MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

CALEPA HEADQUARTERS
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SECOND FLOOR
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SACRAMENTO, CALIFORNIA

THURSDAY, MAY 25, 2017
9:12 A.M.

JAMES F. PETERS, CSR
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Ms. Edie Chang, Deputy Executive Officer
Mr. Kurt Karperos, Deputy Executive Officer
Ms. Ellen Peter, Chief Counsel
Ms. La Ronda Bowen, Ombudsman
Ms. Emily Wimberger, Chief Economist
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Mr. Renaldo Crooks, Air Pollution Specialist, Regulatory Assistance Section, Industrial Strategies Division (ISD)

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Ms. Ashley Dunn, Air Pollution Specialist, Innovative Strategies Branch, Mobile Source Control Division (MSCD)

Mr. Sam Gregor, Manager, Innovative Strategies Branch, MSCD

Mr. Wes Ingram, Chief, Project Assessment Branch, ISD

Ms. Margret Kim, Senior Attorney, Legal Office

Mr. Jack Kitowski, Division Chief, MSCD

Mr. Tung Le, Manager, Regulatory Assistance Section, ISD

Ms. Karen Magliano, Division Chief, Air Quality Planning and Science Division (AQPSD)

Ms. Margaret Minnick, International Liaison, Chair's Office

Mr. Webster Tasat, Manager, Central Valley Air Quality Planning Section, AQPSD

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

Mr. Floyd Vergara, Division Chief, ISD

ALSO PRESENT:

Ms. Adenike Adeyeye, Earthjustice, Central Valley Air Quality Coalition

Mr. Cesar Aguirre, Central Valley Air Quality Coalition

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ALSO PRESENT:

Mr. John Boesel, CalStart
Mr. Manuel Cunha, Jr., Nisei Farmers League
Ms. Janet Dietzkamei, Central Valley Air Quality Coalition
Ms. Grecia Elenes, Leadership for Justice & Accountability, Central Valley Air Quality Coalition
Mr. Linus Farias, Pacific Gas & Electric
Mr. Alan Forkey, United States Department of Agriculture, Natural Resources Conservation Service
Mr. Tom Frantz, Central Valley Air Quality Coalition
Ms. Genevieve Gale, Central Valley Air Quality Coalition
Mr. Sheraz Gill, San Joaquin Valley Air Pollution Control District, California Air Pollution Control Officers Association
Mr. Thomas Helme, Central Valley Air Quality Coalition
Ms. Bonnie Holmes-Gen, American Lung Association in California
Ms. Angela Islas, Central Valley Air Quality Coalition
Mr. Roger Isom, California Cotton Ginners, and Growers Association, Western Agricultural Processors Association
Mr. Shrayas Jatkar, Coalition for Clean Air
Mr. Ryan Kenny, Clean Energy
Ms. Alexa Kleysteuber, Deputy Secretary, California Environmental Protection Agency
Ms. Destini Luna, Central Valley Air Quality Coalition
Mr. Ronald Martin, Central Valley Air Quality Coalition
Ms. Nayamin Martinez, Central Valley Air Quality Coalition
A P P E A R A N C E S  C O N T I N U E D

ALSO PRESENT:
Ms. Alana Mathews, California Energy Commission
Mr. Thomas Menz, Central Valley Air Quality Coalition
Ms. Sarhely Morales, Central Valley Air Quality Coalition
Ms. Yolanda Park, Catholic Charities Diocese of Stockton
Mr. Roman Partida-Lopez, Center for Sustainable Energy
Mr. Michael Pimentel, California Transit Association
Ms. Samantha Rubio, Central Valley Air Quality Coalition
Ms. Sarah Sharpe, Central Valley Air Quality Coalition
Mr. Jared Sanchez, California Bicycle Coalition
Mr. Dolores Weller, Central Valley Air Quality Coalition
Mr. Earl White, Central Valley Air Quality Coalition
Ms. Kate White, California State Transportation Agency
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CHAIR NICHOLS: Good morning, ladies and gentlemen, and welcome to the May 25th, 2017 public meeting of the Air Resources Board. The meeting will now come to order, and we will begin with the Pledge of Allegiance to the flag.

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

CHAIR NICHOLS: Thank you.

Let's have a roll call.

BOARD CLERK McREYNOLDS: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK McREYNOLDS: Mr De La Torre?

Mr. Eisenhut?

Senator Florez?

Assembly Member Garcia?

Supervisor Gioia?

BOARD MEMBER GIOIA: Here.

BOARD CLERK McREYNOLDS: Senator Lara?

Ms. Mitchell?

BOARD MEMBER MITCHELL: Here.

BOARD CLERK McREYNOLDS: Mrs. Riordan?

BOARD MEMBER RIOR DAN: Here.

BOARD CLERK McREYNOLDS: Supervisor Roberts?

BOARD MEMBER ROBERTS: Here.
BOARD CLERK McREYNOLDS: Supervisor Serna?
Dr. Sherriffs?

BOARD MEMBER SHERRIFFS: Yes.

BOARD CLERK McREYNOLDS: Professor Sperling?

BOARD MEMBER SPERLING: Yes. Here.

BOARD CLERK McREYNOLDS: Ms. Takvorian?

BOARD MEMBER TAKVORIAN: Here.

BOARD CLERK McREYNOLDS: Vice Chair Berg?

VICE CHAIR BERG: Here.

BOARD CLERK McREYNOLDS: Chair Nichols?

CHAIR NICHOLS: Here.

BOARD CLERK McREYNOLDS: Madam Chair, we have a quorum.

CHAIR NICHOLS: Thank you. A couple of announcements before we get started. First, I need to mention interpretation services. Our interpreter is here today to interpret in Spanish for Item 17-5-3, which is the public meeting to hear a continuation of the update to the PM2.5 SIP development for the San Joaquin Valley. Headsets are available outside the hearing room at the attendance sign-up table, and can be picked up at any time.

(Thereupon the interpreter spoke in Spanish.)

CHAIR NICHOLS: Thank you. Anyone who wishes to testify should fill out a request to speak card that's
available in the lobby outside the Board room. We appreciate it if you would turn it into a Board assistant or the Clerk of the Board prior to the commencement of the item, so that we can assemble a list of speakers and know how many people we need to accommodate.

Also, anyone who wishes to speak should be aware that we impose a three-minute time limit on oral testimony. We appreciate it if you'd state your first and last name when you come up to the podium, and then put your testimony in your own words. If you are speaking in Spanish or through an interpreter, we do allow extra time, because of the extra time for translation.

But if you have written testimony, we appreciate it, if you'd submit that, and not just read it. For safety reasons, I need to point out that we've got emergency exits to the rear of the room. And in the event of a fire alarm, we're required to evacuate this room immediately and go down the stairs and outside the building until we hear the all-clear signal when we can return to the building.

This morning, we have as our first item, I believe is the consent item, is that correct, yes, right here.

We are removing this item from the consent calendar and providing an opportunity for staff to further
describe the plan, as well as to provide a context for how
the U.S. EPA recently responded to a petition for
reconsideration of its regulation. So I will turn to
staff now for an explanation and a report.

EXECUTIVE OFFICER COREY: All right. Thanks,
Chair Nichols. On August 29th, 2016, EPA published update
emission guidelines that were originally promulgated in
1996 to reduce emissions of landfill gas, which contain
both non-methane organic compounds and methane from
existing municipal solid waste landfills. And as you
know, methane is a powerful climate-forcing pollutant, and
non-methane organic compounds contribute to the formation
of smog, which is detrimental to public health.

The federal Clean Air Act requires State
regulatory agencies to implement and enforce U.S. EPA's
updated emission guidelines. Originally, the State Plan
was required to be submitted to U.S. EPA by May 30th of
2017. U.S. EPA recently stayed the submittal date by 90
days.

Staff consulted with stakeholders, the air
districts, and CAPCOA and have achieved consensus on the
proposal to submit ARB's existing landfill methane rule as
California's compliance plan under U.S. EPA's emission
guidelines. Staff believes the landfill methane
regulation realizes significant greenhouse gas and
criteria pollutant reductions as well as recusing noxious and odorous compounds resulting in important public health benefits, particularly for Californians in disadvantaged communities.

So although EPA has stayed the emission guidelines, staff believe that we should proceed with submittal of California's compliance plan by the original due date of May 30th, 2017, as it will demonstrate that additional emission reductions from the source category are not only possible, but have already been achieved in our State. I'll now ask Renaldo Crooks to give a brief staff presentation.

Ronaldo.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST CROOKS: Okay. Thank you, Mr. Corey. Good morning, Chair Nichols and members of the Board. As Mr. Corey noted, I will be presenting staff's proposed strategy for compliance with the new initial -- emission guideline requirements for municipal solid waste landfills. Staff fully supports U.S. EPA's rulemaking efforts to reduce both methane and non-methane organic compounds from landfills. And staff's proposed strategy complements those federal efforts.

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AIR POLLUTION SPECIALIST CROOKS: I'll start with the primer landfill gas and controls and discuss California's various programs that regulate emissions from landfills. Next, I will step you through a brief timeline that leads up to the development of the proposed State plan, discuss California's landfill methane regulation, and describe how it's similar, but more stringent than U.S. EPA's revised emission guidelines.

I will also discuss the new federal rule for existing municipal solid waste landfills, and the requirements for states to submit a State plan to implement the new federal rule, and will present our strategy for complying with the federal emission guidelines. I will close with staff's proposed recommendation.

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AIR POLLUTION SPECIALIST CROOKS: The decomposition of organics in municipal solid waste landfills produces landfill gas comprising about equal amounts of carbon dioxide and methane along with trace gases. The trace gases include toxics non-methane organic compounds, also called volatile organic compounds, which contribute to the formation of ground level ozone.

Methane is a short-lived greenhouse gas pollutant, which is 72 times more potent than carbon
dioxide over a 20-year time horizon. The control of landfill gas prevents most methane and toxic compounds contained in the gas from either being released into the atmosphere as fugitive emissions or migrating underground to cause groundwater contamination.

Based on ARB's Short-Lived Climate Pollutant Plan that was approved by the Board earlier this year, landfills make up approximately 20 percent of California's total methane emissions or 24 out of a total 118 tons of carbon dioxide equivalent, using a 20-year global warming potential value emitted from all in-State methane sources in 2013.

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AIR POLLUTION SPECIALIST CROOKS: The landfill methane regulation requires owners to install and operate an active well-maintained landfill gas collection and control system. Active gas collection systems employ mechanical blowers or compressors to create a pressure gradient and extract landfill gas.

A typical active gas collection system with extraction wells is shown in this slide. This slide shows the components of a typical active gas collection control system used to produce energy.

The collection and control system is the backbone of minimizing landfill gas from migrating out of the
landfill and into the environment.

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AIR POLLUTION SPECIALIST CROOKS: Once collected, most landfill gas control systems utilize a flare to safely combust the gas to control the methane and non-methane organic compounds. Some collected landfill gas is used to produce energy using microturbines, internal combustion engines, gas turbines, boilers, and fuel cells. Some landfill gas is treated to produce a fuel product. These include landfill gas to vehicle fuel and pipeline quality biomethane.

However, more work needs to be done to ensure that landfill gas is not simply combusted without energy recovery. In addition, there's ongoing work to reduce the amount of organics going into landfills. SB 1383 puts a renewed focus on organics diversion, the development of which is being led by CalRecycle.

The landfill methane regulation builds on existing controls adopted under ARB's landfill suggested control measure, and local air district and federal landfill rules.

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AIR POLLUTION SPECIALIST CROOKS: Since 1986, ARB has been reducing emissions from landfills. In 1986, the Calderon Bill, or AB 3374, required landfill owners and
operators to test their landfills for potential toxics.
In 1987, the Connelly Bill, also known as AB 2588, required each district to prioritize their landfills according to the severity of the toxic emissions. High priority landfills have to prepare health risk assessments.

In 1990, ARB adopted a suggested control measure, which was designed to reduce emissions of non-methane organic compounds from municipal solid waste landfills. In 1996, the U.S. EPA issued landfill emission guideline requirements to reduce non-methane organic compounds from existing municipal solid waste landfills. The guidelines are implemented under Section 111(d) of the Federal Clean Air Act, which requires affected states to submit plans to the U.S. EPA detailing how they will implement them.

In 1997, ARB developed California's compliance plan in cooperation with California Air Pollution Control Officers Association, or CAPCOA and affected air districts. Because no statewide landfill rule was in place, the 1997 Emission Guidelines Compliance Plan consisted of a compilation of landfill rules adopted by each individual air district.

In 2008, recognizing the importance of reducing methane emissions, ARB's first scoping plan identified methane reductions from landfills as a priority discrete...
early action. As a result, in 2010, ARB adopted the landfill methane regulation as a statewide regulation as an AB 32 discrete early action measure.

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AIR POLLUTION SPECIALIST CROOKS: Similar to the guidelines, the landfill methane regulation requires the installation a well-maintained and operated gas collection control system for affected sources. Also, like the guidelines, the landfill methane regulation requires affected sources to control their landfill gas emissions by monitoring their landfills, keeping records, reporting their emissions, and installing gas collection and control systems, if specified thresholds are exceeded.

However, many of the landfill methane regulations' requirements are more stringent than the guidelines, which results in greater emission reductions. The landfill methane regulation achieves greater emission reductions, which I will discuss in more detail later in my presentation.

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AIR POLLUTION SPECIALIST CROOKS: Under section 111(d) of the Clean Air Act, U.S. EPA developed emission guidelines to control landfill emissions. The purpose of the guidelines is to reduce non-methane organic compounds and methane emissions from existing municipal solid waste
landfills. Under the framework of section 111(d) of the Federal Clean Air Act affected states are required to develop a State compliance plan, which details how the states will implement and enforce the requirements of the guidelines.

State plans are to be submitted to the U.S. EPA by May 30th, 2017. As I will discuss later, the regulation is currently stayed by the U.S. EPA.

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AIR POLLUTION SPECIALIST CROOKS: I will now discuss some of the key updated provisions of the emission guidelines. These include lowering the non-methane organic compound emission thresholds of 50 megagrams per year, which triggers the need for the gas collection control system to 34 megagrams per year, except for a new closed landfill subcategory, for which the non-methane organic compound threshold is 50 megagrams per year.

A new tier 4 methodology has been added to the rules to assess whether a gas collection control system is required once the non-methane organic compound emissions equal or exceed 34 megagrams per year.

In addition, there are new requirements for electronic reporting, annual liquids reporting, surface emissions monitoring, wellhead monitoring, gas treatment systems, and startup, shutdown, and malfunction.
As previously mentioned, ARB's landfill methane regulation is similar to the U.S. EPA's emission guidelines but contains more stringent requirements for the gas collection and control system, surface emissions monitoring, component leak testing, and compliance time frames.

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AIR POLLUTION SPECIALIST CROOKS: In the third quarter of 2016, ARB staff established a work group consisting of representatives from the local air districts, U.S. EPA, CAPCOA, and other interested parties to explore compliance strategies informing development of the State Plan.

Two strategies were considered:

The first was to follow the same strategy undertaken in 1997 when the original plan was developed. That is for each affected district to undertake rulemaking activities to update their existing landfill rules to comply with the updated emission guidelines.

The second option considered was to submit the landfill methane regulation, or LMR, as California's compliance plan, since the LMR is more stringent than the emission guidelines.

On January the 10th, 2017, ARB staff held a public meeting to present and discuss the work group's
findings and recommendations for compliance with the guidelines. ARB staff received comments from the public meeting in support of the second option to seek equivalency with the guidelines using California's more stringent LMR as the compliance plan.

Because of the LMR's greater stringency and positive feedback from the public, staff is proposing to submit ARB's LMR as California's State plan. The benefits of staff's proposed compliance strategy are that it nets a greater reduction in methane emissions. Staff estimates that the LMR regulates an additional 29 landfills compared to the updated emission guidelines, and all of the landfills that would be required to install new controls under the updated guidelines have already installed controls under the LMR.

The LMR also has co-benefits because it reduces emissions by at least an additional 87,000 metrics tons of CO2 equivalent, and 195 tons of non-methane organic compounds annually compared to those that would be achieved under the updated guidelines.

And it also reduces regulatory burden and simplifies compliance. The landfill methane regulation is a statewide regulation that has been in effect since 2010. It is already being implemented by affected landfills and is being jointly enforced by ARB and the local air
Affected landfill owners and operators are already familiar with the LMR's requirements, and many key requirements of the guidelines actually mirror those found in the LMR. Sources complying with the requirements of ARB's LMR will also comply with the guidelines. Staff's proposal to submit the LMR as California's compliance plan also has broad support from the regulated community, CAPCOA, and the air districts.

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AIR POLLUTION SPECIALIST CROOKS: ARB continues to work to reduce greenhouse gas emissions at landfills. The Board recently approved the Short-Lived Climate Pollutant Reduction Strategy, which includes targets for the diversion of organics from landfills by 50 percent of 2014 levels by 2020, and 75 percent of the 2014 levels by 2025.

In keeping with SB 1383, CalRecycle is developing regulations to meet these diversion targets. We anticipate that this measure will result in an additional reduction of four million metric tons of methane in 2030, which results in 14 million tons of methane reduced over the lifetime of waste decomposition.

Finally, ARB's draft 2017 Climate Change Scoping Plan update relies on methane reductions from the
Short-Lived Climate Pollutant Reduction Strategy and highlights cross-sector opportunities.

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AIR POLLUTION SPECIALIST CROOKS: As I mentioned in the previous slide, the emission guidelines are currently stayed. In response to a petition from industry, EPA issued a 90-day stay -- administrative stay on the implementation of the guidelines on May 5th, 2017 to reconsider the rule.

The U.S. EPA indicated that as part of the reconsideration, it may prepare a Notice or Proposed Rulemaking that would examine key provisions of the rule, including tier 4 surface emissions monitoring, annual liquids reporting, and overlapping applicability with other rules.

In keeping with ARB's mission of reducing greenhouse gas emissions and protecting public health, and because of the current federal administration's priorities with regard to environmental protection, staff believe moving forward with the submittal of the State Plan and working with the U.S. EPA during the rulemaking process will help ensure the revised guidelines continue to achieve maximum climate and public health protections.

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AIR POLLUTION SPECIALIST CROOKS: In summary, we
recommend that the Board adopt the proposed plan and
direct the Executive Officer to submit it to the U.S. EPA.
California has been first in reducing greenhouse gas
emissions in many sectors, and we believe that the
landfill methane regulation should be held as a model of
what the other states can accomplish above and beyond U.S.
EPA's current rule.

We will continue to work with the U.S. EPA and
other states to show what has ban accomplished in
California can be achieved nationwide.

Thank you.

CHAIR NICHOLS: Thank you very much, Mr. Crooks.
We have a representative of CAPCOA here this morning as I
believe the only speaker who signed up on this item, so
please come forward, Mr. Gill.

MR. GILL: Good morning, Chair and members of the
Board. I'm here on behalf the San Joaquin Valley Air
Pollution Control District and CAPCOA, and I'll have just
a short statement today.

I basically want to state that I'm in -- we are
in full support of ARB's staff recommendation to submit
the California landfill methane regulation that was
adopted in 2009 as an equivalent regulation to meet the
current federal landfill new source performance standards
to reduce non-methane organic compounds emissions from
municipal solid waste landfills.

As the air quality regulators with authority over stationary sources, including landfills, air districts have been regulating municipal solid waste landfills and requiring methane control since the original federal NSPS became effective in 1997.

As noted in the staff report, ARB identified further methane controls at landfills as an early action measure in the first AB 32 scoping plan, leading to the California landfill methane regulation adopted in 2009.

Air districts were very involved in the regulatory process, as well as the MOU process that provided districts the option to enforce the regulation as part of the normal landfill permitting activities. Almost all municipal solid waste landfills in California covered by the California landfill methane regulation are currently being regulated by air districts under the MOU, which has provided significant reductions of methane through leak checks and more frequent inspection of landfill cover.

While comparing the California landfill methane regulation with the most recent federal NSPS will show slight regulatory differences, we support ARB staff's determination that the California landfill methane regulation is equivalent or more stringent than the
This determination would also reduce the need for ARB to reopen their landfill methane regulation to comport to the federal NSPS with a less stringent regulation or reducing a requirement for 35 air districts to develop a new rules to individually show compliance with the federal NSPS.

The air district and CAPCOA urges you to support staff's recommendation and we thank you for the opportunity to comment.

CHAIR NICHOLS: Thank you. Any questions from the Board members about this item?

As you can see, originally we thought this was going to be completely non-controversial until EPA landed another surprise on us. And so I thought it was important that we bring it before the Board to reaffirm our commitment to this program.

It shouldn't have been a controversial item, given all the process that went on and the history, but it seems as though our friends in Washington are determined to relook at every single item of Clean Air Act compliance and implementation, and to really throw a monkey wrench into the process that's been used for a long time now to make continued progress on both clean air and climate pollutants.
So given the importance of this issue to California, we think it's worth noting that we are moving ahead, and that we intend this to be sent, not only to be used by use, which, of course, it will be, but also to be sent on to EPA to make it clear to them that this is something that this State, and we think others also are going to want to continue.

If any other Board members have a question or comment?

Yes, Ms. Takvorian, please.

BOARD MEMBER TAKVORIAN: I just -- I appreciate that we have brought it forward and for all the reasons that you stated. I wondered whether there's any risk here not of submitting, but if there's -- if the authority of ARB or the State of California is in question at all here with this plan?

CHAIR NICHOLS: That's a good question. Would we like any legal comment here?

Yes.

ATTORNEY DILLEY: Legal has reviewed this, and we have done a comparison between the LMR and the emission guidelines. And we are allowed to submit plans that are more stringent than the federal requirements. And so we believe we do have the authority to submit this after doing a comparison of all the provisions.
BOARD MEMBER TAKVORIAN: Thank you.

CHAIR NICHOLS: That's a good question to raise though.

All right. Well, hearing no other comments then, I would ask for a motion.

BOARD MEMBER SHERIFFS: Motion.

VICE CHAIR BERG: Second.

CHAIR NICHOLS: Okay. Moved by Dr. Sherriffs, second by Ms. Berg.

All in favor please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Opposed?

Any abstentions?

Great. Thank you so much. Good job.

While we're changing to the next item, which I guess is our -- actually a consent item, I noticed that one of our Board members was a little bit late this morning, because he was at his own District Board meeting. And I'd like to ask Mr. Serna to give us a report on what he's been up to.

(Laughter.)

BOARD MEMBER SERNA: Man, am I going to --

CHAIR NICHOLS: It is.

BOARD MEMBER SERNA: Am I going to get the evil eye for a while around here.
(Laughter.)

BOARD MEMBER SERNA: No. Thank you, Chair Nichols. I'm very happy to report that Dr. Ayala, Alberto Ayala and I just returned from the Sacramento Metropolitan Air Quality Management District Board of Directors meeting where we publicly announced that Dr. Ayala is going to be our new Air Pollution Control Officer for the local district.

(Applause.)

CHAIR NICHOLS: Yeah. So now you can see why I set this up as I did.

(Laughter.)

BOARD MEMBER SERNA: By the way, the Chair, as soon as I sat down mouthed to me, "You're dead".

(Laughter.)

CHAIR NICHOLS: In a nice way. It was a friendly.

BOARD MEMBER BALMES: I'll second that.

(Laughter.)

CHAIR NICHOLS: In all seriousness, I heard the news last night, and I congratulated Dr. Ayala in person. This is a wonderful move for Sacramento, but I think also for us just in the sense that some of our very top people are now being, what shall I say, welcomed into the community --
CHAIR NICHOLS: -- of local air pollution control
districts. And we will, of course, miss his contribution
and leadership tremendously, but we also recognize that we
have much to gain from having a person with his technical
and policy expertise here close at hand in Sacramento. I
know one of the reasons why he was interested in the
position, and Sacramento in him, is that this area is
making a very significant commitment to electric
transportation and zero emission transportation. And I'm
excited about the opportunity for him to help implement
that vision.

So despite my not quite humorous --

(Laughter.)

CHAIR NICHOLS: -- comment on this, because it
is -- it is a blow to us, of course, to lose somebody
who's been with us for such a long time and has made such
a tremendous contribution, I -- just to mention the
Volkswagen episode, we really would not by where we are
today without his -- without his tremendous contribution.

So, Alberto, we'll appropriately embarrass you
later. But in the meantime, congratulations to all.

Thank you.

VICE CHAIR BERG: And Madam Chair --

CHAIR NICHOLS: Yes.
VICE CHAIR BERG: -- did he give us a six-month notice?

(Laughter.)

VICE CHAIR BERG: I mean, I'd --

CHAIR NICHOLS: Six years.

BOARD MEMBER Balmes: Yeah, six years.

CHAIR NICHOLS: Six years might be more appropriate. We need time for the transition.

Yeah, I think we have -- we have a couple weeks.

All right. Without further do, let's take up our next item, which is --

SENIOR ATTORNEY BREHLER: Chair Nichols, before we sat down, you mentioned returning to the consent calendar to make sure there was vote on that.

CHAIR NICHOLS: Yes, that was what I was going to say was that we would go to the consent calendar, which is the Ozone State Implementation Plan, right?

Okay. Great. Thank you.

So we have a consent -- we do have a consent calendar, Item number 17-5-2 the 2016 ozone State Implementation Plan for the Western Mojave Nonattainment Area, that's Mrs. Riordan's part of the world.

BOARD MEMBER RIORDAN: Yes.

CHAIR NICHOLS: Would you like to say anything here?
BOARD MEMBER RIORDAN: Just briefly. Obviously, I'd like to move approval of Resolution 17-12 which is the consent item, and thank the staff for working with us. This is a district -- or an area that is very much impacted by transport, and staff has been wonderful about working with us, and I thank you for that very much.

CHAIR NICHOLS: I'll take that as a motion --

VICE CHAIR BERG: I'll second.

CHAIR NICHOLS: -- and a second.

All in favor please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Opposed?

Abstentions?

Great. All right. Done. Thank you.

Our next item is an update to an Item that we discussed last October, the PM2.5 State Implementation Plan for the San Joaquin Valley.

As I think everybody those by now, the San Joaquin Valley faces one of the greatest challenges in dealing with fine particles of any area in the United States. Concerted efforts by both the district and ARB are therefore critical to protect public health of the residents of the valley.

I'm especially pleased that we have contingent of residents from the area who are here this morning. And I
look forward to their input and to the Board's discussion.

Mr. Corey, will you please introduce this item.

EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

And as you mentioned, last October, staff presented an initial plan for the 12 microgram per cubic meter annual PM2.5 standard. Air quality modeling conducted for the Plan demonstrated that although significant mobile source reductions will continue to occur, given the magnitude of the PM2.5 challenge in the valley, these reductions would not be sufficient to meet the standard by the moderate deadline of 2021.

And as allowed by the Clean Air Act, the plan included a request for serious area classification with an attainment date of 2025. In October, the Board directed staff to explore opportunities for achieving further near-term reductions from both stationary and mobile sources before it acted on the plan.

Since then, staff has held two workshops in the valley to present the foundation -- the scientific foundation and key strategies for attainment to solicit community input. Staff have also been participating in the air district's public advisory work groups for a comprehensive 2.5 -- or rather, PM2.5 plan that will be heard by the Board later this year.

Staff's technical evaluation indicates that a
balanced approach of both directly emitted PM2.5, along
with NOx reductions would provide the most effective path
to attainment. In today's presentation, staff will
describe near-term actions it has identified to achieve
emission reductions and will also describe an overall
attainment strategy for meeting both the annual and
24-hour PM2.5 standards.

Following today's presentation, staff will
continue to work with the district and stakeholders to
finalize an attainment strategy that incorporates early
emission reduction opportunities that will return to the
Board later this year.

I'll now ask Webster Tasat to give the staff
presentation.

Webster.

(Thereupon an overhead presentation was
presented as follows.)

AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: Thank you, Mr. Corey. Good morning, Chair
Nichols, and members of the Board.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: Meeting PM2.5 standards is the valley's
most critical air quality challenge. In today's update, I
will summarize the Board's direction from last October and
report back on the work that has occurred over the last six months.

Through this process, ARB and district staff have identified additional opportunities for near-term reductions that provide the foundation for a comprehensive plan for meeting all of the health-based PM2.5 standards. The Board will not be taking action today, but I will be discussing the work that still needs to be completed and the schedule for bringing a comprehensive attainment plan to the Board later this year.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION MANAGER TASAT: Last October, the Board tabled consideration of the valley's plan addressing the first step in efforts to meet the 12 microgram annual standard. Instead, the Board directed staff to carry out the following actions.

First, conduct additional public outreach to provide stakeholders with an opportunity for meaningful dialogue on development of the plan. Second, identify additional near-term reduction opportunities from both stationary and mobile sources, as part of a comprehensive attainment strategy for multiple PM2.5 standards.

Finally, the Board requested that staff return and provide an update on staff's actions to implement the
Board's direction. Before I report on the status of
efforts conducted to date, I'll provide a brief summary of
PM2.5 standards the valley must address, as well as
current control efforts which are providing the foundation
for the overall attainment strategy.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: The Federal Clean Air Act sets out
requirements for establishing air quality standards as
well as plans from meeting them.

EPA is also required to periodically view
standards to ensure that they remain protective of public
health. Based on this review, EPA has established
increasingly health protective PM2.5 standards. This
includes both a daily standard to protect against
short-term exposure, and an annual particle standard to
address chronic health effects.

EPA first established PM2.5 standards in 1997.
This included a daily standard of 65 micrograms, which the
valley now meets. At the same time, EPA also established
an annual standard of 15 micrograms. The valley missed
its 2015 attainment deadline for this standard due to the
severe weather conditions associated with the drought,
which interrupted ongoing progress. As a result, the
region must now develop a new plan.
Under the Clean Air Act, attainment must be achieved as expeditiously as possible, along with controls reducing emissions by five percent per year. The target date for meeting this standard is 2020. As new health science became available showing health impacts at lower levels, the daily standard was strengthened in 2006 to 35 micrograms.

The Clean Air Act specifies attainment deadlines for each new standard. And areas with more severe air quality are provided more time to attain along with more stringent control requirements.

For the 35 microgram daily standard, these deadlines range from 2019 to 2024. Finally, in 2012, the annual standard was further strengthened to 12 micrograms with attainment required between 2021 and 2030.

Addressing these multiple standards is not as complicated as sometimes described. The key is developing a comprehensive strategy rather than individual strategies for each standard, and we are working with the district on this comprehensive planning approach.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: Current ARB and District control programs are providing the foundation for the overall attainment strategy. The chart on this slide illustrates progress in
reducing mobile source NOx emissions, which are a key contributor to the formation of particles that make up about half of measured PM2.5 levels in the valley.

The chart has three major colored sections highlighting programmatic areas that have been fundamental to our success: Stringent engine standards for cars and trucks, cleaner fuels, and programs to accelerate the replacement of vehicles and engines. The diamonds indicate the start dates for key programs.

Since 1990, these programs have reduced NOx emissions in the valley by about 60 percent. Looking forward, emissions are projected to continue to decline an additional 50 percent through 2025, as cleaner vehicles and equipment continue to enter the fleet.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: The chart on this slide provides a similar overview, but now illustrating reductions in directly emitted PM2.5 emissions from stationary and area sources. The three major colored sections reflect district programs targeting sources of smoke, fugitive dust, and incentive programs.

For smoke, the District has adopted a number of rules that have been progressively strengthened over time. These rules include controls on commercial cooking...
operations, limits on residential wood burning, and programs to manage agricultural and prescribed burning. Similarly, other regulations have reduced fugitive dust from agricultural operations, construction sites, and paved and unpaved roads. The District also operates a robust incentive program.

Taken together, these district programs have reduced PM2.5 emissions in the valley by nearly 40 percent. Unfortunately, going forward, as these programs have now been fully implemented, emissions are projected to increase slightly as the valley's population continues to grow.

Meeting 2.5 standards will therefore require further enhancements to build on the success of current district programs.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Returning now, to the Board's direction from last October, both ARB and the District have conducted considerable public outreach through workshops and work group meetings. ARB began this process with a workshop in Fresno last December, where staff presented the current science of PM2.5 in the valley, and the scope of potential approaches needed to meet the standards.

And last week, ARB staff held an evening
community meeting in Fresno to report on progress to date in developing a specific attainment strategy and to solicit feedback from valley residents and stakeholders. Approximately 40 members of the public attended the community meeting.

Along with ARB's outreach efforts, the District has conducted a complementary series of workshops and workgroup meetings. The District held four workshops that focused on specific elements of overall PM2.5 plan development, along with a public advisory workgroup consisting of various valley stakeholders. These meetings were also open to the public. The four workgroup meetings focused on air quality modeling, and proposed control measures. These meetings have been instrumental in identifying the near-term reductions I'll be discussing next, along with development of the comprehensive attainment strategy.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION MANAGER TASAT: A diversity of sources contribute to PM2.5 in the valley, representing a shared responsibility between ARB and the District. The new near-term actions identified since October on this slide, therefore target a variety of sources, which are key to effectively reducing PM2.5 levels. These near-term actions represent a
collective effort by ARB and the District to achieve additional reductions that will help advance progress towards attainment.

The new actions include district efforts to strengthen requirements limiting residential wood burning, enhanced control requirements for commercial charbroiling, and measures to further reduce dust emissions from agricultural operations.

In addition, incentive programs will further advance the deployment of cleaner technologies for trucks, tractors and other off-road equipment. ARB has also identified a new measure for heavy-duty truck smog check program to ensure trucks remain clean throughout their lifetime.

Finally, the District has proposed more stringent control limits for boilers, IC engines, and glass plants.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: In the next section of the presentation, I will provide additional details on these actions, as well as the benefits they provide as part of the comprehensive control strategy for all the PM2.5 standards.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: Defining an effective strategy begins with
understanding the sources contributing to PM2.5 throughout the year. Ambient PM2.5 levels are made up of many constituents that can either be directly emitted, such as soot and dust, or form through reactions of NOx, SOx, and ammonia. Routine measurements of these constituents are made at four sites in the valley supplemented with more extensive measurements during intensive field studies.

The pie chart on this slide shows the types of sources contributing to the annual average PM2.5 levels in Bakersfield, the site with the highest concentrations. This reflects concentrations representative of peak drought conditions in 2013. This year was selected as the base year for the attainment demonstration to ensure that the strategy will adequately protect public health during drought conditions that are likely to occur more frequently due to man-made climate change.

Carbon particles are the largest constituent accounting for about 43 percent of annual levels. Smoke from fireplaces, and wood stoves, and commercial cooking are significant sources of this carbon, along with exhaust from mobile sources.

Ammonium nitrate particles shown on the left account for about 37 percent with mobile sources emitting about 85 percent of the NOx that forms ammonium nitrate. Other constituents include ammonium sulfate, which comes
primarily from a variety of industrial sources, and fugitive dust from agricultural operations, construction activities, unpaved lots, and paved and unpaved roads.

Next, let's look at peak daily PM2.5 levels.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Similar to the annual average, the highest daily PM2.5 levels typically occur in Bakersfield. Highest concentrations occur during winter months when long periods without rainfall coupled with cool temperatures and stagnant winds lead to PM2.5 levels that buildup over days to weeks.

Peak levels modeled in 2013 were 63 micrograms per cubic meter, nearly twice the level of the daily standard.

While similar constituents contribute to peak day concentrations, as shown in this pie chart, the proportions are different. The cold stagnant conditions that occur during winter months are especially conducive to ammonium nitrate formation, which accounts for 51 percent of PM2.5 particles. Carbon particles account for another 38 percent with enhanced contributions from residential wood burning.

As with the annual average, ammonium sulfate and fugitive dust particles make up the remaining mass.
MANAGER TASAT: The ambient measurements I just described define the key sources the attainment strategy needs to address. Air quality modeling then helps us evaluate the most effective approaches for achieving necessary reductions.

This modeling integrates air quality and emissions data along with weather patterns to predict future air quality, and identifies the magnitude and relative effectiveness of emission reductions needed for attainment. Building from existing control program, the core elements of the attainment strategy include five focus areas, consistent with near-term actions I discussed earlier.

First, approaches to prevent wood smoke impacts on peak days by curtailing wood burning levels well below the daily standard, along with incentive programs to replace older wood burning devices.

Second, new controls for commercial charbroiling operations with an enhanced focus on urban on the urban areas of Bakersfield and Fresno.

Third, minimizing dust from agricultural operations, as well as urban sources of dust, such as unpaved lots and parking areas as well as paved roads.
Fourth, aligning emission control requirements for stationary sources with the latest advances in control technologies.

And fifth, new measures to establish requirements for the next generation of mobile source controls, along with incentive programs to enhance the deployment of these cleaner technologies within the time frames needed for attainment within the valley.

In the remaining portion of the presentation, I'll provide additional details on each of these elements of the attainment strategy starting with residential wood burning.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Residential wood burning includes emissions from fireplaces and wood stoves and accounts for nearly one-third of the PM2.5 carbon particles measured on peak winter days. These smoke particles also contain toxic air contaminants.

The map to the right shows the distribution of daily average winter emissions from wood burning with the darker red colors indicating higher emissions. Emissions are highest in urbanized areas, but also reflect a broad distribution throughout the valley, including in less densely populated areas.
Reducing the localized impact of wood burning can provide significant health benefits. A recent study found that reductions in wood smoke from District programs to curtail wood burning had measurable health benefits. This study showed that hospitalization rates for heart disease declined over 15 percent since implementation of the District's wood burning curtailment program. Reductions in wood burning through curtailment programs and incentive programs for cleaner devices provides one of the most cost effective approaches to achieving significant air quality benefits. These programs also provide important co-benefits by reducing exposure to air toxics as well as black carbon.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Building on these efforts, new actions include continued replacement of older wood stoves and fireplaces with cleaner devices. The District's Burn Cleaner grant program has assisted valley residents funding over 12,000 replacements to date.

Over 75 percent of these have been to non-wood burning devices. Continued funding for this program will be important in supporting ongoing transition from wood burning. Other actions include consideration of expanding the winter wood burning curtailment season beyond the
current November through February time frame, and mandatory replacement of wood burning devices when homes are sold or remodeled.

Finally, ARB staff has discussed with the District the need for strengthening the District's curtailment program to prevent all burning on days with concentrations greater than 20 micrograms to prevent the build up of wood smoke that could lead to exceedances of the daily standard.

This would eliminate provisions in the current rule that allow certain wood stoves to burn when concentrations are above the standard, as well as wood-burning devices outside of urban areas.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Moving next to commercial charbroiling, which is responsible for 20 to 25 percent of PM2.5 carbon particles year-round. The map on the right side of this slide shows the spatial distribution of charbroiling emissions. As shown by the darker red colors, these emissions are concentrated in more populated urbanized areas of the valley, which can create localized health impacts. Emissions from commercial charbroiling are also continuing to grow along with the valley's population.

The District has required controls for
chain-driven charbroilers for a number of years. However, under-fired charbroilers which are not currently regulated account for the majority of emissions. Effective control technologies for under-fired charbroilers now become available and have recently been demonstrated at one location of a national chain in the valley. Based on the success, these control technologies are now being installed at the chain's other valley locations.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Proposed new actions would therefore require installation of controls for under-fired charbroilers in new larger restaurants throughout the valley. These control technologies can reduce emissions by 75 to 85 percent.

While the costs of -- while the costs of these technologies have been decreasing, installation costs could offset through incentive funding. The District is currently evaluating potential mechanisms for generating funding to support this effort.

In addition to requirements for larger restaurants valley-wide, ARB staff is suggesting a strategic focus on retrofits for additional restaurants in the Bakersfield and Fresno urban areas, which would provide additional benefits in the two regions of the
valley with the highest PM2.5 levels. ARB staff estimates this would affect about a third of the restaurants in these two cities.

Focused retrofits in these two areas would reduce localized impacts. And recent research suggests the control technologies would also reduce toxic emissions.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION MANAGER TASAT: Although the contribution of fugitive dust to PM2.5 has typically been small, the drier conditions associated with droughts can increase dust emissions. Therefore, the district has proposed several new fugitive dust measures. These include replacement of almond harvesters with new technologies that significantly reduce the dust produced during almond harvesting, and updating the valley's Conservation Management Practices regulation to include additional dust mitigation measures.

In addition, ARB staff has identified the need to evaluate opportunities for reducing emissions from urban dust sources, such as unpaved open areas, unpaved parking lots, and paved road dust, particularly in the Bakersfield area.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION MANAGER TASAT: The District has also proposed a number of
new measures to establish lower limits for other 
stationary sources. These reflect ongoing advancements in 
stationary source control technologies that are now 
feasible and cost effective. Specific measures include 
electrifying agricultural internal combustion engines, 
establishing lower NOx limits for non-ag stationary 
internal combustion engines, steam generators and boilers, 
installing ultra-low NOx flare technologies, and 
establishing lower NOx and SOx limits for glass plants.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: As the primary corridor for transportation 
through the State, emission reductions from cars, trucks, 
and other mobile sources will have substantial benefits in 
the valley. While the current control program will 
continue to provide significant ongoing emission 
reductions, further reductions will be a key element of 
the valley's attainment strategy, as well as part of a 
broader effort to transform the transportation sector.

These further reductions reflect a comprehensive 
suite of actions. New measures in the Mobile Source 
Strategy adopted by the Board in March will achieve 
reductions through development of more stringent engine 
standards, especially those for heavy-duty trucks, 
requiring zero emission technologies in a variety of
on-road and off-road applications, and adoption of new specifications for low-emission diesel fuel.

These regulatory efforts will be supplemented through incentive programs to accelerate turnover to these cleaner technologies, especially for heavy-duty trucks and buses, tractors, and off-road equipment.

ARB staff has also begun consideration of a new inspection and maintenance program for heavy-duty trucks. This smog check type program could achieve significant reductions and ensure that trucks continue to remain as clean as possible throughout their useful life.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: Further reductions from ag tractors will continue to play a significant role in our efforts to reduce emissions from mobile sources. Incentive programs have been especially critical in this effort.

Since 2009, over $400 million in private and public funding has been invested in the replacement of older agricultural tractors with newer, cleaner models. This funding has replaced over 5,000 Tier 0 and Tier 1 tractors to Implement the ag equipment measure in the 2007 SIP.

That measure established an emission reduction goal to be achieved through incentives with the potential
for regulatory action as backstop. Incentive funding has achieved over nine tons per day of NOx reduction in 2017, and met the SIP goal.

In addition, the district and the ag industry are working to implement a new tractor trade-up program to replace the oldest tractors with a cleaner used model.

While incentive funding will be an important element going forward, a potential backstop rule could serve as an overall emission reduction target, while at the same time acting as a catalyst for attracting additional near-term investments.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION MANAGER TASAT: ARB staff has modeled the benefits of the measures I've discussed in today's presentation coupled with the significant reductions that will continue to accrue from current control programs as part of a comprehensive attainment strategy.

This slide highlights predicted peak daily PM2.5 concentrations expected through implementation of the proposed measure. The bar to the left indicates 2013 PM2.5 levels in Fresno. The bar to the right shows the predicted future concentration with implementation of the measures identified to date.

All sites, with the exception of this one
monitoring site in Fresno, are projected to meet the 24-hour standard. As can be seen in the chart, the proposed strategy provides for significant reductions in both ammonium nitrate and carbon, and brings Fresno within two micrograms of attaining the standard.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: This next slide shows a similar analysis, but now for the annual standard. The proposed strategy also provides for significant progress in reducing annual levels, and brings almost all sites into attainment of the annual standard. The highest concentrations remain in the Bakersfield area with a predicted concentration within one microgram of the standard.

Again, the strategy provides for large reductions in ammonium nitrate and carbon. The measures included in the attainment strategy are ambitious and will require significant efforts to implement. However, we are encouraged by these results, and experience tells us that we can identify the further reductions that will be needed to close the small remaining attainment gap.

In the next few slides, I'll highlight a number of suggestions we have heard through our stakeholder outreach, as well as next steps in refining -- in further refining the strategy.
MANAGER TASAT: We have heard from many stakeholders during the last several months, including those who live and work in valley communities that are most impacted by PM2.5. With respect to mobile sources, community members have suggested that public fleets, zero-emission school buses, and small ag equipment, and workover and drilling rigs be a potential focus of ARB's commitment to further reduces mobile source emissions.

There is also strong interest in additional EV charging stations to better support the transition to zero emission vehicles. Suggestions to reduce directly emitted PM2.5 include controls on biomass incinerators, boilers and steam generators. Stakeholders have also suggested eliminating residential and agricultural burning and banning leaf blowing, with particular concerns about the localized impacts of these sources.

Enhanced public education and outreach was also a common theme to support the overall effectiveness of individual programs.

Finally, stakeholders have requested further evaluation of potential controls for ammonia, especially for dairies, which are the largest source of ammonia in the valley. We believe this evaluation is an important
effort and needs to begin with additional research to improve our understanding of potential control options.

ARB, working with other stakeholders, is beginning a comprehensive effort to address methane emissions from dairies as part of the Short-Lived Climate Pollutant Plan. This provides an important opportunity to take a broader integrated approach to evaluate both methane and ammonium emission, and the interaction between various control approaches.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION

MANAGER TASAT: In the coming months, ARB will continue to work with the District to refine air quality modeling and identify potential approaches to close the small remaining attainment gap. This will include evaluating how the strategies identified so far can be further refined to maximize benefits, as well as quantifying the emission reductions from several measures that have not yet been included in the modeling conducted to date.

ARB and the district will also be reviewing the additional suggestions provided by stakeholders to develop the final comprehensive attainment strategy necessary to meet the health based standards throughout the valley.

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AQPSD CENTRAL VALLEY AIR QUALITY PLANNING SECTION
MANAGER TASAT: As we move towards completing the attainment strategy, the timing of reductions from new measures will inform the valley's expected attainment dates. Maximizing the potential for near-term reductions will be a critical element of this efforts.

For example, strengthened requirements for residential wood burning can begin now, along with initial requirements for char -- commercial charbroiling, although a phased approach to implementation may be needed.

Incentives for mobile sources can provide additional near-term reductions by accelerating the turnover to cleaner technologies. At the same time, there are significant reductions that will take some time to achieve, as full implementation of the Truck and Bus Rule occurs in 2020 to 2023 time frame.

Development of a heavy-duty truck I&M program would also begin in paralegal. ARB and District staff's assessment of the phase-in of the overall reductions needed for attainment therefore suggests that 2024 is the most feasible attainment date for the 24-hour standard, and 2025 for the annual standard.

However, as I noted above, this must be accompanied by a strong focus on achieving near-term reductions and immediate initiation of rulemaking efforts.

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MANAGER TASAT: In closing, staff will continue to work with the District on development of a comprehensive attainment strategy incorporating the proposed near-term actions I’ve described today.

While the District has historically prepared separate plans for individual standards, we’ve been recommending an integrated planning approach and are optimistic that this can be done.

After district action later this summer, we will bring district planning efforts back to -- for your consideration this fall. Staff will also continue to work with the district on additional public outreach and workshops as part of this process.

This concludes my presentation. I would now like to invite Sheraz Gill, Director of Strategies and Incentives for the San Joaquin Valley Air Pollution Control District to provide a few remarks.

MR. GILL: Good morning again, Chair and members of the Board. Appreciate the presentation. We, at the Air District, would like to express our gratitude to valley residents, valley businesses, and ARB staff for participating in a very robust and effective public process over the last seven months.

We have made significant progress in identifying
control measures that move us closer to attain the PM2.5 standards, but our work is not done, and we still need to identify significant additional emission reductions.

Although we have worked very close and well with our colleagues at ARB, we believe that maintaining a certain degree of tension, and effort to hold each other accountable between the two agencies, is healthy and needs to continue. We believe that the valley residents and valley businesses will be the real winners if both of our agencies continue to push each other and do the best that we can.

A balanced attainment strategy that includes stationary source measures, and mobile source measures, and asks every sector of our economy to do the best that we can will not only be effective in improving public health for the valley residents, but will also help improve economic effectiveness and feasibility by fairly distributing responsibility and cost.

In that spirit, I am here to ask that ARB needs to do more to reduce NOx emissions from mobile sources. We still need to work with ARB to finalize the modeling. But even if we accept for the purpose of today's discussion the current modeling results that you saw today going from 37.1 micrograms to 35 for the daily standard requires approximately another 20 tons of NOx reductions
per day for the daily standard. And going from 13 micrograms to 12 micrograms for the annual standard requires an even greater amount of NOx emission reductions, which is still quite challenging.

Again, all of this is subject to final modeling and refinement, and we are continuing to work with the ARB staff to continue that effort.

And as we continue the public process, we will come up with a greater specificity and more details, but we would like to ask that the final plan include at least three components.

First, with respect to the Volkswagen settlement revenues, we ask that ARB exercise full authority and influence to ensure that they direct a significant portion of the funds to the valley. This is particularly important, given that the San Joaquin Valley is home to the top -- 20 of the top 30 disadvantaged communities in based on the CalEnviroScreen.

Second, we ask that in bringing this plan before your Board, that ARB explore every revenue source possible to help the valley's disadvantaged communities by helping to reduce emissions in every sector, from heavy-duty trucks and off-road equipment to reduce -- to reduce emissions from passenger vehicles, through programs such as the Enhanced Fleet Modernization Program.
In looking for these funds, we ask that all sources be considered, including greenhouse gas funds that could provide co-benefits in the valley's disadvantaged communities.

Lastly, we need to replicate our great success with respect to the agriculture tractors. In 2007, in recognition of the significant reduction needed in our attainment plan to address the 8-hour ozone standard, we worked very closely with ARB and agriculture to include an aggressive commitment in our plan to achieve five to ten tons of NOx per day by 2017, through a combination of incentives and/or regulatory approach.

The agriculture industry, the district, the USDA, NRCC work together on a concerted effort to generate a significant amount of funding and put together a voluntary equipment replacement incentive program that reduced more emissions years ahead of that schedule.

Thus far, this effort has invested over $500 million to date in public-private funding that has resulted in meeting that ten ton threshold, and way in advance getting over -- closely about 12 and a half tons of NOx per day.

We believe that for incentive strategies like this to work effectively, a carrot-and-stick approach is always needed. We are committed to work on -- in bringing
local and federal funding, and ask that the State contributing -- contribute funding as well towards this effort. But a regulatory backstop is also needed to make sure that everyone does their part and remains motivated to make it work.

We can work out the details as the public process continues before a backstop to work a sufficient compliance timeline will be needed to allow time to secure the funding for a project of this large scale. Our preference would be that a regulatory backstop be established and some form of contingency would -- similar to the commitment that we did in the 2007 ozone plan, or perhaps similar to commitments including the South Coast AQMD's recently adopted AQMP that focused on an incentive based strategy first.

In closing, as presented by ARB staff, the District has identified a long list of measures to reduce directly emitted PM2.5 emissions and NOx emissions through our extensive public process. And the District remains committed to continue to search for new opportunities and additional measures as we move forward in the public process. And we really look forward to continuing to work with ARB in this process.

Thank you for allowing me time to comment.

CHAIR NICHOLS: Thank you. And we appreciate the
collaboration and the progress that's been made. It's
undoubtedly a better product than before. Particularly
appreciate the District's willingness to step up on an
increased commitment to working on stationary source
measures that are under your control, and understand that
ARB has a lot of work to do here as well.

So with that, I'd like to turn it over to the
witnesses. We have a substantial list of people who have
come to testified, so let's get started. The list is up
on the Board, so please look at it yourselves and keep
track of where you are. We have a translator here. We
introduced her earlier, but I'm not sure where she is.
She -- okay. Great. So, as needed, she can come forward
then.

All right, beginning with number one, USDA. And
if people would move forward in twos or threes, it's
helpful just in terms of saving time as we wait for you
all to come down to the front.

Thanks.

MR. FORKEY: Good morning. My name is Alan
Forkey. I'm an Assistant State Conservationist for the
Natural Resources Conservation Service in Davis.

My position is to manage farm bill program
funding through Title 2 of the farm bill conservation
programs. We make funding available to farmers and
ranchers throughout California.

Beginning in 2002, with additional funding made available through Title 2, we were able to expand our focus to help landowners with air quality issues. At that time, we focused primarily on replacement of uncontrolled stationary diesel combustion engines, we provided assistance to landowners who were willing to reduce their tillage operations, to reduce PM10 emissions, we promoted smart sprayer technology, road treatment, we even were providing funding for proper disposal of chemically-treated grape stakes.

For about the first four or five years of those farm bill dollars, we probably put five to six million dollars a year into those resource concerns addressing NOx emissions, particulate matter, and volatile organic compounds.

In the 2009 farm bill, our opportunities were greatly expand to include replacement of uncontrolled mobile diesel combustion engines. In that year, we received $18 million worth of funding. We were able to partner with the San Joaquin Valley Air Pollution Control District to leverage funds totaling $21 million to replace close to 500 uncontrolled diesel combustion engines.

Since that time, our funding has been considerable. When the funding was first earmarked into
the farm bill and made available for specifically air
quality, due to the criteria that was developed and how
that funding was allocated nationally, just based largely
on the degree of environmental regulations being imposed
upon landowners, California received about two-thirds to
three-quarters of the funding.

Since 2009, we have replaced over 3,300
uncontrolled diesel combustion engines for on-farm use
statewide. About 2,600 of those have been in the San
Joaquin Valley. And we've provided funding in excess of
$162 million just in our tractor replacement program.
Overall, we have provided approximately $200 million worth
of funding in air quality since that time.

The future of this is that the 2014 farm bill was
funded through 2018. We received $21.5 million dollars in
2000 --

CHAIR NICHOLS: Please go ahead finish.

MR. FORKEY: -- 21.5 million in 2017 and we're in
the process of obligating those dollars, which we have to
do by the end of September. It is highly likely that we
will continue to receive these funds in 2018. And then
depending upon what happens in the next farm bill, we will
hopefully have enough funding to continue this initiative
through the remainder of the next five to ten years.

CHAIR NICHOLS: That's impressive. Thank you. I
would just ask you to explain what you replaced these older vehicles with?

MR. FORKEY: Well, the criteria is they have to -- the old engines have to replaced by a current year technol -- a current tier technology. So when we started in 2009, we were replacing with Tier 3 technology, and now we're replacing them with Tier 4. And it is a requirement that the old equipment must be destroyed. So we're basically taking the old tractors off the market and replacing them with cleaner -- cleaner running engines.

CHAIR NICHOLS: Thank you. Thank you very much.

MR. FORKEY: Thank you.

CHAIR NICHOLS: Thank you

MS. ADEYEBE: All right. Hi. Good morning. My name is Adenike Adeyeye. And I'm a research and policy analyst at Earthjustice, and also a steering committee members of the Central Valley Air Quality Coalition or CVAQ, where everyone is from it seems like.

So I would just like to say thank you so much for the presentation, for -- Sheraz, for your comments, and then also for the opportunity to speak.

We definitely support a lot of what ARB and the district are putting forward in these plans. We support the idea of developing requirements, in particular, for zero emission technologies, support some of the
recommendations from stakeholders like investing more in electrification, and electric vehicle chargers, and electrifying school buses, and small ag equipment. I think those are really important points that should be considered by your Board, and by staff moving forward.

And also, I should have said because everyone else is going to be speaking so extensively on, you know, the fireplace rule, charbroiling, et cetera, I'm going to focus on transportation.

So I think that those issues are very important to us. We look forward to working with ARB and with the District more on that. A couple of things that I wanted to point out are that we really think the focus should be on zero emission, because ARB has recognized that that is the way that we need to move forward to meet current and future air quality standards and to protect public health.

The -- in the rare cases where people are not able to invest in zero emission equipment, we think that ARB should focus on near-zero emission equipment with the definition of near zero being that equipment can operate for some period of miles fully zero emission.

We do not support moving forward with -- well, moving forward with investments in equipment that perpetuates traditional combustion technology, and that will never fully get us to zero, so investing in future
diesel, investing in additional natural gas doesn't really meet the requirements that California has moving forward. I would also say finally that incentives are great and important, carrots and sticks are great. You need a stick to make a carrot work, and we think it's very important that ARB and the district focus on regulations that will encourage people to take advantage of incentives when they exist.

And we'd also like to remind you all that the Clean Air Act doesn't allow for incentives to just qualify as emission reductions for PM2.5. There's no black box here, so we really need to have the emissions in hand, and the regulations that will produce those emissions in hand when developing this plan. So to the extent that you can focus on regulations paired with incentives to advance attainment, that would be -- that would be good for public health and for meeting the Clean Air Act standards.

So thank you again for the opportunity to comment.

CHAIR NICHOLS: Thank you. Janet Dietz.

MS. DIETZKAMEI: I'm Janet Dietzkamei. I have asthma. I live in the San Joaquin Valley, where the worst air in the United States exists. I moved there with my husband in 2003. In three years, I have asthma. I cannot
go outside except on days when the air quality is registered on the RAAN system as good. If I go out, I can't breathe. I start coughing. I'm unable to get an air -- a breath of air, and I struggle to breathe, something like a fish out of water.

I'm not the only one there. There are thousands of us that live in the San Joaquin Valley with asthma. And that population continues to grow. Children are unable to go outside. Children go to school with inhalers so they can breathe. The air is absolutely toxic. And those of us who live there suffer.

In the winter months when we have PM2.5, it's very high. And I am only able to go outside after it rains, and then for only about a half a day after it rains. Wood burning fills the air with PM2.5 once again.

I am an outdoor person. This past year, we did have more rain, but I still was only able to go out a few days during the months of March, December, January, and February. And even part of March, because then ag burning began and the air was filled with PM2.5, black carbon, that I and the other asthmatics in the San Joaquin Valley cannot breathe.

It's a frightening thing, because what can happen to those of us with asthma is we can die. Many of us end up in the emergency room including children. Children are
born -- we have many cases of underweight children being
born, as if -- just as if we were all heavy smokers.

Children have developmental problems due to the
fact that they have asthma. This is a serious situation,
and it needs to be addressed urgently the strictest way we
can to get to where we -- those of us with asthma can go
outside and actually enjoy being outside must be done.

My recommendation is during the winter months, we
ban burning in urban areas, absolutely ban them. That
way, we can enforce if people are using their fireplaces,
both inside and outside fireplaces. That would be a quick
fix, and a very inexpensive fix to reduce the PM2.5 in our
air.

CHAIR NICHOLS: Thank you.

MS. DIETZKAMEI: Thank you.

MS. ELENES: Good morning, Board members and
Chair Nichols. My name is Grecia Elenes. And I'm here on
behalf of Leadership Council for Justice and
Accountability. Now, our organization works with over 20
communities across the Central Valley, most of which are
found in these low income very impacted and burdened
communities that are ranked very high here in the State
and even nationally.

And so we work with dedicated community leaders
fighting together to give their families a better future
because they know how severe their air quality is, and they know how it impacts their families' day-to-day lives. We are thankful that the ARB has stepped in and worked with the District to make sure that we are able to reach the attainment that we need for our communities to be able to thrive and succeed. And we would like to see the ARB and the District take this a step further to create more stringent regulations to further reduce PM2.5, and reduce emissions that we need to see -- we need to see stationary sources that contaminate less and be relocated nowhere near our schools, nowhere near communities, because most of these -- most of the times they're only found in low income communities of color.

We need to make sure that mobile sources are further regulated to make sure we have cleaner tractors, trucks, et cetera, and additionally reroute diesel trucks away from communities, so they can breathe better.

Last, our valley -- our valley needs these stringent regulations. As Chair Nichols mentioned, our case is very severe, and we need these to happen fast and soon to really address the concerns that the community has.

Lastly, I would like to thank the ARB's responsiveness. At last week's workshop in Fresno, we -- there was a comment made where we requested that the
material be provided in Spanish. And we see that here today, so we are very grateful for that. It's a very small step, but it makes a huge difference for a lot of the members when they come to these events to feel included and be able to see the material.

But, yes, thank you very much. I appreciate it.

CHAIR NICHOLS: Thank you.

MR. WHITE: Hello. My name is Earl White. I'm from the Central Valley. I am -- I have interests here through good air is good for everybody. Also, I believe excitement drives the market. So as a business man, I believe the market would get help from the Board -- the Air Resource Board, because that, you know, new product -- a new product line means growth for industry, means growth for the American people, and new job creations.

And reduction is great. Reduction since the 80s since I grew up has come a long ways. I remember seeing cars with tailpipes, you know, there's black smoke coming out. And due to regulation, this has improved the air quality of all Californians. And so, you know, it has been a good job by everybody who was involved.

So I'd like to say thank you for everybody who take the time out to help clean air. I think more can be done. And as a business man, I believe, through industry, we can do a large amount through distributing, you know,
reductions -- electric cars or, you know, more environmentally safe cars, solar power, and other green improvement initiatives.

    Thank you and have a nice day.

MS. MORALES: Hi. My name is Sarhely Morales. I am from the rural part of the Fresno, and we're basically surrounded by different sources of PM2.5, which includes agricultural tractors, animal feed lots to chemical fertilizers and pesticides.

    I want to thank you guys for regulating more the landfills and the gases that emits reducing one source of PM2.5 within like our communities. However, there's still so much sources that are affecting the health of our community and the individuals living there, including childrens, which their health is declining every day and at this moment.

    So I urge you to regulate other sources as well and not just focused on one, and also to push forward these regulations that benefit the individuals in these communities rather than large corporations and industries.

    So thank you.

CHAIR NICHOLS: Thank you.

MR. HELME: Hello. My name is Tom Helme. I am from a non-profit called Valley Improvement Projects in Modesto which is part of CVAQ. I also sit on the EJAC,
the Air District for Stanislaus County. And I want to
first say that I support and appreciate all of the work
done here at ARB, as well as the Air District. And I
appreciate Sheraz being here and his comments, and all of
the work that's done on all sides.

I agree that sometimes a little tension in the
relationship is a good thing, and between community
activists and the Air District is also a good thing too to
have that tension. So I -- like I said, I appreciate all
the work they do. And as we all know, there's still much
more that can be done.

To point out something that was in the
presentation a minute ago, the Air District workshops,
those four public workshops that I believe I was at at
least three of them, if not all four, and I don't think
any of them, correct me if I'm wrong, were in the evening
or weekends, at a time outside of regular working hours.

And as an environmental justice advocate, I try
to do outreach in our environmental justice communities in
Modesto and Stanislaus, and it's very hard to get people
that have a regular job, Monday through Friday, you know,
8:00 to 5:00, to be able to make it to a meeting that's on
a Tuesday at 2:00 p.m., or a Wednesday at 10:00 a.m. or
something like that.

And a couple of these communities, just to share
for an example, the airport district in Modesto is in the top one percent of disadvantaged communities, according to CalEnviroScreen. That's right next to the airport, why it's called the airport neighborhood. To the east -- to the west, you have Gallo, which includes the Gallo Glass facility. And to the north, you actually have Yosemite, which was built with a pipeline for canneries. So you constantly have the trucks coming in and out of those line of canneries all in the same neighborhood.

And to give you another example about in the airport district about half of the population does not have a high school diploma.

So I'd challenge somebody to find somebody that doesn't have a high school diploma that has a job that lets them out, you know, at 10:00 a.m. on a Wednesday to go and attend a public meeting to talk about the air quality.

The other environmental justice community in Stanislaus is on the west side of the county, which has a variety of emitting sources from the trucks coming in and out because of the ag industry to the growing number of distribution centers out near Patterson on the west side of the county that are more being built -- sorry, just take another couple of seconds.

CHAIR NICHOLS: Okay.
MR. HELME: -- to the trash incinerator that's also in the west side of the county, which admits just as much NOx as all of Chevron's facilities put together in the valley. More direct 2.5 than three coal plants combined, and --

CHAIR NICHOLS: Thank you, especially since you're reading. Could you please wind up.

MR. HELME: Yes, I will. Thank you I will end it there.

Thank you.

CHAIR NICHOLS: Mr. Martin.

MR. MARTIN: I'm Ronald Martin. I'm on the executive committee of the Tehipite Chapter of the Sierra Club in Fresno. And I'm here to encourage the Board to speed up the regulation of burning by eliminating burning.

As a boy, it was my chore to burn trash. I took it out to a 55 gallon drum and lit it up with a match. And then that was outlawed and that was -- that was a bad thing to do. Hikers and campers are encouraged not to burn anymore. Don't have a campfire when you go out into the wilderness. Bring a portable gas stove. As there are more and more people in California, we need to stop burning.

And that goes for fireplaces. It ought to be completely outlawed. That would be much easier to enforce
to just have no burning at all. Fireplaces are there for
recreational or decorative purposes, not really for home
heating. We don't need all that much home heating in the
valley, which is a warm place anyway. I've gone through
many Januaries with just leaving the heater completely
off. I wore a coat in the house. People can do that.

And with climate change, it's going to be even
less and less necessary to have heating with burning. And
the same goes for agricultural burning, there shouldn't be
any burning of agricultural waste. Now, it does take more
people to chip and compost agricultural waste, but we want
to create jobs. That's why President Trump was elected
because people prioritize the creation of jobs. If they
can create more of these jobs in the agricultural sector
by eliminating burning, that will be good.

If the businesses can't survive because they have
to pay these costs, well, any regulation will have impacts
on business, maybe even driving some of them out of
business. But prices may have to go up. But if people
aren't willing to pay the full cost of a product including
the price of clean production, then that means people
really don't want it and the business shouldn't exist.

And as for charbroiling and restaurant burning,
that needs to be controlled, possibly even eliminated in
the valley. Possibly with the population we have, maybe
those dishes can't be enjoyed anymore, because we don't want to breathe the PM2.5.

PM2.5 may have killed my mother. She got pneumonia in January probably because of breathing in particles. She got over the pneumonia, but she went into decline, and by June she died. So we really do need to eliminate the PM2.5 by eliminating all the burning in the valley.

CHAIR NICHOLS: Thank you.

Dr. Balmes.

BOARD MEMBER BALMES: Yes. I want to take this opportunity to introduce Sara Sharpe. And I think she's brought along some folks to speak with her. Sarah -- well, first of all, you've heard me talk in the past about the research that I'm involved with in Fresno in the San Joaquin Valley is funded through both NIH and EPA. It's a Children's Environmental Health Center.

And Sarah has been instrumental in an important component of our work, which is community outreach and translation. And, in particular, we've been working with a Magnet high school in Fresno, CART. And I think Sarah is going to mention that. Anyway, I'm very pleased to introduce Sarah Sharpe.

DR. SHARPE: That is me. Good morning, Chair Nichols and the Board. I know most of you. And to those
of you I haven't had a chance to meet yet, nice to meet you.

I'm from Fresno. I've been working in this field for now 10 to 15 years. I currently wear two hats, and one of them Dr. Balmes just mentioned. I will be making some comments for my other job first. So I work for Central California Asthma Collaborative as the Associate Director, along with Kevin Hamilton who is our Executive Director. And he has served in many committees for ARB and at Air District.

So we first wanted to thank both the Board -- both the District and the ARB staff who have worked with us extensively over the last six months. I think we've seen Karen and a lot of other staff in Fresno so much this last six months. It's been fun.

But we -- and we agree with what Tom and Sheraz -- Sheraz has said and Tom's agreement that, you know, we -- there is a great value in holding tension between all of the different stakeholder groups.

We continue to request accelerated efforts for PM2.5 reductions. Even if we aren't going to meet the goals for attainment, we still want to see those reductions as soon as possible, because we know of the health impacts and the health improvements we would see if we take measures early.
We respectfully request that the ARB advance the timeline for Mobile Source Strategy to ensure that valley NOx targets are hit before 2023. And we are also looking -- we've been very grateful to -- for your technical expertise, but we are still requesting additional modeling about ammonia. We've seen the modeling for 30 percent reductions in ammonia. But as my Executive Director has been working for the last 10, 15 years on dairy emission concerns, and the health impacts as an irritant and as a PM2.5 precursor, we really wanted to see at least the modeling for what more reductions in ammonia would get us. Even if it's not a realistic goal, we would like to see those, at least 70 percent reduction in ammonia.

And lastly, I think I've said this to almost everybody here, if you've ever seen me speak that we still want an ag equipment rule. We appreciate what we have gotten with incentives. I've come before this Board for many years asking for an ag equipment rule as one of the last unregulated sources of NOx that we are aware of. So we believe that it's time to start phasing in a rule, and continue moving on with incentives as we have. And we would like to also see the inventory on that.

So with that, I'm going to close that CCAC comment, and introduce to -- we brought two students here...
from -- it's a Fresno Clovis school that focuses the Center on Advanced Research and Technology. And they'll talk more about their program, but that's what -- I've been working with them through the CHAPS study and through our community outreach and translation core.

CHAIR NICHOLS: Thank you.

MS. LUNA: Hello. My name is Destini Luna. I am a student at Sunnyside High and the Center for Advanced Research and Technology. My partner Sam will tell you a little bit more about that.

The focus of our spring semester project was to learn more about environmental issues and getting some field research while doing so. And our -- we were focused on air quality. And what made us so concerned about air quality is the fact that Samantha and I were both born and raised in Fresno and we both have asthma. And we didn't realize to the extent of the problem that it actually was for not only us, but for the rest of the San Joaquin Valley.

And our project was based on an experiment conducted by CHAPS in the fall semester. And it was testing -- we -- they were trying to find out where students in the Fresno metropolitan area were most exposed to black carbon. And in doing so, they tested with volunteers, which were students. They tested this
technology called the AMAS, and that stands for Automated Microenvironment Aerosol Sampler.

And what it does is draws in air and it detects the amount of black carbon that is in the surrounding areas. And what makes it different than the old technology was the fact that it was able to differentiate which microenvironment the subject is in. And basically meaning, it was able to tell whether or not the student was at school, at home, or other, which was considered transit.

And that means it was accounting for everywhere that was not home or school for the students. And the result was that we -- the data supported our hypothesis. Sam and I thought that transit would be the microenvironment in which we were most exposed to air pollution, specifically black carbon. And the AMAS had four different filters: One for home, one for school, and then one for transit, and one was left blank.

And it was quite amazing to see that we spent the least amount of time in transit. However, that is where we were most exposed to air pollution. And we spent the most time at home, which is also where we were least exposed to black carbon.

And I just want to invite you to continue doing what you have been doing, and keeping these regulations up
to par and/or better, so that we can hopefully meet the
standards -- the national standards for our air quality.
And I hope you would also do that through community
outreach, like some of the workshops that have been done.

But also, like it was mentioned earlier, keep in
mind most people are working from a 8:00 to 5:00 job, and
it's kind of hard to come out at such a fun time.

Thank you.

CHAIR NICHOLS: Thank you. We do try to hold
workshops and hearings in all areas in the evening hours
when we do get out into the community.

So I know sometimes you have to do it during the
hours that you can get officials also to participate. But
we definitely that if you want to reach the community, you
have to go where people are. Thank you.

MS. RUBIO: For those of you who do not know what
CART is, it is -- it stands for Center of Advanced
Research and Technology. This is a school only for
juniors and seniors. And me and Destini both attend there
from 8:00 -- from 7:30 to 10:30 a.m., and then we go to a
different school. I attend Fresno High and she attends
Edison High School.

MS. LUNA: Sunnyside.

MS. RUBIO: Sunnyside High school.

Sorry.
MS. RUBIO: This school allows us to take a course we're interested in, like our future career. Right now, we are both taking environmental science. Actually, Destini has finished. She's finished. She's a senior. She's graduated.

Through this -- through the Environmental Science Lab, we got the opportunity to work with Sarah and CHAPS, and we got to understand what is in our air and how it impacts us. And through the research that we've done, it has really brought me to understand that our air needs help.

That's it.

CHAIR NICHOLS: Thank you.

Questions, anybody, comments.

Appreciate your coming. Thank you.

BOARD MEMBER BALMES: I was just -- I was just going to thank Destini and Sam for nice testimony.

CHAIR NICHOLS: Dr. Sherriffs, you had a comment.

BOARD MEMBER SHERRIFFS: No, I just -- this is such a wonderful example of citizen student scientists, and thank you for coming. We won't tell your school you're here.

(Laughter.)

CHAIR NICHOLS: You should get extra credit.
BOARD MEMBER SHERRIFFS: I've got a doctor's excuse for you, if you need it. I've got two doctor's excuses.

(Laughter.)

CHAIR NICHOLS: Yeah, absolutely.

BOARD MEMBER SHERRIFFS: But wonderful experiment, very provocative. Boy, we need more things like this. Thank you.

BOARD MEMBER BALMES: We're actually going to use that pilot data for the next phase of our study. It was very important.

CHAIR NICHOLS: Great.

MS. MARTINEZ (through interpreter): Hello. My name is Nayamin Martinez. And I am member of CVAQ, and also a --

THE INTERPRETER: Excuse the interpreter. It's a very long an no acronym. CCJA.

MS. MARTINEZ (through interpreter): Thank you for providing an interpreter and for translating the materials in Spanish. That helps a lot.

The reason that I am here today is because the air contamination has affected me greatly.

MS. MARTINEZ: Not lately.

THE INTERPRETER: Greatly.

MR. MARTINEZ (through interpreter): I was born in
the City of Mexico. If you don't know about it, it is a
city that has the worst air quality compared to any other
place in the world. In 2000, my husband started working
in Fresno, so we moved to Fresno. He worked for the
University of Fresno. I was highly unaware about the air
quality contamination.

And for 17 years later, I have a son, since the
age of two, has been diagnosed with severe asthma and
several allergies. Now, he does like to keep himself
active. However, he is counting the days, three more
years, before he can leave the City of Fresno, so he can
attend a university elsewhere.

Now, I'm not here just for my son. This also
affects three other million people who live in the Central
Valley. Now, the people in Calwa in the southeast of
Fresno are the people, in my opinion, who seem more
affected by it.

Okay. And just for example, there is a glass
factory in that area, there's also a distribution plant,
and also an incinerator -- a biomass incinerator.

They bring the trees from the mountains. And I
think instead of bringing the trucks, diesel trucks, and
other contaminators, they should keep them up in the
mountains. I think the compost should also go elsewhere,
and the farmers shouldn't have to do the compost
in -- within the community, but outside of the community.

Thank you so much. And I really hope that the regulations that you impose are actually more strict in order to benefit the air quality.

CHAIR NICHOLS: Thank you.

Next person on our list Cesar?

Yes, here you go.

MR. AGUIRRE: Hello. My name is Cesar Aguirre. And I come with the CVAQ representing the Central California Environmental Justice Network. First of all, I'd like to thank you all for the helping hand you're extending, especially being a resident of Kern. In November of 2015, the Kern County Supervisors approved a blanket use of the infrastructure to oil and gas companies. In 2015, Jerry Brown -- in August of 2015, Jerry Brown fired a -- oil and gas regulators under the pressure of Occidental.

And during the campaign, Democrats said that they were pro fracking. And with 80 percent of the oil production of California coming out of Kern County, I would again like to say thank you for your help, because, you know, we don't have a lot of support at home, so we have to come out to other people.

As far as PM2.5 goes, it's affected my family. Me and my brother grew up in the Coachella Valley, and we
don't have any respiratory issues or problems. However, my -- we've lived here for 13 years, and that's how long -- that's how old my sister is. She, however, does have respiratory issues and several other things that we need to be careful with her about.

I can sympathize with people in the valley, because of my sister's situation. And I know some of you may not be able to sympathize, because you have not gone through this, but I brought testimony so that you can empathize with the people and see what they're going through.

One of the main problems that I saw was that people were against small producers, because producers are exempt from a lot of the regulations. One testimony that I'm bringing from a man named Francisco, who lives in a street called Nelson Court in Arvin, California.

He says, "I can feel -- I shouldn't be able to feel the dirt going into my nostrils when I breathe. I shouldn't be able -- or I shouldn't be scared to let my wife go out to be able to breathe this. I shouldn't be scared to wear white clothes because my nose will start dripping blood due to the dirty air. I shouldn't be scared to raise children or bring over my grandchildren to this environment".

This man lives near a gas storage tank. There's
a lot in his community. For example, there is a gas
storage tank that is 200 feet from an apartment complex
with over 100 families. It's next to a Clinica Sierra
Vista and it's right next to a dentist office.

It is labeled a small producer, which means that
because it makes less than 6,000 barrels a day, it is
exempt from these regulations. People in the community
are asking for strict regulations because of this -- for
this, because, you know, they don't have anywhere else to
go.

The second thing that was echoed in the community
is buffer zones. People live right next to oil and gas
production. And sometimes the diesel engines from the
pumps keep people awake. So one thing they want is buffer
zones as well.

So, yeah, I'd just like to finish with telling
you guys let's focus on what we can control. I know
somebody mentioned that in 2013 there was a drought and
that caused a lot of problem. But also in 2013, 80
billion barrels -- or 80 billion gallons of water was used
in the oil wastewater pits. And those were open air. So,
you know, let's focus on what we can control.

Thank you.

CHAIR NICHOLS: Thank you.

MS. ISLAS: Hello. Good morning. My name is
Angela Islas. And I am an intern at the Central California Asthma Collaborative. And I'm here representing CVAQ. And I am a future summer grad student that will be graduating this summer from the California State University of Fresno with a Bachelor's of Science degree in public health.

And I am here to show my full support in the collaborative planning of ARB and the District for the PM2.5 State implementation plan. And I'm honored as well to be in front of the ARB Board, as I have studied you extensively in the CSU Fresno curriculum for public health.

And I'm here to also mention that I am in full support to put stringent rules against mobile sources, and also ammonia emissions, especially towards chemical fertilizers and pesticides, as right now I am doing my research report on the issues with law enforcement and mitigation strategies amongst the chlorpyrifos being used in fields, and that are among farm laborers, as my parents are both farm laborers. And I, as well, have been a farm laborer myself for a short period time and have experienced just the smallest amount of what the air quality and also what chemical fertilizers and pesticides can do towards someone's health, as my father has congestive heart failure and also he has obstructive sleep
So I'm here to show my full support. I'm still learning currently on all the air pollution regulations, as that is one of my future career paths to kind of just be able to be a part of striving to -- to fully just be able to control all of the air pollution that is currently high in the Central Valley.

And also, if my career path fully allows me to be a part of that road and to be able to successfully lower the air pollution in our Central Valley, I would be more than honored to just be a part of it, and also strive to build a better California and a better Central Valley.

Thank you.

MR. MENZ: Good morning, ladies and gentlemen. My name is Thomas Menz. I'm from the urban area of Fresno County. I want you to imagine for a moment that you'd boarded a flight and you were strapped into your seat. And the plane takes off, and you begin to smell smoke. And you look around and you notice that a passenger adjacent to you has lit up a cigarette. So you summon the flight attendant and you say something has to be done about this. This guy is smoking a cigarette.

And this is the response you receive. "Sir, we're very concerned for your health. We're going to do everything in our power. In fact, we will leave no stone
unturned, in our efforts to ameliorate your health concerns. But please understand that the complaint that you speak of is highly localized.

"So what we've done is we've installed a PM2.5 monitor in one of the forward cabins as it happens, and when the ambient levels reach 20 micrograms per cubic meter of air, we will inform all of those passengers smoking cigars, unfiltered cigarettes, pipes, to extinguish their smoking devices. And when ambient levels reach 65 micrograms, then we'll ask those who are smoking low tar cigarettes, and are vaping to extinguish those as well".

Well, that's crazy. I mean, that's a hell of a way to run an airline, isn't it? I mean, not the worst example of airline behavior we've heard in recent news..

(Laughter.)

MR. MENZ: But nonetheless, this is not an adequate response. And yet, and yet less the analogy and the parallel is lost on some of those here, that is very much the response of those who are stewarding our flight through the filthy Fresno winter air. That's very much their response to the problems that we face as it regards residential wood burning.

Now, your staff has modeled that if residential wood burning were to be completely curtailed in Fresno,
four micrograms of reduction overall for the year, I mean, that would go all the way toward meeting this supposedly unattainable goal of the Clean Air Act. In Bakersfield, I believe it’s two micrograms, which would again, you know, meet the requirements of the Clean Air Act.

So the banning of -- there are some things that are just so inherently bad, they're just so inherently unhealthful and harmful to other people that we ban them in public spaces. And I submit that residential wood burning, which has many of the same, you know, sort of problems with it. If you look at the constituents of that smoke, as cigarette smoke, it has no more role in our urban environment than would --

VICE CHAIR BERG: Your time is up sir. I'll need you to wrap-up please.

MR. MENZ: -- lighting up a cigarette in a public meeting place.

So I wish you would consider that, and I thank you.

VICE CHAIR BERG: Thank you.

MS. GALE: My name is Genevieve Gale. I work with the Central Valley Air Quality Coalition. And I also represent the Coalition for Clean Air on this PM2.5 plan.

I'd first like to say, wow, we've come a long way. Back in October, we were told that there was nothing
more that could be done, and that we just needed more
time. And now, we stand here today saying that we can
reach attainment, and we can do it in five to seven years.
And I want to thank you all for that. This progress lies
on your shoulders for refusing to approve an inadequate
plan, and continuing this cycle of rejection, delay, and
dirty air.

This progress is also thanks to your amazing
staff. They have made themselves extremely accessible and
willing to answer all of our questions, and we have a lot
of questions. So I definitely appreciate all of the work
that you have put into this.

I'd also like to say I, too, have done a lot of
public outreach. I have gone to many a meetings in the
past six -- six months. I've met with mothers in Calwa as
Nayamin had described, and who have children with asthma
and live in the shadow of a biomass incinerator.

I've also met with farm workers who are extremely
concerned about open agricultural burning, and also the
other things that get thrown in that pile.

I've also met with a pregnant woman who is very,
very concerned about her unborn child, churchgoers who are
concerned about the environmental racism that occurs in
our cities, and a wife who had to move into the mountains
because her husband can no longer live on the valley
Moving forward, I would like to say that there is still more work that needs to be done. We've gone a long way. We still have some remaining asks concerning the data. We would really like to see, as Sarah had said, the ammonia modeling, I think that's really important to see what kind of reductions we could get. We also would like to see the agricultural equipment inventory to be made public. We're really excited to hear that we've made so much progress and that incentives are working, but we would like to see the data that backs up that statement, and to see what kind of regulation could get us further.

And also, I would like to say that we need to include contingency measures. That has been spoken of today. It's been something that our local district has not included in many of its plans. And it's a needed part of the attainment plan. So banning burning, we know would get us there, so let's keep that in mind.

But in closing, I want to thank this agency for all the work that they have done, and remind you that you are our last defense. We have a district that is trying to roll back protections in the Clean Air Act, and we have a federal government that seems willing to do such a thing.

So we rely on you to protect the public health of
the valley, and I thank you for all of your work.

MR. FRANTZ: Hello. Tom Frantz. I'm not representing the Environmental Justice Advisory Committee for AB 32, but I am a member. But I'm representing the Central Valley Air Quality Coalition as a steering committee member, and the Kern Kaweah Chapter of the Sierra Club as an executive board member there.

I want to start by thanking Kurt Karperos for testifying so eloquently in Washington last month on behalf of the Clean Air Act going up against our own air district who was there to gut the Clean Air Act and make a meeting like this almost moot, you know. So thank you, Kurt, and to the Air Resources Board for continuing to insist that we make progress.

You have AB 197, which is both a mandate and an authority to do direct actions in places like the San Joaquin Valley to not only reduce greenhouse gases, but to get those co-benefits of things like PM2.5 and NOx reductions.

So I'm here to ask you to use that not just in a refinery measure, but to help us clean our air by doing something like this. In Kern County, the production of steam and boilers is one of the biggest overall stationary sources of pollution that we face.

It takes a massive amount of steam to get the oil
out of Kern County oil fields. So -- and they're burning
natural gas for the most part to make that steam. You
could mandate under AB 197 a 50 percent reduction in
greenhouse gases from the production of steam in Kern
County by 2030. And we know that solar can make steam.
Solar can heat water, direct solar, concentrated solar.

They should immediately be transitioning to that
method of making their steam, eliminating all those NOx
emissions that we so badly need in that part of the
valley. And we need that mandate from you, under this --
in the scoping plan. And then that directly gets at this
problem in a way you can't -- maybe you can't do
otherwise.

The same with internal combustion engines that
are pumping irrigation water throughout the San Joaquin
Valley still. You could mandate by 2025 under AB 197 that
every internal combustion engine that's within three to
five hundred feet of a electrical power source convert to
electricity.

Now, you can use incentive money initially, but
there's got to be a mandate by this date by 2025. It's
going to help clean our air. There are thousands of these
pumps still running. Some of them old diesel engines,
some of them newer cleaner natural gas. But we've got to
stop the emission of the greenhouse gases, and we've got
to stop the NOx emission as well that come side by side.

So use your authority in every way you can to help us clean our air.

Thank you.

MS. WELLER: Good morning. I'm Dolores Weller. And I'm the director for the Central Valley Air Quality Coalition. I just wanted to say that I am very appreciative of the Board's direction at the October meeting. As others have stated, this is an unprecedented process. It's sort of shifted things for us, and that's why we're all here. And I think that you might be curious, you know, why are we all here instead of, you know, voicing our concerns directly to the Air District.

And I think that we have felt that our concerns are not addressed. And so we do look to you as sort of that safeguard to ensure that our concerns are addressed in this PM2.5 plan.

As others have stated, you know, we've been going through a long public process, and so we appreciate staff coming to the valley. The workshop that was held last week was in the evening, well attended, so we really appreciate staff and also addressing all of our questions throughout this planning process.

Something that has come out of the workshops and also our own community outreach is the -- are the issues
of localized impacts that others have raised, that there are -- you know, we have a strategy to reach attainment. You know, we're trying to make the monitors read well, but then there are also those impacts to local communities. And that may be, you know, small producers for oil and gas fall through the cracks. The regulations don't apply, but it's a localized impact. And so I think that's something that needs to reconciled and possibly could be addressed in, you know, potential changes to, you know, measures that the District implements in this plan.

I also want to talk about the timeline. I know we're on a really short timeline here, and that your Board will be seeing a completed plan in September. So we do want to stress that we want to see a completed -- the completed modeling data in order to move forward. We have -- we outlined some measures that we wanted to see in October, and we support those that have been modeled so far with residential wood burning and charbroiling. But again, want to underscore the importance of modeling the ammonia, modeling ag burning -- a ban on ag burning or limiting ag burning against the most current data, and not 2013, since we have seen a really big increase in open ag burning the last year.

So those are just some of the areas, but we have made many recommendations. And we think it's really
important to have that data to move forward to identify what are the measures that we can include in a plan, and look forward to working with ARB and the District and all of you in this process; and, again really appreciate your intervention and especially in the -- you know, the face of, you know, the new administration and our unfortunate, you know, local efforts to change the Clean Air Act, you know, having a strong SIP really demonstrates our commitment to the Clean Air Act.

Thank you.

MR. CUNHA: Good morning. I think it's morning. Manuel Cunha with the Nisei Farmers League. Madam Chair, and of course, Board members and staff. The first thing is I wanted to again introduce myself. Manuel Cunha. I'm President of Nisei Farmers League. I also was one of the very first groups that put together the ag research team under Jan Sharpless back in 1990 and '89.

We developed with the staff the study agency, the CRPAQS, seacoast study. And we went through that process because what we saw in some of the research was that the Sierra Nevadas by Midwest Research Institute showed that we cultivate at the Sierra Nevadas twice a year, and that cultivated alfalfa fields 12 times a year. So we knew the data was absolutely. So that's we put together the group
the study agencies. We spent a lot of money. It was a
team effort, EPA. ARB, agriculture, San Joaquin Valley,
and many other air districts.

The first thing is I want to say is that the
numbers that we have for farm equipment was a program that
Lynn Terry, and many of the staff, even Catherine
Witherspoon, and others, and Dr. Lloyd, and several of
your Board members said that if agriculture in the 2008
SIP was able to do stuff from five to ten tons in a
voluntary program for equipment, because we didn't have
any concepts of how much we had out there, that if we got
that, that would be incredible five to ten by 2017.

Today, just touching the research, it's 12.9
tons, not -- they forgot about, I think, NRCS's numbers,
but that's okay. I think there -- that was a number that
was submitted to ARB in May of last year, and in December
of 2016, and your staff agreed. Your staff agreed to that
number because of cleaning it up and whatever else. But
what I want to say is that we've done a great job.

Now, let me give some funding issues here. The
first thing is that the ag industry is putting together a
meeting with USDA, NRCS, Kearney Research Center, Fresno
State, and many other ag groups on dealing with a Burn
Conference sometime in late June, or July. There will a
conference on ag burn and other burn, including the Sierra
Nevadas, because we have a lot of trees up there that have issues across the range.

Secondly is that agriculture is meeting with USDA on the Farm Bill. On the Farm Bill for NRCS, we’ve asked for a special project. We average 21 million from NRCS; Carl Moyer, somewhere 15 to 20 million; EPA funds through the DERA program, 118 moneys, you name it, and the industry agriculture have put over $500 million combination since 2004, which was starting of the ag engines, okay?

So, in closing, I would just say that we are working with USDA right now, as we speak today, to add another ten million special grant project to the air quality project for the San Joaquin Valley on top of what we have.

So again, I want to thank the staff, I want to thank Mary Nichols from way back helping to put together the USDA Air Quality Board in the United States. And she was one of, I think, the first person of the representative and turned out over 200 --

VICE CHAIR BERG: Okay. Manuel, I let you go.

Thank you.

MR. CUNHA: Thank you.

MR. ISOM: Good morning. My name is Roger Isom.

I'm President of and CEO of the California Cotton Ginners
and Growers Association, and the Western Agricultural Processors Association.

A couple things that I want to leave you with today that I don't believe have been represented correctly or maybe that you just haven't been made aware of. And that is there's this discussion of the carrot and stick. The fact of the matter is is that ag has been at the table since the very beginning, and actually has not only done their part, but done more.

Let's talk about ag pump engines. We actually were the first ones along with ARB and the PUC to create AG-ICE, which was a special program to go above and beyond the air districts' rules and get farmers to convert to electric motors. In that first AG-ICE program, we turned over 2,000 diesel engines to electric motors, again above and beyond.

And today, we have with PG&E and their current general rate case, working on AG-ICE 2.0. We're trying to go after those additional engines we didn't get in the first go-round. Again, above and beyond the air district's rules.

The tractors have been talked about. We have been to D.C., whether it's the farm bill or DERA or to the State level, we have got the additional monies to replace those tractors. And right now, we've been at the capital
the last week looking at extending the bill that we carried, along with Assemblyman Arambula to get additional dollars per vehicle in the San Joaquin Valley specifically for clean air.

We're actually happening lobby to make sure that funding goes beyond the sunset date of 2023 out to 2032, because it's been such a successful program.

On CMPs, the conservation management practices, to reduce fugitive dust, when we originally set out on that plan, it was 30 -- we needed 32 tons a day of PM10 reductions. We sat down and worked with farmers, with ARB, with EPA, the district, with NRCS brought experts in, and when it was all said and done, we got -- not only got compliance with the rule, we got buy in. We got buy-in from the farming community and we were actually able to get 34 tons per day of reductions.

But we didn't stop there, because we could have. We met the rule. We're done. We didn't. We continued research with EPA and NRCS, worked with a piece of equipment called an ag optimizer which combined operations to get additional reductions. And we've continued to add addition CMPs to our plan, again without a mandate to do so.

Finally, the discussion was made up about ag burning. And they're right, with the shutdown of the
biomass plans, we're in a crisis situation right now in
the San Joaquin Valley. We have a research project right
now with West Biofuels, a plant in Woodland, that would
create biogas create electricity using the biogas. And we
are in our second year of that doing all kinds of
different ag waste from prunings, to almond shell, to
cotton stocks. You name it, we've been running it through
that in -- not only seeing that the technology works, but
we will also have been measuring the emissions to make
sure we meet any air quality mandate anywhere in
California.

And that project is underway right now, and so
far, it has been a success. So we are continual to look
in all of these areas. We have a good program, and we
think we can meet any kind of mandate that's out there and
go above and beyond.

VICE CHAIR BERG: Thank you.

MR. KENNY: Hi. Good morning, Vice Chair Berg,
members of the Board. My name is Ryan Kenny. I'm with
Clean Energy. We're the nations largest provider of
renewable natural gas transportation fuel. We're
headquartered here in California and have 165 stations
alone in the State.

We're talking about the horrible environmental
and health problems that are happening within the San
Joaquin Valley today. And I wanted to just kind of focus our remedy on the 0.02 NOx low-NOx engine with renewable fuel. We're talking about PM. We're also talking about NOx, greenhouse gas emissions. We're talking about federal attainment.

And we believe that this is a remedy for much of what's happening in the San Joaquin valley. You're -- the ARB's mobile source strategy document does call for 900,000 low NOx vehicles by the year 2031 to reach attainment. And we do believe that there is a significant gap between the goal and the reality of what's being funded right now.

Early next year, the 12-liter Cummins Westport 0.02 NOx engine is due out, and we believe adequate funding -- incentive funding needs to be contributed towards that. It's not just about the total amount of funding, not just about the funding source, but also about the program provisions that will come before you, which includes covering the appropriate incremental cost of such an engine, and also making sure that the incremental cost as compared to diesel -- from diesel to the 0.02 NOx engine, not from natural gas -- state of natural gas.

Also, it's worth noting that the technology is deployable now. You have other technologies such as hybrid fuel cells, battery electric. And according to
ARB's technology assessment recently, those technologies in the heavy heavy-duty space, Classes 7 and 8, with a weight of 26,001 pounds and above are not due for deployment until 2030, if not later, up to 2050.

And there's a lot of range -- a lot of issues because of that, but that's, of course, because of ARB's technology assessment finding that.

It's also worth noting that cost effectiveness is worth considering. The zero emission technologies can be up to five times more expensive than a 0.02 NOx performance standard engine. So you're getting more bang for your buck by going with deployable technology today.

I just want to wrap-up by saying that we do believe in a technology and a fuel neutral approach, but something needs to be done today, and this technology with 0.02 NOx engine with renewable fuel is, in our view, the way to go. Thank you.

MS. HOLMES-GEN: Good morning, Vice Chair Berg, and members. Bonnie Holmes-Gen with the American Lung Association in California. I wanted to thank you, the Board, and the staff on behalf of the American Lung Association for your hard work on digging into this challenge and developing this PM strategy for the San Joaquin Valley.

We understand it's tough and there's many factors
working against us, but it is doable, and you have proven that, and we are thrilled. So thank for doing that. It's critical that we take this goal very seriously.

According to our annual report, some valley communities are experiencing 40 to 50 unhealthy days of particle pollution every year in the valley, over 90 unhealthy days for ozone pollution. And this is clearly unacceptable.

Our valley offices work with families in the valley that have multiple kids with asthma that are struggling with the health burdens and costs on a daily basis. And I know those of you who live in the valley are very familiar with this, especially our doctors.

We have -- and we have over 300,000 kids with asthma in the valley. And these patient voices are very powerful.

We believe you have the right list of tools in the toolbox now. And we need strong coordination between your Board and the local district and the local cities and counties, local jurisdictions in the valley to make this happen.

We strongly support a focus on zero emission across the transportation sector to get to clean air in the valley. We have a lot more work to -- we have a lot of electric options across all classes of vehicles, and
wanted to say specifically there's a lot of new options becoming available in the heavy-duty sector for electric.

Companies are investing in new electric heavy-duty technologies. For example, there's a groundbreaking next week for new electric bus manufacturing facility in Porterville. So great options are available, and we need to get to electric to fully -- to get to sustainable, long-term, healthy transportation in the valley.

The controls on wood burning are incredibly important. We're supporting SB 563(Lara) to establish the Woodsmoke Reduction Fund. It will be pushing for additional funding in the next year to fill out that effort. There are great options for electric and cleaner home heating. Just as we have electric options in transportation, we have a great mix of new home heating options that we need to pursue and get beyond wood burning.

And just another note, I'm working with local governments. We hope that you will reach out and work closely with local governments to the extent possible to get them to show leadership in their local government fleets on zero emission technologies. There's a lot we can do there.

Lots also to say. But since I'm getting near the
end, I'll say thank you for your hard work on behalf of the breathers in the San Joaquin Valley and across the State. Thank you for defending the federal Clean Air Act, and moving forward with our very important authority to clean up the air.

On behalf of our organization, our doctors, and medical professionals, we urge you to move forward and make this plan a reality as quickly as possible.

MR. JATKAR: Good morning, Vice Chair Berg and members of the Board. My name is Shrayas Jatkar with Coalition for Clean Air. And I'd like to just start off by saying as somebody who is fairly new to California — I've only been here for a few years — the idea that California is this, you know, fully green, just, you know, environmentally a sound place, that notion is somewhat shattered when you start to understand the dynamics in the San Joaquin Valley and the land of extremes of California when it comes to environmental contamination and air quality and public health.

And of course, the extreme situation in the valley we've heard quite a bit about that with, you know, the highest PM2.5 levels in the nation. And that exposure is, of course, linked to many different chronic diseases, respiratory, as well as heart disease, premature death. And so because of that, we want to say thanks, as others
have, for sending the PM2.5 plan back to the valley in October of last year, so that they can search for additional measures to control emissions and achieve greater emission reductions.

I'll focus, as some others have, on mobile source emissions, since I'm here before the ARB and this is your purview. So we know that mobile source emissions are kind of the leading cause of NOx emissions in the valley. And so it's important to address both on-road and off-road sources of those NOx emissions.

And as others have said, we agree with the strategy of a mix of incentives and regulations. Those carrots become much more appetizing when there are sticks in place, as folks know. And not only rules and incentives, but, of course, enforcement which I feel like sometimes we don't talk enough about. So in terms of enforcement, we do support improving enforcement of existing diesel rules, and new ideas such as the heavy-duty Smog Check program.

And because heavy-duty diesel trucks alone account for nearly 40 percent of the NOx emissions, we think it's also important to address the point of low-NOx engines and make sure that there are incentives available for the deployment of those low-NOx engines, while, of course, making sure that incentive funding overall is
going to the cleanest technologies available across mobile
source categories.

And so we do think that it's wise to also make
sure that when we promote and support these low-NOx
engines, there should be a requirement for low carbon
renewable fuels. And I think it's important to point out
that when the State is promoting and supporting these low
carbon renewable fuels, it's important to have safeguards
in place to make sure that that transition doesn't lead to
additional pollution in the valley.

And so I'll just close by saying thank you again
to the ARB. Your role is, of course, critical in making
sure that we reach attainment of PM2.5 in the valley
thanks.

CHAIR NICHOLS: Thank you.
Yolanda Park.
MS. PARK: Good. A little short.
(Laughter.)
MS. PARK: Thank you for allowing me this
opportunity to speak. My name is Yolanda Park, and I am
the program manager for the environmental justice program
at Catholic Charities in the Diocese of Stockton.
I encourage the Board to seriously consider and
to adopt language and policies that will promote the
health of all of us living in the valley. Pope Francis
says in his encyclical Laudato Si, "This conversation calls for a number of attitudes, which together foster a spirit of generous care, full of tenderness".

If we do not have a generous compassionate spirit, we will treat the issues of the valley with indifference or contempt, and as a problem not worthy of full consideration causing any solutions to be less effective. But I am encouraged by your efforts, and I hope that you will continue pushing strongly onward.

The Pope says halfway measures simply delay the inevitable disaster. Our communities don't have time to wait and our children have time to wait. Therefore, do I urge you and support you to take to heart the reality of the issue to uphold stringent measures to clean up our air, and to continue working hard on our behalf.

On a more personal note, both my husband and I have seen our allergies and asthma get worse since moving back into the valley. We have three children, very rambunctious children, ages six months, two years, and almost four years. A young family.

My eldest was diagnosed with allergies within one year of moving back into the valley before age two, having had no previous signs of problems. My middle was diagnosed with asthma after he turned one, and my youngest showed signs of asthma at the age of three months and had
an asthma attack at five months.

It extremely hurts to see your children trying to
do the one basic action they shouldn't have to struggle to
do to see, and literally hear, them trying to breathe.

It's a terrible feeling of powerlessness.

But you have the power to do something about it,
not just for my family but for all families and all those
living in this valley.

Thank you very much.

CHAIR NICHOLS: Thank you.

MR. BOESEL: Madam Chairman and members of the
ARB, John Boesel with CalStart. We're a national
non-profit organization dedicated to the development of
the clean transportation technologies industry showing
that we can have jobs, economic prosperity, clean air, and
protect the climate.

I want to say that I'm very impressed with the
progress that has been made to date in the San Joaquin
Valley in improving the air quality. We have done it
through a combination of regulation and investments and I
do believe that's what's needed going forward. I do -- we
do see significant synergy between both our climate
reduction, greenhouse gas reduction programs, and our
efforts to improve air quality. Those two are not in
contrast or in conflict, but actually are in synergy.
I'd like to run through a few examples of that. We, about a year and a half go, with funding from the California Energy Commission, we created the San Joaquin Valley Clean Transportation Center. We now have an office in Fresno, and are very excited about the potential to do work and what we've already achieved to date.

We secured about $12 million in zero emission truck and bus funding from the ARB from cap-and-trade funding. So that's -- actually, those are projects that are going into the valley. We're deploying zero emission buses and trucks to date. So we're learning where are those segments that where a zero emission technology makes sense today. So that's very encouraging.

We're also very encouraged by the rapid growth of the light-duty EV market in the San Joaquin Valley, that it's really taking off at a very dramatic rate. We do need to see long-term incentives put in place. And I'd like to maybe perhaps follow up with the two ARB members to the left, my left here, and talk about how we get the legislature to really understand that we need long-term incentives for EV purchases, particularly in the valley as we need to increase the incentives there.

I also do want to just quickly thank Dr. Sherriffs for coming to our event yesterday. Fresno County is taking leadership in the deployment of solar
powered EV chargers. Fresno County is the first county in
the nation to deploy a network of solar-powered EV charges
in 13 small towns, Mendota, Firebaugh, others that now
have solar-powered EV chargers as a result of public
investment, mostly local investment. Caltrans, the Energy
Commission also helped out.

I want to say that the clean -- the trucking
industry is highly fragmented and segmented. There are
places where we should be pushing forward and exploring
zero emission technology. I think the ARB is pursuing
that on a statewide basis and should be. And we look
forward to identifying those niches where zero emission
technology can make sense, can be commercially viable.

At the same time, there will be a need for
internal combustion engine technology. We're very
encouraged by the development of the near-zero emission
engines and the opportunity to develop renewable natural
gas in the valley and to keep those transportation dollars
local, to keep the investment -- the fuel coming from the
valley and keeping those dollars local.

And I'm out of time. Let me just say that we
very much look forward to working with the ARB and others
to develop the investments, the future funding that's
necessary to hit the 2024 target. Very encouraged by what
Roger Isom said earlier about possibly now pursuing the
extension of both the AB 8, AB 118 program, and the Carl
Moyer Program for another decade.

Thank you very much.

CHAIR NICHOLS: Thank you. Are there any other
witnesses who were missed?

Okay. Well, this is an informational item, so
there's no need to close the record. And we're not taking
any formal action today, but if any Board members have any
additional thoughts or questions or concerns, I would like
to call on them now starting with Ms. Mitchell.

BOARD MEMBER MITCHELL: Me?

(Laughter.)

CHAIR NICHOLS: Yes. Judy. Judy, I'm sorry. I
wasn't speaking loudly enough.

BOARD MEMBER MITCHELL: Thank you. Thank you
very much.

One thing we've heard pretty dramatically from
all the people in the audience is the need for incentives
to convert the mobile fleet to a cleaner fleet. And I
couldn't agree more this is important really for San
Joaquin Valley as well as the South Coast. We've
referenced carrot and stick, but the carrot really should
be called very delicious Hershey's chocolate bar, because
that's where we -- we need to go on this.

I also want to congratulate our staff and the
interested parties from San Joaquin Valley for working together on this -- on this plan pursuant to the Board direction, given last October, because it looks like you've accomplished a lot.

There's still some more work to do, I understand, with the modeling of certain things, the ag burning, and the ammonium nitrate. So I assume you'll keep working on that.

And I'm wondering a little bit about next steps, because if we're going to concentrate on charbroiling and the wood burning, how do we do that? We need to work closely with the Air District to -- is the plan is to strengthen their rules and their regulatory structure or what would be done?

DEPUTY EXECUTIVE OFFICER KARPEROS: Both for the residential wood burning and commercial cooking, those would be sectors that fall under the local air district authority to control.

We have done, through our modeling, an essentially a first initial bogey for how stringent the programs need to be going forward. We need to work with the Air District to further refine that modeling. For example, you heard us talk about targeting the retrofit of the commercial cooking program to the urbanized area in Fresno and Bakersfield, where we see a very, very high
level of cooking carbon on the filters that we measure.

So we can redo some refinement of that modeling as we think about what it's going to take to reach -- come all the way to attainment.

But it's also going to be important, given the time frame it will take to phase in these controls, that the rulemaking begin immediately. And we've suggested to the air district that we now know enough on these sectors, that the workshop process can begin in the next month or two, so that we can see sort of those come forward as full blown packages over the next six to 12 months.

BOARD MEMBER MITCHELL: Good. I think that's important that we keep working with the Air District to start that rulemaking process. And those are like near-term reductions that we can see pretty quickly. So I think that that's -- your attack strategy is very good, and I think that we'll see some good results from that. So thank you for the work on this.

CHAIR NICHOLS: Dr. Balmes.

BOARD MEMBER BALMES: Actually, I think Dr. Sherriffs who actually represents the San Joaquin Valley should go -- no, go first, please. (Laughter.)

CHAIR NICHOLS: All right. I yield to your colleague on the left.
BOARD MEMBER SHERRIFFS: All right. So wisdom will follow my comments.

(Laughter.)

BOARD MEMBER SHERRIFFS: It's way too early to celebrate, but I am incredibly optimistic and so thrilled by the way this process has rolled out. I would not have predicted this in October. And as many others have said, yes, thanks to everybody, everybody who is in this room today, who was there in October, and especially, especially, especially thanks to the public which showed up in Fresno and made us, ARB, and us, the San Joaquin Valley Air Pollution Control District, not kick the can down the road and make the hard decisions later.

They don't get any easier later, and we clearly have identified some things we can do sooner, and this is all about health. And the sooner we do these things, the more benefit -- the more people benefit the sooner, benefit today. You know, we are talking hundreds of thousands premature deaths a year. These are real numbers, real people, real health care costs in terms of children asthma, ER visits, school days missed, particularly in adults premature death.

So this is -- this is great that we have been willing to embark on this, and everybody in the community in Fresno, everybody throughout the State. Boy, the power
of the public process, and the power of the public to ask questions. That's all that was done, questions were asked. And what a great process that this Board, the San Joaquin Board, stepped up to work on those answers.

Some thoughts. The -- we are so close, because I don't think anybody in the room was confident we could get anywhere near this close. There is an important increment left, but we are so close. We absolutely can do this. Things have been discussed and put out. We need more information. We need better science. We need better inventories to figure out how we're going to do that. But clearly, in fact, we can do it. This is doable. You know, we found the will to get this far. Amazing.

I would like to just -- a couple of specifics. Yeah, the funding issues. I think we need -- as the ARB Board, one of the things we need to do is, boy, every time there's any money from the VW settlement, we need to look how we can direct more of that to the San Joaquin Valley to assist with that.

Roger, thank you very much for your voice. I wish everybody spoke as clearly, and loudly, and articulately as you do. Thank you for that. I'm glad everybody likes carrots, vegetables. It's not just what we eat.

(Laughter.)
BOARD MEMBER SHERIFFS: It also turns out to be so significant how our food is prepared. Oh my gosh, who would have suspected that there was so much to gain by looking at hamburgers. But again, the focus on health. Boy, charbroiling, residential burning, open burning, the carbon, these are the most direct and immediate health impacts, and we've identified ways to move it forward. So important. Yes, makes this a public health agency that it is. It's great.

You know, I really would echo everything Sheraz said from the San Joaquin Valley Air Pollution Control District standpoint, and, I think, need to highlight a little bit. Yes, we do need to think about some regulations. And I don't think anybody in the room really likes regulations, but we are a regulatory body, the San Joaquin Valley Air Pollution Control District is a regulatory body, and regulatory -- regulations help us get the job done.

Sheraz mentioned, you know, three things about regulations. One, it's a way to get credit for what we do, because we don't always get that credit when we do it through incentives, but it also helps motivate us. Absolutely, those deadlines are so important. And this whole process validates the Clean Air Act, and what a brilliant structure that was -- is.
And the whole issue of fairness. My farming partner and I chose to chip not burn. We pay a financial increment, and we're willing to do that. Not everybody will, and that's fine. But I do think there's an element of fairness for other people, in terms of a business, and what the expectation is, and how that's done.

Now, also as a physician, when I write a prescription, I am looking for the lowest effective dose. Less can help us get there more than more can. We know that. We've learned that. So that is always in the back of our minds as we think about regulations. But I think we do need to think about some and how they're going to fit in in helping us get where we need to go.

I do have to say one thing just because every time I come to a meeting in Sacramento, I am so excited by the possibilities. And I want to go back to the comments. Yeah, yesterday, in Fowler -- you know, these things are possible and we're moving forward. We need to keep moving forward.

So yesterday in Fowler we have a ribbon cutting for these free-standing solar charging stations. What a concept. Phenomenal. And thanks to CalStart, thanks to the Energy Commission, thanks to the San Joaquin Valley Air Pollution Control District putting time and money into these things to get this thing going. What an incredible
demonstration.

So next week, there's going to be a ribbon cutting in Porterville, and ARB can take a lot of credit for making this happen, because Porterville, the community has made a commitment to fully electrify their transit system.

Fantastic. Next week, in Fresno, hopefully we can find a room at the Air District, we're going to have a demonstration of an all-electric farm tractor. Wow. Yes. You know the technology is there. It is moving forward. And one of the comments I made yesterday at the ribbon cutting is I pointed to my all-electric car, and the all-electric car that came from Los Angeles on one charge, and it was not a Tesla.

(Laughter.)

BOARD MEMBER SHERIFFS: Okay. So this is out there. It's growing. It's getting ess expensive. And I said take a picture, because those are model Ts. And in 20 years, we're going to be astonished that people were driving those things, how primitive they were.

So forward. Thank you.

CHAIR NICHOLS: Thank you.

Dr. Balmes and then Supervisor Serna.

BOARD MEMBER BALMES: Thank you, Chair Nichols.

BOARD MEMBER SERNA: Thank you --
CHAIR NICHOLS: Dr. Balms.

BOARD MEMBER SERNA: Sorry.

BOARD MEMBER BALMES: I'll take the ball passed by my fellow physician about effective dose -- lowest effective dose. I also want to apply that to public health. So the lowest dose of air pollution means the limited -- limitation of the adverse health effects.

And I also want to thank those who testified about the spirit of cooperation that I heard, for the most part, and support for that creative tension between environmental advocacy groups and the District, and between the District and our Board.

I think this is an example of democracy in action. It's one of the reasons I'm proud to be on this Board, because we actually pay attention to the public, and the public from all sectors, whether it's the regulated entities or the public.

So I've been working in Fresno in terms of air pollution and health effects since around 2000. So I have some feel for what sources contribute to the pollution and the health impacts. And I don't think I need to remind everyone that the population that's impacted by bad air quality in the San Joaquin Valley is a particularly vulnerable population.

You know, I was appreciative of the air pollution
control district mentioning the fact that there's so many disadvantaged areas, communities in the Central Valley or in the San Joaquin Valley. I've learned to separate the two -- San Joaquin Valley according to CalEnviroScreen. Remember that.

Sometimes leadership of each agency forgets about that. If your executive director had shown up, I would given him a piece of my mind, but I won't give you that piece. And I don't want to talk about the low-hanging fruit that's been mentioned in terms of residential wood burning, which is a big contributor to the PM especially in the winter months in the SJV, and the charcoal grilling restaurants.

We have other areas that we haven't spent that much time on today, but I appreciate staff's -- it's on page 12, additional stakeholder suggestions. I just want to high -- I think we need to pay attention, especially for the future, given that we're not going to achieve attainment, even with all that's on the table, all that we -- that the District agrees on with us.

So ag trucks are an issue. There are -- you know, I think if I remember correctly, those that are devoted to ag, transport that have less than 25,000 miles a year can be dirty diesel. And if we're talking about biomass burning, what kind of trucks are taking that
biomass to the biomass incinerators and power generators? It's those dirty trucks, I would imagine. I don't know that for a fact.

Oil drilling equipment. I know that mostly it's powered -- or more and more of it's powered by natural gas, as opposed to diesel, but, you know, whatever diesel equipment is still out there needs to be considered, but even the natural gas, if it's the cleanest available technology, is still dirty, relatively speaking. It contributes to PM.

And I think -- again, I don't know the numbers, but I think that there's a fair amount in Kern County that's -- of PM and NOx that are generated by oil and gas extraction equipment, not to mention the steam -- I guess that's probably powered by natural gas is the boilers for the steam that's used to frack our oil, which we've been doing for a long time way before others states have been fracking for natural gas.

I've studied agricultural burning, rice straw burning. I was funded by this agency before I was on the Board -- many years before I was on the Board, to study the health effects of, you know, rice straw burning. We need to get away from agriculture burning. It's -- it's -- you know, that's what they do in Indonesia and Brazil. You know, we should be able to find a cleaner
way of dealing with ag waste.

And then, you know, I want to echo something that Dolores Weller said about contingency plans. You know, we're not going to make it even with what we've got in place. So if some of our projections don't work out, we do need to have contingency plans. So I would encourage both the District and our staff to consider contingency plans.

And last, but not least, I've also studied ammonium nitrate funded by this agency. And while ammonium nitrate is not the -- it doesn't have the same toxicity as diesel exhaust particles, I think our current feeling that, you know, really no PM is safe PM in terms of health. So I think, given how much ammonium nitrate is contributing to the overall PM load in the SJV, air shed, I think modeling how that ammonia -- trends in that ammonia emissions and the generation of ammonium nitrate and possible ways to control that are something we should do. I don't think we're ready to put controls on ammonia at this point, but I think we are at a point where we should be modeling effective strategies in that regard.

So, last but not least, I did want to thank Mr. Isom for his enthusiastic embrace of efforts to have the farm community do their part in terms of improving air quality in the San Joaquin Valley.
Thank you.

CHAIR NICHOLS: Thank you.

Mr. Serna.

BOARD MEMBER SERNA: Thank you.

I want to start by thanking the numerous speakers that were here to provide their personal testimonies about themselves and their families in terms of the health consequence of PM2.5 in the Central Valley. We hear a number of speakers on a lot of subjects, but I can tell you both in my capacity as a local elected person and a member of this Board, that when we hear the effect that it's having on your health, I think that's -- at least for me, that's what tends to move my thinking the most at times. So I want to start by thanking those that were willing to share from that perspective.

I also want to say that I was incredibly impressed with, as Ms. Luna, Destini Luna, who I -- I leaned over to my colleague here and mentioned that, boy, she does a better job at speaking and making her point than a lot of adults do.

(Laughter.)

BOARD MEMBER SERNA: Well, she is an adult.

She's a young adult. But again very impressed with not just Destini, but all the young people, the students, that were here to provide testimony.
BOARD MEMBER BALMES: Those were your federal research dollars at work by the way.

BOARD MEMBER SERNA: Good. At least there's something good coming out of federal government there.

(Laughter.)

BOARD MEMBER GIOIA: Shh, don't tell anybody.

BOARD MEMBER SERNA: Right.

BOARD MEMBER GIOIA: Otherwise, they'll cut it off too.

(Laughter.)

BOARD MEMBER SERNA: I do want to mention something that I brought up during my briefing. And I guess I'm looking squarely at our Chief Economist on this. It's just a -- to underscore -- I want to underscore why I think it's important, because we have a charge at this Board to not just apply the science and rule make with just an eye on public health, and just an eye on greenhouse gas reduction, and just an eye on reducing criteria pollutants, but we have a charge to do that, tempering it with what are, not just the health consequences, but the economic consequences, and the environmental justice consequences. There are a lot of moving parts to what we do.

But when it comes to electrifying school buses, which is something that a number of stakeholders and
advocates have been, I think, rightfully pressing for, in
an effort to continue to reduce black carbon and PM2.5,
whether it be in the Central Valley or other parts of the
State of California, what I'm beginning to hear more and
more from school district representatives is that -- that
is having a -- while the interest continues to grow in
electrifying school bus fleets, it continues to be a
growing concern. I can understand why again being --
holding local elected office, that that's going to have a
very significant fiscal consequence for those districts.

And I think they're fearful that the closer we
get to actually implementing that, and whether there be
strict regulations, or strict regulations more so without
any incentives, they're fearful that that will mean that
there will have to be cuts elsewhere in those local school
district budgets.

So I just want to make public mention of that,
because I think it's a very important concept to keep in
mind the closer we get to, I think, doing what everyone
wants to do, including the school districts themselves,
but there is a consequence to that.

Thanks

CHAIR NICHOLS: Thank you.

Ms. Takvorian.

BOARD MEMBER TAKVORIAN: Thank you. I just
wanted to add my appreciation to the public from the San Joaquin Valley for your incredible expertise that you've applied to this issue, and especially for your persistence and your pressure. Really, I don't know how -- that we would be here without -- without what you've done. And I am really moved by the work that you've done, and the distance that you've allowed us to go, and the place that we've landed today.

And I really want to commend the ARB staff. I've heard this in multiple places for the last few months, that your work with the community has really been stellar, that you've been accessible, and been responsive, and truly listened. So I've been to lots of public hearings, and there's lots of no listening going on.

We're checking the boxes, but I don't think that's what happened in this situation. And I'm really appreciative for that. And I appreciate the collaboration, and the cooperation, and the congratulations and gratitude that is being expressed today.

I think that's really generous, because I'm pretty saddened by the loss that we've had, the loss of life, the shortened lives, and the lives that have been diminished, and we've heard about those. And my colleague, I think, just talked about that as well. And
I -- I don't want us to forget that. So we need to do as much as we can as quickly as we can in the San Joaquin Valley and we need to use this as a lesson for every other district, and for the State of California to say we can't turn our backs on people who are suffering, because those days are lost, those lives are lost, we're not getting those back.

And I don't want to be overly dramatic about this, and be -- you know, be a bummer about it, but that's just true. So we just need to face that and move forward in a positive and collaborative way, but I just don't want us to gloss over what has been lost.

So we need to redouble our efforts. I want to make sure that the recommendations that have come forward in terms of the ammonia modeling to assess the further reductions, the inventory of the ag equipment, the assessment of the contingency measures on ag burning, on banning burning, and particularly on, I think, a principle is no incentives without regulations.

I mean, we have a really good model with that with a variety of other programs, that the regulations come into place, early compliance gets incentives, and I think that's the model we need to use. So I hope we can utilize that principle. And I would really love to hear from staff about that.
And I do want to offer my congratulations on Mr. Karperos your defense of the Clean Air Act. And I really appreciate that. And I have to say that I'm offended by anybody that's representing air quality in the State of California that isn't defending the Clean Air Act, and defending the work that we've done in the State of California.

So -- and again, I appreciate the work of CARB staff and the work of the public. And, you know, we've got to hold our heads up and move forward, but that -- I think we have to call that out and make sure that that's not happening within the jurisdiction and the authority that we have.

So I'd love to hear more about your plans on particularly the ammonia modeling and the inventory.

CHAIR NICHOLS: Do I see any additional hands in the air?

This way. You know I was going to call out Senator Florez before he raised his hand, so I just have to introduce --

BOARD MEMBER FLOREZ: Yeah, I did not want to repeat what everyone was going to say, so I won't.

CHAIR NICHOLS: I want to say though that you --

BOARD MEMBER FLOREZ: I won't. I won't repeat it.
CHAIR NICHOLS: -- you did something about the ag burning issue a long time ago, which I well remember, so that by way of introduction, you have some --

BOARD MEMBER FLOREZ: Thank you.

CHAIR NICHOLS: -- you have some credentials here.

BOARD MEMBER FLOREZ: Thank you, Madam Chair. Appreciate it. And everyone's comments, I'll try not to repeat it. But I would like to say a couple of things to the advocates who came down from the Central Valley. It is a trek. It has always been a trek. You wonder if Sacramento listens. And I think you're seeing progress. Slow as it may be, it is progress.

I want to thank the Board for putting a pause on this in Fresno. And you see what happens when you put a pause on things, sometimes good conversations, leverage, a staff that is dedicated here to really push the District in ways that I think the District would like to have skated past this in Fresno.

So I think really, if anything else, I want to thank our staff for being diligent and pushing, but -- so now as a Board member, let me push staff a little further, if I could.

So I -- you know, I definitely think we need more data, better data, transparent data. The issue of ag and
inventory has to be on the table, should be on the table, should be part of what we do here, and should be part of an evaluation process.

I also think the transparency that does not exist between our district and the San Joaquin Valley's District needs to be mended. We need to fix that. We need to figure out a better way to have more transparent data we agree on, early data, not late data, and that we're all on the same page.

I heard a couple of folks on both sides -- and I say both sides, because there are yeses and noes on our comment sheets. So I'm kind of wondering what we're saying no to. But it seemed to me that we should have a more transparent process. I know that's difficult. I've dealt with that District for many, many years. I understand the obstacles, but I do think we need to push. Their data will get us past a lot of the conversations of us passing -- talking past each other. So let me just make that point.

The second is innovation. Clearly, we need to innovate our way out of this very dire situation in the central valley. There are lots of things to innovate. Tom Frantz didn't mention things like solar ag pumps. He mentioned tractors, but there are a lot of other things that we should be looking at as part of the inventory.
Solar has to be a very big part. I do know that a lot of our water districts are iterating towards that. I know a lot of our farmers are moving in that direction.

But I do think the renewable side of this equation has to be there, particularly as you looked at your charts and it talked about the percentage of carbon. And this is a nice co-benefit here. So we always are looking for co-benefits. And I think if you look at the Central Valley, that renewable side, that carbon side, I would say that what's lacking, which a couple of people mentioned earlier is the investment in infrastructure on the EV side.

So no doubt that the Central Valley is short on infrastructure for charging. It's the reason people keep bringing up Volkswagen. And the reality is no one is going to buy a car in Delano, if they have to drive 30 miles to the highway to charge it.

So the reality of the Volkswagen settlement for these communities, as we look at this chart, is more infrastructure, closer infrastructure, not drive to infrastructure, but infrastructure where you can actually plug your car in. So I would say that that kind of innovation this Board can spur, and I think we should continue to push on, particularly on the Volkswagen settlement, the Fiat settlement, and whatever else is
coming.

So I think, you know, as we start to look at these things, infrastructure is going to be very critical for the Central Valley. I applaud our farmers and our water folks for doing as much as they can with scarce resources. I would hope that we would focus on that.

The last thing I just want to mention is two other items. Accountability. This Board has a challenge to put together a large plan for the federal government. Whether they look at it or not, we will continue to push on that endeavor, but I do want to make sure that everyone recognizes that the people in the Central Valley, this Air Board, is part of that puzzle. It has to work as hard as anyone else.

So if Judy is looking at South Coast and she's making it work hard, this district has to carry its weight as well. It is all one plan, one puzzle. And when one piece doesn't do its job, it makes it a lot harder on every other representative here who has a district to make them do their job.

So I would say that I would not be shy in pushing this district to do its fair share. We absolutely have to make sure, because it makes it harder on every single person who's representing an air district here to do their fair share as well.
A follow up, I would simply say, never an issue with all of folks. As staff, you're very, responsive. I know your boxes are inundated with emails from all the Board members, but I do want to thank you for pushing on this. And particularly for Webster and Karen spending time in the valley. It's important. I'm very appreciative of the Chair going to Fresno. That created a whole new dynamic.

And I hope that when we go back again, we'll go to Bakersfield, which I think is ground zero for air pollution. And I'm really looking forward to some of the innovation, some of the things, believe it or not, that China is doing on the air pollution front that we could actually bring back to this Central Valley to really try to make some really lasting change on those few items that are still remaining.

And I'm really happy that you mentioned the word "dairy". It was too late in the presentation. It was like late in the slides. But methane has got to be our new push in the Central Valley. If we're not talking methane, I think we're really missing the boat. And I know that's very hard, but I do think that those are the kinds of things that we have to innovate our way through.

And thank you Madam Chair. I appreciate the time.
CHAIR NICHOLS: Thank you. I think the fact that we have taken as much of our day as we have on this item is indicative of the recognition that the Board has of the scope and the seriousness of the problems that the valley is facing in dealing with its public health, and also as Senator Florez just said, its role as a generator of greenhouse gas emissions as well.

And I think it's helpful sometimes to me when I think about this enormous State of ours, as diverse as it is, geographically as well as -- as well as economically and ethnically that the valley is, in some sense, our underdeveloped area, and needs to be looked at from the perspective of how we really can demonstrate to the world, if we're serious about continuing our leadership in global, environmental, and climate issues, that we can have significant growth and improvements, and opportunity, and prosperity while at the same time tackling serious environmental challenges as well.

So this is an important step forward, but it is just one step forward, and what I know is going to be a long process. I, too, want to thank everyone who came, and for all of the hard work that people are putting into this effort.

And I think with that, we --

VICE CHAIR BERG: Madam Chair, before -- as you
wrap-up --

CHAIR NICHOLS: Yes.

VICE CHAIR BERG: -- could we just hear from staff on the timing going forward?

CHAIR NICHOLS: Oh, yes, of course. Yes.

VICE CHAIR BERG: And including the time frames that were asked on the modeling, time frames that we'll be able to get those done in time for the rule to come back.

CHAIR NICHOLS: Actually, that was what I was going to do, but it's okay.

(Laughter.)

CHAIR NICHOLS: You just had to jump in. All right. That's fine. That's okay. That's -- go ahead, please.

AQPSD CHIEF MAGLIANO: Okay. So, right, questions were raised about ammonia modeling. As you heard, we have done some preliminary modeling on that, looking at a 30 percent reduction, and shared that with the communities.

U.S. EPA has guidance on how we approach this, and they actually suggest that we look at a range between 30 percent and 70 percent. So that's what we will be jumping on next is to do that 70 percent range, so we have the bracketing to understand better, what the range of benefits could be at the same time as we continue to look
at more of the research to better understand what
different management practices might mean in terms of
reducing not only ammonia, but also methane and VOCs.

One -- I think one of the very strong benefits
that we have now is that our modeling has advanced to a
point where we can really be very sophisticated and
strategic in terms of how we explore potential control
strategies. And so that is something that we will be
working on over the next couple of months as we look at
closing that gap.

The air district has also been developing a
modeling capability. And we've been working closely with
them. So that also provides of advantage of having sort
of an increasingly larger staff that we can collectively
bring to bear as we look at additional strategies.

So as was said in the presentation, this will
take, you know, a fair amount of work, but there is a lot
that we can do to continue to explore these strategies.
And I think we see those going forward over the next few
months of the summertime, and we will continue to be
engaging with the District coming back into the valley to
be sharing all of that additional modeling information
that can help inform all of us working together on the
strategy.

The last -- the other question that was asked was
about our ag inventory. This is something that we worked very closely with the ag industry a little over about ten years ago to collect really detailed information about agricultural practices, farm size, the different tier distributions. And that has been reflected in the inventories that we've been incorporating into the SIPs over the last few years, but probably something that we've been a little deficient upon is having some additional documentation that can be a made available to the public and our website that really provides people with an understanding of the granularity of the information we have. So our staff is working on that right now, and we will plan to be able to make that information available too.

CHAIR NICHOLS: Okay. Thank you.

All right. I think that does it then.

It's 10 past 12:00, as everyone can see, and we have two items. We were scheduled to have a lunch break, and I think we should go ahead and do that, if folks are willing.

Okay. Great. Then we will adjourn and we will be back at 1:30 for the final part of the agenda.

Thank you.

(Off record: 12:14 p.m.)

(Thereupon a lunch break was taken.)
AFTERTNOON SESSION

(On record: 1:31 p.m.)

CHAIR NICHOLS: Good afternoon. We're back from our break. The next agenda item is an informational update on a draft guidance document that was recently released by ARB on overcoming barriers to zero emission and near zero emission transportation in low-income communities.

This is an update to the July 2016 informational Board item, in which staff introduced this project, and presented their initial identification of the types of barriers that low income residents face in accessing clean transportation options.

Today, staff will present additional barriers that have been identified and initial recommendations included in the draft guidance document for Board feedback, and will inform the Board on their next steps in implementing these recommendations. This all grows out of SB 350, which directed the Air Resources Board to conduct a study to better understand barriers that low income residents face in accessing zero emission and near zero emission transportation options, and provide recommendations to increase clean transportation access in low income and disadvantaged communities.

Transportation electrification is the cornerstone
of California's future in meeting both air quality and climate goals. Widespread adoption of clean transportation requires increasing the opportunities for all residents across a range of mobility options.

This is a topic I have to say which I find, in some ways, incredibly frustrating, because, you know, the difficulty in accessing options is being poor. You know, what more do they need to know. Why do we have to day a report on this?

But as it has turned out, there is a lot more under the surface of this issue, a lot more specifics, and more in the way of potential strategies that could be used than have necessarily come to the fore in the policy discussions to date.

And so the fact that ARB is now in a position of really having spent a lot of time out in the field doing discussions, and listening sessions, and having a chance to think through some of the ideas that have come forward actually does present us with an opportunity, I think, to injects ourselves into a discussion which, in the past, we've never really been at the table for.

So I'm thinking that this is something where it's really a good time now to hear an update on what's been done to date, and to start to have the Board really begin to dig into what we might want to do and be able to do to
move this issue forward.

So with that, I am going to turn the agenda over to Mr. Corey to take it from here.

EXECUTIVE OFFICER COREY: Thanks Chair, and that's right on point in terms of discovering some opportunities here.

But as you mentioned, so AB 350 tasked CARB with developing a study on the specific barriers low-income residents and disadvantaged communities face to access zero-emission and near zero-mission transportation options. The resulting draft SB 350 transportation access guidance document staff released for public review last month represents a roadmap for transportation policymakers, project administrators, community groups, and the public to identify potential gaps in access and recommendations for improvements moving forward.

Opportunities for increasing access address four key barriers, as you noted, affordability of clean transportation, sustainable funding, awareness of programs and incentives, and a continued understanding of the unique transportation needs in low-income and disadvantaged communities statewide.

Our new Assistant Executive Officer for environmental justice, Veronica Eady, and I are participating on the SB 350 multi-agency task force that
was recently convened by the Governor's office.

The task force serves as the mechanism and driver for CARB, the Energy Commission, and other State agencies to jointly and collaboratively address barriers to clean transportation and energy access for low income residents.

We plan to continue reaching out to stakeholders, get input on the recommendations and implementation, and then to finalize and publish the guidance later this year.

I'll now ask Ashley Dunn from the Mobile Source Control Division to give the staff presentation.

Ashley

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST DUNN: Thank you, Mr. Corey, and good afternoon Chair Nichols and members of the Board.

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AIR POLLUTION SPECIALIST DUNN: This is our second update to the Board on the SB 350 Clean Transportation Access project. The first was back in July of last year. Since then, we have made a lot of progress and want to highlight that today, in addition to some important next steps.

To start today's presentation, I will briefly describe the overarching goals of SB 350 as a reminder of
the importance of this effort, and how it fits into the broader context of our clean transportation programs. SB 350 established, as a State priority, the reduction of greenhouse gas emissions through a promotion of various clean energy policies, including widespread transportation electrification, expanding access to clean transportation and energy programs, reducing petroleum use to meet our air quality and climate goals, and stimulating economic and environmental benefits for all Californians.

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AIR POLLUTION SPECIALIST DUNN: SB 350 requires that the Air Resources Board examine the barriers low-income residents face in accessing clean transportation, including in disadvantaged communities, as well as develop recommendations on how to overcome these barriers.

SB 350 also requires the California Energy Commission to develop a complementary study that focuses on increasing access to energy efficiency, weatherization, renewable energy investments, and opportunities for small businesses located in disadvantaged communities.

The results of these two separate, but related, reports are really intended to provide a clear pathway to increase clean transportation and energy program access.

Throughout the rest of the presentation, I will
provide information on the draft SB 350 guidance document, including barriers and initial recommendations identified through a public process and community review, how current programs are currently increasing access to clean transportation, and next steps that lay the foundation for more widespread access to clean transportation and mobility options.

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AIR POLLUTION SPECIALIST DUNN: Before we dive into the process that we followed to develop the draft guidance document, it's important to define what we mean by clean transportation and mobility options. Statute requires that we identify barriers to clean transportation options for low-income residents. In order to create a very broad understanding of the challenges to accessing clean transportation across the State, this review needed to include zero-emission vehicles, as well as alternative mobility options, such as biking, walking, public transportation, and car or ride sharing.

We worked closely with the Greenlining Institute, the Coalition for Clean Air, and Communities for a Better Environment to really determine the areas of personal transportation to be included in the draft guidance document. It became evident from these discussions that most forms of personal transportation should be included
within the scope.

As a result, we included barriers to most modes
of personal transportation, including zero-emission
vehicles, transit and school buses along with walking and
biking as I just mentioned earlier with the supporting
infrastructure.

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AIR POLLUTION SPECIALIST DUNN: Once we better
understood the types of transportation modes to review in
developing the guidance document, a key question was what
methods would be used for accessing -- or assessing clean
transportation access barriers?

What we heard from the stakeholders was that if
they really wanted to understand key transportation
issues, we would talk directly to low-income residents in
rural, urban, and tribal regions throughout the State
through our really important partnerships with the
community-based organizations. This was our primary means
of obtaining feedback and really helped shape our public
process.

In addition to meeting with residents, we
conducted community reviews resulting in case studies and
literature reviews to better understand commonalities and
differences in clean transportation access challenges that
residents face in different geographic regions, along with
current transportation options.

We have also been meeting with the State agencies that oversee various aspects of transportation systems on an ongoing basis. In the next few slides, I will touch on these methods in more detail.

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AIR POLLUTION SPECIALIST DUNN: In 2016, we held two public roundtable meetings where we presented initial barrier categories and heard input from stakeholders. We were then invited to attend four community-based meetings in Huntington Park in a rural community of the San Joaquin Valley, Huron, Redwood Valley in the rural northern region, and North Richmond.

We participated in many Environmental Justice Advisory Committee community meetings. We held numerous one-on-one meetings with the public, and attended public meetings held by the Energy Commission.

Throughout these events, we were able to really engage with low-income residents and receive feedback specific to the challenges they're facing in accessing clean transportation, but also what could be done to increase access.

In the following slides, I will get into more detail about the organizations, as well as the State agencies, that have been really critical in the
development of the draft guidance document.

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AIR POLLUTION SPECIALIST DUNN: Here are some of the organizations that we have been working with throughout this process to promote continued community engagement. At this time, we would like to thank them for their partnership and their assistance. These partnerships allowed for many opportunities to meet with low-income residents throughout the State.

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AIR POLLUTION SPECIALIST DUNN: In addition, to engaging with low-income residents and community-based organizations, we have had ongoing meetings with many State agencies that oversee transportation projects and programs which are relevant to this study. We would like to thank these agencies for their assistance and valuable input throughout this process.

The people involved have been very engaged and supportive of the development of these efforts, and we see that really continuing in our coordination as a crucial step in implementing the recommendations to increase access.

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AIR POLLUTION SPECIALIST DUNN: Specific examples of multi-agency coordination on clean transportation
planning efforts include the Zero-Emission Vehicle Action Plan, AB 32 Scoping Plan, Mobile Source Strategy, California Transportation Plan, Bike and Pedestrian Plan, as well as the Complete Streets Action Plan.

The draft guidance document acknowledges these efforts and really highlights their importance in meeting our air quality and climate change goals by increasing transportation access for all Californians.

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AIR POLLUTION SPECIALIST DUNN: The results of these efforts are included in the draft guidance document. This document identifies the main barriers and provides a framework to address them moving forward through the initial recommendations.

Many of these recommendations build upon current efforts both at the State and local level, and what they're currently implementing to increase widespread access to transportation electrification, including efforts to update the AB 32 Scoping Plan and implementation of the SB 375 sustainable communities strategies.

These initial recommendations include steps that the legislature, the State and local planning, transportation, and air quality agencies, as well as the communities can really take advantage of to overcome
specific barriers and begin to formulate innovative, meaningful solutions.

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AIR POLLUTION SPECIALIST DUNN: The key barriers described in the draft guidance document include many of the same barriers that all residents are facing to access clean transportation. But what really makes these barriers more challenging to overcome is that they are more prominent and magnified for low-income residents.

This is mainly due to their inability to afford more expensive advanced technology vehicles, along with living in established communities that lack the necessary transportation infrastructure, such as safe biking and pedestrian facilities.

There's also a lack of long-term sustainable funding that can be used to implement the recommendations to overcome these barriers.

In addition, there's a lack of awareness of zero and near zero-emission technologies, and an understanding of clean mobility options.

Finally, and probably one of the most important barriers identified is that low-income residents have transportation needs that are very unique, depending on geographic locations, and they often feel as though they are not being heard, nor are their needs being addressed.
when transportation investments are being planned and made.

In the next few slides, I will go through the recommendations that, if implemented and funded, can really help overcome these barriers to clean transportation access for low-income residents across California.

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AIR POLLUTION SPECIALIST DUNN: Throughout this effort, it became clear that there wasn't one single solution to addressing the problem, but many steps that taken together will result in ensuring the transformation to electrification of the transportation system, which will ensure that access occur for low-income residents.

Our communications with low income residents allowed us not only to identify key barriers, but also specific community-driven recommendations to overcome them.

The draft guidance document includes four general recommendation categories to directly address the barriers. These include increasing and prioritizing funding for clean transportation and mobility options, expanding assessments when planning transportation investments to ensure transportation needs are met, increasing awareness of the clean transportation and
mobility options in communities, and ensuring that investments in clean transportation projects really maximize economic opportunities and benefits.

Each recommendation category includes a number of specific actions, along with a lead and supporting agency or agencies necessary to implement these actions. In the next four slides, I'll go through more detail on the four recommendation categories, along with providing some examples of current programs and projects being implemented to increase access to clean transportation.

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AIR POLLUTION SPECIALIST DUNN: To date, the State has invested approximately $2.7 billion of auction proceeds in sustainable communities and clean transportation. In order for all low-income residents to access clean transportation, long-term dedicated funding must be identified.

With long-term funding, existing efforts can continue moving the State forward and towards widespread zero-emission transportation. This category includes funding current efforts, such as the Enhanced Fleet Modernization Program Plus-Up Pilot Project, financing assistance for lower income consumers, infrastructure for zero-emission vehicles, and increasing mobility options such as increasing access to car and ride sharing, safe
bike and walking, and providing low-cost electricity for zero-emission vehicles.

The first recommendation category and the one that really touches all of the recommendation in the draft guidance document is the need to increase and prioritize funding for clean transportation, as well as new funding. In addition, there is a need to ensure funds are prioritized to provide direct benefits to low-income residents, including those in disadvantaged communities.

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AIR POLLUTION SPECIALIST DUNN: Since one of our four recommendation categories remain themes throughout the draft guidance document is to increase and prioritize funding, we want to briefly talk about new potential funding sources for clean transportation and mobility options.

One potential source is Senate Bill 1, the transportation funding bill, which was recently signed by the Governor. This bill includes over $52 billion in funding over a ten-year period. About $11.5 billion is focused on increasing funding for active transportation programs, expanding localized transit services, and infrastructure projects, all of which are included in the draft guidance documents recommendations.

This bill also includes $2 billion for State and
local partnership programs, which reward self-help
counties that have adopted local taxes or fees dedicated
to improving transportation infrastructure or programs.

The Volkswagen settlement funds are another
potential funding source, which include approximately $1.4
billion over ten years, $800 million of which will be
invested by Volkswagen, and the rest of which will be
invested by the State on specific projects.

These funds will be invested by the State or VW
in clean vehicles, programs that increase awareness of
clean technologies and transportation programs, and
supporting infrastructure.

As a result of these investments, economic
benefits are anticipated across the State, such as
increased access to clean transportation jobs. These
topics are all included in our draft SB 350 guidance
Document recommendation.

In addition, the California Air Resources Board
has been working closely with the public utilities
commission on a utility program that funds clean
transportation infrastructure across the State.

Staff continues to review funding mechanisms to
support the SB 350 effort, and wants to ensure that
funding priorities maximize benefits in the shorter term.

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AIR POLLUTION SPECIALIST DUNN: The second recommendation category is focused on taking action to better understand transportation needs of low-income residents through prioritizing focused and expanded community-based needs assessments.

As I previously mentioned, one barrier identified by talking directly with residents is that they feel their transportation needs might not be well understood, and that therefore not always addressed or included when investments are made in land use or transportation planning efforts.

These assessments must include resident feedback, updated or new clean vehicle regional readiness programs -- or plans, and a localized view of unmet clean transportation needs as part of regional planning.

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AIR POLLUTION SPECIALIST DUNN: The third recommendation category addresses the need for permanent funding to expand education and outreach efforts in low-income and disadvantaged communities to increase awareness, and exposure to clean transportation, and mobility options.

More specifically, there should be increased efforts to strategically plan our outreach, develop materials, and educational curriculum; as well as engage
and partner with community-based organizations and low-income residents; coordinate streamline our programs and information for low-income residents, such as developing region one-stop shops; and establishing community trust in new and used car buying experiences by developing a statewide network of dealerships that low-income residents can rely on to buy cleaner newer used vehicles.

One success sorry that I want to highlight is "Our Community CarShare Sacramento" project, which was recently launched. This is the first all-electric car-sharing project in the nation that specifically benefits low-income residents in disadvantaged communities.

Residents in three affordable housing units now have access to zero-emission vehicles for doctors' appointments, shopping, and other daily trips. This project also provides targeted outreach and education, so that when a consumer may be ready to purchase a vehicle, they will be aware of clean technologies and more likely to purchase a clean vehicle.

Without the State making investments in these types of projects, these residents are not likely to have access to clean transportation options.

Also, we just closed a $6 million car-sharing
solicitation for fiscal year '16-'17 on Monday, and we received 14 applications which were requesting over $20 million in cap-and-trade funds. So this shows that there is a really high level of interest for zero-emission mobility projects.

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AIR POLLUTION SPECIALIST DUNN: In order to meet broader SB 350 goals of stimulating economic benefits, the fourth recommendation category seeks to ensure access to economic opportunities are maximized for low-income residents. This would be done by prioritizing projects that provide local economic benefits for low-income residents, strategically planning our policies and investments to continue to promote affordable housing close to multiple clean transportation options, and increase connectivity between these options in support of SB 375 efforts.

Investments should be made to support access to good quality clean transportation jobs and workforce development opportunities, and expanded access to vocational training pre-apprenticeship and apprenticeship programs.

Policy -- policies should be carefully designed to ensure clean transportation and infrastructure projects minimize physical or economic displacement of residents
and businesses in low-income and disadvantaged communities, or adverse health impacts.

AIR POLLUTION SPECIALIST DUNN: To facilitate an ongoing public process, we published the guidance document draft form to allow residents and stakeholders the opportunity to review and provide feedback.

To date, we've received a significant level of interest and a number of comments. The comment themes have included the need to:

Prioritize recommendations to be tackled over the next two years. Priority recommendations will be determined through the public process, direct engagement with low-income residents, and the multi-agency task force.

Secondly, closely tied to AB 32 scoping plan efforts, including a stronger Link to emission reductions, reduced vehicle miles traveled, as well as health impacts.

Thirdly, prioritize regional one-stop shops for education and outreach in clean transportation and energy programs.

Fourthly, prioritize increased awareness in transportation electrification in schools and youth programs.

Ensure that recommendations are not too centered
around light-duty vehicle ownership, since there are many
other mobility options that should be prioritized based on
community-specific needs.

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AIR POLLUTION SPECIALIST DUNN: Additional
comment themes have included the need to:

Create safe active transportation options,
including biking and walking, pedestrian safety, and
supporting infrastructure such as sidewalks and dedicated
bike facilities.

Also, highlight the importance of a paradigm
shift away from single occupancy vehicles, including
developing a loading order or a list of potential clean
transportation options that can be better utilized by
low-income residents. And this should focus on the
solutions that best meet the localized needs.

Create stronger connections and promote increased
access between clean transportation jobs, training,
housing, and efficient land use.

And provide a menu of options that local
communities and governments can choose from, rather than
the State setting priorities and expecting them to cover
all regions.

We appreciate the input that we have received to
date and look forward to additional feedback and
discussions as we work to finalize the guidance document this fall.

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AIR POLLUTION SPECIALIST DUNN: In order to ensure the recommendations included in the draft guidance document and CEC's barriers study are implemented, the Governor's office has convened a multi-agency task force comprised of leadership of State agencies implementing clean transportation and energy programs.

The task force is a mechanism and driver for CARB, the Energy Commission, and other State agencies to jointly and collaboratively address the barriers to clean transportation and energy access, and to establish accountability to ensure the implementation of the recommendations.

In addition, the task force will work to identify and prioritize actions needed in the near term to implement recommendations; as well as determine resource needs for each of the recommendations; identify long-term permanent funding sources; and identify as well as develop metrics for clean transportation and energy with input from communities to measure our success and progress over time.

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AIR POLLUTION SPECIALIST DUNN: The next steps
towards supporting an ongoing process and meeting the
goals of SB 350 include:

Continuing the public process. We will
participate in additional meetings and go back to the four
case study communities that we visited to let them know how
their feedback was incorporated into the draft guidance
document, and also determine if we properly characterized
their feedback, and ask for their input on priorities for
increasing clean transportation access. We will also
continue collaborating with the State and local agencies
as well as our stakeholders.

Incorporating feedback. We will incorporate the
ongoing feedback that we receive on the guidance document
over the next couple of months from the Board members to
the State agencies, community groups, and the low-income
residents, particularly on the recommendations that should
really be a top priority over the next two years and then
publish the final guidance document this fall.

Participating in the multi-agency task force. We
are really excited to participate on the task force, and
look at our program to see what, if any, modifications
need to be made to ensure we're really leading the way and
make sure that we continue to work with our sister
agencies and local agencies to prioritize recommendations
through this task force and emphasize priority
recommendations and actions in the low carbon transportation investments funding plan coming to the Board in the fall.

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AIR POLLUTION SPECIALIST DUNN: This concludes presentation.

Next, we have two people who have been instrumental in this effort who would like to say a few words.

First, Alana Mathews, Public Advisor from the Energy Commission, will come up to the podium.

Next, we will hear from Kate White, Deputy Secretary of Environmental Policy and Housing Coordination at the California State Transportation Agency.

After Alana and Kate are done speaking, we'd be more than happy to address any comments or questions from the Board.

Thank you.

CHAIR NICHOLS: Thank you.

MS. MATHEWS: Good afternoon. So I was here, I guess, last time there was a briefing and shared about our process. So I just want to update you. As you know, in December, the Energy Commission we published our barriers study, which is pretty much part A. And that identified broad categories of barriers, as the Chair stated, that
this is a lot more underneath than -- you would just think it might be an economic issue, but there are a lot of other factors that we need to take into consideration and have better policy and planning. So we identified the broad categories of barriers, and then proposed about 12 recommendations. There were five principle and then seven additional recommendations.

So this year, the Energy Commission has really focused on trying to implement those recommendations, one of which has been the multi-agency task force, which on May 9th we had our first meeting. Later this month, May 16th, we had our first kind of implementation workshop. And I'm glad to see that ARB was represented. Ashley did a presentation as well as Mr. Corey was there on the dais. It was a joint workshop, so we had the CPUC, as well as the Governor's office in attendance.

So just in updating on -- we really see this as a joint effort between the Energy Commission and ARB, and so we're happy that Ashley has worked very hard. Sam has been -- we've had joint community meetings. But in all of our workshops and roundtable discussions, we really worked together, so that we can leverage the investments that have already -- are already in place, and then complement that with the new policies and recommendations that we have.
So just to highlight some of the recommendations that we have identified as priority, based on either the maximum potential that it can have for low-income residents and disadvantaged communities, as well as sort of what's the low-hanging fruit, what can we practically accomplish and in the next two years.

So that includes looking at potential solutions for multi-family buildings and their clean energy issues, creating the regional service delivery, which is an overlap of kind of the same solution that Ashley meant, and these cross-cutting one-stop shop, so that there's one place that residents can come to find out about all clean energy programs transportation, efficiency, and otherwise.

We're also looking at better use of data, strategies for clean energy, labor, and workforce development. Again, another overlap that we want to work together. If we're going to train and build a workforce in energy efficiency, it might as well be in clean transportation as well.

(Laughter.)

MS. MATHEWS: So then lastly looking at clean energy pilots, financing pilots that we can implement in low-income communities. So the next steps for the Energy Commission will again first be to continue to work with ARB. We appreciate the strong partnership that we have.
We have our second implementation workshop on August 1st of this year. That's the tentative date. And we'll look at addressing some of the additional recommendations that we've had.

And then we also want to look at a tracking process, because we recognize one of the key components of the success of what comes out of SB 350 is the metrics that we identify and the tracking process, so we can make sure we are on target to our -- reach our State's climate change goals.

Thank you.

MS. WHITE: Good afternoon, Chair Nichols, Board members. Thank you for the kind invitation to speak today. And thank you to Ashley for all her fabulous outreach and connections with other agencies and the public.

I am very pleased with this study. And as the guidance notes from many of the stakeholders that were engaged, transportation costs can be a very significant burden especially for low-income households. And car ownership in particular, whether gas powered or electric, is the most expensive form of transportation. According to the AAA in 2016, the average car owner spent about $8,000 a year owning and operating their car.

And for a low-income individual, $8,000 can
easily represent 30 or 40 percent of a household budget, leaving little for other necessities like food, housing, education, and health care.

At the same time, we know that transportation is absolutely a necessity for life, liberty, and the pursuit of happiness. And as public servants, we absolutely want to increase access to economic and social opportunities for all, whether that's the kids going to the park, or mom getting to her new job, or dad picking the kids up after soccer practice.

And so how do we increase mobility options and access to the bounty of California for low-income residents without overburdening households, especially low-income households with excessive car ownership costs. And at the same time, how do we, as the draft AB 32 scoping plan preferred scenario requires, actually start to decrease per capita vehicle miles traveled.

So I'd like to suggest that a focus for overcoming barriers to clean transportation should be on two things that are very much highlighted in this report. Thank you.

One is, I call it, the original zero-emission vehicle, which is our feet and bicycles; and two, the original high-occupancy shared vehicle, namely trains and buses. And at the State Transportation Agency, we
appreciate the opportunity to partner with ARB and many
other sister agencies to expand safe, convenient,
reliable, and yes, zero-emission transit, walking and
biking.

And fortunately with the help of both the
California climate investments, of which 50 percent have
been committed so to date to disadvantaged communities,
and now the passage of SB 1, as Ashley mentioned, the
transportation funding package, we have significant
resources -- I think we're making some progress towards
your number one recommendation -- significant resources to
both invest in these clean modes, as well as the housing
that will allow low-income residents to afford to live or
stay close to growing job centers and transit hubs.

In addition to new funding, there are a series of
supportive policies and plans across the State that aim to
increase access to transit walking and biking for everyday
transportation. These strategies are outlined in many
documents, such as the scoping plan, the California
Transportation Plan 2040, and just released this week,
very pleased to see, Caltrans first ever pedestrian and
bicycle plan called Toward an Active California.

Finally, much of the innovation that I'm seeing
around clean transportation is happening at the local
level. And those local partners are key. Many city --
California cities are adopting vision zero plans, which aim to eliminate traffic fatalities, increase safety, and other cities are partnering with companies like Lyft to support reduced prime connections to transit.

Thank you again for the opportunity to provide some remarks, and I look forward to the feedback from the public on this study.

Thank you.

CHAIR NICHOLS: Thank you.

Any additional remarks or should we --

EXECUTIVE OFFICER COREY: I'm sensing from the long pause --

(Laughter.)

-- EXECUTIVE OFFICER COREY: -- that answers that they have concluded their presentation.

CHAIR NICHOLS: Turn back to discussion here.

(Laughter.)

CHAIR NICHOLS: I was waiting for fanfare or a musical interlude or something.

(Laughter.)

CHAIR NICHOLS: Okay. Well, that was fine. That was good, but I do think it calls for maybe a little bit of commentary here. One question I guess -- yes, of course. No, no, we will.

Sorry. We have a number of members of the public
who have signed up to speak to us on this comment -- on this -- on this item, and we will hear from them. I was thinking that perhaps it might be helpful to focus a little bit further in on the environmental justice piece though, and I did want to ask if Veronica was able to provide any additional comment on what you're up to with the multi-agency task force.

ASSISTANT EXECUTIVE OFFICER EADY: Well, as you know, we've had one -- one meeting, but I'll speak more generally about the intersection of environmental justice and clean transportation. As you've heard and can imagine, there's been overwhelming support for this and for the work of the team here in, you know, filling a gap, where there's a real need, and we heard today particularly in the San Joaquin Valley, I've heard a lot from the city of L.A. and other communities that are interested in bringing clean transportation to their disadvantaged communities.

There's been a lot of really wonderful activity going on thus far. And I find a really great synergy between the work here under SB 350, and you heard SB 1. So it's a really important time and alignment of the planets here for ARB to be able to leverage all of this great work that's going on within the agency and also with our partner agencies.
So anyway, I'll leave it at that. I think it's a really important report, and I think that from this point on, and the next time you hear from us on this, there will be a lot of major achievements.

CHAIR NICHOLS: Great. Thank you. I appreciate that.

Okay.

BOARD MEMBER GIOIA: Madam Chair, question?

CHAIR NICHOLS: We do have a list of witnesses.

Oh, sorry. Mr. Gioia.

BOARD MEMBER GIOIA: Yeah, just a comment. And thank you for I think this very thorough guidance document. One of the comments I have, and a question of how to approach this in a stronger way. There's discussion here, which I think is very good that -- and where it talks about securing permanent long-term funding sources, and it says this is a critical part of the next steps for the SB 350 process.

So having been involved developing and SCS in the Bay Area a few years ago, and watching the development of these plans around the State, I'm not so optimistic that local regions are all going to put the effort into doing a thorough analysis to look at potential funding sources to overcome these barriers.

So I'd like to see how we can strengthen our
recommendation to require -- I know we get to review the
SCS plans to require that each SCS plan that's submitted
specifically address this issue and develop a plan,
because it's one thing to say, well, the SB 350 process
should address this, it's another thing to try to place a
requirement on local city and county officials. And
there's a few of us up here. We know that different
regions are going to approach this differently.

And I think we need to do something to ensure
that there's the political will to actually be thorough
and do that. So the question is how far can we go to
require this analysis and identification of funding
opportunities and specific strategies?

Because it should occur in each region that
develops an SCS. That makes total sense, because they
understand sort of their unique issues better than maybe a
statewide approach. So I just want to beef up that
recommendation to require it.

Do you have any suggestions on how to do that?

DEPUTY EXECUTIVE OFFICER KARPEROS: Supervisor
Gioia, let me -- let me try to answer your question.
You're right within the context within the existing
framework for 375, the Board's role, and --

BOARD MEMBER GIOIA: Yeah, I'm referring to 375,
right, right.
DEPUTY EXECUTIVE OFFICER KARPEROS: At our March Board meeting, Professor Sperling suggested that we hold a roundtable to talk about some of the funding issues. We have since then started to reach out to the MPOs and others about the format and agenda for that meeting.

We've also communicated with the MPOs about the -- where we think sort of initial -- ARB staff's perception on what initial targets could be for 375. And those numbers are larger than what the MPOs have done with their bottom up. So we've begun a conversation with them that the ability to close that gap, and the ability for them actually to implement their existing SCSs is predicated on available funding.

So I think the -- one of the main agenda items for the roundtable, and we're targeting sort of an August time frame for that, will be this funding issue. How we sort of crack the nut of -- within the context we have with 375 to require it is -- certainly is a challenge, and I don't know -- I don't have a silver bullet for you in terms of answering that part today.

BOARD MEMBER GIOIA: I mean, you know, when we review the SCS, we're trying to ensure that they're meeting some statewide goals. Why can't we just make this one of the goals to include -- to ensure, because I get the value of a roundtable discussion. I've been to plenty
of roundtable discussions. They're great, but it doesn't get the regions of the State to act and require them to put these in their plan. So the information from the roundtable discussion is one thing, but it's connecting it to actually getting city and county officials to put this in the -- in their MPO plan.

I mean, I know the struggle it took to put a lot of issues in the Bay Area plan, and that's the Bay Area, and that came with a lot of advocacy.

I'm not so certain that's going to happen around the State. So if we have a checklist of what's required, can we go further and require it? I think we're sort of assuming folks are going to spend time on this issue, and I think we're wrong. They're not going to have the same -- different regions are going to not put the same amount of effort into this.

DEPUTY EXECUTIVE OFFICER KARPEROS: I don't think within the current structure of 375 that we can explicitly require certain strategies and funding mechanisms.

BOARD MEMBER GIOIA: I don't mean a strategy. Require identifying a plan to address this issue.

DEPUTY EXECUTIVE OFFICER KARPEROS: Okay. I follow. I apologize. I wasn't following.

I think we can integrate into our review of the SCSs a more rigorous evaluation of the language in SB 375
that if the -- if the plan were implemented --

BOARD MEMBER GIOIA: Right.

DEPUTY EXECUTIVE OFFICER KARPEROS: -- we can --
I think we would have the opportunity to talk about what
the risks are and the possibilities given the funding
streams --

BOARD MEMBER GIOIA: Right.

DEPUTY EXECUTIVE OFFICER KARPEROS: -- to assure
that the plan could be implemented.

BOARD MEMBER GIOIA: Right. And some of this is
going to involve funding streams, some is going to involve
just other strategies to remove barriers. And I think to
me that is one of the most important places to develop the
strategy is at these regional levels. And so we got a lot
of bang for our buck, if we can require each of the
regions to go through the effort to do this work. We're
not concluding what the out -- what the specific strategy
is going to be, we're just saying develop a strategy that
works in your region that overcomes these barriers.

CHAIR NICHOLS: Well, even just consider it
seriously --

BOARD MEMBER GIOIA: Right.

CHAIR NICHOLS: -- which doesn't have to happen
right now. I mean, as I've been thinking about this, part
of -- excuse me for piggybacking on this --
BOARD MEMBER GIOIA: Yeah, sure.

CHAIR NICHOLS: -- but, you know, part of what's been causing dissonance in my mind about this issue is that we have all these transportation planning efforts going on elsewhere, and lots of money being talked about, and a huge need to transform our system, which we keep talking about -- you know, more clean vehicles, more transit and so forth.

And in that realm, there isn't any discussion of the issues that we're dealing with over here in this removing barriers report.

BOARD MEMBER GIOIA: Right.

CHAIR NICHOLS: Now, we have to do the report, because we're legislatively mandated to do it, and also it's a useful exercise, but if there isn't a way that it blends back in to the other planning that's going on, it's going to be a continued disconnect, and, if not, tension outright, you know, warfare over how resources get spent.

And that's really, I guess, what I'm troubled about is that, you know, we have a state that has huge areas of poverty in it. We have a big disconnect between rich and poor as it is. We have a need to have people who can afford to buy their own car, buy clean cars, which are more expensive now than non-clean cars, and other -- face other barriers of their own in terms of being out there in
the community, and we've got this other whole issue that we're sort of treating as a completely separate problem.

And it is -- I mean, it has its own issues for sure, but it doesn't seem like we're making connections that need to be made. I see Diane nodding, so I'm hoping she can help me articulate this.

BOARD MEMBER GIOIA: No, I appreciate you said that. I just want -- just a final comment I'll make.

CHAIR NICHOLS: Okay.

BOARD MEMBER GIOIA: For those of us who have been developing these plans at the local level --

CHAIR NICHOLS: Right.

BOARD MEMBER GIOIA: -- on the ground level, we understand how hard it is to include all of these things. And unless there's some requirement, it's not going to get done across the State period. I'm just saying.

And so I appreciate -- for those of you who don't serve in local government, it's easy to say, oh, we recommend this. But when push comes to shove at the local level, that's not going to -- some of this -- some of the regions it won't happen unless it's required. And I'll just say.

CHAIR NICHOLS: You've made your point.

BOARD MEMBER GIOIA: And finally, I appreciate there was the recommendation about identifying in sales
tax measures a separate allocation of funding for clean transportation access for lower income communities. And I think that was a really good recommendation. I realize we can't require that be put in measures, because I've heard the discussion in our own county when we've talked about these issues, the pollsters will say, we really can't put that kind of language in our measure, because we think it will affect the ability to pass.

I'm telling you, right, this unfortunately is the pushback that one gets, but I'm really glad that the recommendation is in there on putting separate allocation in sales tax measures.

CHAIR NICHOLS: That's very helpful. Thank you. Let's hear from our --

BOARD MEMBER TAKVORIAN: So can I jump in?

CHAIR NICHOLS: Sorry. Excuse me, yes, please.

BOARD MEMBER TAKVORIAN: Just on this one point, because there's lots to stay about the report. So this is not my comment on that. But just in terms of integration and requirement, I very much agree with Supervisor Gioia, and that we need to require and that -- and with you, Chair Nichols, that we need to integrate. And that, I think, is starting to show up, in this report. And I very much appreciate it, because staff will attest that I've been saying that a lot.
So I'm sure not because of just that, but certainly a lot of folks have said that. And I think in addition to these specific recommendations -- there's -- there is in the SCS a requirement to define disadvantaged communities. And from my experience, that's very -- that is not consistent across the Board in the SCSs. So that nod from you means yes.

And our own experience in San Diego is that non-disadvantaged communities have been identified as disadvantaged. So I'd like to see us have that consistency across the board and use CalEnviroScreen to do it.

I don't want to start a whole thing, but I do think that that gets used in a variety of places, and that we need some consistency. And Chair Nichols you said from the beginning is that aren't we talking about poverty? We may not just be talking about poverty, but a lot we're talking about poverty. And so if you just look at that, I think then we start to have some consistency about where these strategies could begin to be applied. And I think the report supports that.

CHAIR NICHOLS: Thank you. Agree.

BOARD MEMBER MITCHELL: Ms. Chairman?

CHAIR NICHOLS: Yes.

BOARD MEMBER MITCHELL: A couple of thing.
CHAIR NICHOLS: Yes, Ms. Mitchell.

BOARD MEMBER MITCHELL: I want to just mention on this, because I'm one of those people that is on local agencies. And I think there is a need for integration, but I'm not sure the metropolitan planning organizations are the right place to do that, because a lot of what is suggested here requires funding. And at least SCAG doesn't have funding. Metro has the funding. ABAG, it may work differently in your region up in San Francisco, but SCAG is a huge organization, six counties.

And --

CHAIR NICHOLS: But aren't their plans supposed to direct where the funding goes?

BOARD MEMBER GIOIA: Yeah, they direct -- they direct the transportation funding.

CHAIR NICHOLS: Isn't that the point?

BOARD MEMBER MITCHELL: Well, that is true, they recommend where the funding goes.

BOARD MEMBER GIOIA: They direct transportation funding.

BOARD MEMBER MITCHELL: But also in -- South Coast is administering some programs for getting, you know, clean cars, secondary-market cars, out to the disadvantaged communities. So I'm not sure where that responsibility should lie, but it's something we have to
think about. And I'm just not sure what the answer is, but I'm telling you some of the issues.

BOARD MEMBER GIOIA: Can I add one more point. I think this is an important issue, if I can add one brief point?

CHAIR NICHOLS: Yes. Yes.

BOARD MEMBER GIOIA: So the SCS is the one chance that city council members and community supervisors who serve on these regional agencies get to come together and talk big picture about how to address, you know, planning to reduce GHGs. And so they come to it with the experience, right, of their local experience on their -- in their city and in their county, so they know their region well. They collectively come together, right? And to the extent they're controlling the expenditure regional transportation dollars, I think it's a very powerful place.

And clearly, even if there's not enough money, they've at least identified a plan. So you identify the plan, right, for the obstacles, maybe identify some funding within the region that you can apply toward that and. It may not be all the funding, but we -- all the SCS -- all the MPOs have some control over transportation dollars.

So it's not going to be everything you need, but
at least it's a plan and some funding. It's a start. That's how I -- because if we -- otherwise we're punting. If we're not requiring it here, who's going to do it. We, us? I mean, we could --

CHAIR NICHOLS: Right, we're not.

BOARD MEMBER GIOIA: It's so much better to do at the regional level. Who else is going to do it? It's -- These local elected officials get that working with their communities.

CHAIR NICHOLS: Well, I think that -- I agree with you. And I just want to add to that that people are afraid of taking on issue where they know money is required, and where they know they don't have the money. And I think that's actually backwards thinking. I think the only way you get the money is if you identify what you need in the first place, and then start working towards it, because otherwise you cannot create the pots of money that you're going to be able to spend.

And it certainly has worked out that way every time I've seen a bond measure happen, that all kinds of things are waiting to be brought forward, but it's always too late, because they want shovel-ready projects and people don't have even anything close to a shovel-ready project, because they never dreamed that there could be any money.
So we have to be able to plan and ask for things in advance of the money actually being there. Anyway, this is a useful discussion I think.

Let's turn to the -- let's turn to the people who've signed up to come speak to us beginning with jury Jared Sanchez.

MR. SANCHEZ: Hello. Jared Sanchez with the California Bicycle Coalition. And I have a script here. And before I read off my script, I just can't help being so enthused about the discussion and the comments being made up here. I think these points being made are things I hadn't heard being at the State level of the advocacy around transportation injustice that other agencies aren't simply just taking on.

So, Chair Nichols, when you said early on about injecting yourselves onto a table you haven't been onto before, I think is exactly what needs to be done and to strengthen that conversation around what we mean about transportation justice, and getting folks the proper means of travel that they need and deserve.

So going to my comments, I appreciate the staff for what you've done so far. I've kind of jumped in a little bit late on this, but definitely have a lot to say and chime in. The potential is great for low-income communities, and communities of color to reap the benefits
from a transportation system that has rarely prioritized them.

These are many of the same communities that have been historically deprived, discriminated, and disinvested. That the study was designed to address these long-standing barriers makes those working on transportation justice issues very optimistic. And I imagine grassroots organizations and actual low-income Californians who couldn't be here today, those that would directly benefit from these ideas are also optimistic about this document.

The true test, of course, is will a set of ideas in a document developed by the State reach its actual potential? We certainly understand that there are many factors that play and know that ARB is and should not be the only actor. However, in a lengthy letter submitted to ARB, CalBike and other transportation justice advocacy groups addressed some of the major factors that should be highlighted in the study, which ARB does have strong control over.

I will not go into those details now, other than to say that there can be a lot more done in analyzing the more systemic barriers, and why barriers exist. This type of analysis will better refine some of the barriers and recommendations put forth in the document.
One major aspect to consider the historically ingrained nature of inequitable public funding, the fact that the recently past multi-billion dollar transportation deal of SB 1 does not contain a single word around equity, fairness, or low-income residents is not an accident, and it's aligned with a very inequitable historical record.

It is a record of transportation investments in low-income communities, frequently harming vulnerable residents by subjecting them to unhealthy air, or fueling displacement pressures.

One of many points we recommend in our letter is for there to be a recommendation to improve existing State funding programs to target low-income Californians per SB 535, AB 1550 and the Active Transportation Program, ARB should explore similar investment models to existing significant sources of transportation infrastructure funding.

Thank you for our time, and I hope the discussion continues and I'd love to be a part -- be a partner going on forward with this.

Thank you.

CHAIR NICHOLS: Thank you.

MS. ELENES: Good afternoon once again, Board members. My name is Grecia Elenes and I work for Leadership Council for Justice and Accountability. And as
I had mentioned earlier, our organization works very closely with some of the most disadvantaged, mostly rural, unincorporated communities across the Central and Coachella Valleys.

And these communities are living in the midst of California's enormous economy, and yet -- and yet they are not -- in no way benefiting from one of the world's largest economies. They -- these communities have very little -- limited access to just everyday basic needs, and nearly basically no access to just any type of clean transportation.

In the report, we are grateful to see that the ARB staff has acknowledged that these disadvantaged and rural communities do have very special needs and do have very unique needs. And however, we need to make sure that there's that source of funding to address these specific needs and make sure that that source of funding is targeting them.

I think one specific one I want to point out is the active transportation program that they identified within there, there is currently a rural/small urban set-aside in there. However, the problem with that set-aside is that in no way does it reach those really small rural communities with thousands and sometimes even hundreds of populations in them, it is very difficult for
them to apply, in any way, and be competitive at the
statewide or even the small and urban competition level.

And -- sorry, I kind of lost my train of thought
there.

And getting funding -- ensuring funding in
programs like these are targeting these, the most
disadvantaged, in these rural communities is very
important, and it's very vital if you want to see any type
of improvement in these communities in the coming -- in
these coming years, because these communities, although
they are the ones being burdened the most, they are always
at the end -- at the short end of the stick receiving
close to nothing.

And one specific complaint I really want to raise
that I hear a lot from the community is just having
basic -- clean school buses and clean transit buses is
something that's very important to them, especially since
their kids are the ones in those buses going day-in and
day-out.

Concerns like these is something we really want
to see further addressed, and also be able to hold MPOs,
COGs, and other government entities accountable to ensure
that clean energy and zero-emission transportation are
being provided to these communities, and making sure that
they're meeting performance standards that should be
completed amongst these entities that ensure low-income communities are involved in the process, and that their voices are being heard.

I think lastly one specific example I want to give that, we've been working with a community in Fresno county called Cantua Creek. It's a community of about 600 people, more or less, and with -- with them, we were able to develop a project along with Green Community and Fresno ESE, EOC, where we developed -- it's called Van y Vienen. They were awarded this $200,000 grant from the Just Transit Project, where basically they identified kind of an informal set up that they already have of where they call someone up and say, "Hey, can you give me a ride and I'll give you money too"? "Can you give me a ride so I can get to the City of Fresno to get to this appointment"?

And so they formalized it to where now they're going to have a fully electric van, and they're going to employ one or two people from that community to be able to get them back and forth. Julia Saus came up with that. So we really encourage that type of innovative thinking in these small rural communities.

Thank you

CHAIR NICHOLS: Thank you.

MR. PIMENTEL: Madam Chair and Board Members,

Michael Pimentel with the California Transit Association.
I just want to thank you for the opportunity to address you today. And I'm here largely in support of the recommendations that are contained in this report. However, before I turn the recommendations we agree with, I want to emphasize, because it's somewhat lost within the language of this report that public transit is already, by and large, a clean mode of transportation.

Our transit agencies operate in compliance with State regulations, the cleanest CNG and diesel buses in the country, and many are exploring the implementation of zero-emission buses as well as new optional low-NOx engines, which will reduce NOx emissions by 90 percent from today's baseline.

And, of course, many of my members, including the largest transit agencies in the State, like L.A. Metro, are operating electrified rail. This means that we take people out of cars and we put them into vehicles that reduce the amount of fuel used per passenger mile traveled, and we reduce congestion, which relieves engine idling.

So when we speak about removing barriers to clean transportation, we, as a State, should be emphasizing the importance of increasing the frequency, reliability, and convenience of public transit, not just implementing new cleaner vehicle technologies, so that we can provide new
mobility options for low-income individuals, and induce
mode shift from choice riders.

Now, can transit become cleaner? Absolutely. And, of course, we've been in a long dialogue about how we
do that. For the transit industry, the primary barriers,
as you know, to cleaner vehicles are the following:

There are upfront capital costs for the transit
buses, and charging infrastructure. And also, we face
high and, at times, variable electricity rates. Now, the
legislature and this body, through various incentive
programs, are addressing the higher costs for cleaner
vehicles. And the CPUC, alongside the State's major IOU's
are aiming to address the costs associated with charging
infrastructure with the transportation electrification
applications. These are applications that we
enthusiastically support.

So as the State moves the implement the
recommendations of the study, which really boil down to
supporting investments in and increasing awareness of
cleaner transportation options, we encourage the State to:

One, increase funding for transit capital and
operations. There's some discussion of SB 1, which, as
you know, was signed by the Governor late last month. We
consider that a really significant step forward. My
association was at the forefront of making sure that
transit was a component of that package.

But in all, over ten years, it's going to provide something like $9 billion. We've got a deferred -- we've got an anticipated need of about $72 billion. So obviously it's a good first step, but we need to do more.

Next, we'd like to see an increase in ZEV -- incentive dollars for zero and near-zero emission technologies. We think this can be done through existing funding mechanisms, like the GGRF and the AQIP, but it should also include new funding that may come on-line like the VW settlement Appendix D dollars.

And then lastly, we think that the State needs to adopt the transportation electrification applications before the CPUC, and increase dialogue between regulators and transit agencies about how we really move into an electrified space.

So thank you very much.

CHAIR NICHOLS: Thank you.

MR. FARIAS: Good afternoon, Chairman Nichols and members of the Board, my name is Linus Farias. I'm with Pacific, Gas and Electric Company. And we'd like to congratulate staff on the comprehensive study that identifies many of the clean transportation barriers for lower income residents.

PG&E agrees with the finding in the document that
there is no silver bullet or singular solution that can address clean transportation access since each community has unique needs.

Our efforts to build an electric vehicle charging infrastructure and offer EV rebates will provide few bullets or rather some solutions to help remove the barriers to fund clean transportation.

In late 2016, we started a three-year effort to install 7,500 Level 2 EV charging stations at apartments, condominium complexes, and workplaces that will include disadvantaged communities.

In January 2017, this year, we submitted a five-year $253 million proposal to the California Public Utilities Commission that includes building make-ready EV infrastructure to support electrification of medium- and heavy-duty vehicle fleets, and public DC fast charging infrastructure for light-duty vehicles.

Alongside with this, similar proposals have been made by other investor-owned utilities. And the infrastructure includes incentives for disadvantaged communities. This year, we also started issuing rebates to residential EV and natural gas vehicle customers using funds generated from market sales of Low Carbon Fuel Standard, or LCFS, credits.

So, in conclusion, you know, we believe that
these actions will help remove some of the infrastructure
barriers to clean transportation access and further the
State's greenhouse gas emissions reduction goals.

I also want to note that we're also working
internally with some of the authors of the EV bills to
perhaps shift some of the funds to apply at
time-of-purchase type incentives to further assist
low-income customers and incentivize EV and other type of
ZEV adoptions.

Thank you.

CHAIR NICHOLS: Could I just -- I'm not quite
sure I understood that last point. You think that we
should use the purchase incentives -- add charging station
incentives to the purchase incentives? I just didn't
understand you meant?

MR. FARIAS: No, I believe that in current
legislative bills that are in process, there are
opportunities to provide incentive dollars that could be
done -- could be supplied at time of purchase.

CHAIR NICHOLS: Okay. Okay. Thank you.

MR. PARTIDA-LOPEZ: Madam Chair, Board members,
Good afternoon. My name is Roman Partida-Lopez with the
Center for Sustainable Energy. First off, I want to thank
ARB staff for all their efforts in developing this draft.
I know it was a long process. And they were out and about
in the community.

With that said though, I think it's really important that as we move forward in finalizing the draft that we not only go back to the community to report what guidance will be implemented -- or adopted, but actually start prioritizing those communities that -- to make sure that change does happen.

One thing it's actually just go and receive feedback, but what the community really wants is to actually see change. And so in order to see change, it's important to go back and start prioritizing and implementing programs in those regions, as well as, you know, there's been a lot of conversations of the different funding sources that are available or are becoming available. And it will be important to ensure that these priority recommendations made by the community are actually inserted into those investments to make sure that they are seeing a direct benefit from funding that is needed in their community.

I think many times what happens is, you know, there is a concept of, yeah, we want to do more in these communities, but at the end of the day it doesn't happen. And so we've got to figure out a way that we are doing that and prioritizing them in every investment that comes through the door.
And finally, there was a lot of conversations about the recommendations themselves and how do we apply them at the regional level, and I think that's also an important component to make sure that those conversations are happening, because there's only so much funding that will be available at the State level, but then there's others opportunities at the regional level that also need to be considered, and how do we start adding -- supplying more pressure to make sure that those communities at that regional level who may not be eligible for funding at the State level can access funding to make sure that we start that transition to a clean, more sustainable future.

Thank you.

CHAIR NICHOLS: Thank you.

MS. PARK: Still short.

(Laughter.)

MS. PARK: Thank you again for allowing me to speak. Again, I work for the Environmental Justice Program at Catholic Charities in the Diocese of Stockton.

I want to thank you for your efforts to understand the barriers of our low-income residents, and disadvantaged communities. Your work is important not just for those directly affected, but also for those indirectly affected to understand what their neighbors are dealing with.
I had heard a member of an organization say that bicycling and bike lanes are a rich person's problem, because they are recreational activities. But as you know, active transportation is everyone's concern, whether it's what you do or the air you breathe.

And it shocks me that people who say they are working for communities to little understand how these modes of transportation are what our homeless, low income, and disadvantaged communities use, aside from public transportation.

This way of thinking is really just another type of barrier. That is why I'm thankful for your efforts, and encourage you to keep moving strongly forward and to adopt language and policies that take these studies and solutions higher.

One last thing to add. I have seen how great numbers of vehicle drivers come up for the Tune in Tune up Program. We get people coming sometimes even from past Ripon. So again, I really appreciate your hard work, and for these programs, and I look forward to their strengthening and their inclusiveness.

And since I can't leave without saying a quote from Pope Francis in his Encyclical Laudato si. He says, "Advances have been made in the production of non-polluting energy and in the improvement of public
transportation. These achievements do not solve global problems, but they do show that men and women are still capable of intervening positively”.

Thank you.

CHAIR NICHOLS: Thank you.

That concludes the list of witnesses that I have on this item. We've already had quite a bit of Board discussion on this item. I think we have a lot of expertise on this Board from our local officials, and also from people who have worked as advocates in this area over the years. And we probably all bring slightly different perspectives to it as well.

I'm tempted to say, Ashley, that you ought to do a focus group for Air Resources Board members. I'm only semi-joking on this issue. It might have to be something that you would do, you know, in smaller groups, or individually, but I do think that we have a lot of -- a lot of passion around these issues, and a lot of reason to be concerned.

And so this is not to take away anything from the work that's already been done. This was a very tough assignment, and I think you guys have done a terrific job with it. So I just want to find a way that we can help to make it even better and more useful going forward.

And Professor Sperling may have an idea.
(Laughter.)

CHAIR NICHOLS: No.

BOARD MEMBER SPERLING: I always have ideas.

CHAIR NICHOLS: Always have an idea.

BOARD MEMBER BALMES: Whether they any good it's not --

(Laughter.)

CHAIR NICHOLS: It's not that late in the day.

BOARD MEMBER SPERLING: You have to test out new ideas.

BOARD MEMBER GIOIA: It's an academic competition going on here.

CHAIR NICHOLS: Yeah, I guess so.

BOARD MEMBER SPERLING: You know, going back to what Supervisor Gioia said, I think there's a lot of merit in what he said. And one of the important points is a lot of this is local, and cities they've been starved for so long, and just like transit operators that have been starved for so long, that it's hard for them. They don't have the capabilities. They don't have the -- you know, the bandwidth to try out new things, and because I think in this case -- so I want to say it was a great report. And I've talked to Ashley Dunn about this a little bit, so she's not going to be surprised.

But I think the challenge here is to figure out
what really is important and which of these many, many
ideas really make sense and -- both in terms of potential
impact, as well as cost effectiveness. And these vary
dramatically in terms of both of those criteria, when you
look at the kinds of options that are being considered.

And, you know, to some extent, this might sound
like a broken record, but transportation is changing. And
so much of if you go out and do the focus groups, you
know, the problem with that is you're going to be as --
there's a saying about, you know, if you talk to Generals,
they're going to fight the last war.

And this is a case where a lot of change is
happening. And it's not just electric vehicles, but it's
a whole new set mobility options that are out there. And
some of the more innovative transit operators, the ones
that have the greater capacity -- you know, and L.A. Metro
is one of them, that really is doing -- trying -- is
thinking -- I'll put it -- leave it there -- is thinking
and getting ready to try some innovative things,
initiatives.

So I do have some ideas, but I think the first
point just is we need to really focus on where are the
opportunities that really are going to have value and
impact for low-income travelers?

And -- okay, frankly, to be a little politically
incorrect, giving them an electric car is not one of them. And, you know, 25 percent of the population buys new vehicles. Low-income people don't buy new vehicles. And so there's some thought about how to get, you know, used car -- you know, into the used car market. And that's a good idea, and eventually there will be some merit to it.

But that's not going to -- what we need to be doing, if we're concerned about social equity and environmental justice, we need to be improving the access and the mobility of low-income people. There is a real problem there.

And for one, now for the first time in a hundred years, we actually have some new ideas coming in. You know, all of the new -- okay, so I know people are going to be skeptical, but hear me out here -- all of these new App-based services -- you know, and I know that demand response. And a lot of people are going to respond, well, poor people don't have credit cards, and don't have smartphones, but there's lots of ways of getting around that.

And they are -- there's innovative projects around the country to, you know, you get debit cards to people. They can use other ways of accessing it -- these services.

So the reality is -- and again, to be a little
politically incorrect with my friend Michael from Transit Association, transit is really expensive. You know, if you look at the full cost, transit is the most expensive option we have to provide travel. Now, transit is really important, but it serves, you know, one to two percent of the travel, and it's really expensive. EVs are really expensive.

Now, we want to take advantage of transit, because transit does some things very well. And so the challenge is to figure out the first and last mile access, and how do you get people to, you know, buses, and BRT, and rail.

How do you fill the gaps, because most -- again, less than two percent of passenger travel is by transit. So that means most people are traveling by car. So the comment about don't focus on cars I think is actually mostly wrong, because that is how people travel. And we need to figure out how to use cars more efficiently. We can use pooling services.

So one thing we have to get over is this inhibition over dealing -- working with the Lyft Line and Uber Pool services. Politicians, local governments should be embracing these so wholeheartedly. It is by far the cheapest way of moving people around. We need to reformulate some of our public transportation finance.
And going back to some of the things Chairman Nichols was saying and some others is that let's figure out how to support these services that are much less expensive and much higher quality.

And so I guess my plea here is -- and it's not -- that is not easy, and a lot of this has just happened. You know, all these kind of new ideas, and new technologies, and new ways of thinking are only two or three years old. So there's good reason why if you do a focus group or if you talk to local government people, they won't come up with a lot of these, you know, good solutions.

But these ideas are happening around the country. L.A. Metro, you know, to call them out a little bit in a good way, you know, they're trying out a microtransit service. They're about to put out an RFQ to provide microtransit, which basically is a small microbus that can run around and serve a lot of these areas that are not well served by big buses and rail, which serve a tiny part of the population.

So in terms of -- so I think going back to what, you know, Supervisor Gioia is saying is even more fundamental than that -- and he was right in everything he said, I thought. But even more fundamental is we've got to get some of these good ideas out there and figure out a
way to start really testing them and implementing them, and be willing to, you know, take risks and to make mistakes, because some of these services have been tried out and have failed around the country for -- usually because they do a poor marketing job, and that comes back to the problem is that cities and transit operators don't really have a lot of capability and capacity, and so -- and cities, if you tell them to -- you know, here's a new project, go -- give them money and go do it, there's a really high probability it's going to fail.

So there has to be some kind of funding and support to help the cities, to help the transit operators, and a way of -- and that's why the finance -- the transportation finance is so key to this is we've got to restructure some of that money to be used in a way that really will get value and benefits, because we can -- we can get huge market shares, you know, with these kinds of services.

I mean, we can get 10, 20, 30 percent, you know, with pooling type services, low cost. The cost of cars now is about $0.55 a mile. And, you know, I've been doing some research on this and calculating numbers. You can get -- with these pooling type vehicles, you can start getting that cost way down. And actually electric vehicles work really good in that because they have low
operating costs and low maintenance. And so when you start using these vehicles not for 10,000 miles a year, but for 30 or 40 or 50, the cost comes way down per passenger mile.

So my plea is let's not leap into this too quickly or too naively. And I guess for the report that means thinking through -- prioritizing a little bit about where are the real opportunities, and what does that mean for finance, what does that mean for assistance to the cities, what does that mean for reporting requirements and plans.

Okay. I talked way too long, but there's passion.

CHAIR NICHOLS: I think, that's a very useful contribution. I just am not sure how we send our staff off to do that prioritizing. It seems to me it's a task that requires input, people with different backgrounds, and types of expertise on how all this stuff works, and -- as well as people being willing to put their values on the line. And it's not really a fair assignment to give to the staff to go do that.

BOARD MEMBER SPERLING: Right. The role of the staff is just to start us moving in the right direction, in terms of highlighting where are the opportunities and start thinking through what are the ways of supporting it.
You know, maybe we have an extension service program for cities, you know, to help them out. I think that's -- I mean, this really is -- you know, we're on the cusp of major changes here, and there are great opportunities. And it would be a disservice if we didn't at least start moving the discussion and talking to the Caltrans, and talking to the MPOs, the CTC about how to do things differently.

CHAIR NICHOLS: Well, we Definitely need to do this in conjunction with other agencies again -- John, yes.

BOARD MEMBER GIOIA: Just to add. I think we've had -- have a great start here. I mean, it's not like we're telling the MPOs to figure this out on their own. They have this document and all the recommendations and background in here, which I assume they're all going to pick up and utilize. And this will help them in crafting recommendations that work in their area.

So I think it would have been a lot harder to just, you know, hoist this on the MPOs if we hadn't done this work.

EXECUTIVE OFFICER COREY: Chair, I'm going to --
CHAIR NICHOLS: Yes. Go ahead, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: An observation that may be absolutely worthless --
(Laughter.)

BOARD MEMBER SHERRIFFS: -- but I'll make it anyway, because it's short.

BOARD MEMBER SPERLING: And you're a doctor.

BOARD MEMBER SHERRIFFS: And I'm a doctor, right.

Trust me, I'm a doctor.

(Laughter.)

BOARD MEMBER SHERRIFFS: You know, thinking about these different ideas, well, they fall into two classes. And one is trying to change people's behaviors, and the other is whatever they do, fine, but we'll have clean technology for whatever they decide to do with it.

And I think it's worth, as we think about trying to do these things. Well, which class do those strategies fall into, because they are very different strategies.

And partly it was stimulated by the comments from California Transit Association, because there's this huge resource out here. And on the face of it, that's absolutely right. This is the cleanest option. If you get everybody to do that, you know, it has a tremendous impact.

So how do you get everybody to do that? Well, that's a behavioral change by and large. Although, it also has to do with how that product is delivered, convenience and a number of other things, and repackaging
it and re-thinking it, because I think we all -- when we all think public transit, we think big buses and bus routes. And, yes, it's fantastic when transit authorities start thinking about themselves differently.

CHAIR NICHOLS: I am not satisfied with where this is ending up. I'm sorry. I know the staff is going to go back and they're going to continue to do more work, but I really want to see this Board, as a Board, figure out how to engage more effectively, and not just turn it over to Dr. Sperling to turn it into a workshop.

(Laughter.)

CHAIR NICHOLS: Although, maybe that's the answer. Maybe, he should do the workshop. It's an answer or a course.

VICE CHAIR BERG: No, I agree.

CHAIR NICHOLS: Yes, Diane.

BOARD MEMBER TAKVORIAN: Yeah. I am feeling frustrated as well. I feel great about the report. I think that the process -- I want to say, this is two big items in a row today, just to note, that I think have had great public involvement, environmental justice community involvement, and there's strong consensus about that fact.

So I think there's a culture shift that's happening. I just want point it out that -- and I really am grateful to you -- to all of you, and to the staff that
came before, and to our leadership for really putting that forward.

That said, I guess I just -- I feel like in a lot of ways, you're talking about the future, Dr. Sperling, but I also feel like we're living way in the past in many of our communities. We have streets the we can't walk on. We have the highest pedestrian fatalities. We need that basic infrastructure, so people can ride bikes and walk. We need bus passes so kids can get to school, and -- so there's -- like there's this basic framework that I hope that we can talk about and push forward.

And I'm -- that doesn't mean we shouldn't talk about more futuristic things, if that's even a way to describe it. But for many of our communities, this basic infrastructure doesn't exist. And I just hesitate to end this conversation with, you know, let's wait for the next big thing or embrace that big thing that -- that they got cheated out of having, you know, a subway system, or a bus system, or something that will actually get them to a job that improves their lives.

So I just -- I'm not sure how to proceed from here. Maybe, Chair, that it is a more robust workshop that we can have with a variety of people around the table.

CHAIR NICHOLS: And others -- yeah, and others.
BOARD MEMBER TAKVORIAN: But I'm not confident that -- I don't want to say so go figure out yet another layer of futuristic activities, which is not all I thought you said, but I'm just -- I don't want it to get interpreted that way, but I also want there to be a requirement that we put it in the SCSs, and that I appreciate that it's now more integrated into the scoping plan, so --

CHAIR NICHOLS: Well, I mean --

BOARD MEMBER TAKVORIAN: -- I don't know what the answer is.

CHAIR NICHOLS: -- I shouldn't criticize our sister agencies who are good enough to participate, and to come at the beginning, but I noticed that both walked out, both the CEC and the transportation Agency person left after they said their piece and they're no longer here. Well, they should be here as part of this continuing conversation, because they could possibly help us figure out what other proceedings are going on that we might be better able to plug into as well, because I think -- I exactly agree with the point.

So, you know, instead what happens is that any new thing that comes along, like money that Volkswagen is investing in electric transportation, everybody wants to jump on it and use it for their community electrification
ideas, because there is no other source of money. And I get it that we don't want to let one more thing go by. And yet, at the same time, that may be not at all the most suitable for both legal and other reasons, you know, way to fund better access to clean transportation.

BOARD MEMBER GIOIA: Yeah, and actually I think this aligns perfectly with the funding that's available through the SCS, because, right, the goal of the SCS is how are -- you know, how do you, as the region grow in a way that reduces GHGs?

And the regional agencies, the transportation authorities have funding available. Again, as I said earlier, it's not all the funding we need, but so I think it's meaningful. I actually -- I think if it can be required at that level, there's some funding, there is a plan, that's the best we can do to at least hatch this and move it along.

And then on a parallel track have the roundtable discussion, and continue to develop good ideas and be helpful to the regions. And isn't that what we're doing? We're trying to be helpful to the regions on this.

I feel confident that if we get some funding and a plan in the regions, things will begin to happen in a more meaningful way.

VICE CHAIR BERG: And certainly talking about
that parallel track, if we were to look at -- and I
couldn't agree with you more on the living in the past and
how are we going to do some of the fundamental changes. I
also see the intersection where we don't want to invest
huge amounts of money that keep them in the past as we're
really moving forward to this transportation revolution,
so it's how to meet both. But I couldn't agree with you
more.

It would be interesting taking the San Joaquin
Valley model, where we were in an absolute situation of
there's nothing that could be done, yet we got people
together, and we absolutely agreed across all
stakeholders, which was really impressive that we do could
tackle these specific areas that would get us moving
forward. I'd love to see that in the idea of sidewalks,
and bicycles, and some modes of transportation that
brought these communities more into what we take for
granted quite frankly in other neighborhoods, and yet,
have that other roundtable discussion looking at really
what will beyond this report, because doesn't this report
require some sort of activity and some sort of
implementation within the next two years?

EXECUTIVE OFFICER COREY: It does and it has a
periodic update. I think, it's on a three-year time
frame.
So just to capture these points, because I'm trying to translate this into, okay, what do you -- what do you do with this?

(Laughter.)

EXECUTIVE OFFICER COREY: It's excellent conversation. It is. And it's recognizing that if this was easy, you wouldn't be having this conversation. There's some real challenges here, but I'm translating this into really two areas. What are the priorities?

And we already needed to do a follow-on workshops. Maybe in addition to that, it's a roundtable. I need to follow up with a number of Board members and have a conversation, CTC, others that I think will weigh in on that point.

But the other -- to me, this was the essence. It wasn't to me that the report doesn't have great ideas. It was a lot of them. And then it's how do you prioritize? And to me it was how do you operationalize and implement?

And I thought, Supervisor Gioia, one key point is the SCS. And the fact is that the way Kurt and we've looked at it traditionally it's probably been pretty narrow in terms of does the SCS meet the target. I think that is the right question. And I think it starts with us being pretty clear of what the expectations of SCS is. And I'm hearing clear expectations on the part of this
Board.

And I think it's where else can we connect the dots with respect to those priorities. SCSs is one. VW is another one. The scoping plan is another -- where are those connections made to operationalize action, change? So, to me, with respect to the revisions to the report, and the process that we've -- that how we go forward from here is the follow-on workshop.

We'll look at, you know is there some other form that would also lend itself to an exchange, but really focused on, to me, these two questions, a subset of priorities, and the mechanics of implementation. And the implementation question is you've got to connect the dots. And I thought Supervisor Gioia is right on point in terms of one area to connect the dots is with the SCS. That's how we take this conversation and try and translate it into next steps.

BOARD MEMBER SPERLING: Can I say one more thing?
CHAIR NICHOLS: Excuse me, yes, please.
BOARD MEMBER SPERLING: I think, you know, one of it is going back to our sister agency, you know, the transportation agency. You know, we mentioned SB 1 has a huge amount of new money. It seems one within of the most -- so all of the things that, you know, Richard Corey just said make a lot of sense, I think. But the money is
always the most important, right?

CHAIR NICHOLS: Um-hmm. That's what motivates people anyway.

BOARD MEMBER SPERLING: Right. And so if we can get the funding that is going to the transit agencies, and have some kind of conditions associated with it, that they get more money, if they, you know, participate in creating this broader set of services that are going to serve a lot more people, and if there's some of the, you know, other funding -- you know, looking at it more carefully, I think that -- that seems like the most effective way of actually changing things, because, you know, we can change policies and do plans, but money really, really changes them.

So I'm just saying how do we participate or influence that SB 1 money?

CHAIR NICHOLS: That's a really good question, and it would be a good thing to know the answer to. I have a sense that it's not easy to. It's going to go through the same old processes that it always does, and we're going to have the same results when we show up with CTC, which is they, you know, barely manage to listen much less do anything when we advocated in front of them.

So the fact is that we -- there's a lot more to be done in terms of building the relationships, but it does include also building our leverage in this situation,
which we need to keep our eye on. That's just -- that is a -- that is a fact.

I just -- I can't resist sharing this story. Hector and I were messaging back and forth about this over the last day or two. There was story in the LA Times, which every once in awhile does a, you know, big investigative report on something relating to our transit system.

And they did a big article about how ridership on the buses in L.A. has fallen by 18 percent during the same time period that the rail system was being built, and that we've been raising huge amounts of money for transit in Los Angeles. And they did a study -- the paper did a study that showed that most of the loss from the buses was to Uber-type services. That people were giving up their transit pass and taking Uber type services. People who are not rich enough to buy a car or necessarily even need a car, but who also have decided that they need and could afford a little bit better service than what they get from the buses.

But buried in the bottom of this story is a comment from the system, and maybe it was taken out of context, or they're going to say it was unfair, but it indicated that -- people are saying they don't want to take the bus, because it doesn't come often enough to
where they can pick it up, and it doesn't take them where
they want to go. It drops them too far from where they
want to go.

And the spokesman for the system said, well, it's
true we haven't actually looked at the routes in about 20
years because we just, you know, have't gotten around to
updating our bus routes. And, you know, this is not a
system that's full of slouches. I mean, these are smart
people, but they don't -- they don't think of themselves
as a planning agency or even necessarily as a service
providing agency. They operate buses, and they build
stuff.

And they're not thinking in terms of how to solve
the transportation problem for poor people or for much of
anybody else. But to the extent that poor people are
involved, if they get a little bit more money, or can
stretch their budget, they're just not going to -- they're
not going to use the system at all.

And this is a tragedy in every sense of the word.
So I feel that we have an opportunity here, at least to
some extent, to help make it better with this report, and
other things we can do.

So I think we've sort given enough indications
about where we would like to go with this, and we've been
heard by our Executive Officer, and by the team that
CHAIR NICHOLS: Okay. We have one more item for today, and it's also of a reporting nature, but it's a different kind of a report. It deals with our international program. And I know people hear -- hear a lot. And in many instances, you also interact with foreign visitors or, in some cases, have even traveled on behalf of State talking about our programs. And so we thought it might be a good idea to hear from our own folks about what we're actually doing in trying to coordinate the increasing demands for our time and our expertise at the staff, and the political level in the area of international air and climate work.

Governor Brown has made climate action, as everybody knows, a central theme of his add administration. He's built on the record of the past administration, signing a memorandum of understanding with China, Mexico, and other national and sub-national governments.

And now since the Paris agreement came into force, and since we've seen questions being raised about the commitment of our federal government, it seems like a good time to give some additional thought to how
California fits within the program of attempting to forestall the worst effects of climate change. So I'll turn this over again to staff to give us a report.

EXECUTIVE OFFICER COREY: All right. Thanks, Chair Nichols. And as you mentioned, ARB has a long history of working with foreign jurisdictions to exchange information, provide technical assistance and learn their programs. For many years, we've welcomed foreign delegations who visited CARB to discuss our groundbreaking air quality science and research, to learn about our vehicle emissions laboratory testing procedures, and to discuss our climate change policies.

We've had frequent interactions with our partners Quebec, Ontario, as well as British Columbia, Oregon, and Washington, national and State agencies in Mexico, national and provincial governments in China, researchers and governments officials from South Korea, and Japan, and many others

So now, I'll ask Margaret Minnick, ARB's international liaison to give the staff presentation.

Margaret.

(Thereupon an overhead presentation was presented as follows.)

INTERNATIONAL LIAISON MINNICK: Thank you, Mr. Corey. Good afternoon Chair Nichols and members of the
Board. As Mr. Corey noted, CARB has a long history of providing technical consultation and support to other jurisdictions that are developing air quality programs.

INTERNATIONAL LIAISON MINNICK: California has been working on air quality issues for over 70 years. And we've made remarkable progress. As you can see from the bottom photo, smog was much worse in Los Angeles 50 years ago. This were over 100 air pollution alerts annually.

Because California was the first in the nation to tackle air pollution, groundbreaking scientific analysis methods, monitoring practices, testing protocols, and regulations were developed here. Today, cars, trucks, and other mobile equipment are cleaner and more efficient than ever, and pollution from stationary sources has been reduced significantly.

The air quality in Los Angeles has improved greatly since the 1970s cutting down the number of alerts from 100 to less than ten per year today. This achievement is known around the world, and CARB has long been sought out by other states and countries as a source of cutting-edge air pollution, research, and policies.

INTERNATIONAL LIAISON MINNICK: California also has long been a leader in energy efficiency and clean
energy. As a result of the suite of programs put in place to meet the goals of AB 32, California's per capita and per GDP emissions are declining. Total statewide emissions are also going down. All this, despite a ten percent increase in population since the year 2000 with a population now approaching 40 million people.

This declining trend, coupled with programs that will continue to provide additional greenhouse gas reductions going forward, demonstrate that California is on track to meet the 2020 target.

Leading the way means showing others our path to sustainable growth. Last year, California grew to be the world's 6th largest economy. Job growth in the State has outpaced the national rate, and we continue to see strong investments in clean technology that is spurring new job creation.

In 2009, the California clean energy industry generated $27 billion and employed 123,000 people. By 2020, we expect it to grow in value over five times with 345,000 people employed. California shows that clean air and a vibrant economy go hand in hand. And as a result, other jurisdictions look to our efforts as models for their own.

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INTERNATIONAL LIAISON MINNICK: One measure of
our success is reducing emissions, and protecting public
health and the environment. Another measure of our
success is establishing robust and implementable programs
that serve as models for other jurisdictions. There has
been considerable international engagement on many of
CARB's programs, including air quality monitoring and
planning, enforcement, zero-emission vehicles, carbon
pricing, greenhouse gas emission reduction policies and
strategies, and many other topics.

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INTERNATIONAL LIAISON MINNICK: Every year, CARB
hosts 50 to 60 groups of international visitors in
Sacramento and El Monte. These visitors range from
students and professionals participating in fellowship
programs, to researchers, scientists and engineers seeking
solutions to air pollution challenges, to senior
provincial and national government officials.

I last presented an update on international
activities in December of 2014, and this graphic shows the
number of visitors to CARB from each country in the world
since then. The total number of international visitors
for that period is over 600. As you can see, CARB is
world-renowned and attracts visitors from every continent.

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INTERNATIONAL LIAISON MINNICK: The Brown
administration has signed memorandum of understanding, or
MOUs, with subnational and national jurisdictions around
the world that are interested in partnering with us to
address air pollution and climate change.

Additionally, California's international climate
and environment MOUs are often signed in conjunction with
MOUs to promote trade to expand markets for California's
businesses. Expanding global action to fight air
pollution and climate change also expands markets for
clean technology, which may bolster business for those
companies in California developing clean energy products.
And it helps to bring down the cost of those products
globally and in California.

As a result of these agreements, CARB has
build sub -- built substantive and concrete partnerships
with jurisdictions that are developing air quality and
greenhouse gas reduction programs. Although we have
interactions with many countries around the world, this
presentation will focus on our work with our neighbors,
Mexico and Canada, and with China, because these
relationships are the most extensive and long-lasting,
which provides us the opportunity to track the results
more closely.

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INTERNATIONAL LIAISON MINNICK: Now, I'll turn to
our work with China. CARB has been working with our counterparts in China since 2007 to address their serious air quality problems. In 2013, California signed MOUs to cooperate on air quality with China's Ministry of Environmental Protection, and the Beijing Environmental Protection Bureau, as well as an MOU with the Chinese National Development and Reform Commission, which oversees China's efforts to address climate change.

CARB, along with CalEPA and the local air districts, has been actively engaging with the Beijing Environmental Protection Bureau on air pollution mitigation with regular calls between experts and periodic visits take place.

And Beijing is taking steps to clean its air, including plans to end coal usage completely in all of Beijing and its adjoining districts by 2020. The city began closing coal-fired power plants in 2015, and in March of this year announced that the last coal-fired power plant in the city had been shut down.

They are also stepping up enforcement of existing pollution laws. Although there is still quite a bit of coal being used in China, these are steps in the right direction. CARB continues to build on this work by hosting many delegations from other Chinese municipal and provincial governments to show them how California has
improved air quality over the past 50 plus years.

Many Chinese cities have now released comprehensive air pollution control plans and regional plans are being developed inspired by the California model.

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INTERNATIONAL LIAISON MINNICK: CARB has also been working with engineers from Beijing regarding vehicle emission standards and testing, as well as vapor recovery during refueling of vehicles.

This engagement has been -- has included multiple visits of Beijing personnel to CARB and vice versa. CARB's clean air and truck policies, including zero-emission vehicles are having a significant positive influence on China's policies. In late 2015, the results of the California engagement became apparent when Beijing proposed new vehicle emission standards, based in large part on California LEV III standards and test procedures.

The Chinese national government examined these developments and ultimately chose to adopt China VI, the next standard -- next set of standards for the nation, which are similar to Euro 6.

To help facilitate on accelerating the commercialization of plug-in and fuel cell electric cars, the China U.S. Zero-emission vehicle policy lab was
established in 2014. This collaboration represents a unique partnership between the UC Davis Institute of Transportation Studies, of which Board Member Dr. Sperling is founding director, and the China Automotive Technology and Research Center, both leaders in ZEV technology and policy.

The advisory board is chaired by CARB and the NRDC. Last year, China announced that it intends to implement ZEV requirements for auto manufacturers, similar to California's ZEV mandate, evidence of the expanding benefits of cooperation and information sharing. We will continue our relationship with both Beijing and national regulators going forward to help ensure that cleaner vehicles are on the road in China.

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INTERNATIONAL LIAISON MINNICK: CARB's expertise has also helped Chinese officials to enforce regulations on ocean-going vessels. China's emission control areas are a subject to a regulation that is similar to California's ocean-going vessel fuels regulation, which requires ships to switch over to cleaner burning fuel inside of established boundaries. CARB is the leader in this field, and our enforcement program is recognized around the world.

In April 2016, at the invitation of the Natural
Resources Defense Council, Enforcement Division Air Pollution Specialist Alex Barber provided hands-on training to Chinese marine safety officers on how to inspect ships. Just a couple of weeks after Alex's visit, the Chinese inspectors found their first non-compliant vessel.

The inspectors used techniques taught by Alex to verify the ship's logs and found that the ship had not switched over to compliant fuel as indicated. This was big news in China, and it got extensive media coverage.

Since the initial noncompliant ship, there have been a number of additional violations discovered in China using the techniques that Alex taught.

And just last month, Alex delivered classroom training on this topic at a workshop in Mexico City, where the national government is working on phasing in ocean-going vessel regulations in line with those in the U.S. and Canada.

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INTERNATIONAL LIAISON MINNICK: Speaking of Mexico, I'll now cover some highlights of our engagement with our neighbor to the south. During a June 2014 mission to Mexico City, the Governor signed an MOU with the Mexican Ministry of Environment and Natural Resources and the National Forestry Commission pledging cooperation.
on climate change in the environment.

The MOU is a four-year effort with four priority action areas: Clean vehicles, air quality, climate change, and wildfires. CARB leads the clean vehicles working group, which is focused on updating smog-forming and greenhouse gas emission standards for Mexico's light- and heavy-duty vehicle programs, as well as developing improved inspection and maintenance programs.

Mexico is committed to updating their car and truck standards for smog, pollution, and greenhouse gases. And CARB provided -- is -- has provided technical expertise to federal, state, and local regulators in Mexico to inform this process.

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INTERNATIONAL LIAISON MINNICK: CARB also leads the air quality working group working closely with our colleagues in Mexico to improve air quality at the California-Mexico border. CARB has worked with Baja, California to initiate a joint two-year study of particulate matter in Mexicali, Mexico.

California donated surplus air monitoring equipment to Mexico for this study and provides laboratory analysis support for the air monitoring sites in Baja, California.

Also, on the air quality front, in July 2016,
Board member De La Torre traveled to Monterrey, Mexico, the Capital of the State of Nuevo León at the invitation of the U.S. Consulate there to share CARB's story.

Recently, the Governor of the State rolled out a new air quality strategic plan, specifically inspired by the California model. The goal is to create an independent agency in Nuevo León that is charged with all manner of State air quality regulations in two years.

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INTERNATIONAL LIAISON MINNICK: Climate change is a global problem that requires global reductions in greenhouse gases. Although California emits less than one percent of total global greenhouse gas emissions, we are having an outsize impact on the global effort to combat climate change because of our groundbreaking programs that are being studied and used as models by governments around the world that are developing their own climate change programs.

California's climate statute, AB 232, calls for California to take a leadership role in addressing climate change, and to work with national and subnational governments. Agreement among national and subnational governments to collaborate on climate issues reflect cooperation and progress in an area where it has been very difficult to find global consensus on the national level.
They also serve as a complement to the 2015 Paris Agreement.

AB 32 and the suite of programs that have been put in place in California to tackle climate change have inspired action around in the world and serve as an example of programs that reduce emissions while growing the economy. That's why nearly half of the visitors to CARB in 2016 were interested in learning about California's climate change programs with 22 percent here specifically to learn about cap and trade. In addition to that, another 18 percent or so were focused on zero-emission vehicle programs.

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INTERNATIONAL LIAISON MINNICK: CARB has been working closely with our counterparts in Mexico and China on climate change, specifically greenhouse gas emissions trading systems. CARB leads the California-Mexico MOU's working group on climate change, and staff meet regularly by phone with representatives from Mexico.

The focus of the climate change working group to date has been on monitoring, reporting, and verification of greenhouse gas emissions, with both sides seeing this as the necessary foundation for rigorous greenhouse gas emissions reductions, including emissions trading systems. And late last year, we also began to exchange
best practices on forest management to ensure carbon sequestration.

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INTERNATIONAL LIAISON MINNICK: CARB has also held many meetings with officials responsible for the development of both China's provincial pilot emission trading system and China's national emissions trading system, which is expected to launch this year.

We have shared information regarding the design and implementation of California's Cap-and-Trade Program in order to inform the development of these programs.

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INTERNATIONAL LIAISON MINNICK: CARB also engages in multi-lateral forums that help to develop policy foundation and technical infrastructure for greenhouse gas regulation in multiple jurisdictions. California worked with other governments to establish the International Carbon Action Partnership, or ICAP, in 2007, which provides a forum for sharing experiences and knowledge among jurisdictions that have already implemented or are actively pursuing market-based greenhouse gas programs.

CARB remains involved in ICAP providing technical information on a regular basis. California also participates in meetings of the Partnership for Market Readiness, or PMR, a multi-lateral World Bank Initiative
that brings together more than 30 developed and developing
countries to share experiences and build capacity for
climate change mitigation efforts, particularly those
implemented using market instruments.

And recognizing the need to address the
substantial greenhouse gas emissions caused by
deforestation of tropical forests, California worked with
a group of subnational governments to form the Governor's
Climate and Forest Task Force, or GCF, in 2008. The
35-member jurisdictions are contemplating or enacting
programs to reduce emissions from deforestation and land
use.

GCF members engage in discussions to share
information and experiences about the design of such
programs, and how programs could potentially interact with
carbon markets, including California's Cap-and-Trade
Program.

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INTERNATIONAL LIAISON MINNICK: The Cap-and-Trade
program is designed to enable linkage with similar
programs in other jurisdictions, and is currently linked
with the Canadian province of Quebec. Ontario has
developed Cap -- a Cap-and-Trade Program that launched
earlier this year, and is proposing to link their program
with California and Quebec. And there is ongoing
collaboration on reporting, market rules, offset protocols, and other areas to support potential linkage.

We have seen design features of the State's Cap-and-Trade Program incorporated into other emerging and existing programs, such as European Union emissions trading system, and China's emerging national trading program.

In addition those I've specifically mentioned, there have been numerous other cap-and-trade information sharing engagements with countries from Kazakhstan to New Zealand.

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INTERNATIONAL LIAISON MINNICK: CARB is also working actively with Quebec on policies to increase ZEV numbers, pursuant to a 2014 letter of intent. And CARB actively participates in the International ZEV Alliance, a group spearheaded by California and launched in conjunction with the 2015 Paris climate talks.

Members of the ZEV Alliance are national and subnational governments committed to making all passenger vehicle sales in their jurisdictions ZEVs as fast as possible, and no later than 2015. The ZEV Alliance members meet regularly to discuss common challenges and solutions for meeting this ambitious goal.

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INTERNATIONAL LIAISON MINNICK: The Pacific Coast Collaborative is a cooperative agreement among the leaders of British Columbia, California, Oregon, and Washington to leverage clean energy, innovation, and low-carbon development to reduce the effects of climate change on the regional economy. Members have agreed to harmonize 2050 targets for greenhouse gas reductions and to develop mid-term targets to support long-term reduction goals.

CARB is an active member of the PCC work group on low carbon fuels issues to share insights gained from developing and implementing California's Low Carbon Fuel Standard.

Staff and executive office members have met and participated in multiple conference calls with their counterparts to discuss design elements and Challenges of the LCFS.

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INTERNATIONAL LIAISON MINNICK: The Low Carbon Fuel Standard is seen as an effective tool to reduce dependence on fossil fuels and to incentivize innovation in clean fuels. CARB staff engage regularly in discussions with their counterparts to share our experiences on the design and implementation of our LCFS program.

Low carb fuel mandates, similar to California's
LCFS, have been adopted by the UC EPA and by other jurisdictions, including Oregon, British Columbia, European Union and the United Kingdom. Germany also has an LCFS program, and Canada and Brazil are in the process of developing LCFS programs.

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INTERNATIONAL LIAISON MINNICK: In the year preceding the Paris negotiations in December 2015, the Governor’s office recruited subnational jurisdictions to sign onto the Under 2 MOU, which brings together states and regions willing to commit to reducing their greenhouse gas emissions by 80 to 95 percent or to limit emissions to two metric tons CO2 equivalent per capita by 2050.

The MOU garnered 127 signatories and provided support for action at Paris, reassuring national governments that the provinces and municipalities within their countries are ready to act to reduce greenhouse gases.

Today, a total of 170 jurisdictions, representing 33 countries and six continents have signed on or endorsed the Under 2 MOU and joined the Under 2 Coalition, a global forum that supports the signatories in developing de-carbonization strategies and aligning on a trajectory consistent with 2050 carbon neutrality.

Together, under 2 regions represent more than 1.8
billion people, and more than $27 trillion in GDP, equivalent to more than a third of the global economy. Many foreign jurisdictions seek out California's expertise, because of our history of success, in addressing air pollution and climate change, but California also benefits from these interactions.

As mentioned previously, expanding global action to fight air pollution and climate change expands markets for clean technology. And innovative policies and lessons learned in our partner's jurisdictions can help to inform future policies in California.

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INTERNATIONAL LIAISON MINNICK: Subnational climate leadership and California's continued commitment is even more important now in light of the policies of the new federal administration. Governor Brown highlighted this in his State of the State Speech earlier this year, committing to continue to work with other States, provinces, and countries to stop the dangerous rise in climate pollution.

In light of that urgency and to continue California's leadership role in Under 2 Coalition, and our long-standing climate, clean energy, and economic ties with China, Governor Brown will be leading a delegation to China next week that includes CARB Chair Nichols, and
Energy Commission Chair Weisenmiller.

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INTERNATIONAL LIAISON MINNICK: During the week-long trip, Governor Brown and the delegation will participate in the Clean Energy Ministerial, an annual meeting of national energy ministers and other high-level delegates from nearly two dozen countries and will also join with China's Ministry of Science and Technology and Sichuan Province to host the Under 2 Clean Energy Forum, which expands on the Clean Energy Ministerial by bringing together members of the Under 2 Coalition, as well as business and NGOs to discuss subnational and non-State action to de-carbonize the economy.

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INTERNATIONAL LIAISON MINNICK: Looking forward, CARB's commitment to international collaboration is unchanged and more important than ever. We will continue to share our air quality knowledge, methods, and expertise with visitors from around the world, and to work with partners on developing and implementing comprehensive solutions for combating climate change.

And CARB's new laboratory and research facility in Southern California, which is slated to open in 2020, will enhance those engagements through design features that facilitate hosting of visitors.
Thank you. We'll now take any questions.

CHAIR NICHOLS: Thank you.

I think this is useful as a reference, if nothing else, when people either hear about or have questions about what we might be doing with some other country. It may be helpful to just have this around to refer to. It's a lot obviously, but it reflects a lot of work, and a lot of engagement.

And I think one of the things that comes up from time to time, especially in the political arena is, you know, why are we spending so much time with all these foreign countries? And I think it's important that we be able to explain the fact that this is something that we've made a serious commitment to. It's not just kind of an afterthought or a frivolous activity.

Comments, questions?

BOARD MEMBER BALMES: Well, it's mostly a question.

CHAIR NICHOLS: Okay.

BOARD MEMBER BALMES: In reading some of the articles about SB 775, it was suggested that that would abrogate -- if that was passed, that would abrogate the existing arrangements that we already have with Quebec and it would preclude other potential linkages --

CHAIR NICHOLS: Yes. We've expressed --
BOARD MEMBER BALMES: -- which I consider a problem.

CHAIR NICHOLS: -- concerns about the language of that statute to the author. It's not actually ever had a formal hearing as of yet. So it's unclear exactly how things are going to evolve, but there's no question that as it was originally presented, it would have an impact. It also would have precluded any use of offsets. It would have reduced the amount of offsets and precluded the use of any of them outside of California really, or acceptance of any from outside of California, I should say.

And again, that's one of those issues that reflects a view that, you know, we should pretty much do everything inside the borders of the State of California. And I think it's just important to realize that not only have we contributed a lot to the well-being of the rest of the country, and other parts of the planet, as result of our efforts, but we've gained from these engagements too.

We certainly have a lot of ideas and a lot of wisdom in our State, but we're not the repository of all -- all good ideas, and it's really quite helpful to be engaged, especially as we work with other countries that are seeing a lot of development activity going on. It's very much to the benefit of Californians.

BOARD MEMBER BALMES: I guess there's kind of an
analogy to what's going on at the national scene. I don't
think we should be just California first.

CHAIR NICHOLS: Right. Hector.

BOARD MEMBER DE LA TORRE: Thank you. Two
thoughts. One, thank you for including what we did with
Nuevo León that, you know, I knew it was just an
invitation out of the blue, and they wanted someone who
spoke Spanish, so I went.

And they had me speak to all kinds of different
groups, but they had expressed interest in doing some of
these things, but they just had no idea, because a
previous Governor had disbanded all of their efforts in
the past, including their Smog Check program, and so
didn't know where it was all going to lead.

There were a couple of conversations from July of
last year until as recently as a few weeks ago. And then
the Governor -- I didn't get any heads up or anything
obviously, but the Governor announced he was going to
roll-out this agency. They're very interested in the way
we do things here. I did take the opportunity, while I
was there, to make a funny play on a famous Mexican
saying. Poor Nuevo León, so far from California, so close
to Texas.

(Laughter.)

BOARD MEMBER DE LA TORRE: They got a kick out of
CHAIR NICHOLS: I'm sure.

BOARD MEMBER DE LA TORRE: They're there. They're doing it. They're going to roll-out a smog check program. They're very interested in our representation of the people of California, the structure of this board. They're obviously interested in the technical expertise that we've got, and so it was just a very positive outcome, I think. But it was -- they knew to look to us and it's that first slide that you showed, the growth with environmental improvement that really got their attention. That is our number one sales pitch around the world.

I think the Chinese were attracted by it, and so they were very, very impressed. But they couldn't believe it, when I -- I was on my presentation and so they asked a lot of questions about that. What does that mean, and is that true, and -- so that was very, very interesting, and very positive. And I imagine we're going to continue to be responsive. We -- they just reach out to us, and whatever questions they have, we answer.

The second thing is obviously there's a lot of interest in the capital about this, about what we're doing for all the reasons that the Chair mentioned. So I think we need to put this in a really nice package and share with 120 people over there, as soon as possible, because
they need to understand how big this is.

I get the California First thing. I'm very much there, but they have to understand in tangible ways how we are influencing what's going on around the world.

Thank you

CHAIR NICHOLS: Well, one of the things I am always surprised by is the disconnect that we sometimes experience between the issues we talk about here versus how people respond out in the communities in California.

And young people, regardless of where you are in the State, just take it for granted that we live in a world where you interact internationally, and that, you know, of course, we're Californians, and, you know, we live here, and we care about what's happening in our communities. But no matter what else, they have a whole different view of themselves as global citizens, I think, than people of my generation did.

And it's -- I think we would be missing a lot if we were just to ignore that tendency

So Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Yeah. And just, you know, San Joaquin Valley thinking -- you know, we all are concerned in San Joaquin Valley particularly about pollution drifting into our constituencies, and the effect, for instance, pollution that comes from China.
And as we're studying that to better understand how important that is, regardless of the answer to that question, at the end of the day, boy, I certainly endorse so much better that we have a good collaborative relationship with folks. And, in fact, we've been contributing to their efforts already to improve their situation which may indeed benefit us as well.

CHAIR NICHOLS: Anybody else?
No. If not, I think I see people getting ready to move.

(Laughter.)

CHAIR NICHOLS: It's the hat that does it.

(Laughter.)

CHAIR NICHOLS: Having your hat on is kind of a signal.

(Laughter.)

CHAIR NICHOLS: So without further ado, and without any objections, thank you for the update. We appreciate it, and we will be adjourned. Except I have to ask for public comment. I forgot. Did anyone sign up for broad public comment?

BOARD CLERK McREYNOLDS: (Shakes head.)

CHAIR NICHOLS: Good. All right. Then we will be adjourned.

Thank you.
(Thereupon the Air Resources Board meeting adjourned at 3:43 p.m)
CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of June, 2017.

JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063