- we have tasked CALSTART with helping us form

an advisory group on the implementation efforts, and how to really get work through with fleets, what are the key factors and barriers towards expanding this. That -- to us, that's a perfect area for us to gather the data from that area and get that data inputted in.

Our Executive Officer does have the authority, the way the program is structured, to make adjustments to that voucher amount if that's appropriate there.

You had other things to tee up, but maybe I want to pause here on -- with all of that.

VICE CHAIR BERG: I think what would be helpful to the Board is to understand what authority that we have between the Executive Officer and what executive authority there is, that if additional information did become available, what additional authority do you have to include these fuel systems. And also, it does give me a little bit of pause that South Coast came and testified and said that their voucher amount is \$70,000, so to coordinate, to find out what additional cost.

I understand that our programs really focus on hard costs. And so they might have some infrastructure costs or something built into theirs. But I do think it -- and hear from my fellow Board members that this is an area of concern, and we do -- the sweet spot is important, and this is an important technology. So how do

you feel that you do have flexibility to move forward versus our direction to do so.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

So let me -- let me start with the -- sort of the second -- the earlier part you'd laid out. One of the reasons, and it -- we will -- I will sit down with Naveen and talk through what some of the differences are. But many of the programs, the local programs, are scrappage programs. And if they're scrapping vehicles as part of that, then absolutely it would be more money.

So that might be one of the reasons, but we will look to see if there are others. The way the funding plan is set up, the Executive Officer -- and other members of my team may chime in, the Executive Officer has the authority with sufficient data after we go through a work group process to adjust the voucher amounts, he also can do that in response to -- we'd brought in such contingencies as trade issues, or other things that might raise prices and necessitate that.

But in this particular case, for example, if we got additional information that said this is warranted, we would need to do a work group, but -- and publicly notice it. But then the Executive Officer could approve that.

VICE CHAIR BERG: Yes. Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Yeah. I'm -- one detail

I'm not sure I understand, but eliminating the 10,000 incentive related to the natural gas and low NOx.

Certainly, low NOx hugely important to Central Valley and South Coast. And I guess I'm wondering, well, what do we give up if we don't eliminate that. What's -- what's -- what's the -- I want to be sure I understand the tradeoff.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Well, there was -- you know, certainly there was -- I think there's two ways of looking at that. One is we really struggled as an agency of trying to quantify what are the emission benefits we're getting by providing that. And low NOx in and of itself has benefits, but for this project, without a scrappage, we couldn't identify a benefit or an incremental cost for us to really base that on.

What we're giving up is what -- sort of what we had talked about many times is how do you move with the demand growing and growing whether we're talking transit, or school buses, or other factors. We're talking about expanding in natural gas into the 11.9 liter, and more and more of that. How do you expand that without, you know, other things sort of moving on and sort of graduating from the program.

And I think that's a sense of what this is, is it time for this to graduate and how do we -- there's still

eligibility within the Moyer Program, because you have a -- if you have a replace component to it, then yes. But as a new purchase, is it time for this to -- to graduate or not.

VICE CHAIR BERG: Is there any other questions in regards to the low NOx engine aspect?

I think we're moving on to the refuse trucks. I think that specifically there's still some questions about the refuse trucks, and why they were taken out. And I've heard some definite support for allowing refuse trucks to participate, if there is money available after the other priorities.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Yes. So getting at the point about whether we could set up some sort of secondary system, and whether refuse trucks would continue their eligibility at some point in time and some fashion. That is -- that is a struggle I think for this program to implement, because the whole point of a HVIP Program -- a voucher program for consumers is that we never run out of money. That's our ideal objective. We try and design it so that we can last the year, and that there isn't this uncertainty associated with fleets.

So ideally, if we're doing our job right, there will, of course, be funding left over at the end of the

year. And it's not really a secondary thing. That money left over at the end of the year is designed to carry us through the start of the next year and continue the cycle.

So, it's hard for us to set up a second tier within a first-come first-served program, the way we've designed it.

VICE CHAIR BERG: So then I'm hearing from the Board is that there is support from the people that did comment, which we had a broad brush of districts, as well as stakeholders expressing concern. The refuse trucks have been our partners in pushing technology for many years. And so it's not quite clear, I think to me and maybe to others, that -- how we're thinking about this long term.

And so I would like to recommend that we also put that back on staff to consider the comments that have been made and what our goals are. And when you come back with the presentation, we're going to be making about the full funding portfolio and how everything interacts with each other, the big picture, because it's hard for us when we're looking in compartmentalize to make sure that we're attaining all of our goals. And certainly the refuse trucks have been a key component. And I think you've heard from the dais here that there is concern of eliminating, but we might not be eliminating from the full

program of incentives, and maybe we don't understand that.

Would that be acceptable to the Board?

BOARD MEMBER RIORDAN: Yes.

Madam Chair, if I might, because the refuse trucks travel in our neighborhoods on a weekly basis, and they are in certainly stressed communities as well as just -- you know, they're right there with us, I think a lot of us show sympathy to that concept. And it occurred to me that maybe there could be a timing factor which would say, all right, the first six months of this program we'll keep to our priorities of that technology that you want to the highlight.

But after that first six months, then we open it up. That would seem to me to be maybe an opportunity, a timing factor, which would give you some comfort to administer, because you'd have a certain time, and then when it would be open. So I just offer that as a suggestion.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Okay. One more related area in this area, I should -- a question came up in this context about stacking, about co-funding. And I will say we've been fully supportive of doing that. We have people, staff within each of the programs that talk regularly about how they interact. There are some limitations obviously if

you're -- in Volkswagen funding. In your objective, you have to mitigate a certain amount of NOx reductions. You can't split those with other people. We need to be a little careful, but we're fully supportive, and many of the projects can co-fund and stack.

VICE CHAIR BERG: Great. And Ms. Mitchell had a question.

BOARD MEMBER MITCHELL: I had a question, because what I thought I heard you say in the -- in this program with the refuse trucks, that there wasn't any additional pollution reduction value in -- in that program. Explain that to me again.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Yeah. And this is not to say that the actions taken aren't -- you know, that we aren't fully supportive and that these -- this is the appropriate action. This is -- this simply from the matter of the Cummins engine. All of these only use one engine. There's really one engine available. It's a Cummins 8.9. That Cummins previously manufactured two engines. They manufactured a conventional en -- conventional natural gas, and they manufactured a low NOx version of that.

Now, because many of the fleets already were using natural gas, this Board in the past based the emission benefits and the incremental costs that we would

cover on the difference between those engines. The difference between the conventional natural gas and the low NOx version.

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Cummins has recently eliminated the conventional natural gas engine. They don't make it anymore, because the cost difference between the two, we're getting tighter and tighter. So they only manufacturer the low NOx version, and we have no baseline comparison to utilize to provide the emission benefits, unless we go back to diesel, which isn't a great comparison for these two.

So we're -- you know, it's a -- it's a little bit of a situation where what we're trying to do is move those programs to more scrap and replace. And what you saw from our funding program, what we're trying to do is actually work on providing additional incentives that can grow the market, but that the current market, the one that's, you know, people who are already in that who've made the conversion, we think that's sustainable at its current level.

BOARD MEMBER MITCHELL: So is it true then that no other truck manufacturer manufactures a CNG engine, and that's why you're relying on the Cummins CNG engine?

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

In that category, yes.

BOARD MEMBER MITCHELL: In that category. I'm

questioning that, because I know from my experience as a city councilperson, almost all the fleets for refuse trucks are CNG. They're not low NOx CNG. And so I'm just seeing there probably is some beneficial value in going from CNG to low NOx, particularly in the areas that are not attainment for PM and ozone.

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

The move from Cummins has been in the last six months, and -- but the -- there is -- they do not manufacture the low -- the conventional natural gas any more in this category.

VICE CHAIR BERG: So there is no PM benefit from going from a conventional natural gas to a low NOx natural gas?

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

Correct. It's -- you know, and there's -- but there is a -- there's a -- there's a nOx benefit in going from one to the other.

VICE CHAIR BERG: And we can't calculate that NOx benefit to justify?

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

I'm sorry maybe I misunderstood.

DEPUTY EXECUTIVE OFFICER CLIFF: So Vice Chair

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VICE CHAIR BERG: Yes. Thank you.

DEPUTY EXECUTIVE OFFICER CLIFF: Maybe I can try and help here. So what Jack is saying is that if you currently own a natural gas truck, and you're going to -- and you have a fleet, or you've already invested in the infrastructure, you're getting the benefits from that natural gas fleet, because the total cost of ownership is better.

So staff just doesn't agree that if you're going to purchase a new truck, that you would switch to a diesel truck at that point. If you currently have diesel in your fleet, then this program would allow you to go from diesel to natural gas, and would pay that \$45,000. That's a huge incentive, and that's actually more than what the program previously paid in past years.

But if you're going to buy a new natural gas truck to supplement your fleet, your only choice is the cleanest low NOx natural gas. So there is no incremental cost, even though there is, yes, a benefit. The program can't calculate that incremental cost. That's kind of a bureaucratic response, but that's the truth, right?

The other piece of this is should the program be paying people who have already invested in natural gas, who we think will continue, because they're getting the benefits of that total cost of ownership. And staff just doesn't believe that we should continue to pay for, you

know, them to switch those fleets. If they've already made that investment, great. We're all in. We want to see those clean trucks.

And what we've done is driven down the cost such that there's no incremental cost now to go to that cleanest technology. For those that are driving in communities, they're not seeing a particle benefit, which is really the near source or, you know, the local impact that we see.

Certainly, going to that low NOx, you're going to get that -- that regional benefit from lower NOx.

If you repower, take the existing truck, which we hear, you know, the industry saying they're not going to do that. But if you did, then you would get that incentive to go ahead and repower.

So I think really it comes down to us making sure that there isn't backsliding, and that's something that staff is going to have to continue to evaluate. But recognizing that the program is kind of done what it intended to do, which was get the technology cost down in such a way that now these are very low cost and no incremental cost trucks, and continue to provide a bigger incentive to get rid of the remaining diesel, which is out there.

VICE CHAIR BERG: Great. That was a terrific

wrap-up explanation. Really appreciate that. We have two items still left on our list --

BOARD MEMBER GIOIA: So, Madam Chair, just so I understand --

VICE CHAIR BERG: Oh, yes, sir.

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BOARD MEMBER GIOIA: -- then based on this discussion, I think we're not moving forward with -- with the -- with trying to accommodate a change as some have suggested.

 $\label{eq:board_member_mitchell:} \mbox{Well, not on $--$ not on}$ the refuse trucks.

BOARD MEMBER GIOIA: Right.

VICE CHAIR BERG: Not on the refuse trucks.

BOARD MEMBER GIOIA: That's correct.

VICE CHAIR BERG: On the 8.9. But staff is going to move forward to get additional data on the 11.9. And they have the authority, if the additional data presented and is within our policy, they will increase the 11.9 to include the fuel systems, if that is appropriate.

BOARD MEMBER GIOIA: Right. Okay.

VICE CHAIR BERG: And they are going to monitor the backsliding to make sure that the assumptions we have made on the refuse trucks is correct.

So the last two items I do have, we had a question from Board Member De La Torre about school buses,

and how we are impacting and working down as we have been at this for quite a bit of time? We're looking for good news here.

(Laughter.)

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

School buses are a great good news category. But the mountain is really high on this one, right.

So we've been in front of this Board a couple of years ago now. And we've heard interest in us coming back. We're looking at providing you additional information on an update on where we are in school buses within the next couple of months, so that you have something more comprehensive.

But to give you a little bit of information at this point, this program has school buses -- a Rural School Bus Program. What you've seen from staff across the incentive programs for the last, you know, many years, is an effort to try to address school buses in each and every program. And that's because there isn't a very clear dedicated source of school bus funding.

So what you do see us to do -- doing is cobble together a little bit here. We have 15 million for rural school buses in this program. You've seen Moyer make movements in that -- in that effort by raising the cost effectiveness so they could fund more.

You've seen 617. What we also see is, in our coordination with sister agencies - CEC is doing this - all of these contribute incrementally but no one is the silver bullet for this.

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In this particular case, we've funded about 40 school buses in this program. So far, an additional 75 school buses will be able to funded with the funding that -- the proposal that's in front of you.

The order is very tall. When we came to the Board last time -- I don't know if you -- you may remember we had several categories, and we kind of labeled them the red category. These are ones we need to respond to as soon as possible, a yellow category, and then a green category.

The good news - you wanted some good news - is the red category is gone. We have addressed those, and we've taken care of what we felt were the most immediate needs in front of us.

The yellow category is a category that we are working on now. It's a category of about 4,000 school buses in that category. So we have quite a ways to go to get through that entire list, but, you know, we're all working together to do it.

VICE CHAIR BERG: Yes.

BOARD MEMBER DE LA TORRE: How many were in the

red category?

MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

There was 1,500 I think somewhere in that -- that ballpark.

VICE CHAIR BERG: So thank you for the good news. And we are glad we're out of that red category, because we've been reporting on that for quite a long time. And so when we appreciate that, we are tackling the 4,000. That is a steep climb.

The last one really is the -- how the funding integrates. Dr. Balmes talked about that, 617. I do think, if it's okay, Dr. Balmes, we are going to have staff come back to us with a informational update about how all these fundings portfolio work together. And so if I may defer your question until then?

BOARD MEMBER BALMES: Yes, I'm fine with that. I knew staff would be coming back with that update, and I just wanted to highlight the importance of my hearing about how AB 617 fits into the rest of the picture.

VICE CHAIR BERG: That's great. And then it wasn't directly mentioned, but I do think the presentation made on the hybrids, I just would -- again, it does point out that the right number is helpful, and just make sure that we're getting what we want out of that program would be appreciated.

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I think with that, have we covered -- are we 1 2 comfortable to move forward? 3 And if so, we have Resolution -- I'm sorry, 4 18 - 48. And may I have a motion and a second to move forward? 5 6 BOARD MEMBER EISENHUT: I'll move it. 7 VICE CHAIR NICHOLS: Thank you. 8 Second? 9 BOARD MEMBER SPERLING: Second. 10 VICE CHAIR BERG: Thank you. I have a motion to move forward with a second. All in favor? 11 12 (Unanimous aye vote.) 13 VICE CHAIR BERG: Opposed? 14 Any abstentions? 15 The motion passed. 16 Thank you very, very much, staff. I hope you 17 hear loud and clear from many, many sources 18 congratulations. This was a lot of work, and for so many 19 stakeholders to come forward and say that 99 percent you 20 got it right. I hope you hear that. 21 (Laughter.) 22 VICE CHAIR BERG: And they want you to work on 23 the one percent like we did on the 99. So thank you very 2.4 much. 25 The is a perfect time to take our break. And so

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1
    what I'm going to do is we're going to take a 20-minute
    break and be back at 11:40. But I'm going to start at --
 2
 3
    I'm sorry 12:40. And I'm going to start at 12:40 sharp.
 4
    So it is not 12:45. Okay. Thank you.
5
             (Off record:
                           12:19 p.m.)
 6
             (Thereupon a recess was taken.)
7
             (On record:
                          12:43 p.m.)
8
             VICE CHAIR BERG: Well, as we mentioned, we do
9
    have speakers in the back. And the Board members that
10
    aren't up front and few staff people that are finishing up
11
    some lunch, they can hear us. And so we're going to go
    ahead and move forward out here.
12
13
             And we are -- Thank you very much, yes.
14
             So our next agenda item, 18.8.7, is the San
15
    Joaquin Valley Supplement to the 2016 State Strategy for
16
    the State Implementation Plan. This item is critical for
17
   providing the mobile source emissions reductions needed to
18
    the clean air in the valley.
19
             It just occurred to me to make sure that our --
20
    Hi.
21
             (Laughter.)
22
             VICE CHAIR BERG: Thanks. Good. You're
23
    fabulous.
24
             (Laughter.)
25
             CHIEF COUNSEL PETER: Is your mic on?
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VICE CHAIR BERG: Yes. You don't have to put that part in.

(Laughter.)

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CHIEF COUNSEL PETER: You're supposed to say off the record.

VICE CHAIR BERG: Off the record, I was just checking to make sure that I had my fabulous court reporter. With this new dais, you know he's just hidden. And so it just occurred to me, I might be starting with out him.

So thank you very much for being so attentive.

This next agenda item is critical for providing mobile source emissions reductions needed to clean the air in our valley. I understand the district is planning to consider its part of the next SIP next month setting out actions the district will be taking to achieve emission reductions for sources under its regulatory responsibility.

Once the district adopts their portion of the SIP, staff will come back to us with a full SIP with mobile and stationary measures for us to consider for submittal to the EPA.

Mr. Corey, would you please introduce this item for us?

EXECUTIVE OFFICER COREY: Yes. Thanks, Vice

Chair Berg.

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The 2016 State strategy for the State

Implementation Plan adopted by the Board in March 2017

described the State commitment to achieve the emission

reductions from mobile sources, fuels, and consumer

products that are needed to meet federal air quality

standards throughout the state over the next 15 years.

The commitment included a suite of regulatory and incentive programs to deploy the next generation of cleaner technologies with the focus on the deadline of 2031 for attainment of the 75 parts per billion eight hour ozone standard in the South Coast in the San Joaquin Valley.

For the valley, the 2016 state strategy included a commitment for a suite of emission reduction measures and a direction to staff to return to the Board with a comprehensive PM2.5 plan.

District and CARB staff have continued to work on defining the nature of the control strategy and associate emission reductions needed from both mobile and stationary sources. The Board has heard updates on the progress of the development of the valley's comprehensive PM2.5 SIP as well.

The district, as you noted, has released a comprehensive plan, including measures and commitments for

emission reductions from sources under local control.

Once the comprehensive plan is approved by the district board, it will be brought before you for consideration.

The item before you today is the supplement to the 2016 State strategy providing the emission reductions needed to attain the 24-hour and annual standards PM for the respective attainment deadlines from sources under CARB's regulatory authority.

I'll now ask Ariel Fideldy to begin the staff presentation.

Ariel.

(Thereupon an overhead presentation was presented as follows.)

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

As Mr. Corey just described, the Valley State SIP Strategy is a supplement State SIP Strategy adopted by the Board in March of 2017. When we came to the Board last year with the State strategy, we knew we needed short-term mobile reductions in the valley, but we didn't know exactly how many. Since that time, we have finished the technical work and we now know the level of reductions needed from mobile sources to meet the PM2.5 standards in the valley.

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AIR POLLUTION SPECIALIST FIDELDY: To give a little more context here, I'd like to walk through the history related to the current PM2.5 SIP for the valley. We are nearing the end of what has been a multi-year process.

First, was the district's moderate SIP prepared for the 12 microgram annual standard. Staff brought this item to you in October of 2016. The Board did not take action, but directed staff to work with the district to develop more measures for stationary and area source reductions, and to provide additional opportunities for public input.

During that same time, staff was developing the State strategy that I mentioned earlier. This strategy was developed to meet federal standards over the next 15 years throughout California. While it focused on meeting the ozone standard in 2031, staff was directed to return to the Board with additional measures specific to PM2.5 in the valley.

The item before you today is our fulfillment of your Board direction. The Valley State Strategy is the bridge between last year's State strategy and the district's comprehensive PM2.5 plan that we plan to bring to you in January.

We are bringing our State and mobile source commitments to you here today to keep the development of this plan moving forward, and to achieve the needed emission reductions from mobile sources.

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AIR POLLUTION SPECIALIST FIDELDY: Just to be clear, I want to reiterate that today's action is the consideration of the San Joaquin Valley Supplement to State SIP Strategy, including our CARB commitments for actions to achieve the share of emission reductions needed from mobile sources in the valley.

When we return to you in January, that action will be to consider the district's comprehensive PM2.5 SIP, which will include the district's commitments for actions to achieve reductions from stationary and area sources, as well as either required SIP elements.

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AIR POLLUTION SPECIALIST FIDELDY: How does all of this relate to the valley's PM2.5 problem? To help answer this question, this chart shows the contribution of various sources to the valley's PM pollution problem. Sources such as residential wood combustion, agricultural burning, and other stationary sources emit primary or directly emitted PM2.5.

Diesel PM is also part of directly emitted PM2.5.

These sources are shown here in the yellow and orange pie slices. Vehicles, on the other hand, are largely responsible for the secondary PM2.5 as indicated by the blue chunk of the pie here. It's important to note that while vehicles are responsible for 85 percent of the total NOx emissions in the valley, secondary PM2.5 formed from those NOx emissions is about 55 percent of the total PM2.5 in the area.

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AIR POLLUTION SPECIALIST FIDELDY: Given the contribution of the various sources of PM2.5 pollution in the valley, it is important that responsibility for solutions is balanced among all levels of government. We must look to EPA to address emissions from interstate and international sources under their control, such as trains, airplanes, ships, and trucks that are registered in other states.

We must also look to the district to regulate local and regional sources that contribute nearly half of the PM2.5 emissions in the valley, such as wood smoke and cooking. The district recently released a robust plan addressing sources under their control. At the State level, we must strive to achieve significant reductions from sources under our control.

Today, we are focusing on the center portion of

this diagram, our responsibilities and actions at the State level.

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AIR POLLUTION SPECIALIST FIDELDY: Again, I'd like to reiterate that you adopted the State strategy last career. It was a substantial first step. Now, I'm going to walk you through what was included in that commitment last year.

This slide those the list of measures that are applicable in the valley. As you can see, these measures are purely regulatory. Also included in the strategy was a commitment for emission reductions from State measures in the ozone attainment year of 2031. Although, they were estimated, emission reductions in 2025 were not committed to at that time, as we knew that we were going to need to identify more measures and reductions to attain PM standards in the valley.

As a reminder, the Board has committed to move forward on the measures on this slide. Today, we're committing to aggregate emission reductions in the valley associated with the measures on this slide in the PM attainment years, along with new measures to achieve the last increment of reductions needed for attainment.

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AIR POLLUTION SPECIALIST FIDELDY: This slide

shows how all of the parts fit together to achieve the NOx reductions that we need. The gray bar on the far left illustrates the 157 tons per day reduction in mobile source emissions from 2013 levels through CARB's already adopted regulations.

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The darker blue bar in the middle shows where the extra increment of nine tons per day of NOx reductions from the Measures committed to in the State strategy last year will get us. As these are reductions from exclusively regulatory measures, we need to accelerate these reductions with incentives to get to where the valley needs to be.

The light blue bar on the right shows where the valley mobile source NOx emissions will be when including reductions from the measures we're committing to here in the Valley State SIP Strategy.

As you can see, this total reduction in mobile source NOx of 189 tons per day from 2013 levels will get us to that target level. It's important to note that even though our new measures are mainly incentives, regulations account for nearly 90 percent of the mobile source reductions that will get the valley to attainment for PM2.5.

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AIR POLLUTION SPECIALIST FIDELDY: The table on

this slide shows exactly what the emission reduction commitment is in tons per day for NOx and PM2.5 in 2024. The commitment in the plan before you now includes reductions from measures committed to in last year's strategy and quantified today, and those from the new measures that we are proposing here today.

As can be seen here, the State's aggregate commitment will be 32 tons per day of NOx and 0.9 tons per day of PM2.5 in the valley. This commitment is for 2024, the attainment year of the 35 microgram PM standard and it will be carried through to 2025, the attainment year for 12 microgram annual standard. Next, I'm going to talk about what exactly is new in the Valley State SIP Strategy that is before you today.

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AIR POLLUTION SPECIALIST FIDELDY: Since the adoption of the State strategy, staff has continued to move forward. As you well know, the Board adopted two regulations that were included as measures in last year's SIP strategy. These are the lower opacity limits and amended warranty requirements for heavy-duty vehicles. In the valley strategy, we've also expanded on a few of last year's measures. And finally, we are including a new commitment to initiate the public process on each measure by a certain time. This is in addition to the commitment

to take action that you adopted last year.

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AIR POLLUTION SPECIALIST FIDELDY: Moving forward, the other part of the Valley State Strategy before you today is our proposed new measures. These measures were developed to accelerate the reductions that are going to be achieved through the regulations committed to last year. What you have here are three incentive measures, one for trucks, one for agricultural equipment, and one for other off-road equipment. There is also a cleaner in-use agricultural equipment measure.

As a whole, the State Strategy for the valley includes the regulatory measures adopted last year, and the proposed new measures brought before you in this item. My next few slides will get into a little more detail on the categories being targeted in this strategy and the programs that will be central to success in these areas.

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AIR POLLUTION SPECIALIST FIDELDY: Looking at on-road heavy-duty vehicles, our efforts here consist of a number of existing regulatory programs, the measures committed to in last year's strategy, and then the proposed new measure for accelerated turnover of trucks and buses in the valley.

While the 10 tons per day of NOx reductions we

are estimating we will achieve from incentivizing turnover is substantial, heavy-duty truck regulations committed to last year will also get over eight tons per day in the valley in 2024.

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AIR POLLUTION SPECIALIST FIDELDY: Chief among the regulatory programs for heavy-duty trucks in the near future will be our heavy-duty inspection and maintenance program, otherwise known as heavy-duty I&M. While a majority of the dirty pre-2010 model year engine trucks will be retired by the 2023 thanks to Truck and Bus Regulation, this cleaner technology needs to be paired with actions to make sure these vehicles stay clean in use.

As you can see the cart on this slide, NOx related to deterioration of engines is the largest chunk of emissions from heavy-duty diesel vehicles across the State in 2023 and beyond. While CARB's existing regulations, including the heavy-duty vehicle inspection program, and the periodic smoke inspection program have made progress in reducing in-use truck emissions, a comprehensive heavy-duty I&M program designed for the latest technology engines with advanced aftertreatment and OBD systems is critical for continuing California's progress in achieving clean, healthful air.

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AIR POLLUTION SPECIALIST FIDELDY: Heavy-duty I&M, with staff's plan for Board action in 2020, would achieve a substantial amount of emission reductions. When coupled with other elements of last year's lower in-use emission performance level measure, we expect this program to achieve around 6.8 tons per day of NOx reductions in the valley in 2024.

Staff is currently exploring options for implementation of this program, which could include use of OBD data collection and roadside emission measurement systems.

While our existing authority to regulate heavy-duty emissions enabled us to implement the elements described, legislation could establish a comprehensive program that could link vehicle registration to compliance, include owner operators in the program, and establish fees for program administration allowing us to maximize the benefits of the program.

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AIR POLLUTION SPECIALIST FIDELDY: Moving on to the agricultural side, I want to start by highlighting that the ag industry in the valley has a long and successful history of securing funding and exceeding SIP targets for incentivized turnover of ag equipment. The

valley district has been working with the industry to turnover dirty farm equipment for over a decade.

Since their goals set in the 2007 State SIP and through programs that began shortly thereafter, there has been a total public and private investment of over \$500 million to replace tractors in the valley.

Under the accelerated turnover of ag equipment measure that we are proposing today, staff plans to achieve 11 tons per day of NOx emission reductions in the valley through turnover of approximately 12,000 ag tractors by 2024.

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AIR POLLUTION SPECIALIST FIDELDY: The recently adopt Funding Agricultural Replacement Measures for Emission Reductions, or FARMER, program is going to play a key role in achieving the reductions that we've outlined for this section.

This program has already allocated a substantial amount of funding for turnover of ag equipment. Of the \$135 million allocated by the legislature to CARB last year, 108 million of that was earmarked for use in the valley. For the 2018 to '19 fiscal year, CARB was allocated \$132 million, though district allocations for this fiscal year are still pending. It's important that the funding towards this program be continued as we move

forward.

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AIR POLLUTION SPECIALIST FIDELDY: The last of the measures proposed today as part of the Valley State SIP Strategy targets other off-road equipment. This category will include oil drilling workover rigs, construction equipment, transport refrigeration units, forklifts, as well as other types of off-road vehicles.

Staff's proposed measure would incentivize turnover to achieve approximately two tons per day of NOx reductions in 2024.

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AIR POLLUTION SPECIALIST FIDELDY: Finally, we'd like to show you just how much funding in total we estimate that we need from incentives to meet our goals, and to attain the PM standards in the valley.

As I stated earlier, incentives have been very successful in the past at reducing emissions. This is specially true in the valley where the district has been quick awarding incentive money to deserving projects.

As you can see, we're looking at \$5 billion for our proposed measures. We've already identified around one billion in funds that could potentially be used for these purposes in the valley. This includes funds allocated this and last fiscal years, and a few pools of

money from ongoing fee programs that we expect to continue through 2024. Even so, this is still going to be a very heavy lift.

It's imperative that the levels of funding that we've received in the last few years towards these programs be continued, but we must also identify more opportunities for funding to get us to the levels needed for turnover in the valley in the very short timeline before us.

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AIR POLLUTION SPECIALIST FIDELDY: Looking forward, there are a few things I'd like to highlight. First, it's pivotal to our success in the valley that action on our regulatory commitments is taken in a timely manner. Regulations are the foundation of all programs here at CARB, and that continues to be true going forward, even as we push towards incentivizing vehicle turnover at an unprecedented rate.

Second, incentive funding must be continued and even increased from the levels allocated in recent years. And finally, effective implementation and enforcement of truck and bus, the future our heavy-duty I&M program, and other measures is imperative to ensure that really emission reductions are achieved.

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AIR POLLUTION SPECIALIST FIDELDY: Regarding the action before you today, our staff recommendation is to Adopt the Valley State SIP Strategy and the commitments contained therein. To clarify, the commitments included are two-pronged: the first is to -- the commitment to begin the measure public process and take action on the measures by date specified. And the second is the commitment for an aggregate emission reduction of 32 tons per day NOx and 0.9 tons per day PM2.5 in the valley in 2024 and 2525.

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AIR POLLUTION SPECIALIST FIDELDY: Last but not least, I wanted to touch on the next steps for this plan and the valley's PM2.5 SIP as a whole. If adopted today, we will be submitting the Valley State SIP Strategy to EPA as a revision to California SIP, along with the district's comprehensive PM2.5 SIP. The district released the proposed draft for public comment last week, and they are scheduled to take it to their board mid-November.

The draft valley PM2.5 plan is the most far-reaching PM SIP the valley has ever developed, in part due to the leadership of their new valley EP -- valley APCO -- excuse me -- Samir Sheikh. We would like to thank him for moving forward on releasing the plan and his dedication for improving PM air quality in the valley.

I will now ask Mr . Sheikh to come to the podium for his remarks.

MR. SHEIKH: Thank you. Good afternoon.

4 Appreciate that --

VICE CHAIR BERG: Good afternoon.

MR. SHEIKH: -- that last little introductory part as well. Thank you so much for that.

(Laughter.)

MR. SHEIKH: I wanted to start off by just thanking the Board for all of your commitment to working with us in addressing the San Joaquin Valley's issues going back, as the slide mentioned, to October in 2016, and obviously well before that, but with that moment, and really some direction to work together with us to look for both stationary and mobile source reductions and come back over time to develop a plan that hopefully will be before you here in a couple of months in January, as was discussed by staff, that really is the most comprehensive plan that I think we've ever put together in the San Joaquin Valley.

It addresses three federal standards at the same time. So it's very comprehensive and really looking at all of the issues that are related to implementing those standards. And I think most importantly, the improvements in air quality and public health are going to be

significant with that plan.

I wanted to make sure that, you know, as we talk about these -- these SIPs, we never loose the fact that as we put these programs together, we're not only dealing with the regional issues, but there's also the neighborhood level impacts and benefits that come from all of these very important measures that are being discussed today.

So I wanted to thank the staff also, Mr. Corey and Kurt Karperos, and Michael, and Sylvia, and other staff that have worked tirelessly on putting these measures together. There's been, as was mentioned, quite the public process, very extensive, a number of workshops and meetings, a lot of stakeholder engagement, and really trying to flesh out these measures and come up with a package that now, with a plan that's going to be before you very soon, demonstrates that the valley can come into attainment with the right balance of measures, and the right level of investment, and clearly it's going to take a lot investment.

So as we move together, in this process, you know, one of the things that we've done very well has been developing a joint message on how important it is to invest in these programs. This is something that we're very active in in the legislature, and in putting together

the funding that you see before you. As was mentioned, there's been a lot of funding that's come available recently. That's really important, and that's going to have to continue moving forward.

One particular program I wanted to highlight was the FARMER Program that was mentioned before. What you may not know is that's an acronym, maybe the best acronym ever created.

(Laughter.)

MR. SHEIKH: I forget exactly what it stands for, but I know it's -- part of it at least is funding agricul -- agricultural replacement of -- and then that's where I lose it.

(Laughter.)

MR. SHEIKH: That's a -- that's a great program. We actually had a wonderful event. I hope Mr. De La Torre is in the back listening to my comments. I wanted to thank him for being at that event, where we really highlighted and showcased what we could do when we work together to really put together programs that make sense, that -- in partnership with those that we're trying to encourage to move forward with emission reduction projects. So a very significant first step in that area, and we're going to need to continue to see that same level of investment moving forward in all the other key areas

that are here.

This is a very comprehensive strategy here before you. You have regulatory on inspection and maintenance. That's a huge lift. And that's going to take a lot of action at the legislative level, as well as working very closely with stakeholders to develop an effective program that deals with any concerns that they're going to have in moving forward with that. And you're going to see that across the board with every measure is that really a continue commitment to flesh out the issues and put together some very good programs moving forward.

So it's about five billion over five years is the costs of this plan. And that's going to take a lot of concerted effort, a lot of ongoing advocacy and education, amongst legislators and others that make decisions about where that funding needs to go. And, of course, we're going to continue to make that commitment to work with you, and then, of course, to follow-up.

One of the things that's really important in this process moving forward is that we come back to you on a regular basis to talk about how these very aggressive measures that are being put into place are doing, and where we may need to make some adjustments moving forward.

So with that, I just wanted to tell you that I really appreciate the staff, their commitment on this.

They've been great to work with. We've held each other accountable in this process. I can sure you that CARB staff has been working with us closely on our local measures. And we've also been putting a lot of pressure on staff to do the best they can with putting together a strong mobile source element. We appreciate the hard work that they've put into this.

It's going to achieve very significant emission reductions moving forward that are going to improve air quality, hopefully bring us into attainment very quickly, and improve public health. So thank you very much again, and I'd be happy to answer any questions you may have.

VICE CHAIR BERG: Thank you very much.

BOARD MEMBER BALMES: I just wanted to say -- oh, here he is. He was bagging about attending the event.

BOARD MEMBER DE LA TORRE: The crushing event?

VICE CHAIR BERG: Are we done?

Back to me. Thank you very much. I really appreciate that. I think I'll turn to our two valley Board members for comments. Dr. Sherriffs?

Just opening comments, then we do have 10 people testifying, but I thought maybe --

BOARD MEMBER SHERRIFFS: Right. No, just -- just --

VICE CHAIR BERG: -- you'd like just to make an

opening comment.

would echo what Samir has had to say. It's been an extraordinary process. I think two years ago this was embarked on that was a big deep breath. And it's taken a long time, but that's because there's been a lot of hard work. And I think we are far beyond where we would have been if we had just deferred to a later date to work on this. It's been a great -- a great process to see in terms of the bringing together of stakeholders, of advocates in the community, the environmental justice community, agriculture, other businesses to focus on this and get to where we are today.

We're obviously not quite there yet. We have a few more things to wrestle with and approve on all sides, but it's been gratifying to see. And it's highlighted as I -- as I've been thinking about this, boy, it's far from over, assuming we -- when we cross the finish line, because it's not the finish. The funding is a huge issue. And it's been great that we've collaborated together, because there's going to have to be a lot more collaboration in the future, because it's going to mean everything that all of those groups mentioned can move together in terms of continuing funding through the State legislature, through federal programs to achieve this.

It relies on incentives heavily, which is very -- which is good, but that means we all are going to have to step up to make that solution work and not have to look for another solution.

Thank you.

VICE CHAIR BERG: Thank you.

Mr. Eisenhut.

BOARD MEMBER EISENHUT: I think I'll defer until after the comments.

VICE CHAIR BERG: That would be great. Thank you very much.

So let's turn to our witness list. We have a list of up here. And we'll start with Roger Isom. Hi, Roger.

MR. ISOM: Good afternoon.

VICE CHAIR BERG: There's a button at the base.

MR. ISOM: All right. Good afternoon. Roger Isom, President and CEO of the California Cotton Ginners and Growers Association, and Western Agricultural Processors Association. You've heard me testify here before on how successful the Incentive funding program has been for tractors. And I think today is another example of that with the kick-off of the FARMER Program and talking about this in this SIP element.

And that's where my comments are going to center

on. We fully support the use of incentives. Agriculture is different than a lot of industry sectors in that we don't have the ability to pass along the cost. We simply have to absorb it in order to try to -- and try to stay in competition it's very difficult.

The incentive programs that have been used to date have helped us overcome that. They've been very successful. We've been able to beat every SIP commitment that's been put before us. And I think that while this is challenging, I think we're going to get there.

We do have a couple of concerns. One is that we don't want to see the money reallocated out differently. The San Joaquin Valley district is the only one with this kind of a mandate. We want to see the San Joaquin Valley receive the majority of the funding. It's not to say that the other districts don't deserve it. I have members in those other districts, but they have also seen a huge increase in funding with this FARMER Program. So we just want to make sure we maintain that.

We are concerned moving forward though. We have a commitment for two years of funding, but what do we do beyond that? We think that this use of cap-and-trade is -- money is the best one out there. We just want to work together. And I think Dr. Sherriffs was absolutely 100 percent right. It's going to take all of the groups

working together, but we do need to acknowledge that, that we need to work with the next administration to keep this money coming, because it's a huge ask.

There's also some -- an interesting look at the equipment. We don't know that the manufacturers are going to be able to keep up with this demand. And I would encourage us, and we've been in discussions with ARB staff to meet with the manufacturers and the dealers to make sure that we can keep up with the amount of tractors that need to be replaced.

Tractors aren't like a car, you don't go to a car lot out there, or a tractor lot, and there's -- pick from 100 tractors. Tractors today are made to order, so it -- there's at least a six to eight month lead time. We need to get out in front of this, if we're going to make this 2,400 tractors a year for the next year five years. And I just want to put our commitment forward that we'll work with you guys to do that. And so it was great to see Board Member De La Torre down in the valley this last week, as we kicked off that program.

The fact of the matter is, we've already spent more than \$10 million of that FARMER money replacing tractors. I mean, we hit the ground running. We've also ticked off a program that we've been trying for a very long time, and that's to get electric ATVs out in the farm

community. We are now doing that. And we actually crushed an ATV that day there.

So to see that advancement, to see where we are today is a huge difference. And I just want to thank the staff for working with us, and encourage us to move forward on the incentive part of it.

Thank you.

VICE CHAIR BERG: Thank you.

Hi, Will.

MR. BARRETT: Hi. Once more taking Kathryn

Phillips place in align. Will Barrett with the American

Lung Association, and Kathryn had to step out, but some of

my comments reflect what she wanted to convey.

So we appreciate the work that the Board and the staff have done, and all partners really have done over last two years to work towards strengthening the valley plan. This has been all done in support of improving public health. And we appreciate the persistence of everyone involved.

We agree with our colleagues in CVAQ that this proposal represents many improvements in terms of the open communications, the targeting of regulatory actions for the majority of emission reductions, including on the agricultural tractor side, and the off-road equipment side that all are geared towards benefiting the valley -- air

quality in the valley.

There are concerns, including aspects of the plan that rely on legislation or federal actions to achieve emission reductions. The Lung Association we're engaged in both the State legislative venue here and at the federal level in pushing for those actions to happen.

But I want to just express that concern that, you know, we want the Board to move forward with everything under your authority as quickly as possible to really set the tone that these programs are coming, and that those emission reductions will be real. And again, we'll continue working on those other venues to help make that happen.

On the discussion of incentives, we know that the incentives aren't going to achieve all of the emission reductions. They're going to achieve a piece of it in acceleration of those reductions. But we're concerned that if those incentive funds do not materialize as planned, we'll have an issue. So we're engaging with your agency on the regulatory side of things. We're engaging in the legislature on the funding side of things. And I agree with Dr. Sherriffs, we all have to be working in that direction to make sure that these emission reductions are happening through both the regulatory process, but also through incentives. And that's something that we're

going to have to really focus on, given the level of incentives needed under this plan.

So with that, I think we would support the call for an ongoing reporting on progress to meeting, you know, the regulatory time frame, the incentive programs, really making sure that we're on track, and we can course court if we find that we're moving off track, whether that's through funding issues or through those authorities not coming through, or anything else that is in the plan that's not maybe nailed down.

So, ultimately appreciate the work you've done. We'll continue working with you and supporting all efforts to improve the air in the San Joaquin Valley, which is home to some the most difficult challenges in the country of course. And everything we're doing is in line with trying to improve public health. And we just want to make sure we get there where we need to go.

So thank you very much.

VICE CHAIR BERG: Thank you. High, Ryan.

MR. KENNY: Hi. Good afternoon, Vice Chair Berg, members of the Board. I just have a really quick comment. We spoke, and you heard testimony last item, about the low NOx engines. I won't go into that.

But I just want to mention that we are woefully short on the SIP goal of 900,000 low NOx engines by the

year 2031. And we do ask, when the opportunity does present itself, that funding be committed for this item sooner than the proposed year of 2021, and for all mobile source measures, especially the accelerated truck turnover measure. We just need to get more of these vehicles on the road, low NOx especially. So thank you.

VICE CHAIR BERG: Thank you very much.

Hi, Noelle.

MS. CREMERS: Good afternoon, Vice Chair Berg and members of the Board. Noelle Cremers with the California Farm Bureau Federation. I want to echo Mr. Isom's comments. California agriculture is committed to doing its part to clean the air in the Central Valley. And we really appreciate the focus on incentives. I want to thank Air Resource Board staff for communicating with us early and talking through the challenges that this will present.

I don't want to gloss over how hard it will be to replace these 12,000 tractors, but I really am heartened by the focus on incentives and ask that everyone work together as has been already stated on identifying and securing the funds necessary, because they will be significant. I mean, in looking at earlier projections by staff on how much it would cost to replace my back of the envelope was 700 million. And I saw this morning the

estimate now has doubled that for how much we expect it to cost to replace the tractors.

I did want to highlight some concerns that I have with the heavy-duty vehicle inspection and maintenance program. California farmers, and especially livestock producers, depend on out-of-state trucks to transport their livestock in the spring and fall when they're moving to different feed sources. And so we're concerned about how those trucks -- the logistics of making sure that those trucks can come into the state.

I really don't want to see a situation where you have a truck full of cattle at the Oregon border trying to come into California, that then fails and what do we do now, how do we get those cows home.

So we just need to work through the logistics of making sure that those trucks can get certified out of state before they come to the border, so that we don't lose access to the trucks that we need to make ag work in California.

Thank you.

VICE CHAIR BERG: Thank you.

Ryan.

MR. SCHUCHARD: Hello, again, Vice Chair Berg, members of the Bard. Ryan Schuchard with CALSTART.

We'd like to express our support for the plan,

commend CARB, and Samir and his staff, for putting it together.

You may know, but I'd just like to remind you, if you aren't thinking about it, that CALSTART has -- we run the San Joaquin Valley Clean Transportation Center out of Fresno, which has the mission to developing clean transportation projects in the valley. And we're doing all kind of things there that should interest the plan and its implementation, deploying zero-emission buses with the major transit agencies, electric delivery trucks near zero, low NOx big trucks, school buses, even the nation's first network of electric aviation, and the list goes on. So we're very excited about this plan in helping to implement it.

It is appropriate that on-road measures are the first sector in the plan that are targeted. And among those accelerating the turnover of trucks and buses is really, really important. And we think, in general, there's a good balance of sticks and carrots, or at least recognizing you can't achieve all with sticks or carrots.

And then I would just, I guess, express a concern that we heard from Mr. Barrett and a couple of other commenters that the district can't do this on its own. It requires State legislation as well as potentially other resources to ensure that we get the funding required for

the vehicles.

So the plan calls for a dramatic scale of turning over 33,000 heavy-duty trucks, which the plan states itself that only two-thirds of funding -- sorry, one-third of funding is identified, two-thirds is not identified. So we really have a lot work to do together to get the legislative support for this plan, and the resources needed to make it go forward in recognition that this is not a short-term game, but it's where we need to be thinking for the long term.

And if I could close with just a comment about the interdependency of climate change here. This is really an air pollution plan, but the needs for the SIP are complementary to greenhouse gas reduction. Climate change is exacerbating wildfire, forest -- and forest fire risk and extent. And that is exacerbating air pollution. And we've really got to work together to take that message to the legislature. And CALSTART stands ready to help do that.

Thank you for your leadership.

VICE CHAIR BERG: Thank you very much.

MR. MAGGAY: Hello again, Vice Chair Berg, Board members. My name is Kevin Maggay. I'm with SoCalGas. And we support the plan. Specifically, we support the proposed measure to accelerate the turnover of 33,000

trucks to near zero or better in the valley. The plan shows that heavy-duty trucks contribute 58 percent of all on-road vehicle emissions for NOx. Thus, we appreciate CARB's recognition that the State Action is needed to accelerate reductions from this sector.

As you guys know, natural gas trucks are 90 percent cleaner than the existing standards. They've been available since 2016, and when paired with renewable natural gas, you also achieve significant greenhouse gas emission reductions. With all that said, we do have some -- some comments on the measure itself. We have six comments specifically.

The first is that we think that the plan needs -or the measure needs to be accelerated. The plan says
there would be Board action in 2021. We think that it
needs to happen well before that. Turn ing over the
33,000 trucks between 2021 and 2024 is a very, very
daunting task. The sooner you can get started on this,
the better.

Second, we need to develop infrastructure concurrently, until diesel has an engine that meets the low NOx standard, the complying technologies will -- would be natural gas, or electric, or hydrogen. And the infrastructure just isn't there yet. We recommend that an infrastructure study be done as soon as possible as well.

Third, ten tons per day is allocated to this measure. Yet, there are no new incentive projects listed in the emission reduction table. We would like to see more details on how ARB intends to get those emission reductions through this measure.

Fourth, when relying on incentives to get emission reductions, monitoring is going to be very critical as the gentleman before me stated. We recommend a robust monitoring program to ensure that the emission reductions are achieved and the money is not just being spent.

Next, the supplemental states that there -- if there's a shortfall in -- for funding or if there's a shortfall because of the no federal action taking place, that staff would look at other categories, such as stationary sources. Eighty-five percent of the NOx emissions come from mobile sources, 58 percent of that comes from heavy-duty trucks.

We caution against moving the focus to -- from the heavy hitters, trucks, to categories that don't emit as much as stationary sources. We do think that the focus should remain on the categories that emit the most.

And lastly, I wanted to echo the funding comments. A lot of funding will be needed to achieve this. And we think that all stakeholders have to work

together. And SoCalGas can -- we'll do all we can to participate and help us get to this goal.

Thank you.

VICE CHAIR BERG: Thank you.

MR. ROSE: Good afternoon. Mark Rose with

National Parks Conservation Association. I also live and
work in Fresno.

First, I'd just like to thank the CARB Board for this opportunity to comment. And also I'd like to take an opportunity to really thank CARB staff. They've been crucial in getting this plan to this point. They've been working with allies really well for the last two years, allies and stakeholders, so thank you.

We at NPCA are really overjoyed to see that we are this close to the finish line after about two years. And it's really wonderful to see that the San Joaquin Valley is projected meet attainment, with all three existing PM2.5 standards.

That being said, CARB's current mobile source plan relies on a lot of things really going right. And as we all know, things rarely go right. This plan relies on emission reductions from federal low NOx standards, despite those reductions coming from an EPA that is actively trying to rollback as many clean air regulations as they can get their hands on.

This plan also relies on State legislative action for the heavy-duty truck I&M program, despite that legislation failing in the past, and without clarifying what regulatory authority CARB staff has for this action.

Finally, and probably most importantly, as others have mentioned, this plan relies on about \$5 billion worth of incentive, much of which is not secured.

EPA's own guidance for SIP requirements states that voluntary incentive-based strategies must be surplused, quantifiable, permanent, and enforceable in order for it to count towards State emission reductions. It's sort of hard for us to see how relying on potentially billions in unfunded incentives might meet this standard.

Meanwhile, the plan B for this attainment plan should be -- or should any of these above-mentioned strategies fail is merely a commitment to reach aggregate emission reductions without any specifics. This is why our main ask for CARB staff before the final version of this rule is voted on, hopefully, this January, is that moving forward CARB's mobile source plan includes specific, concrete, and enforceable contingency measures, such as accelerated vehicle turnover dates.

We'd also like to see CARB's Board require annual or biannual reports on this plan. To oversee the status of incentive funding, as well as where we're at in terms

of reach attainment.

Finally, given that portions of this plan are now about two years overdue, we would like to see this move forward in January as scheduled, because San Joaquin Valley residents, and the well-being of our national parks really can't wait.

And as Alex said, this is going to take everyone working together on that. And I hope NPCA can be a partner in that. Thank you so much.

MS. GALE: Good afternoon. Genevieve Gale,
Central Valley Air Quality Coalition. Two years ago this
month, we collectively agreed that we could do better, and
we could make a real plan for attainment. And here we are
today, 24 months later nearing the finish line.

Now, I didn't think it would take this long. I'm not sure if you thought it would take this long either.

But I would like to say that your staff have been instrumental in pushing progress along, truly instrumental.

And so today, we have a mobile source plan here before us that is -- represents a significant improvement. As was already stated, a majority of the emission reductions that we need will come from regulatory actions associated with the current programs or future actions, and this includes a new agricultural tractor rule, the

first of its kind in California.

But as Mark laid out, there are a lot of uncertainties associated with this plan. For instance, we need \$5 billion to expedite the turnover of mobile source equipment. And this represents a significant increase in the funding that we've gotten to date.

We also need the federal government to do a 180 and start creating stronger environmental regulations rather than weakening the ones we have today. That's a big what-if.

We also need Senate transportation bill that died in its first policy committee to now get through both houses of ours -- of our legislature and get off the Governor's desk. So, in essence, we need the stars to align for this plan to work.

And I know a lot of CVAQ members are not incredibly comfortable with just crossing our fingers. We want a back-up plan, and so I have a handout that hopefully has been passed out already and it lays out a few ways to create that back-up plan.

One is strengthening the plan that we have, such as expediting and strengthening the Advanced Clean Truck measures, as well as expediting the Tractor Rule, increasing enforcement resources directed to the San Joaquin Valley and targeting investment in our most

overburdened communities.

It also calls for stronger contingency measures, this back-up plan, in case something goes wrong. And unfortunately for your staff, I know what they're capable of, and I know that they can probably create a stronger contingency measure.

Sorry, guys.

And also as Mark noted, annual or biannual updates to ensure that we're on -- we're on track. So in closing, I did choose the neutral speaking card, because I wish there was a "yes and" card. Yes, we need to move forward, but yes we can also do better.

Thank you.

MR. MAGAVERN: Bill Magavern with the Coalition for Clean Air. And I first want to second all the comments Genevieve made for CVAQ.

Two years ago when we were in Fresno and you called for a better plan, I think that we believed that that plan would be finished in the first half of 2017. So it's been a long time working on it, and I appreciate the work of the staff and also of the advocates in the San Joaquin Valley who have been calling for improved air quality.

We know that the San Joaquin Valley has the worst particle pollution in the entire country. So we have a

health crisis. We need to throw everything that we have at it. And it's not just a matter of the district needing to step up or CARB needing to step up. It's actually both are required to step up, because we don't need to just address mobile sources, or just address stationary sources. We need to address both. Today, of course, you're considering the mobile sources. And it would be wonderful to think that the federal government is suddenly going to completely turn around and start helping us. It would be wonderful to think that here in California we would suddenly be able to come up with an additional \$4 billion over five years.

But right now, we actually don't have any realistic hopes that either of those will happen.

Although, we'll certainly do what we can to make them happen.

So a few suggestions that I would make. First of all, the in-use agriculture equipment rule, thank you for putting that in the plan, but we think it could certainly be adopted before 2025 and implemented before 2030, which is a really long ways away.

Secondly, when it comes to trucks in use, you've been working a lot on reducing the emissions through improved maintenance and warranties, and other performance measures. We recommend that while we pursue the

legislative track for a comprehensive inspection and maintenance program, that you also begin to exercise more robustly the authority that you already have.

And I think really just about everybody I've talked to, and I think over 99 percent of Californians would be shocked to find out that while their cars need to go in to be smog checked, there is no such requirement for big rig diesel trucks. So there's a lot more that could be done in that area.

And then when we look towards eventually getting our trucks to be zero emission, we now -- we know that we already have last-mile delivery trucks that are zero emission. And staff are working on a rule to have a requirement. We think that that should be accelerated. There should be requirements both on manufacturers and on fleet purchasers, and that we should ramp that up to by 2030 have all fleets required to make 100 percent of their new purchases to be zero emission trucks.

Thank you.

2.4

VICE CHAIR BERG: Thank you, Bill. And that does conclude our testimony. And I will go ahead and close the record and turn it back to staff.

Does staff have any questions for staff? Thank you.

BOARD MEMBER GIOIA: So I just would be

interested to hear how staff would respond to some of the issues raised by the coalition, where they identified, you know, this -- there -- they had -- there was a letter on the record and then a handout? Can you respond to some of those? I think they raise legitimate concerns knowing that we've pushed this plan. And I'd be interested to hear from those from the valley as well how -- on the board here how they feel.

DEPUTY EXECUTIVE OFFICER KARPEROS: Let me start, and some of the issues I think others at the staff table may want to -- may want to weigh in. One of the primary issues that we've been having our conversation with the advocates is the timing of the plan, and the timing of the -- excuse me -- the aggressiveness of the turnover related to the -- to the need -- the need for incentives.

And we certainly appreciate that the -- the turnover is aggressive, both in terms of trucks and -- and agricultural equipment especially. And that's why we wanted to daylight for you, so that we're all very clear about how aggressive it is, and how the scale of incentives that would be needed.

In order to meet that sort of timeline, I think there's two parts to that. One, you've already heard from all of the witnesses -- many of the witnesses speak to it, that we need to work collectively to secure those

reductions. But it also means that both ourselves and the district need to move forward very, very quickly on the rulemaking that we have committed to.

We have to have the rules in place, so that when we bring the incentives to bear that -- that those two -- those two work together. For example, the district has been talking to us about how we can potentially accelerate the rulemaking for the low NOx truck standard.

We -- staff is still reviewing some of the data, the test data, and we will be talking to the district about how we want to ramp up that program and see if we can't beat the timeline that we actually have in front of you.

And similarly, we'll be looking, and we'll talk to you about this when we bring the district plan in front of you, the speed at which the district needs to move forward on some of the items like residential wood combustion. So that wasn't a -- I wanted to speak to that at the outset, because that wasn't necessarily an item that was called out in the advocates' letter, but it sort of pervaded all of the testimony, so I wanted to touch on that first.

One of the items was increased enforcement. And I think we have not done as good a job as we could to describe to those in the valley that work that we are

doing right now to enforce the Trucks and Bus Rule.

There's actually been a lot of staff effort underway to bring trucks into compliance for that rule. So I'll pause for a moment and ask Michael Benjamin to talk about that.

AIR QUALITY PLANNING AND SCIENCE DIVISION CHIEF BENJAMIN: This is Michael Benjamin.

So, as Mr. Karperos said, we do have an existing and ongoing enforcement program for heavy-duty trucks statewide and in the valley, which consists of this Periodic Smoke Inspection Program for fleets to determine that they're meeting the opacity limits, and then also the Heavy-Duty Vehicle Inspection Program where staff -- Enforcement staff pull over trucks and ensure that they have the appropriate control equipment on them.

We have also been working at deploying some new technologies and approaches for assessing compliance with our rules, and also for identifying high emitters. And specifically that includes our truck and bus surveillance program, where we pull in selected trucks and test them in our laboratory on dynamometers, very similar to our existing light-duty vehicle surveillance program.

We also have a new effort underway to collect on-board diagnostics data from trucks that are pulled over by enforcement staff, which enables us to identify issues warranty issues, and defective components.

And then we also are working, and will soon be deploying -- our Enforcement Division staff will be deploying our Portable Emissions Analysis or Acquisition System, or PEAQS System, which will enable us to collect and identify high-emitting trucks, hundreds of them, over the course of a day. And that will significantly improve our capabilities to identify trucks that are a problem in the valley.

We're actually working with CVAQ on scheduling a meeting with Todd Sax of our Enforcement Division, where we intend to brief CVAQ on how our current enforcement resources are being allocated, specifically in the valley, what sort of activities are underway, and to explore in a collaborative way opportunities for how those resources might be used perhaps more efficiently or in different ways, and also to make sure that everybody has a common understanding of some potential paths forward.

VICE CHAIR BERG: Thank you. Does that -DEPUTY EXECUTIVE OFFICER KARPEROS: Sorry?

VICE CHAIR BERG: Oh, go. Please, go ahead.

DEPUTY EXECUTIVE OFFICER KARPEROS: A couple of

item -- other items I wanted to touch on. We are starting and will be starting a public processes on implementing elements of an inspection and maintenance program for heavy-duty diesels later this year. So the -- one of the

asks in the letter was to clarify the authority we do have, and that will be a processes that we'll undertake as we go forward there.

I also want to talk a little bit about acceleration of agricultural equipment turnover. The program that has been underway that Mr. Isom spoke about has been, to my eye, one of the most successful turnover and incentive programs in the State of California, in --much in part to the involvement of the agricultural industry in ensuring that that program would be effective finding the equipment that is most cost effective to turnover, paring that farmer up with a dealer and getting that equipment out onto the field.

As we looked at the timing for the incentive turnover program, and then paring that up with what would be potentially necessary in terms of a back-stop rule, we determined that we needed to maximize the amount of time that we had to continue the successful effort that we've had over the last 10 years. And that's why we put the rulemaking into the middle of next decade. So really to maximize our ability to continue on the positive path we've been on.

Lastly, one of the requests was a stronger contingency measure. We knew that was coming, so that will be in your next Board item, as soon as we wrap this

one up.

2 (Laughter.)

VICE CHAIR BERG: Other Board comments?

4 Thank you, Ms. Takvorian.

problem and the cost of it.

BOARD MEMBER TAKVORIAN: New technology. Sorry.

Well, you know, I wanted to echo Dr. Sherriffs' comments that -- and others that two years ago we, I think, set a strong expectation, and staff has gone out and the district has met together and worked together with community members in the environmental justice community, the coalition and others to -- to try to make this work. I guess I feel a little overwhelmed by the plan, in the sense that it's real evidence of the seriousness of the

And while I think it lays a good groundwork, the overwhelming part is I just don't see where the four billion is coming from. And there's -- I mean, just to be really up front about it, there's not a chart in the plan that says, you know, here are the funding sources that we see over the next five years, and here's the amount that we could project.

I mean, I know that it's all projection, but that might give a greater level of comfort to folks in the valley that are looking forward to this -- to these reductions that are obviously clearly needed, so that we,

as advocates on the Board and in the community would have the opportunity to say, okay, so that's where we're going to point to, and that's who -- what we need to talk to the legislature about, and to ourselves about in terms of the allocations.

But that's -- unless I'm missing it, I don't see it there, as to what -- what -- this is -- I know it's not just a wish list, but it feels a little too vague to me to rest the accomplishment of the plan on. And the plan is too important to the health and quality of life for the people in the valley. So I -- I really feel like I need more substance and maybe you all could provide a little bit more detail on that.

So, for instance, on the 1.4 billion for the ag equipment, what percentage of that is incentive funding and what percentage of that is paid for by the ag industry, or is that the total that's needed in incentives, and what on top of that is being paid for by industry? I'm not clear on that. And forgive me if I missed it in the report. So that's one question.

And the other is can you provide more details or could we get a more detailed report at -- when we come back in December, I believe, right with the stationary source plan? Could we see that in terms of the funding?

And then I would like to hear your responses on

your willingness to do the biannual updates for how we're doing on the plan.

Yeah. Thank you.

EXECUTIVE OFFICER COREY: Yeah. A few things, Ms. Takvorian. And I think a few overall observations.

One is no doubt incentives are an important part of the plan. They're an important part of the South Coast plan. They're an important part of the overall what we do.

Ninety percent of this plan is measures. Ninety percent of getting us there. So I don't want to downplay both the mobile and stationary measure. In fact, the very direction that we got from this Board is sharpen your pencils, work the public process much more than had taken place, coordinate with the districts. And I think it got us to a place that represents really a significant advancement.

And if I had been asked back when the Board adopted the mobile source plan on the overall State plan two years ago or so, did we really think that we had the prospect of -- I think we're managing 1.5 billion this year. You know, were we going to see that kind of funding? I wouldn't have ever anticipated that between both the legislative appropriations or some of the settlement dollars.

So I think a key point was identify the need, identify, as clear as we can, where are the opportunities, but have we identified all the opportunities? No, we have identified the need and we've identified a number of measures. And those measures, several of which we've already started working on. In fact, later this year, rather in 2019, we'll be in front of the Board with the heavy-duty low NOx measure. Really significant State measure. Do we ultimately need the Feds to adopt that measure? We do. But the way -- we're not sitting on our hands. We're not going to wait. We're moving forward.

As Mr. Karperos said, heavy-duty I&M, we're kicking off that workshop process later this year. We think that's really important. There may well be follow-on legislation. I think that would be excellent. But another area where we think we need to work going forward.

But to your point from a overall implementation standpoint, I think this is critical. The commitment we're making, the commitment I'm making to this Board is an annual report where are we with respect to the measures? How are we coming along with the mobile measures we've committed to in this plan? What are the stationary measures that will be brought to the Board? It will be in January. As well as, has the money come about?

What's happening with respect to incentives. We've seen some of the largest numbers dollars come to the valley I think we've seen in history.

But, you know, as people rightly have said, that support needs to continue. And I think as Kurt mentioned, and I think there will be some follow on to my comments here and contingencies, to the extent that there are progress reports to this Board, as I indicated annually, and if there are areas where we are falling short, we'll be straight up on that too. Where are falling short? What is -- what are the -- how do we need to back-fill that?

So I think the best approach for us, at least my assessment -- and we certainly will see if we can provide a little more detail in the January report, but I won't have all the answers. We'll do as many as we possibly can, and I think really a solid plan. But I think the need for an annual status report to the Board will be a really useful element to the overall approach as well.

So I didn't know if you wanted to add anything, Kurt, to what I just put out?

DEPUTY EXECUTIVE OFFICER KARPEROS: No, I think that was very good.

VICE CHAIR BERG: Was that helpful?

BOARD MEMBER TAKVORIAN: So thank you. I

appreciate that. And I don't -- I didn't mean to say that I think anyone could have all the answers. And I just think that we deserve to have a -- everybody, the industry, the community needs to have a sense of, so if this doesn't work, what are the options?

And I know we can't option ourselves to the moon, but I think it really is important for us to say what are the plans that you see as being reasonable? Because otherwise, I think folks see it as well we -- then we fail, you know, and nobody wants to fail.

I think that staff has worked way too hard, the district is working way too hard. This is obviously a plan for success. We want to succeed and that's what this Board wants to have happen. So we just need to know when we -- when we have to make that turn, if the funding isn't coming through. Because on the regulatory side -- you're right, and I should have noted that -- it's huge. It's 90 percent. But we still need \$5 billion.

You know, that's -- I think that's the overwhelming part is we're doing all this, and we still need that in order to make it happen. So I just think we can work now maybe on more -- more of those plan B's, those contingency plans, so that everyone can see those.

Thank you.

VICE CHAIR BERG: You're welcome.

Any comments?

Dr. Balmes.

BOARD MEMBER BALMES: Well, first of all, I want to thank both the staff of CARB and Samir's staff at the South -- at the San Joaquin Valley Air Pollution Control District, and especially the community advocates for pushing us to get -- well, the community advocates for pushing the two agencies to get something done. And I agree, it took far too long.

And I agree with Ms. Takvorian's concern about where is the money going to come from. But I just want to say, as Mr. Corey knows, I continue to do research in the Fresno area on the health effects of air pollution exposure on children. And I'm just putting in a grant, and CARB is going to help us with the air quality monitoring, that we're doing there. But there still is a major air pollution problem in the San Joaquin Valley, and in Fresno, in particular.

And so I don't want to us lose sight of that. I mean, we're getting -- we're working on regulatory policies to improve the air quality. But the bottom line is it needs to get improved for health purposes. So I just want to underscore that I believe the Dr. Sherriffs would not disagree with me on that point.

VICE CHAIR BERG: Thank you.

BOARD MEMBER EISENHUT: Thank you.

Two years ago, I had trouble. I didn't support the proposed plan. My expectation was we'd see a plan back again within a six-month period. I support this plan, not because it's a two-year interval, but because it is a plan. It's a comprehensive much improved plan for the remediation of the San Joaquin Valley. It has gaps. It will require coordination and potential consequences.

And so to that end, I would request that it's our understanding that we hear at least annually from staff as to the progress of this plan, and what possible remediation is required to make appropriate progress should we not be headed in that direction.

And I'm going to suggest that the first -- and I'm looking to Richard for a nod or a shake of the head -- but the first report be March, so that that would coordinate with other such reports that might be made to this Board. But I'm open, as long as it's within a year.

EXECUTIVE OFFICER COREY: Yes, Mr. Eisenhut, we can -- we can make that work. It would be -- really, what it would be is a report on the regs that have already -- we've already gotten out of the gate and a status report, might point on NOx, I&M and some of the stationary work that the district is doing, so yes.

BOARD MEMBER EISENHUT: I'm sorry. Thank you.

And one very minor point to the Farm Bureau's point about livestock transportation. I have a recollection of this conversation when we implemented the Truck and Bus Rule. And it's my recollection that at that time, Chair Nichols sent the interested parties into the other room and said you figure it out. It's a small business. You folks come up with the solution that works for all of you. Come back and tell us you've got it figured out, and I believe they did so, and I hadn't heard otherwise until this moment. So I'm -- I look to staff for input in that -- in that very specific issue.

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EXECUTIVE OFFICER COREY: Just a quick -- and I'll be really brief on this, Mr. Eisenhut. I understood the Farm Bureau - Ms. Cremer was talking about - I think concerns about a potential I&M program, so a potential regulation in the future, and potential implications. So following on the point that you just made and direction from Chair Nichols, which was a separate issue on the Truck and Bus Regulation when she provided that direction, our first step on I&M, big tent, pull people in. We need the Farm Bureau to have that conversation, as well as other stakeholders. How do we structure and develop a rule? This is a rule that's yet to be developed in a way that is -- that makes sense and is workable. So we'll be following up with her accordingly

BOARD MEMBER EISENHUT: Thank you.

VICE CHAIR BERG: Yes, please. Mr. Sherriffs.

BOARD MEMBER SHERRIFFS: Yeah. Thank -- thanks.

Thanks everyone for comment.

Yeah, I just as -- I just wanted to add, I think the updates are critical. You know, many important suggestions about how to strengthen this plan. And really the question will become do we need to invoke those things? Do we need to be moving in that direction?

You know, I'd suggest when the whole plan comes back to us in December or January, in fact, the staff can have some benchmarks along the way of where we're hoping to be at one year, two years, three years in terms of how many tractors have we replaced by that time, what's happening with the truck enforcement and so on, so that we can have a much clearer sense of our roadmap.

And obviously that will be adjusted over time, but it's not just a general, well, we think we're on track or, gee, we're running off the rails, but some real benchmarks that we're all comfortable with using and reflecting on. I think that will be useful for us.

VICE CHAIR BERG: Thank you very much, my fellow Board members. There's no question that this issue, as Diane you pointed out, is overwhelming. And it's been overwhelming since I've been on the Board and been part of

these discussions, whether at the San Joaquin Valley, and feeling almost inadequate that are we making progress fast enough.

But I also think in the reporting, it is helpful to know where our limitations are. There's limitations under SB 1 as to accelerated truck turnover. There's limitations. And so I understand the need to want to be able to have those contingency plans available. But probably some of them are going to look pretty draconian, if, in fact, we can't get this funding.

And so I really do understand the desire and the passion behind let's get the funding, because I'm fearful that the alternatives are pretty painful. And so I will hold a good note that we will. And I know you have the Board's commitment to do whatever we can.

I don't want to close or call for the vote until I really thank the valley citizens. It has been a real partnership. It has been painful at times. But really due to your leadership, I think Samir would agree, that we have made great progress. And that truly has been about the way that your leadership has come to the table. And I'm glad we also have reciprocated, and also coming to the table differently, and -- but I really truly want to thank you. It really is a very impressive job, and we don't want to let you down for all the hard work you have done.

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    And so I want to assure you of that.
             So with that, we have Resolution 18-49 in front
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    of us.
            And could I have a motion to a move this forward?
             BOARD MEMBER SHERRIFFS: Please.
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             VICE CHAIR BERG:
                               Thank you. And a second?
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             BOARD MEMBER MITCHELL:
                                      I'll second.
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             VICE CHAIR BERG: Thank you very much.
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             We have a first and a second.
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             All those in favor?
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             (Unanimous ayes vote.)
             VICE CHAIR BERG: Opposed?
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             Any abstentions?
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             Motion passes. Thank you, staff.
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             So you're next up --
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             (Laughter.)
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             VICE CHAIR BERG: -- is our 2018 updates to our
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    own California State Implementation Plan. Over the last
    few years, the Board has considered adopted and submitted
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    a number of SIPs for nonattainment areas in the state.
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             However, as a result of a recent court decision,
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However, as a result of a recent court decision, the U.S. Environmental Protection Agency is revising its SIP guidance requiring us now to go back and update some of the elements of these plans.

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The item before us today includes these updates for the relevant nonattainment areas SIPs.

1 Mr. Corey.

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EXECUTIVE OFFICER COREY: Yes. Thanks, Chair Berg. Over the last few years, CARB staff worked with local air districts to prepare numerous SIPs to address the SIP planning requirements for the 75 parts per billion ozone and the 12 microgram per cubic meter PM2.5 federal standards, based on U.S. EPA guidance

Districts submitted the plans to CARB and CARB adopt and submitted them to U.S. EPA as revisions to the California SIP. Since CARB submitted the plans court decisions determined that portions of the U.S. EPA published guidance documents were inconsistent with the Clean Air Act.

As such, CARB must update the relevant SIP elements for the affected non-attainment areas in order to facilitate U.S. EPA approval of these plans. The SIP elements include reasonable further progress or RFP, associated with RFP baseline year emission inventories, transportation conformity budgets, and contingency measures.

I'll now ask again Ariel Fideldy -- Fideldy, rather of the Air Quality Planning and Science Division to begin the staff presentation.

Ariel.

(Thereupon an overhead presentation was

presented as follows.)

AIR POLLUTION SPECIALIST FIDELDY: Thank you, Mr. Corey. Hello again, Vice Chair Berg and members of the Board.

As Mr. Corey said, we've submitted ozone SIPs for several non-attainment areas over the last few years for the 75 ppb standard. We worked very closely with the districts and EPA in developing these plans to ensure that we followed all applicable EPA guidance that was in place at the time.

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AIR POLLUTION SPECIALIST FIDELDY: Since then, there's been a couple of court decisions that impact the approvability of certain elements of these submitted plans. The decisions essentially change some requirements that EPA had originally defined for reasonable further progress and contingency.

We're proposing the SIP updates today in accordance with these decisions, and because EPA has deadlines to act on most of the SIPs by the end of this year.

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AIR POLLUTION SPECIALIST FIDELDY: The map on this slide shows the areas with plans that we're updating. A total of 10 areas with plans have updates in the 2018

SIP update. Later on, I will highlight the elements updated for each area.

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AIR POLLUTION SPECIALIST FIDELDY: Now, I'm going to quickly go over the two court decisions and their impacts. Just as a reminder, Reasonable Further Progress, or RFP, is a Clean Air Act requirement that areas show steady progress in emission reductions prior to their attainment date. RFP ensures that areas don't wait until the last minute to adopt rules and get regulate -- sorry, excuse me -- get reductions. Essentially, for ozone, RFP is an emission inventory exercise to show a reduction in emissions of three percent per year from the baseline year through the attainment date.

When the Board adopted SIPs, EPA's guidance for 75 ppb standard set an RFP baseline year of 2011, but it had allowed states to choose in alternate years between 2008 and 2012.

For all of the plans that CARB submitted, we used an alternate baseline year for RFP. Just this year, in a case titled South Coast v. EPA the court determined that EPA did not properly justify the use of alternate baseline years. And as such, 2011 is now the only allowable year.

Because all California areas used an alternate baseline year in their submitted plans, we now need to

update all of the RFP demonstrations to use a 2011 baseline year. The RFP demonstration prepared for each SIP has a sort of trickle-down effect into some other elements of the plans. The milestone years determined by RFP become the years for which we submit an emission inventory. Transportation conformity budgets are also required for the RFP years. Because of this, when updating RFP years, we must also update the years included in the emission inventory, and the conform budgets.

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AIR POLLUTION SPECIALIST FIDELDY: The second court decision, Bahr v. U.S. EPA centered around the SIP element known as contingency. The purpose of contingency measures is to ensure that if an area fails to meet RFP or fails to attain a standard, there will be emission reductions occurring while they put a SIP together.

Contingency measures are a Clean Air Act SIP requirement to have such a measure that is already adopted and will get reductions in the future if there is a failure.

The recent BAR decision determined that along with getting real reductions in the future, contingency measures must include a triggered element that is activated upon an EPA finding of failure to meet RFP or a finding of failure to attain.

Essentially, the measure sits on the shelf to be implemented without further regulatory action and to achieve reductions if it's triggered.

Prior to this court decision, our practice had been to use emission reductions from continued implementation of our mobile source program to fulfill contingency measure requirements. While this approach is still important for providing additional reductions in the future, we now need to add a triggered element for contingency purposes.

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AIR POLLUTION SPECIALIST FIDELDY: As a result of these two court decisions, the submitted ozone plans need updates in order to be approvable by EPAas follows: an RFP demonstration with a new baseline year, emission inventory submittals to match the RFP years, transportation conformity budgets also to match the RFP years, and new contingency measures with triggered elements.

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AIR POLLUTION SPECIALIST FIDELDY: Meanwhile, staff has also recently updated CARB's on-road mobile source emissions model, EMAC, with the latest information regarding vehicles in our control program. EMFAC 2017 was completed and subjected to EPA for approval.

This new information shows greater emissions in

the future for many areas across the state as a result of updated deterioration factors, motor vehicle population data, and revised truck and bus compliance rates. The 2018 SIP update includes safety margins in the RFP demonstrations and transportation conformity budgets for the relevant areas to accommodate the revised estimates.

Including these margins will allow transportation agencies to move forward with their planning efforts over the next few years without being hindered by budgets developed using the older model that they can now no longer meet.

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AIR POLLUTION SPECIALIST FIDELDY: My next few slides will go what exactly is included in the 2018 SIP update in response to all these recent events I just described.

The table here shows the differences between what was included in our originally submitted ozone plans and what is included here today for RFP and the other elements involved in the trickle-down I talked about earlier.

These changes are dependent on the baseline year used for RFP demonstrations.

As you can see in the table, we are switching from a 2012 RFP baseline year for most areas to a 2011 RFP baseline year. This leads us to a first milestone year of

2017, rather than 2018, and then subsequent milestone years every three years after until attainment.

Conformity budgets are set in alignment with the RFP milestone years.

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AIR POLLUTION SPECIALIST FIDELDY: In accordance with the second decisions I discussed earlier, staff has developed a triggered contingency measure for enhanced enforcement that will apply to all 10 non-attainment areas included here, and will kick-in within 60 days of the U.S. EPA published finding of failure to meet and RFP milestone or failure to attain one of the standards for a certain area.

Essentially, the statewide measure commits that upon failure to meet RFP or failure to attain, CARB's Enforcement Division will develop a report on enforcement efforts in the area, and determine the type of enforcement resources that will be most effective in reducing emissions in that area.

CARB staff will then implement an enhanced enforcement program for specified timelines and publish a report with the results upon the conclusion of the program.

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AIR POLLUTION SPECIALIST FIDELDY: To wrap it up,

the table on slide 10 shows which SIP elements are being updated for each nonattainment area. For example, for Imperial County, we are submitting only two SIP elements, emission inventory and RFP demonstration; while for Sacramento, the 2018 SIP update includes all of the elements we've described: emission inventory years, RFP demonstration, transportation conformity budgets, and contingency measures.

With the elements included here in the 2018 SIP update, all the submitted plans will once again be whole and approvable by EPA.

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AIR POLLUTION SPECIALIST FIDELDY: Finally, our staff recommendation here consists of three parts. First, to adopt the non-attainment area elements included in the 2018 SIP update as revisions to the California SIP.

Second, to adopt the statewide contingency measure as a revision to the California SIP. And lastly, to direct the Executive Officer to submit the non-attainment area SIP elements and statewide contingency measure, both included in the 2018 SIP update, to EPA as revisions to the California SIP.

This concludes my presentation today. We'll be happy to answer any questions from the Board.

BOARD MEMBER RIORDAN: Thank you very much. I

think before we open it up to Board members, we have one person wishing to speak. And I'd like to take that comment, and then we'll open it up to the Board for questions.

Sean Edgar, CleanFleets.

MR. EDGAR: Mrs. Riordan, thank you for the opportunity to address you about my favorite topic, trash trucks. We'll always share a magic moment of September 2000 of the Diesel Risk Reduction Plan, and I keep coming back. So don't take my repeated presence as just too much. Most of our refuse members are out actually working their companies today. And so they're out doing busy work, that's why they have folks like me come up here and speak on their behalf.

I'll just borrow from the last few items and tie it into the current item. We heard Vice Chair Berg be -- express her concern about funding appearing for the San Joaquin plan. And we know that each one of the SIP strategies outlined here are going to involve money. So I'm just going to take a few moments and try to make a jump to lightspeed to connect all the last items that you addressed.

The first two items that you talked about vapor recovery today, Vice Chair Berg observed that there was almost a perfect storm and alignment, where you had

equipment that was just about to be turned over and Board staff worked with the industry to figure out how to get the cleanest equipment out, and that was victory lap on the first two items relative to your vapor recovery item.

We went into the HVIP item. And what I took away from that is once your CNG, you're always CNG, because there is a presumption with your staff that -- and by the way my father came from Texas and he told me it's not polite to beat a dead horse, so I won't beat a dead horse. I'll just reiterate a few things that relate to the current plan.

We heard from staff, once CNG always CNG. That's not the case, because fleets routinely make a choice. Mr. Sheikh talked about the need in San Joaquin County. The City of Tulare, which has an LNG station, has a CNG station, was buying CNG and LNG trucks just bought diesel equipment, because a combination of reasons pertaining to cost performance and a whole bunch of items.

So just because you had CNG or used to buy CNG, doesn't mean you're always going to buy CNG. So that was one item that I took away from our prior discussion.

Fleets that are on the team really don't deserve to be on the team going forward. So if you've taken an HVIP voucher because you've made a decision at one business unit to buy some CNG trucks, secure some fueling

maybe locally, maybe you built, you didn't. But if you're already on the team with CNG, you're not going to be on the team with CNG at another site. That's what I understood your staff to say.

And then finally, I guess in a jump to lightspeed, when I said ban the purchase voucher for 8.9 liter, staff said the ban is not the same as eliminating. They're -- apparently, the words mean different things.

In the time that I'm left, I'll just say unfortunately I texted one of our members and reported the bad news from HVIP item. And he responded glibly, "I guess they don't care".

You know, my challenge to you in the 22 seconds I have left, if you're intending to get truck reductions from heavy-duty trucks, you can deal with the A team. We consider ourselves the A team, because for the last 15 years in front of this Board, our folks have actually stepped up, put the family investment on the line, and bought clean trucks. And they can't do it everywhere. They can't do it every time, but they're motivated to do it. And it can help in all the strategies that you're discussing.

 $\,$ So look forward to the next process of HVIP workshop.

Thank you.

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VICE CHAIR BERG: Thank you, Sean. 1 I definitely took away from our funding 2 3 discussion that staff is going to look at these things. 4 There are work -- there are working groups that are going 5 to be out together. I understand your frustration. However, I would really encourage that we 6 7 consider -- we continue the dialogue, because it is an 8 important one, and we do need all those stakeholders to be 9 at the table. So please continue to be. We appreciate 10 that. 11 So with that, do we have any questions on this 12 particular item? Seeing none. I will close the record on this 13 14 item. And we have before us Resolution number 18-50. 15 And do I have a motion to move that forward, 16 please. 17 BOARD MEMBER RIORDAN: I would move approval of 18 18-50, Madam Chairman. 19 BOARD MEMBER EISENHUT: Second. 20 VICE CHAIR BERG: Thank you. With a first and a 21 second. All in favor? 22 23 (Unanimous aye vote.) 2.4 VICE CHAIR BERG: All opposed?

Any abstention?

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1 Motion passes.

Thank you staff. Congratulations. And we'll look forward to seeing you in -- are we coming back in December or January?

EXECUTIVE OFFICER COREY: It's January.

VICE CHAIR BERG: Okay. We'll see you in January. Thank you.

Our next agenda item is actually a very fun one, because it's a new market segment. And it is a Regulation and Certification Procedure for Light-Duty Engine Packages that are Used in Light-Duty Specifically Produced Motor Vehicles for 2019 and Subsequent Model Years. This proposal will create a process for the certification of newly produced replica cars in California, which are cars that resemble the iconic older cars that we all loved.

That California car culture values the classic cars of the late 50s, the muscle cars of the 60s and 70s, and the sporty and stately convertibles. However, these vintage cars are often expensive and can be gross polluters. The replica care industry approached CARB with a request to create a process ensure replica cars can be sold in California legally, and still achieve low-emission levels.

Staff's proposed process strikes a balance of ensuring emission reductions without creating undue

economic burden on a new and exciting adventure for a new industry.

Mr. Corey, would you introduce this item?

EXECUTIVE OFFICER COREY: Yes. Thanks, Vice

Chair Berg. So currently in order to sell light-duty

vehicles in California, a manufacturer must certify a

whole vehicle to the current low-emission vehicle exhaust

and evaporative emission standards and meet onboard

diagnostic, as well as other requirements.

The replica -- the replica car industry approached CARB through industry associations to request a pathway to sell new replica cars in California, as the current requirements for new car manufacturers are cost prohibitive. Staff's proposal creates a path for manufacturers to certify engine packages to low emission vehicle exhaust and evaporative emission standards, and to grant Executive Orders to replica car manufacturers that use those certified engines.

Through working with industry, staff is proposing a process that provides needed certification flexibility to the new replica car industry, while ensuring low emissions.

I'll now ask Richard Muradliyan of the Emission Compliance, Automo -- Automotive Regulations and Science Division to give the staff presentation.

1 Richard.

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(Thereupon an overhead presentation was presented as follows.)

AIR RESOURCES ENGINEER MURADLIYAN: Good afternoon, Vice Chair Berg and members of the Board. I have the privilege today to present to you a proposal that brings back cars we all grew up with, designs you remember, cars with fins, gorgeous convertibles, exotic imports, and beloved muscle cars, bud brand new with emission-compliant engines.

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AIR RESOURCES ENGINEER MURADLIYAN: Our presentation today will be comprised of a basic overview of this item and the goals of the proposed regulation.

I'll describe what is a specially produced motor vehicle and review the history and current status of the federal program.

I'm present staff's concept for the proposal and the costs and the emissions justification. Industry has raised concerns about the proposal. We will be proposing 15-day changes in response to these comments. But first, let's talk about the vehicles.

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AIR RESOURCES ENGINEER MURADLIYAN:

Specially-produced motor vehicles, or replica

cars, could be a 1957 Impala, a 1964 Mustang, a late 60s Dodge Challenger, or a the famous Cobra. They're cars of our past, heritage classics, and works of art.

Our proposal focuses on vehicles that were commercially produced for sale to the public at least 25 years ago with designs that resembles the original vehicles. They are built by small volume manufacturers, and offer to the public as a turn-the-key-and-enjoy replica. No assembly required.

They will be sold just like other new vehicles today, and included in the State's Smog Check Program.

There will be limitations on safety due to design restrictions.

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AIR RESOURCES ENGINEER MURADLIYAN: Here are various samples of vehicles that may be offered under this program. They are not restored, but will be brand new. You can just turn the key and go.

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AIR RESOURCES ENGINEER MURADLIYAN: These heritage vehicles of our past with designs we all recognize.

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AIR RESOURCES ENGINEER MURADLIYAN: In 2015, lawmakers enacted legislation for the sale of specially

produce motor vehicles, known as the FAST Act.

The FAST Act was supported by the Specialty
Equipment Marketing Association, SEMA, which is automotive
association. Currently, the EPA is working on a guidance
document for those who want to produce SPMVs. The
National Highway Traffic Safety Administration, NHTSA,
will soon begin a rule laying out safely requirements for
SPMVs.

Due to adoption of the federal FAST Act, SEMA approached CARB to consider adoption of a process that aligns with the FAST Act. Today, we bring forth staff's proposal for California in response to the FAST Act.

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has two parts, an Executive Order for engines and an Executive Order for vehicle builders. The concept for the engines would be that there are plug and play.

Manufacturers of engine packages would have to show compliance with the current small volume exhaust and evaporative emission standards. There would be some flexibilities allowed for OBD demonstration. And just like other engine manufacturers, SPMVs would meet emissions warranty, defects reporting, and recall provisions. Alternatively, and EV Powertrain pathway is also included.

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AIR RESOURCES ENGINEER MURADLIYAN: Like the federal law, vehicle builders would be small volume manufacturers with less than 5,000 vehicle production annually worldwide. U.S. sales would be limited to 325 per manufacturer per year.

Our proposal limits the type of vehicles eligible for this program to vehicles manufactured to resemble ones of our past, and commercially produced and sold to the public. The vehicle builder is also responsible for the fuel tank and lines, installation, and compliance.

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AIR RESOURCES ENGINEER MURADLIYAN: What are the costs for those who participate in this optional process?

For engine builders, we expect the same cost as current certification. So no increase in certifying to the current emission requirements. Engine packages will most likely be based on a current model year whole vehicle certification.

For the vehicle builder, time and resources will be needed to submit the required paperwork to show compliance and be granted an Executive Order. What are the emissions impacts for this new classification of vehicle?

The engines will be vehicle -- the engines and

vehicles with meet current exhaust and evaporative standards with some OBD concessions. Overall, the regulation would not pose any potential significant adverse impacts as further discussed in the Initial Statement of Reasons.

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AIR RESOURCES ENGINEER MURADLIYAN: Industry raised two areas of specific concerns with the initial proposal due to the complexity of putting a fully emission compliant engine and OBD system into multiple vehicle builds.

First, new body configurations and fuel tank location and size all weigh in on the complications of demonstrating OBD leak check and purge diagnostics.

Engine manufacturers believe the market will be too small for these engines and too costly to make a custom OBD calibration for each unique vehicle model. The second issue raised was centered around the definition of a specially produced motor vehicle. Industry would like a broad -- to broaden the scope of what -- of that which qualifies as and SPMV. CARB was concerned with making sure that the scope was limited, and exclude vehicles that were not production heritage classics.

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AIR RESOURCES ENGINEER MURADLIYAN: Since the

noticed package was released, staff continued working with stakeholders to determine if additional changes made sense with the intent of the proposal. At this time, the following 15-day changes are recommended for the proposed regulation and procedures.

Changes made to the vehicle definition will maintain the original intent of a specially produced motor vehicle, but allow some expansion to allow more customized vehicles. We will add the option to have a capless fuel storage system instead of a large leak check monitor with a purge diagnostic mandatory in engines certified to the 2023 model year and newer. Both these changes are not expected to change the outcome of cost or emissions impacts.

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AIR RESOURCES ENGINEER MURADLIYAN: We recommend to the Board adopt the proposed resolution, which would approve for adoption the proposed regulation, and allow staff to further develop 15 day changes.

I leave you with these final images, the possibilities of an SPMV as an EV.

Thank you very much, Richard.

VICE CHAIR BERG: We have six witnesses. And, boy, looking at this, you guys did a great job. They all say support.

So let's -- let's find out how great staff did. We'll start with Jesse.

MR. GLICKENHAUS: Madam Vice Chair, thank you. Staff, thank you. I don't have a triangle in my presentation, but there's some lovely circles.

(Laughter.)

(Thereupon an overhead presentation was presented as follows.)

MR. GLICKENHAUS: So I'm Jesse Glickenhaus, managing director of Scuderia Cameron Glickenhaus.

We are a NHTSA approved low-volume manufacturer.

MR. GLICKENHAUS: And we have several models of replicas that are also approved by NHTSA --

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AIR POLLUTION SPECIALIST NICHOLS: -- including our replica Steve McQueen Baja Boot, as you can see in color behind you, which we would love to manufacture and sell in the state of California. And this proposal should be set up to do just that.

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MR. GLICKENHAUS: Of course, the Board's stated object is to align with the FAST Act to allow replica sales in California for replica manufacturers.

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MR. GLICKENHAUS: But CARB's definition -proposed definition of replica differs significantly from
the definition in the FAST Act, and herein lies the issue.
If you look at the Baja Boot as an example, it clearly
meets the FAST Act definition of replica. In fact, NHTSA
has approved the replica boot for manufacture. In our VIN
decoder it's published as approved.

But this vehicle doesn't meet CARB's proposed definition of replica. So what are the possible solutions?

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MR. GLICKENHAUS: So CARB's proposed definition blocks several vehicles that have already been approved by NHTSA under the FAST Act. So we have two possible solutions. First, solution A, CARB could have the definition of replica that's identical to the FAST Act definition; or solution B, CARB could allow the following language -- could add the following language to their current definition of replica, so that replicas already currently approved by NHTSA would be eligible to be sold under -- in California. So the language is, "Or any vehicle which has, by the time of the adoption of this regulation, been approved by NHTSA as a replica, as evidenced by the vehicle's identification in a NHTSA approved low volume manufacturer's VIN decoder".

If CARB adopts this proposed regulation, we commit to immediately, over the next 12 months, spend at least \$500,000 to design, build, and fabricate the prototype replica boot in California. We anticipate we will spend 10 to \$12 million a year for the next several years manufacturing replica boots in California.

We will use verified carbon offsets to more than offset the anticipated lifecycle emissions from the vehicles. So any vehicle we sell in California will be net carbon negative. And we will use our best effort to have dealers in California, so the boots can be repaired, maintained, and stay safe and clean.

We would love to sell these in California, and build them in California, and we're asking for your help.

Thank you.

VICE CHAIR BERG: Thank you. I'm sure we'll be discussing it after all the speakers.

Thank you.

MR. GOSSWEIN: Greetings, Vice Chair Berg and Board Members. I'm Stewart Gosswein, Senior Director, Federal Government Affairs at SEMA. And we are absolutely thrilled to be here in support of the proposed regulation with the revisions that are also being proposed.

And our thanks to CARB staff for having worked for probably about two years on this, and especially very

diligently the last couple of months to get us here. And SEMA itself is based in Diamond Bar. We represent the \$43 billion specialty equipment industry that produces both performance equipment and vehicles such as the replica cars.

And as Rich was saying in the presentation, we worked with Congress from 2011 to 2015 to go ahead and enact the legislation. And in order to get it passed, we demanded and Congress demanded that these be clean cars. And we pointed to the specialty constructed vehicle EO program that was in place in 2012, and we used that as an example. And CARB staff is expanding that, so it applied to the low volume manufacturers.

And so we are thrilled that -- to get this up and running. As Rich was saying, there's a lot of iconic cars out there that can be rebuilt. And one of the things that was important to us, is that these are going to be clean engine packages, not only for the replica cars, but for kit cars, and potentially for the hobbyists that are rebuilding their older cars.

And so this is a viable program that will be making affordable clean engine packages that will help clean the air, while bringing iconic cars back to the marketplace.

Thank you.

VICE CHAIR BERG: Thank you.

2 Good afternoon.

MR. LIBERG: Good afternoon, Chair Berg and the rest of the Board. My name is Braden Liberg. I'm with Edelbrock. And I'm here on behalf of Edelbrock. I want to thank you for the opportunity to speak to this proposal for SPMV.

I guess first off, I should say that we've been working very closely with CARB staff. And CARB staff has come up with a proposal with the revisions that we completely approve of. Edelbrock is an automotive performance company. We're celebrating our 80th year. We were founded in California. We have our headquarters here in California. We've an aluminum foundry and manufacturing and distribution centers here in California. We also employ over 700 people here in California. We view this as an opportunity for California business to grow as well.

care has faithfully supported both the environment and stakeholders with this. And I can give three reasons why. The first is that it would improve the emissions of vehicles that would otherwise have emissions that were much worse. There's other process, and guys can build their vehicles with any technology from the early years, which is much, much more dirty than the 2019

certification -- certified engines that we're planning on doing.

This also was made possible by CARB allowing certain things that Richard was stalking about earlier with the evaporative diagnostic and purge diagnostics being able to be put to a point where we could actually produce these cars, as well as they expanded the definition, so that the definition can handle everything from pre-war cars all the way through to the up to 25 year old cars that we were talking about.

The second opportunity is that it does increase the business opportunity here in California. Edelbrock itself was planning on being an engine provider to this -- and also being kind of the intermediary between a large OEM and the chassis manufacturer that was building the 25 year or older cars.

The third thing is it supports California history, and it supports California enthusiasm for this market. It's one of the things that makes being in California and why Californians like to be here is it's just fun. And I think that CARB staff has made it possible for all these things to happen, where we have cleaner cars, where we have increased California business opportunity, and we have fun.

So for -- from Edelbrock's perspective, we want

to say that we fully support the regulations as proposed with the revisions that they had.

Thank you very much.

VICE CHAIR BERG: Thank you.

MR. TREYDTE: Good afternoon, Madam Chair and Board members. My name is Peter Treydte. I am the Director of Emissions Compliance for SEMA. And I'd like to speak just for a moment to the relationship between SEMA and the CARB staff members, as we've kind of gone through this process.

First of all, SEMA places a high priority on emissions compliance with our members. And we do that through first of all education. We try to Educate our members on the importance of emissions compliance.

Secondly, we encourage them to pursue demonstrations of emissions compliance. And that typically results in a CARB Executive Order covering their products. And then thirdly, we provide resources to those members for going through that process, and that includes operating and automotive emissions laboratory.

Over the years, SEMA has been very closely engaged with ARB staff. And we really value that relationship. We feel like that relationship that we have is an important one on both sides. And I think that the -- this -- it is this relationship that brought us to

this point. Staff did a great job over the last couple of months of really dialoguing with us and finding out where the issues were, and finding ways to resolve those issues. So we're very appreciative of that.

And as program takes -- takes root and starts to grow, we anticipate that we'll be working -- SEMA will be working closely with those members to ensure their emissions compliance as well.

Thank you.

VICE CHAIR BERG: Thank you.

MR. STANDER: Hi. Thanks very much. This is my first time doing something like this. And you can obviously hear the accent I'm not quite from here. But I have been in the U.S. for 20 years, and I'm an American citizen now. I'm very proud to be one.

Have also lived in California, and my business Superformance and Shelby Legendary Cars that supplies a lot of these old cars. We've probably done about 4,000 of them over the last 20 years. But they've -- all over the world we've sent them. And we naturally support this initiative. We were involved with this initiative right from the beginning, and would really like to see it happen now.

We have set up -- we have invested when the bill act was -- when the bill was originally signed and became

an Act we invested a lot of money in inventory and facilities. We are in our new facility already, all waiting for it to happen, and unfortunately it was slowed down, but really excited that we're at this point, and really thankful for CARB staff getting it to this -- to this point with us.

Naturally we have to thank SEMA for all that they did. Once they got involved, it really started happening and started going forward. And I can -- I don't want to reiterate all the other positives that everybody else has brought up because they are all positives. It's a staff creation -- a staff bill and we -- it's investment -- further investment, in my case, my company in California. And it's just -- these cars are just part of the whole California history and the American history.

We founded our company when we started 20 years ago was about 90 percent of them were sold in the U.S. Right now, we are exporting nearly 40 percent of them from the U.S., so -- and with us, this bill is going to give us an extra 325 or so. That's going to mean a lot more being exported also. So we support it and thank you very much for getting us this far.

Thank you.

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VICE CHAIR BERG: Thank you.

MR. WYNNE: Hi. Good afternoon. My name is

Cameron Wynne. I'm from De Lorean Motor Company. I'd like to thank you for your time for this. De Lorean Motor Company has had a presence in California since 1983 servicing original De Lorean cars. This was originally the largest market for De Lorean cars in the eighties, and we intend to recreate that again in the future.

As a company, we intend to take advantage of the low volume manufacturing legislation to produce the replica cars. Within six months of the finalization of the regulations, we'll be able to announce the final specifications and prices -- pricing, and be able to take deposits and go in production of the cars.

We are already in negotiations with several existing and potential component suppliers in the state of California to begin production and create more jobs in California.

We share the desires of the Air Resource Board to improve air quality. And these clean replica De Loreans will play a small but highly pivotal role in keeping our air and environment clean. I'd like to thank you for your time very much.

VICE CHAIR BERG: Thank you.

So with our last witness, I'm going to go ahead and close the record on this item. But I'd like to return to staff on our first witness that almost got a perfect

record here, and -- but it's so exciting they want to play too.

So I think this probably is an issue between custom and one-off type definition, and what we're proposing today. And so maybe you could just summarize for the Board how that is -- how your definition is different and why we did it that way.

ECARS EMISSIONS COMPLIANCE BRANCH CHIEF LOURENCO:

Sure. So when -- the FAST Act, from what I understand, it was basically -- it's pretty broad about how the industry can produce a vehicle to bring in. When industry asked us to consider this rule, we wanted to keep it limited to those vehicles that we could identify, that were recognizable to us, that were our history heritage vehicles.

And so we wanted to make sure that there wasn't a circumvention of our light-duty vehicle regulations for vehicles that were one-offs or show cars, things that we could not verify that they were -- they were real vehicles.

So what we had done is we -- our definition is, like I said, more limited. It has a production limit. Initially, we had set that production limit at 500. So those would be vehicles that a manufacturer would have at least produced 500. We could verify them.

We dropped it down to 50, because there were some people who wanted a Tucker. So I think that was a car from the forties and they produced 51.

(Laughter.)

ECARS EMISSIONS COMPLIANCE BRANCH CHIEF LOURENCO:

So now if someone wants to build a replica

Tucker, which we can -- we can verify. We know what it

looks like, and we know where it was produced, and so that

way it will save some -- a lot of effort when it comes to

implementing this rule.

So vehicles like the off-road vehicle is not an on-road vehicle. And we kept it to on-road vehicles only.

VICE CHAIR BERG: Okay. Are there any other Board questions?

Yes, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Yeah. Just to clarify to be sure I understand. This is not like the glider program? These are vehicles that are required to meet current emission standards. So if I buy one of these, it's comparable in terms of emissions to, as if I go buy a 2019 whatever in terms of fleet emissions, yes?

ECARS DIVISION CHIEF HEBERT: Yes, that's correct. It meets all the exhaust and evaporative emission requirements of a new vehicle, just any other new vehicles that's like the replica car. We did have to

supply some OBD concessions, because of the complications of putting different lines, and fuel tanks, and multiple builds compatible with the system as a whole.

So there is a little bit of OBD concessions, but nothing that we're concerned is going to cause emission -- you know, negative emission impacts.

And we have a coupe of -- there's different options for manufacturers to do. But they're in the Smog Check Program. So if there's any failures, they're -- they're held to the same requirements as any other new vehicle with just a couple of OBD concessions given for flexibility for builds.

BOARD MEMBER SHERRIFFS: And in regards to the testimony with the first part. That's an off-road vehicle, not an on-road vehicle?

ECARS EMISSIONS COMPLIANCE BRANCH CHIEF LOURENCO:

That was a one- or two-build vehicle, from what I understand. And it was definitely build to run one of the Baja races. So it's definitely an off-road vehicle.

BOARD MEMBER SHERRIFFS: Okay. Did you want to clarify?

MR. GLICKENHAUS: Thank you. Yeah, so that's a -- that's a prototype vehicle that General Motors made to go after Jeep. They actually wanted to go after Jeep, so they made that -- they made several of them. And the

idea was to go after the Jeep market. It was designed by Vic Hickey, the gentleman that designed some iconic off -- trucks, on-road trucks and also the lunar rover.

And they drove it two the Baja from California, raced the Baja. So it was an on/off-road vehicle. And we intend it to replace some green sticker vehicles.

BOARD MEMBER SHERRIFFS: So I'm sorry, the model that you're producing would be on-road street legal?

MR. GLICKENHAUS: Yes.

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BOARD MEMBER SHERRIFFS: Okay. Are we going to offer incentives if they put electric motors in these?

(Laughter.)

DEPUTY EXECUTIVE OFFICER CLIFF: Well, let me just address that. So we would not give an incentive for an electric vehicle, but there are incentives in the regulation, in that that's an easy path for certification, if you do an electric vehicle.

BOARD MEMBER SHERRIFFS: Nice

VICE CHAIR BERG: Yes, Mr. Gioia.

BOARD MEMBER GIOIA: I will -- I will move the recommendation.

VICE CHAIR BERG: Thank you.

Do I have a second?

BOARD MEMBER DE LA TORRE: Second.

VICE CHAIR BERG: Before we take the vote, should

I read into the record the fact that we're going to have a 15-day change?

ECARS DIVISION CHIEF HEBERT: He is.

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VICE CHAIR BERG: Yes. We'll -- before the vote, I just need to read in the 15-day change language.

So I have already closed the record. Now, if it is determined that additional conforming modifications are appropriate, the record will reopened and 15-day notice of public availability will be issued. If the record is reopened for a 15-day comment period, the public may submit written comments on the proposed change, which will be considered and responded to in the Final Statement of Reasons for the regulation.

Written or oral comments received after the hearing but before the 15-day notice is issued will not be accepted as part of the official record on this agenda item. The Executive Officer may present the regulation to the Board for future considerations, if warranted. And if not, the Executive Officer shall take the final action to adopt the regulation after addressing all appropriate conforming modifications.

We have before us Resolution 18-45. I have a first and a second.

All in favor?

(Unanimous aye vote.)

1 VICE CHAIR BERG: Opposed?

Any abstentions?

Motion passes. Thank you very much, staff.

(Discussion off the record.)

BOARD MEMBER BALMES: Because they've worked hard and now they can enjoy the fruits of that work.

VICE CHAIR BERG: Well, we're on our last agenda item. And that's Agenda Item 18-8-8. And it is a informational item to inform the Board of California Air Resources Board Tribal Consultation Policy. California is one of he largest populations of Native American Tribes in the country, a little under 200 tribes.

For generation, tribes have been sustainably managing their lands, and are in a unique position to offer insight, guidance, and collaboration with State agencies on ways to protect the environment.

In late 2011, Governor Brown signed an Executive Order, B-10-11, directing State agencies to consult with tribes. CARB already engages with tribes on various programs and has benefited from important contribution tribes have made to protect California's air quality and climate. For example, CARB has worked with the Yukon and other tribes to develop provisions in the Cap-and-Trade Regulation that allows tribes to voluntarily participate within the offset portion of the program.

As a result of consultation, tribes are now key actors in generating forest offset credits under the Cap-and-Trade Program by ensuring long-term protection of forest for the climate ecosystem, cultural, and other benefits. This is just one example of the State tribe collaboration and highlights the importance and benefits of meaningful consultation.

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Today's items will further this consultation process and our understanding of it.

Mr. Corey, would you please introduce this last item for us?

Chair Berg. So this item, as you noted, is to inform the Board of the policy by which CARB will conduct formal consultations with California Native American tribes.

While the federal government has been engaging in consultations with tribes for a very long time, the idea of consultation by State agencies has taken on increasing importance under Governor Brown. The history of state's interaction with tribes has not always been good one. But our understanding of the importance of these government-to-government relations has evolved and improved over time.

The need for state agency consultation with tribes has only become more apparent as we face air

quality and climate change challenges common to all of us. Now, more than ever, states need to act swiftly, if we're going to slow down or divert the harms caused by climate change and continue on the trajectory of cleaning up our air, and to back-stop some of the rollbacks of environmental regulations at the federal level.

CARB's policy reflects our commitment to consultation to recognizing the sovereignty of tribes and to solidifying the importance of these government-to-government relations in a knowledgeable, sensitive, and respectful manner.

Tribes have unique insight, expertise, and experience on environmental protection, and we stand to benefit from full and effective consultation with our counterparts in tribal government. And just as a personal anecdote to demonstrate how our consultation and collaboration with tribes can have an even larger impact, I wanted to share a brief summary of a recent visit we had with the Yurok Tribe on the Klamath River.

The Yurok Tribe has been working to protect their forests and culture, and increase their land base through an innovative combination of carbon offset financing and other tools. The structure is being analyzed by tribes and indigenous people from other countries as an example of what can be done.

A few months ago, we had the honor of representing CARB in a meeting with the Yurok and tribal leaders from around the world to highlight the importance of states and tribes working together in a co-equal manner to tackle climate change. Our Tribal Consultation Policy is another key to building these important relationships.

And with that, I'll ask Shannon Martin Dilley of the Legal office to give the staff presentation.

Shannon.

(Thereupon an overhead presentation was Presented as follows.)

ATTORNEY MARTIN DILLEY: Good afternoon, Vice Chair Berg and members of the Board. I'm presenting CARB's draft Tribal Consultation Policy. It is an informational item, so no action is necessary, unless directed otherwise.

As a member of the Abenak Tribe back east, this is an item that is very important to me.

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ATTORNEY MARTIN DILLEY: I would like to begin with a roadmap of where we will go in the presentation. First, I want to address CARB's outreach process that we went through to ensure tribes had adequate input into the policy. Then I will go over the purpose of CARB's draft Tribal Consultation Policy, and some basic tribal

concepts. I will then identify important Executive Orders and legislation that influenced this policy, and then go over the policy itself, including important consultation principles.

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ATTORNEY MARTIN DILLEY: CARB engaged in extensive outreach to tribes. We released our draft policy in January providing tribes with an eight-month comment period. We then conducted a mass mailing and posted the policy on the CalEPA tribal listserve. We also presented at three different workshops throughout California, in Northern, Central, and Southern California on tribal lands.

We presented at the Regional Tribal Operations

Committee meeting. We also submitted our policy for

review to the Governor's office, CalEPA, and the National

Tribal Air Association.

We then created a tribal relations website on the CARB website, and we posted the policy to the website. After reviewing the tribal comments, we met with one tribe to discuss ways to address the comments. We then made suggestions on language and presented it to the tribe for approval. And after receiving approval, we incorporated the language.

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ATTORNEY MARTIN DILLEY: So why are we doing this?

There were three man purposes of the draft Tribal Consultation Policy. First, it is a commitment by CARB to engage in government-to-government consultation with California Native American tribes, and strives to do so in a knowledgeable sensitive and respectful manner. Second, it is aimed at fulfilling the Governor -- Governor Brown's Executive Order B-10-11. And third, it provides guidance to CARB staff in how we will conduct consultations.

CARB will use CalEPA's Tribal Protocol, which is in the works right now, for a more in-depth step-by-step process, and will use other documents, such as a tribe's own consultation policy as well.

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ATTORNEY MARTIN DILLEY: Some background information is important. The term "tribe" can mean many things. In a general sense, it means a group of people with shared characteristics, kinship, language, rituals, culture.

The legal definition, of course, is a little more narrow. Under the Government code, it is either a federally recognized tribe or non-federally recognized tribe. And under the California Environmental Quality Act, or CEQA, it is a California Native American tribe

located in California that is on the contact list maintained by the Native American Heritage Commission. So the definition depends on the law.

Federal recognition is done by a process administered through the Department of the Interior or through federal legislation. Tribes must meet certain criteria to be recognized federally. And federal recognition means a tribe has certain legal rights and the federal government has trust duties to the tribe.

For purposes of consultation, CARB consults with both federally recognized and non-federally recognized tribes. California and Alaska have the two largest tribal populations in the United States. The number changes ever year, but currently there are 109 federally recognized tribes, and 57 non-federally recognized tribes in California, and in the U.S. There are 563 federally recognized tribes.

California Native American tribes have been managing their lands and the environment for many centuries and have unique insights. Each tribe is distinct from one another area. You cannot make an assumption about one tribe based on interactions with another tribe.

They are different in history, culture, language, the governing bodies, and their environmental issues.

There is one shared characteristic, however that does apply to all tribes, and that is the history of interactions with the government.

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ATTORNEY MARTIN DILLEY: The history is important, because it shapes our interactions with tribes today. As you can see from this slide, there are many different periods. I will not go into each one unless asked. But throughout time, the federal government and the states institutionalized violence against Native Americans, enacted policies of warfare, slavery, land dispossession, relocation, and cultural determination that left few people alive and no tribe intact.

We are in currently in the self-determination era, where the government recognizes that tribes are in the best position to manage their affairs. But if you look at the history, you see that tribes have had many years of experience working with the government, and it hasn't always been good, and it shapes where we are today.

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ATTORNEY MARTIN DILLEY: Another important concept at the heart of where we are today is tribal sovereignty. It is inherent tribal authority. Tribes have their own constitutions, land bases, and people that they govern. They have tribal governments, and tribal

courts. Tribes have the power to regulate, tax, punish, and exclude others. This is a complex issue because there are states -- state and federal laws that may affect tribes depending on the legal status of the tribe and the land holdings. But given the history that I just described, tribes hold sovereignty very closely.

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ATTORNEY MARTIN DILLEY: But we are in a new era. State-tribal relations are more important than ever. Things are changing at the federal level making the state interactions a larger focus. Even before the changes at the federal level, California began recognizing the importance of tribes early on.

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ATTORNEY MARTIN DILLEY: In 2011, Governor Brown signed Executive Order B-10-11 directing state agencies to engage in government-to-government consultations with tribes. This includes both federally and non-federally recognized tribes.

It also created the Governor's Tribal Advisor

Position to help with this process. Then in 2014, the

legislature passed Assembly Bill 52 requiring consultation

between lead agencies and California Native American

tribes as part of -- as part of the environmental review

process under the California Environmental Quality Act.

The legislature recognized that the California Native American tribes traditionally and culturally affiliated with a geographic area, may have expertise concerning their tribal cultural resources.

AB 52 adds cultural resources to the list of potential significant effects on the environment. It requires that prior to the release of a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report for a project that the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with a geographic area where formal notification is requested. It directs public agencies to avoid damaging effects to any tribal cultural resources where feasible.

Most of CARB's work does not disturb the ground. We do not issue permits and do not regulate on tribal lands. Most of CARB's tribal consultations will occur under Executive Order B-10-11, rather than AB 52. However, as you can see, there's a lot of great work being done at the higher levels that highlights the importance of the tribal-state relations.

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ATTORNEY MARTIN DILLEY: It is also important to highlight CalEPA's role. CalEPA had a tribal consultation

policy on the books since 2009. Then, in 2015, CalEPA updated its policy. And CalEPA, recognizing the unique work that each of the six boards, departments, and offices conducts instructed each agency to adopt their own tribal consultation policies.

CalEPA is also in the process of formalizing a tribal consultation protocol that will help with a step-by-step process in conducting the tribal consultation -- tribal consultations. And CARB has been directly involved in that as well.

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ATTORNEY MARTIN DILLEY: Our policy commits to CARB working with tribes in a respectful, knowledgeable, and sensitive manner. It sets out core principles for consultation with tribes, when the tribes request consultation or consultation is required or appropriate.

These important consultation principles are things like determining when consultation is required or appropriate, the scope of the consultation, the time frame, whom to consult, and the meaning of consultation.

There is the legal meaning of consultation, which is meaningful and timeful process -- timely process of seeking, discussing, and considering carefully the views of others in a manner that is cognizant of all parties cultural values and where feasible seeking agreement. The

policy also notes that the tribe may have a preference on how the consultation is to be conducted, what consultation means, between whom, and so forth, and that we will respect this.

It also notes that where there is a legal requirement, such as AB 52 or other statutes, that we must comply with the legal requirements. The policy highlights three important consultation principles: consultation is between high ranking officials unless something less is agreed to, consultation has been -- has to be meaningful, and it is not the same thing as public participation.

Second, the policy provides direction to CARB staff should they receive a tribal consultation request.

Third, it lays out important guiding principles, which include con -- important concepts, such as respecting tribal sovereignty, committing to building and strengthening the government-to-government relationship, and recognizing that each tribe is distinct culturally, geographically, and in their governing systems.

Last, it lists action items, like designating a tribal liaison, implementing CalEPA's tribal protocol, and attending the Tribal Advisory Committee meetings, which occur quarterly.

This policy will be practically applied mostly in the Executive Order B-10-11 setting as previously stated.

A majority of our regulations and projects do not create ground-disturbing activities that would implement AB 52. In this regard, we could receive a consultation request during the initial stages of creating regulations, plans, or policies.

Where we will likely see most of our consultation requests is in the Cap-and-Trade Forest Offset Program.

Tribes can voluntarily participate and, in fact, make up about 50 percent of the program.

Other areas that we can expect potential requests would be the development of major policies or plans like the scoping plan, or major regulations that have meaningful impact to climate change. Funding is another area that will likely receive more attention as well.

Next steps.

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ATTORNEY MARTIN DILLEY: This is an informational item, so no action is necessary from the Board unless you instruct otherwise.

Once we conclude the Board hearing and all comments are incorporated, I will submit the policy to Executive Officer for signature and it will become final. We will continue to work with tribes using this policy as guidance. This concludes the presentation. I'm happy to answer any questions.

Thank you.

VICE CHAIR BERG: Thank you very much, Shannon.

This is an area that I have not thought a lot about,

tribal lands. And certainly, their sovereignty I think

about often. But how do tribal lands fall under the Clean

Air Act, or under our -- under our SIP plans, or are they

just carved out areas that are sovereign areas, and it's

up to each tribe individually decide if their

environmental quality is being met or not?

with the federal Clean Air Act, and they work with U.S.
EPA. And if their area is not in attainment, they would
be submitting a tribal implementation plan to U.S. EPA.
But they could have impacts where -- they could do
activities that have air impacts off the tribal lands.
Another -- another area is if they -- if they request
treatment as a state from U.S. EPA. So tribal law is very
complex, and there's a lot that's involved, and the land
holdings are important.

But for the most part, they will be submitting their own plans to U.S. EPA. And they do have air laws that they have to comply with.

VICE CHAIR BERG: Well, thank you very much for bringing this item to us today.

Are there any other follow-up questions from the

Board?

Yes, Dr. Balmes

BOARD MEMBER BALMES: I don't have a question, just a quick comment. First of all, I wanted to thank you for the presentation. And I also wanted to thank Mr. Corey and CARB staff that actually helped me help the Yurok tribe. And I learned about, you know, the sovereignty issues and how the Clean Air Act did or didn't apply.

But the Yurok tribe had a school with -- with electricity that was supplied by a dirty diesel generator right next to the school. Now, with the staff's help, we both got a clean generator and actually PG&E finally got actually a powerline to the school. But I just wanted to appreciate CARB staff's help, and Mr. Corey's in particular, with regard to that specific issue.

VICE CHAIR BERG: Yes. And thank you that we do incorporate these very important citizens within our state. And I appreciate all of your interaction as well. So keep us updated as you feel we should be.

ATTORNEY MARTIN DILLEY: Thank you.

VICE CHAIR BERG: Thank you.

Oh, yes, please.

BOARD MEMBER TAKVORIAN: I just want to express my appreciation as well for your hard work. And I think

that an intentional process to recognize and seek the guidance from indigenous people. So I really -- when you did the briefing with me, I really appreciated that you saw this was a two-way interaction. And I think that's critically important. We have a lot to learn from indigenous people. And I appreciate you representing at least a slice of the history, so that we're all reminded of the challenges and awful treatment that indigenous people have received in -- in our country.

San Diego has the largest number of tribes actually, and -- not the largest number of tribal people, but there's a couple of environmental protection agencies that have been established on tribal lands in San Diego. So we've had some interactions related to that. And I really appreciate the struggle that they have gone through to try to figure out how to manage environmental issues on their own lands.

So as I said to you during our briefing, I hope that we can -- we, as a Board, can do more to learn about indigenous culture and about how that relates to environmental stewardship, because they certainly have been a key part of the environmental justice movement, and we're some of the original folks who helped to start that. And I think that the movement still really relies on indigenous culture as guidance.

So I really appreciate that CARB is part of that, and that you've done this policy.

Thank you so much.

ATTORNEY MARTIN DILLEY: Thank you.

VICE CHAIR BERG: We do not have any public comments. And so at 3:05, we will bring this meeting to a close, and look forward to seeing everybody in November here in Sacramento, and December is in Fresno?

EXECUTIVE OFFICER COREY: We're going to move, because it was driven by the San Joaquin item. We're going to move -- the December meeting will be in Sacramento. It will be January San Joaquin, so we'll have to make some adjustments.

VICE CHAIR BERG: Great. Thank you very, very much. Everybody have a great afternoon. We'll see you next month.

(Thereupon the Air Resources Board meeting adjourned at 3:04 p.m.)

1	CERTIFICATE OF REPORTER
2	I, JAMES F. PETERS, a Certified Shorthand
3	Reporter of the State of California, do hereby certify:
4	That I am a disinterested person herein; that the
5	foregoing California Air Resources Board meeting was
6	reported in shorthand by me, James F. Peters, a Certified
7	Shorthand Reporter of the State of California, and was
8	thereafter transcribed, under my direction, by
9	computer-assisted transcription;
10	I further certify that I am not of counsel or
11	attorney for any of the parties to said meeting nor in any
12	way interested in the outcome of said meeting.
13	IN WITNESS WHEREOF, I have hereunto set my hand
14	this 6th day of November, 2018.
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19	Amer A
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21	
22	JAMES F. PETERS, CSR
23	Certified Shorthand Reporter
24	License No. 10063