MEETING

STATE OF CALIFORNIA
AIR RESOURCES BOARD

CALEPA HEADQUARTERS

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SECOND FLOOR

1001 I STREET

SACRAMENTO, CALIFORNIA

THURSDAY, JUNE 25, 2015 9:07 A.M.

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

APPEARANCES

BOARD MEMBERS:

Ms. Mary Nichols, Chairperson

Dr. John Balmes

Ms. Sandra Berg

Mr. Hector De La Torre

Supervisor John Gioia

Mr. John Eisenhut

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Ron Roberts

Supervisor Phil Serna

Professor Daniel Sperling

STAFF:

Mr. Richard Corey, Executive Officer

Dr. Alberto Ayala, Deputy Executive Officer

Ms. Edie Chang, Deputy Executive Officer

Mr. Kurt Karperos, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Ms. Edward Wong, Acting Ombudsman

Ms. Heather Arias, Chief, Freight Transportation Branch, TTD

Mr. Peter Christensen, Manager, Innovative Heavy-Duty Strategies Section, MSCD

STAFF:

- Dr. Bart Croes, Chief, Research Division
- Ms. Sarah Dominguez, Air Pollution Specialist, Sustainable Communities Policy and Planning Section, AQPS
- Mr. Sam Gregor, Manager, Planning & Regulatory Development Section, MSCD
- Mr. Douglas Ito, Assistant Chief, Transportation and Toxics Division
- Mr. Nesamani Kalandiyur, Manager, Transportation Analysis Section, AQPS
- Ms. Deborah Kerns, Senior Attorney, Legal Office
- Ms. Jennifer Kozumplik, Good Movement Strategies Section, TTD
- Ms. Karen Magliano, Chief, Air Quality Planning and Science Division
- Ms. Lisa Macumber, Manager, Innovative Light-Duty Strategies Section, MSCD
- Ms. Cynthia Marvin, Chief, Transportation and Toxics Division
- Mr. Greg Mayeur, Manager, Program Operation Section, ISD
- Mr. Brian Moore, Populations Studies Section, Research Division
- Ms. Christina Morkner Brown, Assistant Chief Counsel, Legal Office
- Ms. Lucina Negrete, Chief, Innovative Strategies Branch, MSCD
- Mr. Arnab Pal, Air Pollution Specialist, Industrial Strategies Division
- Mr. Andrew Panson, Innovative Strategies Branch, MSCD

STAFF:

- Mr. Nicholas Rabinowitsh, Staff Counsel
- Ms. Terry Roberts, Manager, Sustainable Communities Policy & Planning Section, AQPS
- Ms. Rajinder Sahota, Chief, Climate Change Program Evaluation Branch, ISD
- Ms. Linda Smith, Branch Chief, Health and Exposure Assessment, RD
- Ms. Holly Geneva Stout, Senior Staff Counsel
- Mr. Jon Taylor, Chief, Transportation Planning Branch, AQPS
- Ms. Barbara Van Gee, Manager, Goods Movement Strategies Section, TTD
- Mr. Floyd Vergara, Chief, Industrial Strategies Division
- Ms. Barbara Weller, Section Manager, Populations Studies Section, RD
- Mr. Erik White, Chief, Mobile Source Control Division

ALSO PRESENT:

- Mr. Zach Barbane, ecoPartners, LLC
- Ms. Connie Best, Pacific Forest Trust
- Mr. Jim Boyd, Chugach Alaska Corporation
- Mr. Steve Brink, California Forestry Association
- Ms. Julia Bussey, Chevron Corporation
- Mr. Paul Buttner, California Rice Commission
- Mr. Tim Carmichael, California Natural Gas Vehicle Coalition

ALSO PRESENT:

- Mr. Sean Carney, Finite Carbon
- Mr. Nicholas Chavez, School Transportation Coalition, California Association of School Transportation Officials
- Mr. John Clements, Clements School Trans Consulting
- Ms. Cynthia Cory, California Farm Bureau
- Mr. Cliff Costa, California New Car Dealers Association
- Mr. Manuel Cunha
- Mr. Steven Douglas, Auto Alliance
- Mr. Evan Edgar, California Compost Coalition
- Mr. Sean Edgar, CleanFleets.net
- Ms. Erin Evans-Fudem, Small School Districts Association
- Dr. Michael S. Graboski, American Rental Association
- Ms. Sekita Grant, Greenlining Institute
- Mr. Larry Greene, Sacramento Air Quality Management District
- Ms. Claire Halbrook, Pacific Gas & Electric
- Mr. Jamie Hall, CALSTART
- Ms. Bonnie Holmes-Gen, American Lung Association
- Dr. Robert Hrubes, SCS Global Services
- Mr. Tom Jordan, San Joaquin Air Pollution Control District
- Mr. Brian Kleinhenz, Sealaska Corporation
- Mr. Kent Leacock, Proterra, Inc.

ALSO PRESENT:

- Ms. Jenny Lester Moffitt, California Department of Food and Agriculture
- Mr. Jamie Levin, Center for Transportation and the Environment
- Mr. Paul Lilly, Spatial Informatics Group
- Mr. Jim Lites, California School Boards Association
- Ms. Jerilyn Lopez Mendoza, Southern California Gas Company
- Mr. Michael Lord, Toyota
- Dr. Edward Lovelace, XL Hybrids
- Mr. Bill Magavern, Coalition for Clean Air
- Mr. Mik McKee, The Climate Trust

Senator Mike McGuire

- Mr. Jim McKinney, California Energy Commission
- Mr. Ralph Moran, BP
- Mr. Edmund C. Murphy, Sierra Pacific Industry
- Mr. John Nickerson, Climate Action Reserve
- Mr. David Norris, Lakeport Unified School District
- Mr. Gustavo Occhiuzzo, Green Commuter
- Mr. Robert Parkhurst, Environmental Defense Fund
- Ms. Michelle Passero, The Nature Conservancy
- Mr. Arjun Patney, American Carbon Registry
- Mr. David Puzey, Natural Resources Defense Council
- Dr. David Reichmuth, Union of Concerned Scientists

ALSO PRESENT:

- Mr. Timothy Robards, New Forests
- Mr. Gary Rynearson, Green Diamond Resource Company
- Mr. Matt Schrap, Crossroads and California Fleet Solutions
- Mr. Chris Shimoda, California Trucking Association
- Mr. Mikhael Skvarla, CCEEB
- Mr. Joshua Strauss, IETA
- Ms. Eileen Tutt, CalETC
- Ms. Claire Van Zuiden, CE2 Carbon Capital
- Dr. Barry Wallerstein, South Coast Air Quality Management District
- Mr. Michael Wang, Western States Petroleum Associations
- Ms. Jeanie Ward-Waller, California Bicycle Coalition
- Mr. Roger Williams, Blue Source

HAAGEN-SMIT AWARDEES:

- Dr. Donald R. Blake, University of California, Irvine
- Dr. Kirk Smith, University of California, Berkeley
- Dr. John C. Wall, Cummins, Incorporated

INDEX PAGE Pledge of Allegiance 1 Roll Call 1 Opening remarks by Board Member Berg 1 Item 15-5-1 3 Board Member Berg Motion 4 Vote 4 Item 15-5-2Board Member Berg 4 Motion 4 Vote 5 Item 15-5-75 Board Member Berg Executive Officer Corey 6 Staff Presentation 7 16 Board O&A Dr. Wallerstein 20 Ms. Lopez Mendoza 22 Mr. Schrap 23 Mr. Shimoda 25 Dr. Graboski 26 Mr. Carmichael 30 Mr. Edgar 31 Board Discussion and O&A 34 Motion 40 Vote 40 Item 15-5-540 Chairperson Nichols Executive Officer Corey 42 Board Member De La Torre 43 Dr. Blake 45 Executive Officer Corey 46 Board Member Balmes 46 Dr. Smith 48 Executive Officer Corey 51 Board Member Sperling 51 Dr. Wall 55

I N D E X C O N T I N U E D PAGE Item 15-5-857 Chairperson Nichols Executive Officer Corey 59 Staff Presentation 60 Mr. McKinney 78 Board Discussion and Q&A 80 Senator McGuire 88 Dr. Wallerstein 90 92 Mr. Greene Ms. Cory 95 Ms. Ward-Waller 96 Mr. Puzey 97 Mr. Levin 99 Ms. Tutt 101 Mr. Hall 102 Ms. Grant 104 Ms. Holmes-Gen 107 Mr. Lord Dr. Reichmuth 109 111 Mr. Douglas 113 Dr. Lovelace 115 Mr. Cunha 116 Mr. Chavez 119 Mr. Norris 120 Ms. Evans-Fudem 121 Mr. Lites 123 Mr. Jordan 123 Mr. Clements 125 Mr. Sean Edgar 127 Mr. Evan Edgar 130 Mr. Costa 133 Mr. Occhiuzzo 134 Mr. Magavern 135 Mr. Leacock 137 Board Discussion 138 Motion 173 Vote 173 Afternoon Session 175 Item 15-5-6 Chairperson Nichols 175 Executive Officer Corey 176 Staff Presentation 177 Ms. Moffitt 194

INDEX CONTINUED PAGE Item 15-5-6(Continued) Mr. Wang 196 Ms. Passero 199 200 Mr. Rynearson Mr. Brink 201 Mr. Kleinhenz 205 Mr. Parkhurst Mr. Moran 207 209 Mr. McKee 211 Dr. Hrubes 213 Mr. Carney 214 Mr. Williams 216 Mr. Strauss 219 Mr. Buttner 221 Ms. Van Zuiden 224 Mr. Barbane 226 Ms. Best 227 Mr. Murphy Ms. Halbrook 229 231 232 Mr. Patney Mr. Boyd 234 Mr. Lilly 237 Mr. Nickerson 240 Mr. Robards 242 Ms. Bussey 245 Mr. Skvarla 245 Board Discussion and Q&A 246 Motion 258 Vote 259 Item 15-5-4259 Chairperson Nichols Executive Officer Corey 261 Staff Presentation 261 Mr. Gallegos 275 Board Discussion and Q&A 284 Item 15-5-3Chairperson Nichols 287 Staff Presentation 288 Adjournment 301 Reporter's Certificate 302

PROCEEDINGS

BOARD MEMBER BERG: I'd like to welcome you to the June meeting. And I am tag teaming with Chairman Nichols this morning, because we haven't figured out how to clone her yet. But she will be joining us shortly, and we're going to get underway in her absence.

And so would you please join me in the pledge of allegiance.

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

BOARD MEMBER BERG: The June 25th, 2015 public meeting of the Air Resources Board will come to order.

And, clerk, would you please call the roll

BOARD CLERK JENSEN: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK JENSEN: Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK JENSEN: Mr. De La Torre?

Mr. Eisenhut?

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20 BOARD MEMBER EISENHUT: Here.

BOARD CLERK JENSEN: Supervisor Gioia?

BOARD MEMBER GIOIA: Here.

BOARD CLERK JENSEN: Ms. Mitchell?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

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BOARD CLERK JENSEN:
                                  Supervisor Roberts?
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             BOARD MEMBER ROBERTS:
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                                    Here.
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             BOARD CLERK JENSEN:
                                   Supervisor Serna?
             BOARD MEMBER SERNA:
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                                  Here.
             Dr. Sherriff's?
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             Professor Sperling?
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             BOARD MEMBER SPERLING:
                                      Here.
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             BOARD CLERK JENSEN: Chairman Nichols?
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             Madam Chairman, we have a quorum.
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             BOARD MEMBER BERG: Thank you very much.
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             BOARD MEMBER SPERLING:
                                      We have a new -- a late
   arrival.
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             BOARD MEMBER MITCHELL: I'm here.
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             (Laughter.)
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             BOARD MEMBER BERG: Now, we have a super quorum.
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             Before we get started this morning, I have a few
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    announcements. Anyone wishing to testify should fill out
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    a request to speak card, which are available right outside
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    the lobby. And please turn those into the Board assistant
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    or the Clerk prior to the commencement of the item we'll
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   be hearing.
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             Also, speakers please be aware that we will be
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    imposing a three-minute time limit. Please state your
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    first and last name. And when you come to the podium, if
    you could testify in your own words, that is very helpful
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to the Board. If you have written testimony, it will be submitted and we will also have that for the record.

Also, with our new AV system, we do post the witness list. If you will see where you are on the list and make your way up to the podium as the previous speaker is finishing up, we'd also appreciate that.

For safety reasons, please note that the emergency exits are to the rear of the room. In the event of a fire alarm, we are required to evacuate this room immediately, go down the stairs, and out of the building. We'll wait for the all-clear signal, and then return to the hearing room and resume our hearing, if appropriate.

So with that, let's jump in. And we have two concept items. Our first item is Item number 15-5-1. It's a greenhouse gas quantification determination for the Stanislaus County of Governments Regional Transportation Plan Sustainable Communities Strategy.

I'd like to ask the Board if we have any witnesses that have signed up to testify on this item?

BOARD CLERK JENSEN: (Shakes head.)

BOARD MEMBER BERG: We did receive one comment letter, and I'd like my fellow Board members to know that letter is in support of the item, and therefore that, in and of itself, does not trigger the item to come off of the consent agenda. Are there any Board members who would

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    like this item to be removed?
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             Seeing none.
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             Can I get a motion on this item?
             BOARD MEMBER ROBERTS:
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                                     Moved.
             BOARD MEMBER RIORDAN:
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                                     Second.
             BOARD MEMBER BERG: Thank you.
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             All in favor?
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             (Unanimous aye vote.)
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             (Board Member De La Torre not present.)
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             BOARD MEMBER BERG: Any opposed?
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             So moved.
             BOARD MEMBER BERG: Our second consent item is
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    Item number 15-5-2. It is also a greenhouse gas
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    quantification determination. However, it is for the San
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    Luis Obispo County of Regional Transportation Plans
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    Sustainable Communities Strategies. I'd like to ask the
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    Board clerk if any witnesses have signed up for this item?
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             BOARD CLERK JENSEN: (Shakes head.)
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             BOARD MEMBER BERG: There are also no comment
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    letters. So are there any Board members who would like
    this item to be removed?
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22
             Seeing none, could I please have a motion to pass
    this item?
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             BOARD MEMBER BALMES: So moved.
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             BOARD MEMBER RIORDAN: Second.
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BOARD MEMBER BERG: Thank you.

2 All in favor?

(Unanimous aye vote.)

(Board Member De La Torre not present.)

BOARD MEMBER BERG: Any opposed?

Thank you. So our first hearing item is Item number 15-5-7. We've moved this up on the agenda, and it was posted. It is the Proposition 1B goods movement emission reduction program guidelines. And if I'm not mistaken, this is our final funding and program that has been enormously successful, we'll be hearing about that both from Richard Corey and our staff.

Last month you might remember that we did hear on the sustainable freight pathways to zero and near zero emission as a discussion draft, and how important incentives an investments were going to be to transform our freight system. Goods movement incentive programs bring both public health benefits and economic stimulus benefits as the funding helps thousands of business owners clean up their diesel equipment ahead of schedule. This financial assistance also helps create and retain jobs in California while supporting businesses.

Today our job is to update this program guidelines, so we can deploy the next round of moneys this fall and further reduce the health risks from freight

operations and support the transformation of zero and near zero emission freight system. Mr. Corey, would you please introduce this item?

EXECUTIVE OFFICER COREY: Certainly, and thank you, Chair. The following presentation is the first of two items the Board is going to here today regarding ARB's commitment of incentive funding to support California's transformation toward a zero and near zero emission freight system.

First, the Board will hear a proposal for updates to the Proposition 1B guidelines, which will direct the remaining funds for the Prop 1B program, and later, the proposed funding plan for low carbon transportation investments and the air quality improvement program. Staff has coordinated closely to design complementary programs to advance technology. In addition, the proposed 1B guidelines also focus on continuing ARB's commitment to provide funds for small fleet truck projects.

Since this program started in 2008, we've awarded more than \$700 million in funding to local agencies for projects to reduce emissions from diesel freight equipment, primarily trucks.

Jennifer Kozumplik from the Goods Movement Strategies Section will give the staff presentation.

Jennifer.

(Thereupon an overhead presentation was Presented as follows.)

MS. KOZUMPLIK: Thank you, Mr. Corey. Good morning, members of the Board. Today, I'll be presenting staff's recommendations to update the goods movement emission reduction program guidelines.

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MS. KOZUMPLIK: After a brief review of the existing program, I'll highlight the progress of the program to date, and then I will summarize the proposed changes. I'll conclude with staff's recommendations for Board action today.

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MS. KOZUMPLIK: In 2006, California voters approved Proposition 1B authorizing \$1 billion in bond funding to reduce emissions from freight transport in the four priority trade corridors. These funds provide incentives to owners of diesel equipment to upgrade to cleaner models and reduce the health risks related to diesel emissions in heavily impacted communities.

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MS. KOZUMPLIK: The implementing statute defines the core requirements of the program. First, ARB must adopt the guidelines for implementation and award grants to qualifying local agencies. The local agencies

administer the implementation of equipment projects.

Another requirement is that bond funds must be used to achieve early or extra emission reductions compared to what is required by regulation or enforceable agreements. The program also requires match funding. Match funding can come from the equipment owner, a local agency, or federal sources.

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Finally, projects must compete for program funding based on emission reductions and cost effectiveness.

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MS. KOZUMPLIK: To administer this program, the legislature appropriates funding to ARB through the State budget. ARB then adopts the program guidelines to define how the program will work and what kinds of projects are eligible. If the Board adopts the guidelines today, ARB staff will then solicit project proposals from local agencies, like air districts and seaports. Staff will evaluate the proposals and will return to the Board in September to recommend funding awards. The local agencies will solicit and evaluate applications from equipment owners and then fund eligible projects in a competitive process for each source category.

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MS. KOZUMPLIK: Now, I'll quickly touch on the

progress of the program.

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3 MS. KOZUMPLIK: This graph shows the distribution 4 of funds allocated by the Board so far by funding category. Over 80 percent of the project funds have been 5 6 dedicated to cleaning up diesel trucks. The next largest 7

share of funding has been for ships at berth and cargo

handling, followed by locomotives and harbor craft.

Projects have been funded throughout all four corridors with the L.A./Inland Empire leading followed by Central Valley, then Bay Area and San Diego border corridor. All of the funds have been spent on projects that operate in impacted communities in the four trade corridors.

Approximately \$220 million will be available for projects. The remaining funds are for ARB's administration, bond issuance, and oversight costs.

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MS. KOZUMPLIK: To date, this program has funded about 12,000 truck replacements or retrofits, 25 locomotive upgrades, shore power for 37 ship berths and three commercial harbor craft. We estimate that these projects will reduce over 2,200 tons of particulate matter and 85,000 tons of ozone-forming NOx over their lifetime.

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MS. KOZUMPLIK: In anticipation of receiving the remaining funds, staff have reached out for input on what changes should be considered. In April, the staff released a concept paper, and held three workshops in the trade corridors. Input was received at these events, in comment letters, and during follow-up discussions with our stakeholders.

To further inform these guideline updates, staff considers the goals of the sustainable freight: Pathways to zero and near-zero emissions discussion draft, as well as the draft heavy-duty technology and fuels assessment overview. Staff also worked with local agencies to identify changes in the program to increase its effectiveness.

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MS. KOZUMPLIK: Now, let's move on to today's focus. Staff's recommendations on updates to the goods movement program guidelines.

Staff is proposing revisions to project eligibility and program administration requirements. Each project category was analyzed and staff has incorporated the most current information available regarding regulatory implementation dates, available technologies, and potential project costs.

This includes looking for opportunities to

further incentivize zero emission and advanced technologies. This proposal also includes administrative changes to improve our effectiveness and expedite the implementation of projects that achieve emission reductions.

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MS. KOZUMPLIK: For reach funding cycle, the Board approves the priorities to guide how the funds should be spent. In this round, the proposed update to the guidelines supports spending funds in a way that helps meet air quality goals and climate goals. Staff recommends the following priorities for this funding cycle:

Projects to upgrade all equipment types to zero and near-zero emission equipment through replacement, repower, and retrofit as applicable; truck projects to assist small fleets without upgrading to cleaner technology, that can still achieve earlier extra emission reductions relative to the state-wide truck and bus regulation; locomotive projects on engines meeting the Tier 4 standard, the most stringent national emission standard.

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MS. KOZUMPLIK: Shifting now to specific category recommendations. I will start with the largest project

category in the program, heavy-duty diesel trucks.

Based on the priorities in the previous slide, staff proposals include: Increased funding for all fleets upgrading to advanced technology, such as optional low NOx certified to a 0.082 gram per brake horsepower hour standard, hybrid and zero emission vehicles, and longer timelines to support projects involving upcoming advanced technology; focusing large fleet truck options to grants for advanced technology and alternative fuel projects, continued support for all small truck fleet project types, including diesel, advanced technology, and alternative fuel; and, support for trucks upgrading to electric or fuel cell power by providing infrastructure with the replacement of a minimum of three trucks.

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MS. KOZUMPLIK: Staff is proposing new options and increased fund levels for the cleanest truck technology paying a greater share of the funding for equipment to help offset the higher cost. These amounts can also be combined with other incentive programs, such as ARB's and the Energy Commission's AB 118 incentive programs, and the low carbon transportation program.

The ability to combine funding enhances the incentive for truck owners to switch to advanced technology. In addition, we are proposing that zero

emission and zero mile placements projects be given the highest priority in the competitive process.

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MS. KOZUMPLIK: Staff is also proposing to expand eligibility for the truck reuse option to include trucks with model year 2007 to 2009 engines. These model years, which have remaining useful life, may be reused in the State. Trucks, including drayage, with '07 to '09 engines, would be made available to fleets that wish to replace an older truck. In turn, that older truck would be scrapped.

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MS. KOZUMPLIK: Funding for transport refrigeration units is a new category proposed for this round, as it reflects the program's initiative to support zero and near-zero equipment wherever possible. Staff is also proposing funding options for infrastructure. Many of the latest models of commercialized transport refrigeration units, hybrid electric and electric standby, have the ability to plug into electric infrastructure, but lack the infrastructure at freight facilities to take advantage of this equipment.

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MS. KOZUMPLIK: Now, let's talk about opportunities for locomotive projects. Locomotives can be

in operation for 30 years or more. Due to this long life, it is critical to upgrade existing locomotives with the cleanest technology to maximize the emission reductions achieved in the future. As such, staff is making several recommendations to help incentivize these upgrades:

Increase funding amounts to support the deployment of Tier standard engine technology; extend time frames to allow for Tier 4 availability; for line-haul locomotives that spend a majority of their time outside the State, allow pro-rated grant amounts commensurate with their in-state usage down to a minimum of 30 percent of time spent in California; provide additional funding for the option to incentivize scrapping the old equipment and maintain the existing option to ban the old equipment from California operation.

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MS. KOZUMPLIK: For cargo handling equipment, we're proposing to add funding for zero emission technologies, including battery and fuel-cell powered equipment, such as yard trucks, forklifts, and rubber tire gantry cranes, as well as new funding for charging infrastructure associated with this equipment.

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MS. KOZUMPLIK: For ships at berth, staff is proposing funding for hood technology, which can operate

at all berths, and a minor change to the operational efficiency requirement.

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MS. KOZUMPLIK: For commercial harbor craft, staff is proposing: Increased funding for Tier 4 and hybrid technologies; expanded eligibility to allow funding for some additional vessel types, including marine spill response boats and oil boom boats, dive vessels supporting marine construction, and also for auxiliary engines on all eligible boats; expanded eligibility by allowing vessels with Tier 2 engines to participate in the program; and that trade corridor use for all these vessels be reduced to at least 51 percent. Funding would be pro-rated based on approved use.

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MS. KOZUMPLIK: The last set of proposed revisions are to improve program administration. Staff proposes streamlining compliance checks, simplifying the ranking requirements for undersubscribed truck solicitations, and extending the grant timelines to allow for the introduction of upcoming advanced technology.

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MS. KOZUMPLIK: We have identified some minor corrections to ensure accuracy and internal consistency within the guidelines and staff report listed here.

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MS. KOZUMPLIK: Staff and the local agencies are poised to move quickly. If the Board adopts the update to the program guidelines, staff will issue a Notice of Funding Availability and call for local agency project proposals next week.

Following the public review, program staff will recommend funding awards for your consideration in September.

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MR. KOZUMPLIK: ARB staff recommends that the Board adopt Resolution 15-20, and the proposed 2015 update to the Proposition 1B goods movement program guidelines, including the additional changes previously described.

This concludes the staff presentation. Thank you. And we'd be happy to answer any questions that you may have.

BOARD MEMBER BERG: Thank you very much, Jennifer.

Does any Board member have a question in regards? Supervisor Gioia.

BOARD MEMBER GIOIA: Yeah, just to understand -so I'm trying to understand the process on awarding funds.
So local agencies essentially are eligible -- to give an
example in terms of a publicly-owned port. So what about

joint applications from a port tenant and a city-owned port, can you talk a bit about -- or the nature of potential joint applications?

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: Sure.
This is Heather Arias.

Yes, in the guidelines, we clarify the full definition of public agencies that can apply.

BOARD MEMBER GIOIA: That's what I'm trying to find. It's under the -- where is it in the report?

Just -- and I'll look at it later, but just --

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: Yeah, we'll find -- they'll find you the specific page while I'm explaining it to you.

There is an opportunity for joint applications. When the public agency applies to the State, they have to be able to show their readiness to be able to implement the program, including their knowledge regarding air quality type projects. So in the past, the air districts have obviously been --

BOARD MEMBER GIOIA: The local air districts as well, local government?

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: Local government. But when they apply, they would have to be able to show their readiness for resources and their knowledge on air quality.

BOARD MEMBER GIOIA: Right. In the past round, what types of local agencies tended to be the greatest number of applicants?

 $\label{thm:chi} \mbox{FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS:} \quad \mbox{The } \\ \mbox{local air districts have always been the greatest number.} \\$

BOARD MEMBER GIOIA: The air districts, right.

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: So in the guidelines themselves, if you look on page 17, there is a definition of local public entities, local agencies.

BOARD MEMBER GIOIA: And in terms of the -- you talked about the priority areas, can you talk more about sort of the anticipated percent of dollars in each of those areas? And then in each of those are disadvantaged communities, and then areas that are impacted that may not be disadvantaged, can you talk about the breakdown of all of that in terms of the eligibility?

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS:

Right. So --

BOARD MEMBER GIOIA: So what -- first, what percent overall needs to be spent in this category? I didn't catch that in disadvantaged or to benefit disadvantaged communities?

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: So the statute doesn't actually have a requirement for disadvantaged a communities. However, when we have

discussed with the local districts they were able to confirm for us that all the projects are funded in areas of impacted communities.

BOARD MEMBER GIOIA: Right. So maybe not the OEHHA map defined areas, but like I know in some air districts, they define the impacted communities differently than the OEHHA maps.

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: Right.

BOARD MEMBER GIOIA: Okay.

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: And as far as the targets for the general areas, we are on track for meeting the original targets set within the program by the Board. And we will be discussing that in more detail with the Board in September, after we have received applications from the local agencies, and can come back to you with proposals on where those funds should -- the remaining funds should go.

BOARD MEMBER GIOIA: Thank you.

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

If I might just briefly add one thing. When you look at who applies to ARB for funding, those -- that entity is the administrator. It's not ultimately the recipient of funding. And that entity is required to run a competitive program.

BOARD MEMBER GIOIA: Right, right. 1

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TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

We had the little issue, for example, when Port of Long Beach was an applicant, and they really just wanted to fund projects at the Port of Long Beach, and then they realized that if they were an administrator they were going to have to open it up to fund projects across the State. And so that's why we've relied on six air districts to be the primary administrators, and then make many local governments and ports and others to be applicants for the actual project funding.

BOARD MEMBER GIOIA: Right. And their funding quidelines have to be consistent what we have in the amended guidelines that you -- because you're asking for some -- a few amendments off the plan, and so it has to be consistent with that.

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

Right. And typically the local agencies who administer this program do not have independent funding guidelines. They follow the State's guidelines.

> BOARD MEMBER GIOIA: Right

BOARD MEMBER BERG: Thank you. Other comments?

Okay. We have five people to testify. We'll start out with Dr. Wallerstein.

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DR. WALLERSTEIN: Good morning, and thank you for

the opportunity -- push the button. Good morning. Thank you for the opportunity to address you on this item this morning. Barry Wallerstein, the Executive Officer of the South Coast Air Quality Management District.

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I'm here to thank the staff for its hard work on this item. We're here in support of the item. They've worked closely with our staff in developing these enhancements to the guidelines. The additional enhancements relative to zero and near-zero emission vehicles and engines is very, very important in terms of our SIP needs and also reducing air toxics, not just in our air basin, but across the state. Your staff has really done an excellent job on this item.

I would like to also mention relative to locomotives, I've heard that there's some discussion that the industry might like to use just Tier 3 locomotives, which only really control the particulate emissions. It's really crucial that any funding be for Tier 4 locomotives only, because that gets us the additional NOx emission reductions that are necessary to reduce both ozone and fine particulate pollution throughout the State.

And with that, again, I'd just urge your approval of this item.

BOARD MEMBER BERG: Thank you very much. Good morning.

MS. MENDOZA: Good morning, Chair Berg. Good morning, Board members and staff of the California Air Resources Board. Jerilyn Lopez Mendoza ON behalf of THE Southern California Gas Company.

I'm here this morning to speak on behalf of supporting this item. We're just very excited about the fact that we're moving forward with the last expenditure of the Prop 1B dollars. We want to thank the staff in particular who have interacted with us numerous times, both in-person and email, regarding the funds. And we're particularly excited about the fact that natural gas vehicles are eligible for incentives funds as a result of some of the program reevaluation.

So we think this will result in a direct reduction of emissions, particularly criteria pollutants that affect health pretty dramatically. Heavy-duty trucks in particular are of concern to us as a health issue, because they're mobile. They go everywhere. They're all over the community. They're in the port communities. They're on the freight corridors up and down the state. And so reducing the heavy-duty engine reductions from heavy-duty trucks is a big priority for the Southern California Gas Company.

So thank you very much. And I hope you vote in favor of this item, and I appreciate the time.

Thank you.

BOARD MEMBER BERG: Thank you. Matt, good morning.

MR. SCHRAP: Thank you, Madam chair and Board members. My name is Matt Schrap. I am president of California Fleet Solutions and vice president of government programs for Crossroads Equipment Lease and Finance. Our organization is no stranger to the Proposition 1B program having financed tens of millions of dollars in clean, new and used, truck grant transactions throughout the State helping thousands of small businesses in meeting the air quality goals.

The proposal that you have in front of you today by staff is a result of detailed discussions with stakeholders, equipment providers, equipment operators, and organizations such as ourselves, air districts and nonprofit organizations, such as the California Trucking Association being integral to this process. And the results before you are, in fact, something that is very reflective of the need that is out there for large and small fleets alike.

We are here in full support of staff's initial recommendations and look forward to further discussion and refinements of the guidelines. We urge your aye vote.

Thank you.

BOARD MEMBER BERG: Matt, can I just ask you a quick question. You've been so involved in this funding of the small fleets, do you see that to continue to be an area of interest from small fleet owners?

MR. SCHRAP: We do. There are challenges of course with some small fleets out there who are still struggling to meet the deadlines, but there are thousands of fleets still in the small fleet category of three or less that have one truck that are in compliance right now across the State. So we're in endeavoring hard to get in touch with those folks and make sure that they know there are opportunities, especially using the California capital access program to help enhance then credit. When you combine that with grants and availability of some new alt. fuel equipment, or the cleanest available diesel technology, it's exciting. We can feel that there is a little bit of a rumble from those small fleets.

BOARD MEMBER BERG: And also, if there's anything that we can do to help on outreach, I know that outreach and really getting in touch with the small fleet owners is not always easy, and I know the districts have worked very hard, but again to get people in.

So as you're coming across ideas, please keep in mind that we're here to help on that.

MR. SCHRAP: We really appreciate that. And just

as some accolades and kudos to the districts, they have been doing a great job in engaging stakeholders, especially on the dealership side and some of the nonprofit side to make sure that the words are getting out.

I know a lot of organizations are happy to create materials and distribute them to their mailing lists. So we're here in full support and we appreciate the direction from staff and also your leadership, as well as the rest of the Board. So thank you very much.

BOARD MEMBER BERG: Thank you.
Morning, Chris.

MR. SHIMODA: Good morning, members of the Board and Chairman Berg. Chris Shimoda, California Trucking Association. We're here to express our support for the proposed modifications to the guidelines. Staff was extremely responsive, I do have to say, to suggestions made by industry during the draft comment period. And we feel like the proposed changes to include a large fleet eligibility for our alternative fuel vehicles and the option to replace the 2007 through 2009 model year engines are going to expand the universe of applicants significantly, and reward those fleets who have taken early action throughout the life of the truck and bus rule to comply.

So thanks again to staff for a fantastic job and we look forward to assisting and implementing the funding in any way that we can.

Thank you.

BOARD MEMBER BERG: Good morning, Michael.

MR. GRABOSKI: Morning. I'm Mike Graboski from the American Rental Association. And I'm here this morning -- if you can get my slide up --

(Thereupon an overhead presentation was presented as follows.)

MR. GRABOSKI: -- to just ask the Board to make a change in the definition of goods as far as Proposition 1B is concerned.

Next slide.

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MR. GRABOSKI: Rental companies just like all kinds of kind trucking companies move good. It turns out that the goods that we happen to move are often heavy-duty equipment being moved from rental yards to job sites, but the problem that we have is that we have found ourselves ineligible under this program, because we are moving goods under what are called lease contracts compared to the guidelines which say that we can only move goods under sales contracts to be eligible.

Under the Health and Safety Code 39625, ARB is

authorized to administer the bond funds. And they define, "goods" based -- or you define, "goods", based on Uniform Commercial Code Section 2105, which specifically deals with goods for sale.

But if you look at the Uniform Commercial Code, there are many sections and many definitions for goods.

2105 talks about goods that are related to sale.

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MR. GRABOSKI: 10103 talks about goods related to lease contracts.

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MR. GRABOSKI: And when we looked at the California Board of Equalization definitions, lease includes rental, so we would expect that Uniform Code would then apply to rental as well as to lease.

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MR. GRABOSKI: So I searched the Health and Safety Code 39625 for the word, "goods". And while it appears 11 times, it's always related to movement. It's never related to sales or lease or anything like that. And contract appears five times, but none of it is related to goods for sale or goods for lease.

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MR. GRABOSKI: So I concluded that the legislature didn't stipulate that the funds were to apply

only to goods for sale. ARB was responsible for that definition, and we've talked to them -- staff a number of times through some of our members, and we came to the conclusion that definition of goods is too narrow and unreasonable for this program.

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MR. GRABOSKI: So we're just here to ask the Board to make the program fair for all businesses and to change the definition of goods, so that it's consistent with the Uniform Commercial Code and not one specific section of the Uniform Commercial Code.

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MR. GRABOSKI: Because, you know, whether you're moving goods for sale or for lease, they produce emissions, and we believe that if we take a track loader to a job site, we're not emission neutral. We're putting out emissions just like anybody else is moving groceries, for example, from a warehouse to a store.

That's what I have.

Thank you.

BOARD MEMBER BERG: Thank you. Could we have staff comment on that, please?

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

Happy to. So I think, you know, Board members are well aware that the Proposition 1B funds are available

for a subset of the trucks that are covered under the truck and bus rule. That's always been the case with the emphasis in trade corridors, for example.

In this case, what we tried to do back in 2008 when we developed the guidelines -- the first guidelines was take the most basic definition of goods out of the California Commercial Code. So ARB did not develop its own definition of goods. We turned to State law and looked for the most straightforward definition that we could find.

In that definition that we've been using since 2008, it basically identifies a good as something that is ultimately part of a contract for sale. And so that's the way that we've been implementing this program. What it means is, for example, if you are mining aggregate and you're hauling that aggregate, you're eventually going to sell it, that's a good for sale. If you are a furniture mover moving someone's personal possessions, those are not part of a contract for sale. Those sorts of trucks and those sorts of operations are not covered.

And so at the time that we originally did this, there was a potential for a different definition. Like I said, we took the most straightforward. We would propose to retain the definition that the program has been operating under since 2008.

BOARD MEMBER BERG: Thank you very much for your testimony.

MR. GRABOSKI: Thank you. Do I get to reply or not?

BOARD MEMBER BERG: Quickly.

MR. GRABOSKI: I would just say that I really don't see a deference between the sale and the rent or lease issue. I mean, we're moving goods. And I think that they didn't take the most broad definition. They took the -- a lesser than most broad definition.

Thank you.

BOARD MEMBER BERG: Thank you.

MR. CARMICHAEL: Good morning, members of the Board. Tim Carmichael with the California Natural Gas Vehicle Coalition. Here to support the revised guidelines for the Proposition 1B program. I want to thank Richard Corey for his encouragement. I want to thank Cynthia Marvin and Heather Arias for their hard work. Chris Shimoda already referred to this, but I think we threw about 150 questions at them and asked them to respond yesterday. And they did a pretty good job of that. And certainly, in the final proposal, they took a couple steps towards our position and it's much appreciated.

We're very much looking forward to working with ARB and the air districts on getting a chunk of this

funding for clean alternative fuel trucks.

Thank you.

BOARD MEMBER BERG: Thank you. And our last speaker, Sean.

MR. SEAN EDGAR: Chair and Board members, Sean Edgar with the CleanFleets.net. I will add to the love-fest just by thanking staff for the efforts to include natural gas vehicles. I'll have a couple focused comments as we roll-out this year five Prop. 1B program. First of all, thank you much for including the small fleet issues, natural gas, others have touched on that.

There will be an ongoing issue that we'll work out with staff on the issue of reporting for vehicles that are using renewable natural gas. Staff had required some reporting. So we'll work out for some of the folks like our members that make their own renewable natural gas. That may be a pretty simple task for folks that are buying natural gas at a merchant facility. We'll have to work through some of the reporting issues.

The key thing in the time I have left would just be to address two items. First of all, the LongMile fix. So I'm grateful to staff for including \$6.3 million to fix the LongMile. These are the 1,400 devices, plus or minus diesel particulate filters that were recalled. And so staff had the foresight to include \$6.3 million in fixing

that issue.

There are a couple key things that I would just punctuate that we'd probably need to plan for the worst and hope for the best. And what I mean by that is it may not be a direct drop replacement. So out of the 1,400 units, our members operate several hundred of those. And it may not be a direct replacement, which is the cheapest alternative and may actually be a whole new engineered system. And there are couple reasons for that.

First of all, the device itself, when it was verified by the Board, had a very low operating temperature. My understanding is the replacement device operate -- has to operate at a higher temperature. So it may be an active system versus a passive system.

Second of all, there's an installer liability issue there that apparently the last installer who touches the vehicle has to take responsibility for every other weld, bracket, and all the other work that had been done prior to that last installer. So as part of this replacement, you may find amongst your approved installer network hesitation to take responsibility for an existing system by direct dropping in a replacement system that may end up, because of warrantee and installer issues, drive more toward complete system replacement, which is the more costly option.

So just to put a word out there, \$6.3 million is a great downpayment, but I would just suggest we plan for the worst, hope for the best, and we may be back in front of you asking for additional funds as the installations begin.

And then in the 30 seconds I have left, I'll just touch on optional low NOx engines. I think that's great that -- and I heard Dr. Wallerstein's comment, especially in south coast, you need the cleanest engines. And Board staff wants to reward those cleanest engines and get those rolled out. That's great. My only challenge on timing of the operation a low NOx engines, this year five money is programmed to go out by the end of 2016. And I'm just not sure whether the engines are out there. So if you're tying the incentive funding to an engine that is not currently commercially available, and I'm not sure whether is going to be commercially available during 2016, we may have a timing issue there. So those are my comments. Thank you very much.

BOARD MEMBER BERG: Thank you.

Ms. Marvin, could you comment for me on the liability issue on the LongMile?

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS:

Actually, if you don't mind, Ms. Berg, I'll take this one.

BOARD MEMBER BERG: Thank you very much.

FREIGHT TRANSPORTATION BRANCH CHIEF ARIAS: I am actually very happy to give you an update on the substrate program. We have been working very closely with

Sacramento Air District, who has stepped up and is going to be our partner in implementing this program. We have been working with the manufacturer of ESW to proceed with the project, have been talking about all the issues that Mr. Edgar brought up, including the liability issue. And they will be providing a warrantee associated with the replacement.

So we expect to be able to mail out direct solicitation letters next week to all of the fleets that were involved in the replacement program, and we hope to begin the actual installation of the replacements within a few months.

BOARD MEMBER BERG: Thank you very much.

Okay. That concludes our public testimony. So at this point, I'd like to close the record on this agenda item, and turn it over to the Board for Board discussion.

Supervisor Roberts.

BOARD MEMBER ROBERTS: Yeah, I'd like to back up a couple speakers and go back to this issue of lease versus sale. It seems like we've adopted a definition that really doesn't have much to do with air quality. It

maybe was convenient at the time, but it seems like we've dismissed this awfully quickly.

It doesn't -- I'm not sure that I care what a truck is carrying, if it has a sales contract or a lease contract. I don't know why that would be so important.

And if there's some reason that makes that important from an air quality standpoint, I haven't heard it.

It would seem to me we ought to be considering expanding the definition, if it's an air quality benefit.

BOARD MEMBER BERG: So I understand that this is the fourth round of funding, so we're on our final round of funding. And Ms. Marvin, I understood from your perspective that to look at a definitional change at this time, that staff has decided to stay with the current definition. But I do think it's kind of interesting the fact that they do have to buy the equipment, and the fact that they provide fill-in pieces.

To me, what would be hard is to really tie the equipment to actual goods movement, and make sure that it falls within the guidelines of Prop 1B. I think that would be pretty difficult. Could you further give us some insight?

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

Sure. So when we originally created the program,

you might recall that when the voters approved Prop 1B,

that was in the era when particularly containerized cargo was growing and was really predicted to grow quite significantly. And so the emphasis, the focus really was on moving goods for sale. And it was in those trade corridors. So when we tried to design the program, we tried to design it to be responsive to what prompted the proposition to be passed and to try to take the most straightforward definitions that we could find.

For example, there are many trucks that are used to provide work services on a job site. Those don't move goods. And so those trucks are not eligible for this program. And so when you look at the statute about the primary purpose of this program, which was to reduce the health impacts from this goods movement, it wasn't a matter of staff deciding what should and shouldn't be included really, it was a matter of trying to say we understand where the concern is coming from that prompted the ballot initiative, and how can we most surgically target this program to be responsive to that concern. So that was our intent.

BOARD MEMBER BERG: Supervisor Roberts, does that --

BOARD MEMBER ROBERTS: Well, I'm still uncomfortable with that, because this seems to me we just -- there may be some applicable way to do this that

broadens that definition out. I mean, I don't think we're talk about something that's illegal. We're talking about staff drawing some based on a narrow definition of how they've interpret it, which was passed.

BOARD MEMBER BERG: Well, I think we're -- I mean, my sense is, and Chairman Nichols has now joined us -- Chairman Nichols, we're talking about the rental issue, and the fact that it is for lease rather than for sale for goods.

My sense right now is that we're on our last go-around, and there's always more projects than money, and whether this is the time to really look at a definitions change could also be questionable. But staff, maybe you could go back and take a look at meeting up with Supervisor Roberts and myself and talking about this issue a little bit further, understanding that a staff recommendation -- I'm hearing nothing from the Board to change that recommendation, but we'd like to enter more conversation with you, since this is one of two items. Is that -- oh, we do have some -- we're going to have some further comments, but that would be my -- would that be okay with you?

BOARD MEMBER ROBERTS: Yeah.

Ms. Mitchell?

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BOARD MEMBER MITCHELL: Thank you, Chairman Berg.

And, Ms. Marvin actually reached a point that I think is pretty critical here. Prop 1B was voter-approved measure, and we need to look to the intent of that proposition when we are deciding what it covers.

The other thing that I'm concerned about is changing the guidelines to this extent in this way for the final round of funding. It seems to me there's a fairness issue involved here as well. And you would have people stepping forward and saying now in the final year of funding, you're going to let different categories come into the arena. And so I do think we need to look at that as well.

I'm also thinking that there must be other sources of funding for companies that carry leased equipment. Are Carl Moyer funds available, for example? There are other sources out there that these kinds of trucks can reach to for funding to, you know, control the emissions.

So could you respond to that, please?

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

Absolutely. So I'm not aware of any other programs funded by ARB, CEC, or the air districts that are specifically focused on goods movement and have the more restrictive definition. I believe this is the only program, because it was created for a slightly more narrow

purpose. So other trucks are eligible for other incentive programs.

BOARD MEMBER MITCHELL: For example Carl Moyer?

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN:

Yes.

BOARD MEMBER MITCHELL: These kinds of entities that are hauling leased construction equipment could apply for Carl Moyer funding, is that correct?

TRANSPORTATION AND TOXICS DIVISION CHIEF MARVIN: Yes, ma'am.

BOARD MEMBER MITCHELL: Thank you. My intention to go with the staff's position on this to retain the existing definition and not be changing it at this sort of late stage in the game. It's like let's exchange the rules in the middle of the game kind of direction that I don't support, so -- but I do understand trucks are emitters, you know, whether they're hauling leased equipment or whether they're hauling goods for sale.

But I think there are other avenues for these trucks that are hauling leased equipment to get funding to improve their trucking operation.

BOARD MEMBER BERG: And I'm in agreement with you also that it is late in the game. We're actually in the final inning of this, not even halfway.

Any other comments?

We have before us Resolution number 15-20. Do I have a motion to approve?

BOARD MEMBER RIORDAN: Madam Chairman, I would so move.

BOARD MEMBER MITCHELL: I'll second.

BOARD MEMBER BALMES: I'll second.

BOARD MEMBER BERG: All in favor?

(Unanimous aye vote.)

BOARD MEMBER BERG: Any opposed?

Motion passes.

And with that, welcome

CHAIRPERSON NICHOLS: Thank you very much. I'm glad to be here in time for the most fun part of our agenda. And it's always a great pleasure to present the Haagen-Smit Clean Air Awards. These are the Air Resources Board's only way to officially recognize leaders in air pollution and climate change research, technology, and policy. And it's also an annual opportunity to say a few words about Arie Haagen-Smit whose memory we honor with these awards.

So I will say a few words about him as well as about the honorees before turning it over to our executive officer to carry this to the next phase.

Arie Haagen-Smit was a native of the Netherlands. He was proud to call himself a Dutchman. And he was a

biochemistry professor at Caltech in Pasadena for 16 years before he began working on the issue that brings his name to our attention. He studied things like rubber and pineapples before he was asked by the County of Los Angeles to look into the chemical nature of this awful stuff that was in the air.

And it was his research that established that most of California's smog resulted from photochemistry, when the exhaust from motor vehicles and industrial facilities reacted with sunlight to create ozone. And it was this breakthrough that provided the scientific foundation for the development of California's and the nation's air pollution control programs.

Leaving his plant studies behind, Dr. Haagen-Smit continued to work in the field of air pollution research and control taking the smog problem in Los Angeles head on, and he became the first Chair of the Air Resources Board in 1968. Indeed, I remember once getting onto a freeway behind him and seeing that his license plate was ARB 1 --

(Laughter.)

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CHAIRPERSON LLOYD: -- and thinking wow.

(Laughter.)

CHAIRPERSON NICHOLS: That is pretty cool.

25 (Laughter.)

CHAIRPERSON NICHOLS: So in 1973, in recognition of his contributions, Dr. Haagen-Smit received the National Medal of Science, our country's highest scientific honor. He passed away 37 years ago, but his legacy lives on, including in the naming of our own El Monte Laboratory after Dr. Haagen-Smit, which I was able to attend when Governor Brown was Governor for the first time.

Since 2001, the Air Resources Board has sponsored the Haagen-Smit Clean Air Awards. Over the last 13 years, 37 acclaimed individuals have received this award. In light of the global connection between air quality and climate change, the scope of the program has now expanded to include an international focus, and a focus on climate change science, as well as localized air pollution science and mitigation.

So with that, I will turn the next phase of the program over to Richard Corey.

EXECUTIVE OFFICER COREY: Thank you, Chairman.

I'm pleased to announce the three recipients of the 2014

Haagen-Smit Clean Air Awards. Each of the winners will be introduced by a Board Member. And after each of their introductions, the winners will have the opportunity to say a few words at the podium.

The first recipient today is Dr. Donald Blake for

his work in the area of atmospheric chemistry -- atmospheric research. He'll be introduced by Board Member Hector De La Torre. And Mr. De La Torre.

BOARD MEMBER DE LA TORRE: Thank you.

Dr. Blake. Donald Blake is being recognized today for his career contributions to atmospheric chemistry research. Dr. Donald Blake is a professor of chemistry at the University of California, Irvine.

Professor Blake has spent over 30 years in the field of atmospheric chemistry research, and is a world renowned leader and innovator in sampling and analysis of atmospheric trace gases.

Professor Blake has guided over 30 Ph.D. candidates during his career, and has authored and co-authored nearly 500 published scientific journal articles.

Professor Blake has carried out internationally acclaimed measurements of atmospheric volatile organic compounds that have provided unique and critical insights into their roles in air pollution and climate change.

These measurements have been used to document that chlorofluorocarbon emissions were decreasing as expected from regulatory efforts and to determine that elevated air pollution in some cities, such as Mexico City and Santiago, Chile, was attributable to propane use rather

than automobile exhaust as previously thought.

Having been to both of those cities, they've got a long ways to go. They could use some of our expertise. Leading a diverse research team, Professor Blake has conducted the longest running global measurements of key greenhouse gases such as methane, and the CFCS -- CFCs with unprecedented accuracy and precision. CFCs not only lead to the upper atmosphere ozone destruction, but are also potent greenhouse gases, so such measurements are critical for future predictions.

Professor Blake's work adapting and advancing the capabilities of atmospheric sampling continues to play an important role in validating satellite measurements and deepening our understanding of atmospheric chemistry.

Not only a renowned scientist, he has the ability to translate his scientific findings into public policy implications, as well as fostering public understanding of air pollution and climate change impacts.

He was one of the initiators of the NASA Student Airborne Research Program, in which undergraduates from around the United States come to Irvine for an eight-week summer program to collect samples on the NASA DC8 aircraft and then analyze them in a laboratory. The program provides hands-on experience connecting VOC and CFC impacts, and student interest in the sciences.

I know that we benefit greatly from that work that is done every summer. Professor Blake was awarded the Nobel Peace Prize in 2007, along with 2,500 other scientists for their work in the International Panel on Climate Change Report.

He has received other awards for his accomplishments, including election as a Fellow of the American Association for the Advancement of Science in 2008, and of the General -- of the American Geophysical Union in 2009. In 2013, he received the American Chemical Society's award for creative advances in environmental science and technology. We are proud to present Professor Donald Blake a Haagen-Smit Clean Air Award.

Thank you, Dr. Blake.

(Applause.)

DR. BLAKE: I'm a little shaky right now. This is a huge honor. Downstairs walking by the Haagen-Smit little display, I think it really sort of hit home as to just what an honor this is. I mean, I'm a Californian. I was born in Orange. I grew up in Escondido.

In the fifties, I didn't understand why when we would go visit cousins in Riverside why my chest hurt.

(Laughter.)

DR. BLAKE: Little did I know that, at some point in my life, I would be recognized as somebody who was

helping us to better understand why this is happening, how we might impact in a positive way this.

Also, I'd like to say that for me having worked with Sherry Rowland was a real honor. He instilled in us -- in all of us group members the need to contribute. And I think I needed that. I had been drafted during Vietnam and came away from that experience with not necessarily being real proud. We didn't go around and talk about the fact that we had served.

And so to work on something like air pollution was something that I always felt very proud of, and it made my family proud. It made me proud, and I'm just overwhelmed by this.

So thank you very much.

(Applause.)

EXECUTIVE OFFICER COREY: All right. Next Dr. Kirk Smith for his work in the area of international air pollution research. He'll be introduced by Board member John Balmes.

Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Richard.

I won't have to read any prepared comments, because I've had the good fortune of being Kirk's colleague for the last 15 years.

Kirk is, without exception, the most important

scientist with regard to household air pollution in the world. He's been studying the exposures of women, children, and to a lesser extent men, with regard to household air pollution in lower -- lesser and middle income countries for longer than he cares to remember. And he's also contributed greatly to our understanding of how household air pollution contributes to outdoor air pollution and climate change.

He is originally a nuclear physicist who went into public health, and his contributions are too long to list. I will say that he also shares in that Nobel Peace Prize, along with Professor Sperling. He also received one of the nation's highest environmental awards the Heinz Prize, which Dr. Sperling also received a few years ago, so he's in good company. He received the Tyler Prize for environmental achievement a couple years ago.

But I'm really honored to be able to present him with this award, because in addition to being an outstanding scientist, he's -- I'm getting choked up. He's actually a really great person who's taught me more than he probably realizes about integrity and about public commitment and translation of science into policy. He's tireless in trying to help the disadvantaged people around the world.

And when we -- when I first got involved with a

project in Guatemala with regard to clean cookstoves, he had written the original grant and then he asked me to 3 help him write the refunding grant. And he put a lot of pressure on me. He said, John, we've been providing 4 5 health care to all these people for the last, you know, 6 three years, and we can't give that up now, so you'd better write a good grant, so we can continue to get -provide health care to this population.

So it's with great personal pleasure that I introduce our next Haagen-Smit award winner, my good friend and colleague Kirk Smith.

(Applause.)

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DR. SMITH: Can I say a few words? CHAIRPERSON NICHOLS: Yes, please.

DR. SMITH: Thank you, John, that was very kind, and thank you, Bart too. Bart has been a very close supporter morally, and occasionally with a few financial resources too. Appreciate that.

You know, the -- I met Dr. Haagen-Smit once. don't remember exactly when. I was a doctoral student at Berkeley. I think it was after he got the science -- the Medal of Science. So it must have been '73 or '74, and he passed away in '77, so there's a window there.

And I remember the lecture and being very intimidated actually by all that chemistry. But you know, Max Planck said once that science progresses funeral by funeral. Now, I think he was referring to getting rid of people who had lousy ideas, but --

(Laughter.)

DR. SMITH: -- there is -- there's another side to that. I mean, if you like, the funeral of a great scientist, or a person in any field, you know, sort of caps that -- caps that person's career, provides it there that's there for us to look at. And that has survived a long time with Haagen-Smit. You know, others, you know, sort of pass away, but that capped career the beginning to the end and all of that, as you portrayed it is something that is an inspiration to the rest of us.

Now as John mentioned, I started out in, you know, physics and then went to public health, and unnaturally studied nuclear issues and nuclear waste and nuclear reactor safety. But I was trained to follow the risk. When I got out in the broader world and started looking at issues in Asia, I realized there wasn't any risk in nuclear power compared to air pollution. I mean, there's orders of magnitude difference.

If you want to really look at people's problems, it's air pollution that's the issue. And part of that is if you're going to look at the risk of air pollution, you have to measure where the people are. Well, I'm sorry to

say that people aren't breathing air in Sacramento, most of the people in the world. They're breathing in other places. And one of the places they breathe in extensive amounts is in village households around the world.

And, of course, when we looked there, we found extremely high exposures, much higher exposures than you find elsewhere in the world. And consequently, the biggest burden of disease now from air pollution is recognized to be, what we call, household air pollution from cooking, or heating with simple solid fuels around the world, not that outdoor air pollution also isn't a big burden.

And as John said, we now find there's a significant contribution to outdoor air pollution. And I must say, you know, I mean, I have to compete a little bit with Don. I mean, he's flying DC-8s around with 40 graduate students. We have -- we fly too our instruments, but they're \$75 drones that we stick an air pollution monitor on, but that helps us understand this contribution to outdoor air pollution from households.

So finally, let me say, of course, thank you to John and Bart again, and to the Board and to the nominators and letter writers for this award. And I very appreciate that. And, of course, I need to thank my family and my wife who is here. You know she likes to say

that, you know, for two million years men have been standing around the kitchen watching women work, but my husband is the first one to make a career out of it.

(Laughter.)

(Applause.)

EXECUTIVE OFFICER COREY: And lastly, Dr. John Wall for his work in the area of emissions control technology. He'll be introduced by Board Member Dan Sperling.

Professor Sperling.

BOARD MEMBER SPERLING: Thank you. I am truly delighted to be able to introduce Dr. John Wall. I don't -- I haven't known him nearly as long or as well as John Balmes has known Kirk Smith, but I have known of him for a very long time. And I was -- as I was listening, I looked to the introductions, it just occurred to me that John is, I believe, only the second person from the industry -- from industry, from the corporate world to have gotten this award. And I don't know all the winners. I was just looking through it just now, but I believe that's true.

And so that's what makes, you know, John especially impressive, you know, for this award is that he's been a leader in the industry, but also as a leader in the public world and policy. And so John has served as

vice president and chief technology officer for Cummins Incorporated since 2000. Cummins is one of the largest manufacturers of heavy-duty diesel engines in the world, and also a leading manufacturer of natural gas engines.

Most importantly for us today, Cummins has been a leader in building low-emission engines. Dr. Wall deserves much of the credit for Cummins leadership. He's led Cummins and the truck industry in crafting and realizing the vision of clean trucks. Much more is possible of course, but much progress has been achieved.

Who would have thought 20 years ago that criteria pollutant emissions from trucks would be approaching zero?

Dr. Wall began his career at Cummins in 1986 after working in fuels research at Chevron Research Company, where his research team was the first to quantify the effect of sulfur on diesel particulate emissions. As chief technology officer of Cummins, Dr. Wall leads an international technical organization with over 6,000 engineers in 17 major technical centers around the world, including the U.S., but also the United Kingdom, India, China, and Brazil.

He has been particularly effective in leading the development of technologies leading to dramatic reductions in emissions of particulate matter in nitrogen oxides from both on-road and off-road engines. And that's in

California, the U.S., and the world.

In 2002, Cummins was the first company to introduced cooled exhaust gas recirculation technology on commercial heavy-duty engine -- heavy-duty vehicles. He was also the first to certify diesel and natural gas engines that met California's and EPA's 2010 heavy-duty truck emission standards, and they did it in 2007, three years early.

Cummins and Dr. Wall have also been leaders in building more energy efficient and low greenhouse gas engines. In 2013, Cummins unveiled diesel engines that met the first U.S. EPA greenhouse gas standards for trucks, a year ahead of schedule. Dr. Wall has been not only a path-breaking corporate leader, but has also played a public role in advancing low emission, energy efficient diesel engines. He's been a trusted advisor to the U.S. EPA, to us here at the Air Resources Board, and he's been an advisor to many universities, including Purdue, MIT, and most recently my university, UC Davis.

In recognition of his accomplishments, Dr. Wall has received a series of very prestigious and important awards, including the following:

He was selected as a member of the prestigious National Academy of Engineering. He was selected as a fellow of the Society of Automotive Engineers. He was

awarded the Society of Automotive Engineers Horning

Memorial Award and Arch T. Colwell Merit Award for

research on diesel emissions. He received the American

Society of Mechanical Engineers Soichiro Honda Medal for

outstanding leadership in the research, design,

development, and production of low emission fuel efficient

diesel engines.

So as I said, I've had the honor and pleasure of getting to know John Wall over the last few years. I've seen firsthand his passion, his expertise, his engagement, and also his good humor. I've seen him testify here at the Air Resources Board. I've seen him advocate for more aggressive greenhouse gas standards nationally, as well as eagerly help organize a major conference on transportation energy, and enthusiastically interact with my students at UC Davis, as well as some of the other universities.

(Laughter.)

BOARD MEMBER DE LA TORRE: Some of those other places.

BOARD MEMBER SPERLING: Some of these other places.

(Laughter.)

BOARD MEMBER SPERLING: We are truly proud, and I am proud to present Dr. John wall a Haagen-Smit Clean Air Award.

(Applause.)

DR. WALL: Thanks, Dan. I'm still a little stunned to be standing here to be representing a regulated industry being honored by our toughest regulator.

(Laughter.)

DR. WALL: So that's very special. And I must say I am happy to note that it is not being awarded posthumously.

(Laughter.)

DR. WALL: You know, as I reflected back on what brought me here, I was thinking, you know, my personal environmental journey started here in California. And I recall my very first presentation to the Air Resources Board on fuel sulfur. Mary Nichols was the Chair and Jerry Brown was the Governor. So here we are again.

(Laughter.)

DR. WALL: And I also, as I looked at people that have been honored with this award, I recognize that I've got a lot of friends here, a lot of friends in the room, people that have been previously awarded the Haagen-Smit award, Jim Boyd, Tom Cackette, Bob Sawyer, Mike Walsh and a number of others that we've collaborated with over that period of time. And so it's made it very special to me for you to recognize me in this way, and also to recognize that I'm standing here representing a lot of people.

You know, I'm fortunate enough to have been with strong colleagues in developing good policy for the environment, for energy to have friends like Tom that I've known since the early days, Chet France at the EPA, both of whom I really appreciate as co-nominators for this award. And we sort of grew up together. And it was nice having friends on both sides to try to forge the kind of collaboration that we need for good policy.

And then more recently, I've made some new friends here that we continue to work with, so I really appreciate this. You know, it's a little bit of a victory lap for the diesel industry now with the ACES Report that says that now with the exposure of rats to diesel exhaust, there were absolutely no indications of cancer or other tumors, which is a far cry from where we were when we started out. But we've got a lot more to do if you look at the situations in India and China and Brazil and other places transferring this technology there, as we continue to clean the air in California and in the U.S. is going to be very important.

So thank you once again for this award. I'm truly honored by this, and I look forward to continuing to work with you.

(Applause.)

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CHAIRPERSON NICHOLS: I don't believe we're

allowed any public comment.

(Laughter.)

CHAIRPERSON NICHOLS: Public comment has all been had. But we will take a brief break for some photos. And I'm not quite sure where that's going to happen.

EXECUTIVE OFFICER COREY: Someone will come up and escort Board members to the flag and we'll take some photographs.

CHAIRPERSON NICHOLS: And tell us what to do.

And so if you'll all bear with us, this will just take a
few minutes, but it's important that we record this event
for history.

(Off record: 10:20 AM)

(Thereupon a recess was taken.)

(On record: 10:32 AM)

CHAIRPERSON NICHOLS: All right. Ladies and gentlemen, we don't often get to have quite so much fun at Board meetings. Although, they're all fun in their own way.

Will you please stake your seats for the next item, which is going to be the funding plan -- the proposed fiscal year 2015-16 funding plan for low carbon transportation investments from Cap-and-Trade auction proceeds and the Air Quality Improvement Program known as AOIP.

So this is sort of a companion piece to the first item that we took up today on Prop 1B. This funding plan serves as ARB's blueprint for expanding \$350 million that are appropriated from the Greenhouse Gas Reduction Fund for low carbon transportation investments, and \$23 million for the AQIP incentive projects. Combined, this funding represents another significant investment in zero and near-zero emission technologies, while supporting a substantial investment in disadvantaged communities with at least half of the low carbon transportation funds allocated to benefit these communities, and at least 10 percent invested directly in those communities.

As we've heard in the scoping plan and sustainable freight strategy updates over the last year, meeting our climate, air quality, and petroleum reduction goals will require a transformation of the California vehicle fleet to one with widespread use of zero and near-zero emission vehicles, both for passenger and freight transportation.

The investments in this funding plan represent an important component of this transformation. While we're investing a considerable amount of money with this plan, we must recognize that ARB's investments are but one piece of the State's overall clean air, clean energy, and climate investment portfolio, which includes other State

and local agency investments as well.

So it's an important piece, but it's far from the only one. Mr. Corey, would you please introduce this item?

EXECUTIVE OFFICER COREY: Yes. Thank you,
Chairman. Incentive programs are a critical part of ARB's
comprehensive strategy to accelerate the development,
deployment and widespread use of cleaner motor vehicle and
equipment technologies. Low carbon transportation and
AQIP funding complements, as noted, our other incentive
programs such as the goods movement emission reduction
program that we discussed in the previous item.

These programs work hand in hand with our strong regulatory programs to implement strategies called for in climate change scoping plan, State implementation plan, and most recently in our sustainable freight initiative.

The expansion of low carbon transportation investments in the budget shows a strong commitment from the State to meet our air quality and climate change goals and to ensure that disadvantaged communities realize the benefits of this funding. It also demonstrates support for ARB's investments to date in advanced technologies for both the passenger transportation and freight sectors now coming to market.

The proposed funding plan establishes ARB's

1 priorities for this funding cycle, describes the projects we would fund, and sets funding allocations. 2 The plan 3 proposes to continue and expand the investments made over 4 the past funding cycles. The plan continues ARB's 5 close -- also continues ARB's close coordination with the 6 Energy Commission which supports the necessary 7 infrastructure foundations for cleaner cars and trucks. 8 The plan also addresses the requirements of the two bills 9 signed into law in 2014 that further refine ARB's 10 implementation of these programs.

Andy Panson of the Innovative Strategies Branch will present the staff's proposal. And at the conclusion of the staff presentation, Jim McKinney from the Energy Commission will provide some comments on how these proposed investments coordinate with the energy efforts.

Andy.

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(Thereupon an overhead presentation was Presented as follows.)

AIR POLLUTION SPECIALIST PANSON: Thank you, Mr. Core. And good morning, Chairman Nichols and members of the Board. Today, I'll present staff's proposed funding plan for low carbon transportation investments and AQIP.

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AIR POLLUTION SPECIALIST PANSON: Today's proposal builds on last year's plan, as well as

investments spanning back to 2009. It would continue funding for advanced mobile source technologies to transform the California fleet. Our proposal would also increase benefits for California's disadvantaged communities, a key tenet for the State's cap-and-trade auction proceeds.

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AIR POLLUTION SPECIALIST PANSON: California faces ambitious goals to reduce greenhouse gas emissions, improve air quality, cut toxics exposure, and reduce petroleum dependency, including new 2030 targets set this year. These proposed investments reflect a coordinated strategy to make progress towards all these goals.

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AIR POLLUTION SPECIALIST PANSON: I'll first provide some background before delving into the details of our proposal. AQIP was established by Assembly Bill 118 in 2007, and it was reauthorized in updated in 2013 by Assembly Bill 8. AQIP provides the foundation for the low carbon transportation investments that now make up the vast majority of our funding. We've focused AQIP on technology advancing projects that support California's long-term air quality and climate change goals in addition to providing immediate emission benefits. This has included the clean vehicle rebate project, or CVRP,

vouchers for hybrid and zero emission trucks and buses, and the truck loan assistance program among others.

Each year, we bring the Board a proposed funding plan which details our priorities and projects for the upcoming fiscal year.

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AIR POLLUTION SPECIALIST PANSON: Cap-and-trade auction proceeds greatly expand the scale of our advanced technology incentives that reduce greenhouse gas emissions. The legislation governing the use of auction proceeds requires the Department of Finance, in consultation with ARB and other State agencies to prepare an investment plan every three years.

Funds are then appropriated by the legislature in each year's State budget. Statute requires that a portion of the proceeds be invested in and to benefit the disadvantaged communities most impacted by pollution. And the Board approved guidance last year for State agencies on how to meet this disadvantage community investment requirements.

The administration's 2013 investment plan both identifies low carbon transportation as a priority and identifies AQIP as a program that could provide the framework to build upon for these new investments.

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AIR POLLUTION SPECIALIST PANSON: Now, on to the 2015-16 funding for these two programs. The Governor has proposed 350 million for ARB to accelerate the transition to low carbon freight and passenger transportation increased, from \$200 million last year in recognition of the demand for and importance of these incentives. I'll provide an update on our progress in spending last year's funds later in the presentation. The State budget also provides 23 million for AQIP.

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AIR POLLUTION SPECIALIST PANSON: In the last year, the legislature passed two new laws that provide further direction on ARB's implementation of these programs. On the light-duty vehicle side, Senate Bill 1275 creates the Charge Ahead California Initiative, with goals of deploying one million zero emission and near-zero emission vehicles by the start of 2023 and increasing access to these vehicles for disadvantaged communities and lower income consumers. This target complements and provides a milestone on route to the Governor's 2025 target of 1.5 million ZEVs.

SB 1275 directs ARB to consider or adopt several changes to CVRP, including establishing income eligibility limits. It also directs ARB to establish disadvantaged community focused programs building on our light-duty

pilots.

On the heavy-duty side, SB 1204 creates a the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program to provide -- to support cleaner technologies using auction proceeds with a priority given to projects that benefit disadvantaged communities.

SB 1204 establishes specific requirements related to how we prioritize project categories and select projects. The new law puts a formal structure around the types of investments ARB has been making through AQIP and the first low-carbon transportation appropriation.

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AIR POLLUTION SPECIALIST PANSON: With that background, I'll now move on to our proposed project allocations. We're proposing \$200 million to continue and expand our light-duty vehicle projects. This funding is split between CVRP and pilot projects to benefit disadvantaged communities.

We also propose an additional \$167 million for heavy-duty vehicles and equipment. This would continue the demonstration, deployment, and trunk loan projects included in last year's plan, as well as add two new project categories. The balance between light-duty and heavy-duty investments matches that in last year's plan.

We're target at least half of the low carbon transportation funds to benefit disadvantaged communities consistent with the direction in the administration's investment plan.

And this year, we're adding a second commitment that at least 10 percent of these funds be invested directly in these communities. We considered these targets to be a floor, and we expect to exceed them.

We developed our proposal, based on an evaluation of demand, as well as a readiness of advanced technologies in various sectors. We considered stakeholder input through a public process that included three workshops and six more focused work group meetings.

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AIR POLLUTION SPECIALIST PANSON: This next slide provides a closer look at our light-duty investments, which as I noted, include two complementary elements.

CVRP offers statewide rebates to consumers who purchase or lease ZEVs and plug-in hybrids in order to accelerate the widespread commercialization of these vehicles.

The pilot project shown on this slide are designed to increase access to these clean vehicles for disadvantage communities and lower income households. SB 1275 reaffirms both elements of this strategy by directing ARB to continue investing in each with refinements to

CVRP. First, for a status update on the four disadvantage community pilots we included in last year's plan.

We launched increased incentives for public fleets to buy CVRP eligible vehicles in February. About 40 percent of the funding has already been reserved, and we're getting interest from additional fleets.

The San Joaquin Valley has just launched its
Enhanced Fleet Modernization Program plus-up pilot, also
known as EFMP plus up. This provides extra incentives for
lower income consumers who scrap a vehicle and buy a
cleaner replacement. Used or new hybrid, plug-in hybrid,
and ZEV replacements are all eligible for these
incentives. The South Coast's program will launch later
this summer.

Car share projects will help bring cleaner technologies to disadvantaged communities as well. We just awarded grants to start a new project in Los Angeles and to expand an existing car share to serve the Barrio Logan and Logan Heights neighborhoods in San Diego. These projects will start later this year.

Our financing assistance pilot solicitation closed in May and we'll award funding shortly.

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AIR POLLUTION SPECIALIST PANSON: Based on the strong interest in all these pilot projects, we propose

increasing funding to \$37 million for the upcoming year up from \$9 million.

A frequent comment that we heard during our workshops was the need for considerably more funding for the EFMP plus up scrap and replace program. And that's reflected in our proposal, which increases funding from \$2 million to \$20 million, and also expands eligibility to any air district that runs a qualifying scrap and replace program and wishes to participate.

We're also recommending a new project to fund cleaner agricultural worker vanpool fleets in the San Joaquin Valley.

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AIR POLLUTION SPECIALIST PANSON: Now moving on to CVRP. As you know, we've seen a significant increase in rebate demand particularly over the past three years. We're pleased to report that CVRP has stayed within budget over the past year, while continuing the general upward trend in rebate demand.

The 110,000 rebates issued to date, growth in annual sales, and increased number of models available are all positive signs and indications of the project's success. However, the ZEV market is still in its early stages with deployment totals not yet at one-tenth the Governor's -- not yet at one-tenth of the Governor's 2025

goal. So continued investment in CVRP remains key.

At the same time, we know we can't continue incentives indefinitely. And as part of the funding plan that we'll bring the Board a year from now, SB 1275 requires us to include a three-year funding estimate of for CVRP, a ZEV market and technology assessment, as well as an assessment of when a self-sustaining market is expected.

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\$163 million CVRP allocation would meet our projected demand for the next year. SB 1275 requires us to limit CVRP eligibility by income. We propose addressing this requirement with a two-pronged approach, an income cap that would exclude the higher income consumers most likely to purchase a ZEV without a rebate, coupled with higher rebate levels for lower income consumers most in need of financial incentives to purchase a CVRP eligible vehicle.

We believe this approach would improve CVRP's effectiveness by targeting rebates where they are likely to have the greatest impact, while at the same time, continuing to support market growth.

We propose an income cap matching the income thresholds set in Proposition 30 a ballot initiative approved in 2012. Proposition 30 temporarily increased

taxes on higher income taxpayers, and it provides a case where California voters established a definition of what could be considered higher income levels.

We propose to delay implementation of the income cap for fuel cell vehicles for the next three years with an annual Board reevaluation during this period. At this very early stage of the fuel cell vehicle launch, we want to ensure the same level of State support that was provided for battery electric vehicles when they first were commercially released. Once sales reach higher volumes, income limits matching those shown on this slide would apply.

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AIR POLLUTION SPECIALIST PANSON: Increased rebate amounts would be open to consumers with household incomes less than or equal to 300 percent of the federal poverty level. This equates to about \$73,000 annual income for a household of four.

We picked this level because it matches one of the eligibility tiers for the EFMP vehicle scrap and replace option. And this would allow a more seamless coordination for consumers who want to access both incentives.

It will take some time to modify the CVRP process and to do the necessary outreach on these changes. So

they would take effect four to six months after Board approval.

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AIR POLLUTION SPECIALIST PANSON: Moving on to heavy-duty vehicles and equipment. You can see from the table on this slide, we are increasing funding for each of our existing projects as well as adding two new categories. Of the \$167 million dollar total, nearly 150 million is from the Greenhouse Gas Reduction Fund for SB 1204 projects with the remainder coming from AQIP.

These incentives -- or these investments would continue the demonstration and deployment of advanced heavy-duty technologies supporting the transformational changes called for in the sustainable freight discussion document. Our proposals are also informed by the heavy-duty technology and fuels assessment that staff has undertaken over the past year and a half.

I'll next provide some detail on each of these projects.

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AIR POLLUTION SPECIALIST PANSON: HVIP is intended to accelerate the deployment of new hybrid and zero emission trucks and buses. We've funded about 2,100 vehicles over the past five years. Most of these are hybrid delivery trucks. Only about 20 percent of the

vouchers have gone to zero emission trucks. This is an area where we need additional growth in order to meet our longer term goals. We propose \$12 million for HVIP for the next funding cycle, which would meet expected demand. We also recommend adding eligibility for zero emission and hybrid vehicle conversions as new technology options as directed by SB 1204.

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emission truck and bus commercial pilot deployment projects are designed to complement HVIP. In contrast to the first-come-first-served HVIP design, these projects are intended to fund larger scale deployments and the associated fueling and charging infrastructure. We believe this model will help address the slow uptake of zero emission vehicles in HVIP, because it may make sense for fleets to purchase enough vehicles to make the infrastructure investments worthwhile.

We propose \$20 million for zero emission trucks and 45 million for buses augmenting the 25 million from last year's appropriation. This funding level is needed in order to increase vehicle production levels to the point where initial economies of scale can start to be realized, as well as to satisfy the expected demand, especially among public transit fleets.

At least half of these funds would be reserved for projects that benefit disadvantaged communities. And these projects will also support the upcoming advanced clean transit regulation.

In developing our solicitation for last year's funds, we received input that will be critical to maximize leveraging of federal funds for transit bus projects.

We're working closely with the federal transit administration on timing. And as a result, we decided to hold back the 2014-15 funding and release a joint solicitation for both year's funds after Board approval on a schedule that meets transit agencies' procurement time lines.

New this year, we're also reserving \$5 million of the bus allocation for cleaner school buses for rural school districts. This funding would not be limited to zero emission buses in recognition of the different duty cycles in these rural areas. Hybrid and renewably fueled buses that reduce greenhouse gases would also be eligible.

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AIR POLLUTION SPECIALIST PANSON: As a new project category, we proposed \$7 million in incentives for truck certified to the optional low NOx standards adopted by the Board in 2013. These incentives would encourage engine manufacturers to bring these cleaner trucks to

market and truck owners to buy them once they are commercially available.

The vehicle incentive would be coupled with additional incentives for the use of low carbon renewable fuels to maximize greenhouse gas benefits.

We expect that the first trucks certified to these standards will be natural gas vehicles. And accordingly, we're working with the Energy Commission to coordinate the implementation, because they already run a natural gas vehicle incentive program.

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AIR POLLUTION SPECIALIST PANSON: We're also continuing our support for demonstration projects with \$59 million to accelerate advanced technologies towards commercialization. Last year's plan included demonstration projects for zero-emission drayage trucks, and advanced technologies that operate at multi-source facilities, such as distribution centers and warehouses.

We just released those solicitations and they're on the street now, and we'll award funding later this year. Complementing these projects we recommend funding this year for: Advanced heavy-duty trucks and intelligent vehicle systems, zero or near-zero emission freight locomotives, zero emission freight equipment, and other off-road sources.

We selected these categories based on the priorities identified in the sustainable freight document, our heavy-duty technology assessment of what technologies are ready to be demonstrated, and input from our public process.

Like last year, we're required that all these projects take place in areas that benefit disadvantaged communities.

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AIR POLLUTION SPECIALIST PANSON: The funding plan also includes \$9 million for second new project, incentives for zero emission freight equipment that's now commercially available. This includes forklifts, transportation refrigeration units, and guard trucks among others. We envision this pilot will evolve into a first-come, first-served voucher project like HVIP in future years.

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AIR POLLUTION SPECIALIST PANSON: Now on to our final project category, continued funding for the truck loan assistance program to help small business truckers secure financing for newer trucks or diesel exhaust retrofits in advance of compliance deadlines for ARB's truck and bus regulation.

Since 2009, \$60 million in ARB funding has

leveraged 450 million in private financing for over 7,000 cleaner trucks and retrofits. This program reaches the California fleets most in need of economic assistance.

Nearly 80 percent of the loans have gone to single truck owners. Participation has increased in recent years and the proposed \$15 million allocation is needed to meet our expected demand over the upcoming year.

We'll also work with the California Pollution
Control Financing Authority on potential refinements to
ensure longer term sustainability in light of this growing
demand.

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AIR POLLUTION SPECIALIST PANSON: I'd like to wrap up the heavy-duty category by noting that the funding plan includes elements to address the requirements of SB 1204 for the nearly \$150 million in funds allocated pursuant to this law.

In the plan, we refine the criteria for evaluating heavy-duty projects, and describe how our program design meets specific goals included in SB 1204.

The projects proposed for funding, notably HVIP, zero emission truck commercial pilots, and low NOx truck incentives satisfy the requirement that at least 20 percent of the truck funding be spent on commercial deployment of existing technologies.

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AIR POLLUTION SPECIALIST PANSON: We're proposing one small revision to the funding plan that we released last month. We had included a \$1 million AQIP reserve, not allocated to any project, in order to address revenue uncertainty as we've done in the past several plans.

Since then, we've taken a closer look at our revenues and we believe we'll be okay holding back only 500,000, because of the reserve we've built up over the current budget cycle.

We would like to reallocate the remaining 500,000 from the reserve to fund a new mobile source agricultural equipment trade up program pilot for the San Joaquin Valley. This innovative new project is designed to help small farmers with uncontrolled tractors and other equipment trade up to cleaner used equipment.

This is a concept that the San Joaquin Valley Air District has been developing, and we believe that the time is right to pilot it. If successful, we hope to expand it beyond the pilot phase.

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AIR POLLUTION SPECIALIST PANSON: One final issue to note is that the legislature has deferred action on the administration's full cap-and-trade expenditure plan until later this summer. So the low carbon transportation

funding was not part of the State budget passed last week.

Today's proposal remains contingent upon final budget approval. We may experience some implementation delays depending on when this funding is approved.

Notably, we expect the remaining CVRP funding to run out around the end of August. If the auction proceeds budget is not approved by then, we would need to start a waiting list.

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AIR POLLUTION SPECIALIST PANSON: In closing, this year's plan builds on our previous investments to reduce greenhouse gas, criteria Pollutant, and toxics emissions by advancing the cleanest available technologies. These projects will bring emission reductions to disadvantaged communities that need them the most, and the plan also includes refinements to address new ledge station.

We recommend that the Board approve the proposed funding plan with the minor revision to add the agricultural equipment trade up pilot.

This concludes my presentation. And, at this time, I'd like to invite Jim KcKinney, Manager of the Alternative and Renewable Fuels and Vehicle Technology Program at the California Energy Commission to say a few words.

Jim.

MR. McKINNEY: Thank you, Andy.

Good morning, Chair Nichols and members of the Board. Again, my name is Jim KcKinney representing the California Energy Commission.

Since 2008, the Energy Commission and the Air Resources Board have worked closely together to coordinate the sister-incentive programs established for ZEV and near-zero emission vehicles technologies that were created by AB 118 and then reauthorized by AB 8.

The Air Resources Board is a permanent member of our ARFVTP advisory committee, and Dr. Ayala currently fills that role. And we participate regularly in the public workshops and Board hearings for AQIP.

This strong working relationship helps ensure an efficient and coordinated use of the public monies entrusted to both of our agencies for the development and promotion of the zero emission and low carbon technologies needed to achieve California's air quality and carbon reduction goals.

I think Andy Panson mentioned some of the cooperative ways that our programs complement one another. So today, we're at about \$584 million in ARFVTP program investments. And these complement each other with ARB programs in a couple of ways.

For light-duty electric vehicles, we've invested \$38 million for over 7,000 chargers. So you need one to do the other. Especially, with hydrogen fuel cell electric vehicles, we've invested over \$90 million for 49 new and upgraded hydrogen fueling stations throughout California. And in the medium-duty/heavy-duty truck sector, we've invested over \$100 million in advanced technology development. And several of the companies we made initial awards to have kind of graduated to HVIP and now have commercial vehicle platforms ready for offer.

In general, the Energy Commission applauds ARB staff on producing another high caliber funding plan for the fiscal year 15-16 AQIP and GGRF funds. The plan introduces new innovative policy measure and responds to legislative direction in several key areas.

It is clear and well written and includes important summary information on CVRP and HVIP voucher rebates. We think the plan makes good strategic use of the AQIP and GGRF funding, and will help advance the State's progress in meeting our air quality, carbon reduction, and ZEV vehicle deployment goals.

In particular, we'd like to highlight the increased rebate levels for low and moderate income consumers. We support this new funding approach, and it fits with our understanding of the way this demographic

purchases and uses vehicles.

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We'd also like to highlight our support for the increased funding for zero emission trucks and buses, development of zero and near-zero emission truck technologies that will be put into service by California's large freight and trucking fleets as a critical element of the sustainable freight strategy, and other efforts to reduce criteria and carbon emissions from the trucking sector

This substantial new GGRF funds that ARB is allocating should accelerate the pace of technology development and build on the initial technology development work that I mentioned with ARFVTP investments.

In closing, we look forward to seeing the results in the investments made possible by the substantial increase in GGRF monies allocated to the Air Resources Board, and we look forward to our continuing collaborative relationship and shared efforts to develop and deploy the technologies needed to achieve California's vision for a low carbon transportation future.

Thank you.

CHAIRPERSON NICHOLS: Thank you very much. Does that conclude the staff presentation then?

EXECUTIVE OFFICER COREY: Yes.

CHAIRPERSON NICHOLS: Okay. Obviously, this is a

complicated proposal covering a lot of different items. I do think the staff has done a good job of building on what they've learned in each successive year to target the funds more effectively towards the areas where we have a high likelihood of success.

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I don't want to presume to speak for all my fellow Board members on this one, but I think that we could do a better job of communicating exactly how these programs are going to be made available. And I'm hoping that as soon as we get the budget done, that we'll be able to come up with some addition to our website in the form of a chart or a graphic that we could use. I find when I'm called, and I am from time to time and I suspect others of you are as well, either by constituents or by legislators or others who want to know about funding availability for different kinds of projects, it's always -- you always have to go back to a small number of people and say what about this, what about that. And then it turns out that there are -- you know, there may be some pot of money there that you didn't realize was applicable to this particular program area.

But overall, I think it's pretty clear that we are not only leveraging a lot of funds from other sources, but actually seeing a tremendous amount of innovation going on in the field of ultra low emission vehicle

technology as a result of having these funds to spend.

And it's exciting to see them now being increasingly deployed in some of the areas of the State that are most in need of the emissions reductions. So I think the overall message here of the proposal is one of putting our stake in the ground that we can do better, that we can use these funds in ways that are really going to move the needle, and maintain California's ability to achieve some of the very tough targets that we've set for ourselves.

But at the same time, I think we do have to be aware of the fact that we're dealing with multiple different groups here when we talk about how we put these funds out. And I'm saying this I think as much for the benefit of the people who are in the audience, as well as that we appreciate the fact that each of you may be speaking to some different piece of this big puzzle here, but they all do have a -- they all do have a role.

I see Supervisor Roberts and Supervisor Gioia both eager to say something right now, so why don't we start there and then we'll call for our public comment.

BOARD MEMBER ROBERTS: Yeah, I just -- you know, by the luck of the draw, there's going to be a presentation you're going to see this afternoon that I wish would have come before this one. And it's a, what I

think, is going to be a very innovative public transportation system with far less greenhouse gas emissions than anything that I know that we're doing.

And I'm not sure how I could fit it into the existing definitions here. So if we get into that, but we finished the engineering studies for it.

CHAIRPERSON NICHOLS: Okay. We'll --

BOARD MEMBER ROBERTS: San Diego, the SANDAG has finished engineering studies for an aerial gondola that is -- I will compare it to any electric bus system or anything else out there in terms of the impacts, and at an operating expense at a fraction, but it's -- you know, it's getting these things.

I'm looking at how we get really innovative, and yet we've kind of -- we shoo all these things in a way, and we come up with definitions like I complained about on the last item that sometimes are so -- they're like a straightjacket and they give us exactly what we know and don't give us sort of the ability to innovate beyond very narrow guidelines. So I'm going to -- I'll talk more about this later.

CHAIRPERSON NICHOLS: Great.

BOARD MEMBER ROBERTS: I'd like to see a way that we can take systems that are -- that are there, that I think we're going to see, but that are going to need some

help. And I think we're going to see them. The potential is there for these things to be replicated in a whole lot of areas throughout California.

CHAIRPERSON NICHOLS: Thank you.

Mr. Gioia.

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BOARD MEMBER GIOIA: Thanks Chair, Nichols. I know our comments are going to come after the speakers. I just had a question of staff maybe to clarify, which may be helpful for the speakers as well.

So the aggregate goal of expenditures for disadvantaged communities was 10 percent in the community and 50 percent to benefit. So the first simple question, presumably that's 60 percent? The 10 is not inclusive -- 50 is not inclusive of the 10, so it's 60 percent?

AIR POLLUTION SPECIALIST PANSON: Actually, the 10 is included in the 50, so it's --

BOARD MEMBER GIOIA: It is. Okay. So it's 10 percent in and then 40 percent on -- this is the minimum 40 percent to benefit, so that's where you come up with the 50?

AIR POLLUTION SPECIALIST PANSON: Yes.

BOARD MEMBER GIOIA: The 50 is benefit or in the community?

AIR POLLUTION SPECIALIST PANSON: Yes.

BOARD MEMBER GIOIA: So the larger question is

(Nods head.)

it's an aggregate goal, and you've got the breakdown of light-duty vehicles and heavy-duty vehicles. So in thinking this through, is there a goal in each of those categories? I think we may hear about that, because -- and there's some complication in thinking about that.

AIR POLLUTION SPECIALIST PANSON: Yes. There is a goal within each, and I -- I highlighted it verbally in a few cases in my presentation and I probably should have had a table in the presentation that laid that out.

BOARD MEMBER GIOIA: The issue that complicates it that I want you to explain is that so the in the -- and in the rebate program it goes to eligible -- it's income eligible. So you could be a low income resident in a disadvantaged community or you could be a low income resident outside the disadvantaged community, right?

BOARD MEMBER GIOIA: So how are you going to

AIR POLLUTION SPECIALIST PANSON:

calculate in looking at those goals?

AIR POLLUTION SPECIALIST PANSON: Right. Well,

in -- and for the CVRP, how we determine whether you're in or benefit a disadvantage community is actually based on where the vehicle is registered.

BOARD MEMBER GIOIA: Right.

AIR POLLUTION SPECIALIST PANSON: And so when we gave a rebate, we know where the vehicle is registered.

And if it's in -- registered within one of the census tracts that was identified as a disadvantaged community that counts as being in a disadvantaged community. And if it's in the guidelines that we're -- the SB 535 guidelines that were adopted last year, we -- the Board created definitions of what it means to benefit a disadvantaged community. And for CVRP, it means that the car is -- the owner is -- the vehicle is registered in one of the zip codes that contains a disadvantaged community. So that's -- we --

BOARD MEMBER GIOIA: Right. So if you're a low income -- if you qualify for the larger rebate and you don't live in the disadvantaged community, that will not -- that amount is not calculated into the disadvantaged community.

AIR POLLUTION SPECIALIST PANSON: Yes, correct.

BOARD MEMBER GIOIA: Got it. Got it. Only if
it's -- if the car is registered or located in the
disadvantaged community.

AIR POLLUTION SPECIALIST PANSON: Yes.

BOARD MEMBER GIOIA: And can you make clear on the different goals? I was a little unclear. Just to summarize -- I mean, the -- in addition to the 50 and 10 by other category.

AIR POLLUTION SPECIALIST PANSON: Do you mean --

BOARD MEMBER GIOIA: The heavy-duty and the light-duty broken out.

AIR POLLUTION SPECIALIST PANSON: Okay. What we actually do is we break them out by project by project. And so we included a table in the funding plan, which I now wish I would have included in my presentation, that lays out how we're going to meet the 50 percent target on a project-by-project basis. So some -- our first-come first-serve projects you essentially -- you don't know until after the facts.

BOARD MEMBER GIOIA: Right. Right.

AIR POLLUTION SPECIALIST PANSON: So we've calculated -- we've set very conservative targets based on our -- we have historical data on what we've done in the past, so we're -- we've set a target for CVRP of 25 percent and HVIP of 50 percent. And then the projects that we award on -- via solicitations, we have 100 percent control, because you aren't eligible for funding -- you can't get awarded funding if you don't meet the requirements of the solicitation.

BOARD MEMBER GIOIA: Got it. Okay. I see it in the other materials. Okay. I see it. Yes.

AIR POLLUTION SPECIALIST PANSON: Okay.

BOARD MEMBER GIOIA: Not on the slides, but in the other resolution materials.

CHAIRPERSON NICHOLS: The background materials that were provided.

BOARD MEMBER GIOIA: Right.

CHAIRPERSON NICHOLS: Okay. If there are no other foundational questions, let's turn to our audience then. We have a number of witnesses who've signed up. I have a page with 21, and I believe more are coming. If you could -- if think you're going to testify, we really appreciate it if you could let us know sooner rather than later.

Our first witness is a -- has asked to present Senator Mike McGuire. Are you here? Yes you are.

Thank you.

SENATOR McGUIRE: Well, good morning. Let me push it and turn that on.

Good morning, Madam Chair and honorable Board. I just want to stay how grateful I am to be here today. And I'd like to talk specifically on the rural school bus item within Item 5. And I want to start out by thanking the Chair and the Board and your amazing staff for the work on this proposal. We've been grateful to work with you to invest in rural California and provide rural school districts the tools they need to improve air quality, health outcomes, and provide the safest and most modern transportation possible.

You should have received a letter signed by 18 legislators, a bipartisan coalition showing strong support for the \$5 million allocation, which would help rural school districts reduce their carbon footprint and take dirty burning buses off of the road.

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According to the U.S. Environmental Protection
Agency more than half of today's school buses have been in
service for over a decade. And unlike many states,
California does not require districts to remove buses from
service after a defined number of years. As a result, the
State has some of the oldest and least fuel efficient
fleets in the nation. Consequently, health risks for
students, especially younger kids, increase significantly
because their respiratory systems are still developing.

Students from rural areas are disproportionately impacted, because they have longer commutes and limited school transportation alternatives.

According to the LAO's office, rural school districts transport a significant share of total student population as compared to our more urban larger districts. This means per capita, more students are exposed to higher forms of pollutants than these same districts that have higher proportions of students from the low income families.

Moreover as your previous staff reports have

1 pointed out, bus related exposures to exhaust fumes were due to the time spent commuting on the school bus and not 2 3 time spent at bus stops or loading and unloading, and 4 exposure to exhaust fumes are known to cause asthma, as we 5 all know. One school bus can transport 70 plus students. 6 This means that providing funding for new clean buses will 7 take an estimated 50 cars off the road, which will reduce 8 traffic congestion, emissions, and greenhouse gases. This 9 proposal makes a modest but absolutely necessary 10 investment that will have a significant impact in the 11 State's air quality and the health of thousands of Californians kids. 12

I respectfully ask for your support on behalf of the bipartisan coalition. And again, I just want to say thank you, Chairwoman, along with the entire Board, for your leadership and partnership on this important issue. Thank you so much.

CHAIRPERSON NICHOLS: Thank you. Thanks for coming over and presenting your comments in person. We really appreciate it.

Our next witness, Barry Wallerstein.

Have we posted -- usually, we have these -- oh, they're behind. I see. Okay. Thank you.

(Laughter.)

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DR. WALLERSTEIN: Good morning, Madam Chair and

members of the Board. I'm here to encourage you to approve the staff recommendation, but that's not my primary purpose this morning.

My primary purpose this morning is with an eye towards the future. \$350 million dollars is a lot of money by any measure. But when one puts it in the context of \$2.3 billion in auction revenues, less than 16 percent of the money that you're collecting is coming back to this agency to clean up climate change pollutants and to achieve those other transformational benefits that the Chair referred to for criteria pollutants and air toxics.

We're working closely with your staff on preparation of the 2016 SIP amendment. My board has directed me to blowup the black box reductions that have historically been contained in the clean air plan that looks to future technologies and how some time in the future we'll get the necessary reductions to protect public health.

My purpose this morning is to reach out to your Board and your staff in partnership and, say, I think we need to do a better job of educating the legislature and Frankly the Governor's office on the air quality needs both climate and criteria and toxic pollutants, so that a better share of the money comes back to this Board to be used to transform our mobile source fleets, and allow us a

chance at meeting national clean air standards by prescribed deadlines.

And so it is with that I recommend approval of the item, but ask that somewhere in the direction to staff we get together, not just our air district and CARB, but the air districts across the state, the public health advocates, and also the business community since it's a -- it's a zero sum game in reaching clean air standards. If you don't get the reductions one place, you've got to get it some place else.

And so I think there's a good opportunity that the business community, those that are actually paying these auction revenues, would like to see the revenues also get those co-benefits, because otherwise we're going to be right back to them with more stringent stationary source regulations to try and start to make up some of the difference.

So we would like to work with you to get you more money, so that you can help us, and so that we can together help the breathing public.

Thank you.

CHAIRPERSON NICHOLS: Thank you very much.

Appreciate that.

Larry Greene.

MR. GREENE: Chairman Nichols and Board, I'm

Larry Greene with Air Pollution Control Officer of the Sacramento Metropolitan Air Quality Management District.

First, I can certainly support my colleague there in his comments. We will be doing a SIP next year just like they will. We're not in as dire attainment straits as they are, but we are a severe area, and we will have a long road to -- on the ozone front.

I wanted to, first of all, thank the staff for their very hard work and long hours that they put in over the last months in putting proposals and programs together. And we've been with them in the workshops, in the work groups. And my staff has put a lot of time in too it.

We will be putting some quality projects forward on car share, on zero emission buses, and some other programs. And we're considering the EFMP plus up if we can figure out a way to deal with the admin piece of that, because ramping that up from scratch without a lot of admin money is very difficult for a smaller large district, if you could call us that.

I wanted to make one other general comment. As the person who was the chair of the CAPCOA board when we did the Moyer formula, I'm certainly glad to have that in my -- in the back -- in the past as something that I worked on. It was really important to have equitable

distribution of funds across the State.

And I think that that has panned out. It didn't compromise programs because your staff working with ours has made sure that Moyer 923 programs have been very robust and we've had great projects. But what happened was that when we went forward with AB 8 and now 513, we had widespread bipartisan support in the legislature for those programs.

And the reason was we had distribution of the funding across the State. I just wanted to make a general comment that the Board and staff keep that in mind as you move forward and as you see the program's play out. Not a specific program, because we understand that programs are going to vary year to year in how they're allocated, but as you look at the distribution of the cap-and-trade funding across the state over time, that's a really important issue that we need to keep in mind, because as we come back to the legislature each year, all of those legislators are going to see how this is playing out in their districts across the state.

And we want to maintain support, because as Barry said, we need this funding. We need it across many years for not only greenhouse gases, but for the criteria pollutant benefits that we're going to get in our SIP to -- just like the other districts.

So just a general comment and a request there. Thank you very much.

CHAIRPERSON NICHOLS: Thank you. That's good advice.

Ms. Cory.

MS. CORY: Good morning, Chairwoman Nichols and members. Cynthia Cory, California Farm Bureau. I just want to briefly thank the staff for recognizing the need and the importance of the San Joaquin tractor trade-up program, which is what we call it. I know my colleagues in the San Joaquin and the staff have worked a long time thinking about this. They've thought about it for the truck rule. I mean, many of you have worked with us, you know, on that concept. But this will allow -- we're probably the tiniest slice of this -- of all this money, but it's an important slice.

This will allow small growers who can't compete with the folks who are using their equipment more, but are -- you know, they have basically tier zero uncontrolled tractors, and they only use them to maybe plant and harvest and they sit the rest of the year, to get maybe a Tier 2 program as the folks that are -- use their equipment much more will get the brand new equipment. So that will pass down, and then they'll have a Tier 2 controlled engine.

So it's a small, small improvement, but as we know, as we continue to ratchet up dramatically, our greenhouse gas goals, our fuel use goals are reduced, our criteria pollutant standards are reduced, every single allowance is going to be important. So we want you to know how much we appreciate this and ask for your support.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MS. WARD-WALLER: Good morning, Chair and members. My name is Jeanie Ward-Waller. I'm the policy director the California Bicycle Coalition. And I'm here to ask you to consider adding a pilot program to the clean vehicle rebate portfolio for bicycles. Bicycles clearly follow into -- fall into the zero emission vehicle category. That State has multiple goals for multiple benefits to increase bicycling. And Caltrans has actually set the target of tripling bicycling by 2020. These vehicles already make up one and a half percent roughly of all trips in the State. And we -- you know, for health benefits, for clean air, for multiple other community benefits, we want to continue to increase that mode share.

You have an item later in your agenda about the health benefits of physical activity. So this request clearly falls in line with that item and objective.

There's emerging technology and a growing market

around electric bicycles. These are more flexible, have greater range, provide options for folks who may have limited abilities in riding a traditional bicycle, and also cargo bikes, unfolding bikes are continuing to be developed that also provide more flexibility and also allow folks to use those for trips that directly replace vehicle trips. Those utilitarian trips, not recreational trips, but trips that replace vehicles.

The only other point I want to make is that bicycles -- increasing bicycles on the road increases safety for both bicycles and pedestrians and the awareness that these vehicles are on the road. So that also achieves the goal of the State to increase safety of our transportation system. So I ask that you consider this idea for a pilot program and look forward to working with you.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. PUZEY: Good morning, Chairman Nichols and respective members of the Board. I'm Dave Puzey on behalf of NRDC.

I want to start off by commending the staff for developing a funding plan with sufficient resources to ensure that the State remains on the path to meet its air quality and climate goals. And in addition to offering

agreement with the comments you're going to hear from my colleagues in the Charge Ahead coalition, I will focus my brief remarks on two points.

First, we support the staff proposal not to reduce CVRP rebates prematurely, as doing so would undermine SB 1275's goal of creating a self-sustaining market for electric vehicles. We look for to working with ARB staff to develop the long-term plan SB 1257 requires to evaluate when rebates should be phased down as the EV market matures.

The second point I wanted to make is to explain our reasoning for our opposition to exempting fuel cell vehicles from the income eligibility requirements of 1275. We're concerned that the proposed exemption may not be legally permissible. And in any event, it certainly violates the intent of 1275 to direct incentive dollars only to those who are influenced by them. We do understand that this exemption is intended to help fuel cell vehicles in the same way that electric vehicles were when the CVR program began. However, the legal framework is different today.

When the CVR program began, there was no statutory requirement to limit participation based on income, but there is now. We also simply don't think it makes sense to provide rebates that we know have little or

no impact upon purchase decisions, especially when those funds could be used for supporting more rebates for those who really are influenced by them.

With the modifications that I've described and those that will be described my colleagues, we would then recommend that the Board adopt the proposed funding plan.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. LEVIN: Chairwoman Nichols and members of the Board Jamie Levin with the Center for Transportation and the Environment.

As someone who is responsible for building five hydro -- fleet hydrogen stations delivering over 200 kilograms of fuel, two generations of fuel cell transit businesses, the latest one carrying over four million passengers with over a million miles of service, most of those passengers from disadvantage communities, building stationary fuel cells powered with biomethane, and also solar generation systems for demonstrating renewable hydrogen, I want to really commend your staff and this Board for wonderful visionary thinking and for these initiatives that are proposed in this plan and this resolution. I cannot tell you how pleased and excited I am as I watch this technology grow.

But more specifically, on June 19th, we submitted

a letter to Chairwoman Nichols identifying the fact that our organization is working with Tier 1 major truck and bus manufacturers and infrastructure suppliers to move not just fuel cell electric technology, but battery electric technology to commercialization.

And in that regard, it takes more than the three-year appropriation limit to expend these funds to build these programs out. And so I encourage the Board to work with your staff on an administrative level and to work with the legislature to sustain multi-year funding for these efforts.

We are moving on the course of making this zero emission technology viable in our communities. And what you're doing here, what your staff is doing is a world standard. And so I just encourage you to keep in mind this multi-year funding concept working with the legislature to enable us to sustain this momentum.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you. I would mention that we are working on a new funding plan for the GGRF funds, which is a three-year plan. Although, it doesn't bind the legislature. We still have to go through an annual budget process, but I think we've found that was quite useful and influential. So we will be doing another one and submitting it to the legislature and hoping to get

approval on a longer range basis for these ideas that you're talking about. Thanks.

MS. TUTT: Hello. Because Jamie Hall and I are so often confused, we decided to just switch it up a little bit here, and also avoid having to Jamies in row. My name is Eileen Tutt. I'm with the California Electric Transportation Coalition, but today I'm here representing a much broader coalition of industry folks -- if you want to just stand up and sit down real quick -- industry, including automakers, utilities, truck and bus folks, consumer groups, as well as the charging infrastructure folks.

So we're a very, very large and diverse coalition, and we support entirely the staff's proposal before you today. We also really appreciate the amount of time that staff spent with us, because it is challenging, oddly enough, to give away this much money. And I agree with Barry Wallerstein that we're going to need a lot more in the future, so we'll continue to work together as a coalition.

I do want to say -- I want to recognize particularly the staff in developing the income cap proposal, because we were very concerned that it would complicate the program, that it would limit -- that it would decelerate the market. And I think the proposal

that the staff came up with is probably the best you could have done. It still will probably decelerate the market on some level, but we do think -- we do support the staff's proposal, and we would avoid any reduction and that income cap amount, particularly reducing in order to fund another program. We think that's sort of a bad precedent to set. We'd prefer to go after more money for you all, and make sure you get what you need to fund these important programs.

I also want to recognize the uncertainty that we're facing now with the actions by the legislature not to appropriate this money. And we're going to continue to make sure that you get the funding that hopefully you'll approve today, but it is unfortunate that we are here now. We thought we'd be in a different place.

So thank you so much.

CHAIRPERSON NICHOLS: Okay. Thanks.

Another Jamie.

MR. HALL: Good morning, Chair Nichols and members of the Board. I'm Jamie Hall for CALSTART, here today to support the plan. We really had a great time working with staff on this. We were part of the broader low carbon transportation coalition that Eileen mentioned, so I agree with all the comments that she made, and we also work closely Charge Ahead. You'll hear shortly from

Sekita Grant and others in that location.

Across the Board on light-duty, we support what staff is putting forward. The amount for CVRP, the program modifications we think are very reasonable, and the increased funding for equity programs and also the specific areas there.

I want to very briefly touch on a few things on medium- and heavy-duty in particular as this is where we at CALSTART spend a lot of time. We like the expanded focus of the HVIP program and the inclusion of after-market technologies. I think this is really important to move the technology forward and build the market. We also appreciate the broader focus in the technology demonstrations. You know looking at things like connected vehicles, intelligent transportation systems, and advanced vehicle engines and drivetrains that can run on biofuels, natural gas, renewable natural gas, all these things are going to be very important in meeting our long-term goals.

It's nice to see a broader focus that goes beyond electrification and includes this and it's very much in line with the research that we've done in this area.

Finally, we're really happy to see the strong commitment to zero emission truck and bus technologies.

We especially see an awful lot of opportunity in the zero

emission bus sector. I think not everyone appreciates
just how excited transit agencies are getting about this.
I think we're nearing a tipping point here. A lot of
these buses are increasingly being made here in
California, so this is the kind of win-win that we really
like to see out of this program. And I think we'll see

like to see out of this program. And I think we'll see some great things with this next solicitation.

So overall, this is a very well thought out plan. These are the exact sorts of things that the State should be doing with GGRF funds, and I will definitely echo Barry Wallerstein's comments about the need for more funding in this sector.

Thank you and thank you to staff.

CHAIRPERSON NICHOLS: Great.

MS. GRANT: Good morning. My name is Sekita Grant with the a Greenlining Institute and representing Charge Ahead in my comments today. Thank you Chairman Nichols and to the Board for the opportunity to provide comments.

We'd like to first and foremost commend staff for the work that they've put into this plan. As Eileen and others said, this is no easy task and we do appreciate the amount of work that you guys have been putting into it.

I'm not going to -- we submitted comments in
writing, so I'm not going to reiterate those, but instead

provide some highlights for the Board today.

Specifically, we'd like to commend staff for the increased commitment around equity. In particular, the expansion of the EFMP plus up program, as well as the increased LMI rebates. We think these are critically important to reaching low and moderate income communities and communities of color.

On the issue of the low and moderate income rebates -- the supplemental rebates, we do want to mention and reiterate the importance of pre-qualification and point of sale. And that we ask that staff and the Air Resources Board make this a priority in order to find solutions to accelerate the accessibility of these rebates in the low and moderate income consumer base.

On the issue of the in cap -- income cap, we urge staff to continue -- to abandon using Prop 30 as the method and the precedence for the income cap, and instead focus on data available and also collecting additional data, and really focus on the SB 1275 priorities in setting an income cap for this program.

I'll end with a couple more points. The first is around community outreach. This is a really critical issue for reaching low and moderate income communities and communities of color. We commend staff for noting in their funding plan and calling this out as a priority.

We are a bit concerned about staff's comments that the status goes has been sufficient. We think that a lot more needs to be done. Having education materials in Spanish and other language is an excellent start, but we really need to do more.

This is important for the roll-out of electric vehicles in the low and moderate income communities and communities of color, and is really critical to the success of these programs.

Finally, and in our comments, we encourage the Air Resources Board to establish targets, deadlines, metrics, and to really assess the progress of these programs in low and moderate income communities. We think this is important for several reasons: To ensure progress, accountability, and also to allow some flexibility in these programs. We understand that we're all embarking on new territory, so having a program that allows us to make adjustments as we move forward to make sure we're using State funds as effectively and efficiently as possible.

And lastly to say that -- to have these -- to have the metrics and targets in place makes it easier for the Air Resources Board to tell the legislature to tell the federal government to tell the Pope to tell whoever that California is successful in aggressively reaching

climate goals and providing benefits to disadvantaged communities.

Thank you for your time.

CHAIRPERSON NICHOLS: Thank you.

Bonnie is next.

MS. HOLMES-GEN: Chairman Nichols and members, Bonnie Holmes-Gen with the American Lung Association in California. And I wanted to point out this is important timing for your consideration of the AQIP and GGRF investment allocations.

The American Lung Association and public health organizations in California and around the world have rallied this week around a series of announcements that you're well aware on climate change and health. Surgeon General Murthy called for strong actions to protect the climate, and talked about the climate change threatening to worsen disparities in health, and how unacceptable that is. We've had the Pope's encyclical on the environment, the British Medical Journal, the Lancet, this week stated that cutting fossil fuels and slowing climate change could be the greatest global health opportunity of the 21st century. And, of course, the U.S. EPA came out with a very important report, tens of thousands of lives could be saved and billions of health costs can be avoided through climate actions that protect the air from harmful fossil

fuel pollution.

All of this just brings again a very tight focus on the connection between health and climate. And the work that you're doing today approving these important incentive fundings is key to California's efforts. We've been a long-time supporter of this program, and we support the allocations that are before you today, especially the increased focus on getting funding into disadvantaged communities, the programs in rural communities for investment in vanpool, and cleaner tractor trade-up options are very helpful.

We support the increased funding for light-duty pilot projects in disadvantaged communities and look forward to seeing those projects getting experience on the ground, so we can continue to improve and expand them. We support the increase in the CVRP rebates for low and moderate income communities. All of these are very helpful strengthening components, and we appreciate the work of the staff over the months that this proposal has evolved and has come together into a very good package, and we appreciate that.

Going forward, we would like to see a couple of strengthening additions. We think that it would be important to increase the percentage of funding in the zero emission truck and bus pilot deployment categories

that increase the percentage of funding for disadvantaged communities from 50 percent up to 75 percent. We think there's a need to continue to get those emission reductions in those communities that need it the most, especially from the heavy-duty equipment.

And we would love to see additional focus on active transportation. It is something we've talked about so much over the years with the SB 375 project. Anything we could do to help promote bicycling and active transportation as another option would be fabulous.

We support the focus on zero emission technologies in this program, and always want to mention how important this is to address both our near-term air quality and health problems and to build sustainable solutions over the long term.

Thank you very much. And as we go forward, don't forget the communication and outreach, simple messages for the public is going to be critical.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. LORD: I think I'm next. Mike Lord with Toyota. Thank you for the opportunity to make a brief statement. We would like to express our support for the staff's proposal, in particular as it relates to the Clean Vehicle Rebate Project.

We must consider the transition to low carbon transportation as a long-term process, and incentivize electrified vehicles as an important tool of State policy to help develop this market.

In particular, Toyota supports the proposed rebate amounts and how CARB proposes to implement the income cap, including the exemption for fuel cells in the initial years of the vehicle market roll-out.

Toyota will introduce our Mirai fuel cell vehicle in California this year. And we're more than excited -- maybe I don't sound that way --

(Laughter.).

MR. LORD: -- to bring this vehicle and technology to the market after more than 20 years of developing. We believe fuel cell vehicles have a key role to play in our zero emission future. This is a very exciting time at Toyota as we work on both the vehicle and the infrastructure roll-out. And appreciate the support from both the Air Resources Board and the California Energy Commission.

And just a quick comment. You know, right now, there's still a lack of the federal tax credit for the fuel cell. There's activity in Washington. And while we support the -- we're trying to move this forward. If this tax credit can't be extended, we would, maybe in the

future, request that additional consideration for funding for fuel cells be considered in the next AQIP budget plan.

Thank you.

CHAIRPERSON NICHOLS: Thanks.

DR. REICHMUTH: Chairman Nichols and members of the Board, my name is David Reichmuth and I'm here representing the Union of Concerned Scientists.

First, I'd like to recognize the work of ARB staff in producing a plan to support solutions for clean transportation. This plan incorporates many of the suggestions from a very diverse set of stakeholders. So I'd like to thank them for putting in all those hours on putting together a complete plan that represents everyone's views in some respects.

We've submitted written comments largely in support of the funding plan. I just want to call out a few items. We agree with staff's assessment the state of the ZEV market is not at a point where rebates should be phased out. So we support the continuation of CVRP at the current levels with the proposed income caps to improve the program's effectiveness.

Now we do urge the Board to -- or the staff to collect CVRP survey data on income filing status. The current income cap is based on income filing status, but the current CVRP data is aggregate household income only.

So better data can help refine the cap in the future years and maybe lower it if the data supports that.

We also strongly support the addition of increased rebates for lower income buyers as targeting this subset of ZEV buyers should be an effective means to improve program equity. Along with increased incentives, we urge the Board to implement point of sale rebates for lower income buyers. While we agree with staff that point of sale rebates for the entire CVRP program is not appropriate, allowing them for a smaller subset for the low income buyers would reduce the out-of-pocket costs and ensure that ZEVs are an option for the broadest range of California vehicle buyers.

We also strongly support the investment of the 167 million in the freight heavy-duty and off-road sector. Zero emission technologies in this sector are critical for the health of our communities and to meet air quality and climate goals. And because many of the impacts from these heavy-duty vehicles disproportionately fall on disadvantaged communities, we, along with partners in public health, science, environmental, and environmental justice interests, recommend that a higher fraction of the ZEV truck and bus pilot commercial deployment investment go to these communities. Specifically, we're recommending that the benefits to disadvantaged communities be raised

from 50 percent to 75 percent.

And last, we support the proposal to use low carbon fuels along with conventional vehicle technologies, particularly in the low NOx diesel and natural gas area to ensure that we get substantial GHG emission reductions when GGRF funds are spent. And that requirement for low carbon fuel use should be done based on the carbon intensity of the fuel, not on the volumetric basis.

Thank you for the opportunity to comment on the AQIP and FGRF funding plans.

CHAIRPERSON NICHOLS: Thank you.

MR. DOUGLAS: Good morning, Madam Chairman, members of the Board. I'm Steve Douglas with the Alliance of Automobile Manufacturers and I appreciate the opportunity to be here. Like everyone else who's testified, we do appreciate the staff's work on this. A lot of hard work went into it. They met with all of the stakeholders. They reached out and took input, and they tried to balance a variety of viewpoints that were sometimes conflicting and I think they did get a great job.

Second, I'd like to thank the Board for your commitment to the zero emission vehicle technology. I've said this before, but California has the most comprehensive and the most sustained program to support

zero emotion vehicles. And we think that's what it's going to take. And this Board has been in the leadership of that. Manufacturers today offer eight plug-in hybrid electric vehicles, 11 battery electric vehicles, and two -- or soon enough, two fuel cell electric vehicles.

And those vehicles, the ZEVs in total, are about a little more than three percent of the light-duty vehicle market in 2014. And that's a great start, particularly since zero emission vehicles were just commercially introduced in volume just a few years ago. So that's a great start.

However, we have a long, long way to go. We have to sell five times that many just to meet the goals and the requirements in fact in the next 10 years. So we have a long way to go. It's an early market. And to get there in short, we have to get as many vehicles into the hands of consumers as quickly as possible. And the CVRP program is an essential element in that.

Again, we support the staff's proposal and we appreciate the commitment to this.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Just to let people know where we are, the list that's up there goes to 21. I have a second page which takes us up to 30. So we have 30, and then we'll close

off the hearing and have comments and discussion from the Board before we act. And then we will be taking our lunch break just for planning purposes.

Thanks.

DR. LOVELACE: Hi. Good morning, Madam Chair, honorable Board members and staff. I'm Ed Lovelace, and CTO representing XL Hybrids. So at XL Hybrids, we're very appreciative of the efforts of the ARB team in developing an AQIP funding plan for the coming year and agree with the basic principles and structures that have been proposed.

In particular, we enthusiastically support the proposed changes to the HVIP program. XL Hybrids is currently a leading fleet electrification company in the U.S. operating with, as of May 2015, over 12 million fleet customer miles per year driving our products across North America.

Our core hybrid electric conversion product for Class 2 to Class 6 major OEM vans and trucks provides fuel and CO2 improvements with no compromises for the fleets.

Going back to the HVIP program. Over the last couple periods, one of the issues we observed there was one company for one particular vehicle type had been receiving about over 90 percent of the vouchers. And we believe that the proposed changes for this coming year for

HVIP addresses this issue. So we're very pleased with the changes.

We support both the structure and the proposed amounts by type. And I did submit written comments in more detail. But again, I wanted to thank everyone, and the staff in particular, for all of the dialogue we've had over the past year.

Thanks.

CHAIRPERSON NICHOLS: Thank you.

MR. CUNHA: Good morning, Madam Chair and Board members, and distinguished Barbara Riordan. We go back a long time and thank you for all the support.

I want to also acknowledge -- we support the proposal, but I would like to acknowledge a few people.

Agriculture is a very easy industry to work with.

(Laughter.)

MR. CUNHA: And -- but I'm going to have to put on my glasses. And it's not because of age. It has nothing to do with age. It's government documents.

(Laughter.)

MR. CUNHA: Government documents.

(Laughter.)

23 CHAIRPERSON NICHOLS: That's something we haven't 24 been blamed for yet.

(Laughter.)

CHAIRPERSON NICHOLS: We'll have to add that to the list.

MR. CUNHA: You know, first I want to thank Richard Corey, Alberto and Erik White of that level staff for working with agriculture over the past years, especially in 2004 moving forward to the farm equipment program.

Also, I want to thank Sam Gregory, Lucina -- so I said it correctly. Not Lucille Ball, but Lucina.

Michelle Buffington. I want to thank the staff though,

Madam Chair, and Board for their continual outreach to the agriculture industry throughout California, but especially the San Joaquin Valley where we have the challenges.

I appreciate the staff's acknowledgement of the carpool van program through Mr. Hughes in Tulare County that has spread through Kings County and others. A very positive, successful program for vans to transport farm workers in a very safe, reliable means of transportation.

And today, it is more important because of our farm workers having to travel a greater distance because of no water in various farms. So that effort has been tremendous, and we thank you for you recognizing that part of it, as well as cleaner vehicles. Absolutely important.

The second part I want to thank you for is the trade up program. The trade up truck program is still not

done, still moving in a positive direction. I have some growers that are very excited about that program. But the tractor program, on behalf of Roger Isom, the California Cotton Ginners and Growers, and Mr. Will Scott, the California African-American Farmers do appreciate the effort that your staff is looking at this program as part of what we did with the regular tractor voluntary program that Mr. Tom Jordan will talk about.

But these efforts and these new innovative ways of trade up program for those farmers, who don't put a lot of hours, and we want those farmers to sustain and keep farming -- it's called small farms in most cases -- that this program will give us an opportunity to look at things in the future.

But what I do like, Madam Chair, is that
California again is stepping out, but for agriculture
across the rest of the country to see that the efforts of
USDA NRCS funding and your funding has opened that door
for voluntary programs that are very positive for health
of everybody.

So I again want to thank you, Madam Chair. Ms. Riordan, thank you for all the help and efforts over the years and the staff again.

Appreciate that.

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CHAIRPERSON NICHOLS: I hate to cutoff anybody

who's saying nice things about us, but --

2 (Laughter.)

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CHAIRPERSON NICHOLS: -- I just have to do it.

4 (Laughter.)

5 CHAIRPERSON NICHOLS: All right. Mr. Chavez.

MR. CHAVEZ: Chairman Nichols, members of the Board, my name is Nicholas Chavez. I'm here on behalf of the School Transportation Coalition and the California Association of School Transportation Officials. We are here in support of the \$5 million school bus replacement for small and disadvantaged communities grant opportunity.

Earlier this year, we worked with Senator McGuire who authored SB 523. Senator McGuire's leadership on the issues paving the way for small, disadvantaged districts to replace old, dirty buses that are not only dangerous to the students but the environment.

We applaud the work of your staff who have been working collaboratively with Senator McGuire. If approved, the grant opportunity would allow -- would offer the most challenged school districts to join the State and lead the nation to reduce greenhouse gas emissions.

It would allow school districts to use awarded funds to replace the buses with the latest alternative fuel vehicles.

Thank you for your work on this.

MR. NORRIS: Good morning, Madam Chair and the Board. My name is David Norris. I am the director of maintenance, operations, and transportation for Lakeport Unified School District.

I'm here in support of the \$5 million school bus replacement pilot proposal for small and disadvantage communities. Lakeport is a small rural town located on the west shore of Clear Lake in Lake County, approximately 100 miles northeast of San Francisco. The Lakeport Unified School District has approximately 1,500 students, and we provide transportation services to about 415.

Lakeport applauds the school bus replacement pilot program, which will reduce emissions caused by old dirty-polluting buses, so that children inside the bus and the environment outside the bus are not exposed to both cancer causing and smog forming pollutants.

As in many low income areas, California's Lake County has a relatively high poverty rate. Seventy-two percent of the Lakeport school students are on the free and reduced meal program. For many of our students, the bus is the only option for transportation to school.

Many of the families only have one car, and the parents leave very early as they work in the agriculture, and too early for the kids to get a ride with them, so they wait for the buses. And so they really rely on us.

Transporting 70 plus students in a clean, safe bus is clearly the best choice for our environment and the future of our children. A key factor for making this program successful is to provide full replacement funding, because it is unlikely that smaller school districts, such as ours, have the matching funds that used to be part of the small school bus program.

I urge you to adopt the \$5 million school bus replacement pilot proposed for small disadvantaged communities. I really appreciate your efforts in this.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MS. EVANS-FUDEM: Madam Chair and Board members, I'm Erin Evans-Fudem representing the Small School Districts Association. The Small School Districts Association is strongly in support of the \$5 million set-aside for rural school bus replacement. SSDA represents school districts with an average daily attendance of less than 2,500 students. This represents nearly 60 percent of school districts in this State, many of which are located in rural areas.

Rural and small school districts operate with very little budgetary wiggle room. And this investment is the first of its kind in dedicating funding for low carbon and low emission school buses. Without support from

school bus replacement programs, the disadvantaged youth in small school districts are often denied access to clean and health transportation.

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The ability to purchase environmentally friendly school buses by rural and small school districts will have positive impacts in a variety of ways. First, rural school buses generally transport students longer distances keeping the bus on the road for a longer period of time contributing to air pollution and exposing children to exhaust fumes.

Replacing our older buses with newer, cleaner buses would significantly lower transportation costs, improve air quality, and protect the children that we serve. This \$5 million set-aside is a modest investment, and we urge your support.

Thank you. We'd like to also thank the staff, the Board members, and Senator McGuire for his leadership on this issue.

CHAIRPERSON NICHOLS: Thank you.

20 MS. EVANS-FUDEM: Finally -- excuse me. But my 21 colleague --

CHAIRPERSON NICHOLS: Oh, I thought you were done. Sorry.

MS. EVANS-FUDEM: -- my colleague from the School Employees Association was unable to be here today and wanted me to express his support, and his organization's support as well.

Thank you.

CHAIRPERSON NICHOLS: Okay.

MR. LITES: Good morning, Madam Chair and Board.

Jim Lites on behalf of the California School Boards

Association. We really wanted to thank the Board and the staff for recognizing the opportunity in working with

Senator McGuire. And we also thank him for his leadership on the set-aside for the rural school buses.

This will really help some of our members that represent less populated areas of our State that historically have lower emissions concentrations to really achieve a significant reduction in their areas and in this case will certainly benefit the school aged children for hopefully lower exposure of particulates going forward.

We urge adoption of the proposal.

Thank you very much.

CHAIRPERSON NICHOLS: Thanks for coming.

Tom Jordan, hurry on down.

MR. JORDAN: Good morning Madam Chair, members of the Board. My name is Tom Jordan with the San Joaquin Valley Air Pollution Control District. As has been mentioned a number of times, these programs are critical, not only for greenhouse gas reductions but for regions

like ours that have significant air quality challenges.

In the San Joaquin Valley, we also have 23 of the 30 most disadvantaged communities in the State based on the CalEnviroScreen scores.

So it's been great to work with your staff. They've been really good on working on the pilot programs. There's a number of them that we've spent a lot of hours with them on. I also think we're going to learn a lot over the next year or so as we implement them, and we look forward to working to fine tune those programs and get even more emission reductions for both cap and -- for greenhouse gases and criteria pollutants.

Finally, I want to thank the staff and the Board for the track -- considering the tractor trailer program as an addition to this. The district has worked with the agricultural industry on a voluntary program to replace older dirty tractors in the valley. To date, over \$300 million has been spent to replace over 4,000 tractors.

And with that, we've achieved substantial greenhouse gas reductions, and over 12 tons per day of criteria pollutant emission reductions.

I've been doing this for a long time, and we don't throw out numbers that size anymore. That used to happen back in the early nineties, but that is a very substantial reduction and a huge benefit to public health

in the San Joaquin Valley.

And so I thank you for adding the trade up program. It will allow us to go a step farther and get at some of the tractors we couldn't get at with the existing program. So it's -- while it is a relatively small amount of money, it is a really -- it is really huge and we really appreciate your staff in really working with us and adding this as a component of the plan. So we support the plan.

CHAIRPERSON NICHOLS: Very good.

I think this is going to be a very useful tool here. So glad to have your support.

Is Mary Pitto here?

If not, John Clements.

MR. CLEMENTS: Good afternoon, Madam Chair, Board members and staff. John Clements here advocating for school bus as a consultant, and also long term -- long time valley resident, San Joaquin Valley resident and a former director of transportation for Kings Canyon Unified.

So I am here standing before you in support of the \$5 million for the small rural disadvantaged community opportunity for school bus replacement. As an electric school bus consultant and known as the electric bus evangelist, I'm now a spokesperson for the only two OEM

school buses in North America -- electric school buses in North America.

And I want to just say that I'm in support of the other alternative fuels, having been an advocate for those as a school district transportation director that will further reduce the emissions and operational expenses to those small school districts and disadvantaged communities in which they'll serve.

Thankful for the Governor for his GHG emission goals. And I want to assure you as ARB that these smaller schools are eager to participate in these programs. They won't be standing alone and at risk, because there's other risk takers that have come before them as these buses reach commercialization.

And with that said, I additionally want to endorse the upcoming zero emission truck and bus pilot programs. I see great opportunities to go beyond proving in the past demonstrations that we did and conducted with your staff, and the outreach that we did, where these -- we have great opportunity with the new OEMs that are coming, those same OEM school buses that I had here for the Governor's ZEV Summit parked out front about a month ago.

A great opportunity to further the cause for clean air. And so I'm excited that we have the

opportunity to reach those deployments and that they'll also benefit small rural communities, disadvantaged communities throughout California.

Thanks for the opportunity to share. And thank you again to the staff for the awesome job that you guys do, and that they still allow me as a retiree to come back and play in work group sessions.

(Laughter.)

CHAIRPERSON NICHOLS: Glad to provide an outlet for you.

(Laughter.)

MR. SEAN EDGAR: Chair Nichols and Board members, Sean Edgar.

CHAIRPERSON NICHOLS: Hi, Mr. Edgar. I'm getting a little silly here, but my apologies.

BOARD MEMBER GIOIA: We did see his buses in Richmond at an air district, so I know he's a very strong advocate.

MR. SEAN EDGAR: Chair Nichols and Board members, Sean Edgar. I'm the director of CleantFleets.net and Grateful for the opportunity to be in front of you this afternoon.

Unlike the previous speaker, I will -- I'll just admit to my own old age on needing to use my own glasses to -- it's nothing that the Board did, but my 15 years on

working on fleet issues, it's my own fault. It's not the Board' fault.

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I'll draw your attention, there are two items.

Really my goal today is to punctuate the need for best bang for the buck meaning quality projects. So there are a few focused comments that I'll offer.

First of all, Autocartruck submitted a letter that's attached to my speaker card. And Autocartruck is an important technology partner with regard to hydraulic hybrid systems that are used by many of our refuse collection and recycling collection companies.

And just a few items. And Autocar's request to the Board today is just because our fleet managers rely upon them to produce the severe service trucks that travel in urban communities, there are a couple different items that have been validated. The City Orlando recently conducted a study demonstrating 48 percent less fuel consumption on a diesel platform. That's something very important, because that corresponds to greenhouse gas reductions equivalent -- the City of Orlando deployed nine The letter states the math, but the math works vehicles. out to comparable to taking 542 mid-sided vehicles off the road. So you put out nine clean refuse recycling trucks with a hydraulic hybrid system equivalent to 542 mid-sized vehicles.

You've heard previous testimony from Lung
Association and Union of Concerned Scientists and others
to get heavy-duty vehicle projects into communities -disadvantaged communities, and we think this is a key
strategy, so the -- before I leave the Autocar letter,
just their ask is that the Board staff look at the
incremental costs of the vehicle. The current voucher is
\$40,000. The incremental cost of the truck is about
\$100,000. So we're asking -- Autocar is asking in their
letter just to ask Board staff to look a little bit more
in detail at the voucher amount and perhaps look at
increasing that to an \$80,000 level to pay for most of the
incremental cost of that truck to get more of those clean
trucks out.

In the time I have left, I'll just touch upon a letter that was submitted also to the docket on behalf of CleanFleets. And just to touch upon some of our -- reiterate our prior support for RNG projects, so we know what staff is looking at a multi-year approach. Chair Nichols, you indicated a multi-year approach in looking to where to spend the GGRF money and we would just appeal to you that I'm -- my dad grew up in Texas, so it's probably not polite to beat a dead horse.

You've seen me for about six months talking about RNG projects, how important those are, and the fact that

there are carbon negative fleets today, so I won't beat on that, other than to say -- because your staff has heard a lot from us on that.

We're grateful for about \$7 million being put aside in this program for projects that could be RNG projects. That's a good start. We want to do more with your staff over multiple years to get these types of projects into fruition. And our letter really talks about our desire to do that.

So I'll just touch upon an opportunity to get rid of about 7,000 diesel collection vehicles. We could do that in big numbers. The Energy Commission indicates they have a program. We'd like to do vehicles in the thousands. Their program is in the hundreds.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thanks.

MR. EVAN EDGAR: Good afternoon Chair and Board members. My name is Evan Edgar, and I have a neutral card in today. Actually, my industry is carbon neutral. The Compost Coalition is carbon neutral, but we're also carbon negative. We make a carbon negative fuel today. And I'm carbon negative against the funding plan together. I'll talk more about it.

Why am I here today with diverting organics from the landfill? The Compost Coalition actually makes their

own fuel. They make a carbon negative fuel. We want to rethink methane and getting organics out of landfills by 2025. The short-lived climate pollutants has 90 percent reduction by 2025. We support that.

But as part of that support, it takes 14.7 million tons of organics, about eight million tons of greenhouse gas reductions. Over 200 anaerobic digestion facilities will need to be -- play out 100 by 2020, another 100 by 2025 to build this organic highway, a heavy-duty organic highway, which we can fund with cap-and-trade money, and invest in it in order to get off diesel, get off landfills, and have a carbon negative fleet.

We have deployed this technology in Sacramento at Atlas. We have it in South San Francisco with help from the Energy Commission on fuel production. So we actually are making carbon negative RNG today. But the gap of funding is a CNG fleet. Our industry got off diesel. We're moving quickly. Fifteen thousand trucks. We want to be off diesel by 2020, be off landfills by 2025.

But this funding plan needs to be rethinked, because it leap frogs over RNG, except for \$7 million.

And it's all about electrification. And our industry just got off diesel. We're on CNG. Now, we're going to try to get in -- electrification won't be there till 2025 or

more. We can do this here and now to make RNG be carbon negative.

And zero emission vehicles aren't zero when it comes to greenhouse gas reductions. They're not. Our industry, we're making fuel that is carbon negative today. And our fuel is less than ZEV equivalents or carbon intensity, which you'll adopt next month at the July hearing.

So, if anything, let's rethink biomethane. Let's rethink this funding plan. We say down with every gentlemen and lady here for the last three workshops and individual meetings talking about how we can transition 15,000 Class 7 trucks and 3,000 Class A trucks to have an RNG organic highway from the ports to the valley to move organics, wood chips, compost, food waste from the landfills.

We can make a carbon negative fuel with a carbon negative fleet on the organic highway. So, if anything, as future funding gets towards 2020, that \$350 million we put a request in for 50 to 70 million dollars to have an incremental difference of \$40,000 per truck, much like the Carl Moyer program for air quality for criteria pollutants, we can do that for greenhouse gas reductions, because after all, this is a Greenhouse Gas Reduction Fund. And AB 1204(Lara) puts greenhouse gas equal to

criteria pollutants.

So if anything, please rethink methane. Let's rethink funding cap-and-trade money to back into carbon negative fuel.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. COSTA: Good morning, Board and Madam Chair. Cliff Costa on behalf of the California New Car Dealers Association. We are here today in full support of the item in front of you, particularly on the CVRP program. And we are here in strong support of the staff's recommendation that we not move to a point of sale voucher system yet on the CVRP.

We are fully in support of working with the staff, working with the stakeholders, and continuing to sit down and figuring out a way that we can do point of sale for consumers that makes sense for the dealer's perspective and for the consumer's benefit.

We are not there yet. There are a lot of hurdles that are going to be placed in front of us. We're willing to sit down. We want to partners with the Board on trying to reach that goal, but we're not there yet.

The final thing I'll say is is the legislation, SB 1275, did not direct the Board to actually have point of sale by a specific date. They said in the legislation

in statute to consider it.

We encourage you today not to set a particular date to try to make point of sale possible, but let's have those meetings, let's have the work groups, let's try to get there, and hopefully by next year we can have a proposal that works for both the industry as well as consumers.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. OCCHIUZZO: Good afternoon, Chairman Nichols and members. My name is Gustavo Occhiuzzo. I'm the founder of Green Commuter. We're hoping to be the first vanpool and car-share company in the State that uses only electric vehicles. And I just have two comments today. One is on the HVIP program.

The program we foresee that it's going to be oversubscribed, you know, in this coming year, which is because more vehicles are being included in the list, but also on start-up companies, such as ourselves, that thanks to this technology, we're going to be, you know, deploying our vehicles -- clean vehicles in the region.

The second comment is on the car-sharing project. That program has been very successful. There was very oversubscribed. The program is a tiny program, \$2.5 million for last fiscal year. And they got application --

13 applications totaling 16 million.

We've seen the increase for this coming fiscal year to five million. We think that it's going to be oversubscribed. And the impact that that program can bring to the communities, especially disadvantaged communities, is great. A lot of studies have shown that every car-share deployed can remove nine to 13 vehicles from the road. So I encourage you to rethink about the funding for the program, because that program can bring a lot of impact and there's a lot of interest from different stakeholders for that.

Thank you so much.

CHAIRPERSON NICHOLS: Thank you.

MR. MAGAVERN: Madam Chair and Board members, I'm Bill Magavern with the Coalition for Clean Air and we've submitted written comments with the Charge Ahead campaign and also with 22 other groups who are members of both the California Clean Air Freight Coalition and the SB 535 Coalition.

The proposal before you today has very well targeted ways to reduce emissions from the transportation sector. And we think that you've chosen excellent ways to spend \$350 million that you collect from the polluters. And we join others who will ask the legislature and the Governor for more funding in future years.

And, in fact, this proposal implements a couple of important laws that were passed by the legislature last year signed by the Governor that we strongly supported both SB 1275 and SB 12046.

And I agree with the comments that have been made by my colleagues from Greenlining and NRDC and the Lung Association and the Concern Scientists, as well as with the Chair's comment that there's a need to do a better job of communicating these available programs.

In the light-duty area, some of the elements that we're especially enthusiastic about are the increased funding the Enhanced Fleet Modernization Program plus up, as well as that ag. van proposal, and in CVRP, the additional incentives for low and moderate income people.

We do think in CVRP, as you've heard, that we need to get, as soon as possible, to the point of sale rebates for the low and moderate income folks. And let's remember that most of them are not able to take full advantage of the \$7,500 federal tax credit, because that is a tax credit, and a lot of people don't have that much of a tax liability. We also think there needs to be better outreach so that people in those communities with the low and moderate incomes are aware of the program and able to take advantage of it.

In the medium- and heavy-duty area, again, we

applaud the alignment with the sustainable freight efforts that the Board is pursuing, as well as the incorporation of conversions this year and support the increased funding for the truck and bus pilots, as well as the school bus program.

We do urge you to increase the percentage that goes to disadvantaged communities. In the current year, that percentage in the medium- and heavy-duty area is 100 percent. The proposal is to drop that in half to 50 percent. We think 75 percent would be more appropriate, because we know that the great disproportionate majority of the emissions from the heavy-duty sector are falling in those disadvantaged communities. So we should be spending 75 percent of the funds in and for the benefit of those communities. So we urge you to consider that in your deliberations. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

MR. LEACOCK: Good afternoon, Chairman Nichols.

I'm Kent Leacock with Proterra, the zero emission battery electric bus manufacturer. And I'd like to express our support for the \$350 million overall budget, but specifically the \$45 million budget for zero emission buses. And I'd like to point out a fantastic link between Carb's policies and what CEC's actions are doing as a result of the CEC action to fund a second manufacturing

facility -- or support funding for a second manufacturing facility for Proterra. We will be building buses down in the City of Industry, that if we're hopefully successful and this budget gets approved, in part we'll be funding buses that will come gliding out of that facility in City of Industry by the first quarter of 2016, which that will be a great occasion, and we'd love to have all of you come.

I'd like to also give me thanks to the staff of CARB, many of whom I've spoken to personally a number of times about zero emission buses, about the funding plan.

And as the last guy standing in between now and lunch, I'd just like to say thank you.

(Laughter.)

CHAIRPERSON NICHOLS: Well, thank you. That was a good person -- good one to end on, because this ZEV bus program is one that we've been nurturing along for a long time. And it's exciting to see the progress. It's great.

Okay. That does conclude the list of witnesses.

This isn't a regulatory item, but we will close the record at this point and proceed to Board discussion.

We heard a lot of witnesses, but I have to say for \$5 million, we sure made a lot of people interested.

(Laughter.)

CHAIRPERSON NICHOLS: So that was -- I'm very

glad. Really, it's a sign of the importance of making even a small investment in the rural communities. I'm very, very proud that we're in a position to do that.

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I'm going to just call on Board members for any thoughts, comments, or questions that they may have, starting at the far end with Supervisor Serna.

BOARD MEMBER SERNA: Great. Thank you, Chairman Nichols. And first, let me start by thanking staff, as many of the witnesses have, for all the work they've done on the funding plan.

I wanted to ask a question as kind of a follow up from the comments expressed by my local air pollution control officer Larry Greene about the administrative costs associated with EFMP, and wanted to know in particular what are we doing in the current pilot to address that, so that we can advance the expansion of it in the future?

This is -- the plus up represents the largest single project increase from last year. And so I think that expresses a lot of success already. And so as we heard from Larry and others, there's a lot of interest to perhaps expand that to other areas in the State. So I'd like to hear from staff about what we're doing to address the administrative costs.

PLANNING AND REGULATORY DEVELOPMENT SECTION

MANAGER GREGOR: Yeah. We are very excited that there are other air districts that are looking at expanding this program for targeting consumers in disadvantaged communities, especially low and moderate income.

Regarding the \$20 million for this pilot -- for these pilot projects and the expansion, what we plan on doing is work -- working with CAPCOA and the interested air districts on understanding the types of programs that they want to develop in their regions, understanding that the cost that will be to launch these programs.

We do recognize that San Joaquin and South Coast have put a substantial amount of money of their own into these programs and not all districts have those funds available, so I think we will -- you know, we look forward to working with those air districts to understand the types of programs that they want and to figure out how to adjust the funding amounts to meet those needs in the region.

CHAIRPERSON NICHOLS: Are you saying that administrative costs could be considered in these programs then, because that was I think the question?

BOARD MEMBER SERNA: Right.

PLANNING AND REGULATORY DEVELOPMENT SECTION

MANAGER GREGOR: Yes, we do allow administrative costs for these pilot projects.

BOARD MEMBER SERNA: Is it possible we could hear a report back, at some point, in the not-too-distant future about progress in that regard?

PLANNING AND REGULATORY DEVELOPMENT SECTION MANAGER GREGOR: Yeah, I think so, absolutely.

BOARD MEMBER SERNA: Thank you.

CHAIRPERSON NICHOLS: Good. Thank you.

Mr. Gioia.

BOARD MEMBER GIOIA: First, thanks to the staff. It's apparent that folks around California think you worked really hard in the outreach. So that was -- it's great to see that.

And I know the Executive Officer of the South Coast Air District I think put out a challenge about getting more money. So I calculated that 45 percent of the State's residents live in the South Coast Air District. So if you were successful in giving every legislator in your district to support additional funding, I think we'd do fine. So maybe that's an additional challenge. I know Judy you're working on that down in the South Coast.

So -- but I agree, it's how to continued to get more funding. And then the 350 that we have hasn't been finally approved. So we're all assuming that's going to happen. So I just have a few comments. And again, it

doesn't take away from really all the great work, but just sort of a little more detail on a few things.

A few speakers referenced the fact of the importance of additional outreach in disadvantaged communities. And I think it is really important to think about the other things that are necessary to make our part of it successful, right?

So we have the increased rebates, which I think is very important and very good. But for folks in many disadvantaged communities to take advantage of it, a couple things need to happen, right? The biggest gap we have in charging is to be able to charge at home is in multi-family. And as a higher percentage of folks who live in disadvantaged communities, lower income residents who live in multi-family housing, whether it's rental housing, whether it's a condo.

And as we know, there -- that -- there's very little charging opportunities at home in multi-family. So if you live in a multi-family apartment, you're not going to make that decision to buy an electric vehicle, even with a rebate, unless you build up the charging infrastructure in multi-family.

So I think we need to think about, that which gets to -- and I know some of the investor-owned utilities' proposals to the PUC to build out charging

networks could include multi-family. So thinking about a strategy to complement that, we take it for granted, you know, single-family homes, people can put in charging, but they can't when they're at the mercy of the property owner in a multi-family. So that's really important, I think, how do we think about that? So some thoughts there.

Second, the outreach to low-income communities as folks talked about is really important as well. It's not -- even among quote middle class or upper middle class folks, our program is not that well known. The challenge of making the rebate program more understood and known in low income communities is really important. So it's how we also put the resources to work with folks who are already work -- we don't need to recreate the wheel.

Folks are already working in those communities, great community based organizations. How do we help them in their work, whether it's a social service, a health agency, through a public agency, a nonprofit, how do we help them inform people as part of financial literacy issues and creating some opportunities.

Third, I noticed something that, Professor

Sperling, you're doing some research on at UC Davis is the whole point of sale issue, right? There's -- the most important time when people make a decision about whether to buy an electric vehicle. And we've talked about this,

there's not particularly a lot of help at the point of sale point, right, with dealers. It's not meant to be critical of the manufacturers, but there are issues there.

And so one of the things that -- so we need more work there, but the prequalification I think is an important thing to look at, because a lot of folks may not be able to afford waiting for the rebate check. And then we don't know what the downpayment is going to be by dealerships. They may set -- as you know, a lot of times the downpayment on these for either a lease or a purchase is in excess of the rebate, right? And so folks may not be able to afford that.

So we need to think about the prequalification and how to make that point of sale better. And I know while the funding allotment, assuming we get it, is greater this year than last year, the decrease from 100 percent to 50 percent in the heavy -- in the bus and truck for pilot programs, I mean, I think this is a really important time to continue with having a higher percentage. And I would support the 75 percent. And if we can, you know, see what the discussion is here today on this.

Because as the legislature is considering extension of the GHG goals beyond 2020, I think we need to show across the State, and it's important to many

legislators around the State, that we're making -- and I think we're being very good about this, the -- but increasing the investment in disadvantaged communities around the state. You know, getting the support in the State Senate and the -- well, in the Assembly, excuse me, because it passed the Senate -- the Assembly for the extensions beyond 2020, I think it's going to be important to show that we're continuing with our investment.

So I would propose that we go to the 75 percent, and that we specifically look within this how we -- are firm about resources on outreach into disadvantaged communities. And the last point on the going 75 percent, I think that's consistent with what we've talked about the freight strategy -- clean and sustainable freight strategy, because really it's disadvantaged communities that are often near ports, near railyards that are bearing the burden of the -- of diesel emissions and of the -- from existing polluting trucks. So those are my comments.

And I don't know if you want to respond to anything about the outreach or what we could do on strategy, but I think those are relevant -- those are all important, I think, to include.

CHAIRPERSON NICHOLS: Yeah. You could talk about the outreach strategy around the funding here, but I would want to point out that we're part of a much broader

administrative-wide effort --

BOARD MEMBER GIOIA: Right.

CHAIRPERSON NICHOLS: -- on EVs and zero emission vehicles, in particular, which not only includes the Energy Commission, but the Governor's office and a number of other agencies that are all doing things that are sort of aimed at reaching a very high target of zero emission vehicle penetration. So just to kind of put that in a little bit of a bigger context.

BOARD MEMBER GIOIA: Right.

CHAIRPERSON NICHOLS: But you can go ahead and talk about the grants.

MOBILE SOURCE CONTROL DIVISION CHIEF WHITE:

Yeah, thank you Chairman Nichols. You know, certainly, we recognize and appreciate the need for rigorous outreach in disadvantaged communities. And, in fact, I think if you look at the structure of the low income programs in the light-duty sectors, we -- as we work with the implementers of those, they all have a very strong outreach component associated with them building on existing networks in communities that they have with preexisting programs.

And so we're fairly -- we're very confident that that will yield tremendous success in the communities in which those programs are implementing. But I think more

broadly, and as Chairman Nichols noted, I think there's a broader recognition in the administration that to maximize the benefits and awareness of these funds, implementing agencies need to begin to dedicate resources towards a more effective outreach much more broadly. And ARB is certainly one of those agencies where, as we work with the administration and talk with the administration, we expect to be able to put some resources towards that in the upcoming year, which I think will really help achieve and address many of the comments that we heard today.

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BOARD MEMBER GIOIA: And I think -- and I realize that there are things that others are doing that will complement what we're doing. And that gets into also the resources to include, and I stress this, the infrastructure at multi-family units, because again, if you don't have the ability to charge at home, the rebate is not going to make any difference to you, and it's going to, you know, cause you to make other choices. And then you're not getting strong support at point of sale, right. So I'm just -- the cumulative effect of all of those things is that it's one thing to have the rebate, it's another thing to actually get the rebate out the door into the families and individuals who are going to actually use it and buy the vehicles.

MOBILE SOURCE CONTROL DIVISION CHIEF WHITE: Let

me give just one quick perspective on that, because we agree with you completely on that. And as we've talked about some of the programs that we have in place, I think EFMP is really the best place to look. And you'll note that there's a tremendous increase in proposed funding from 2 million to 20 million next year, because we recognize that one of the -- we believe one of the most effective ways to get these vehicles into communities is to take an old vehicle off the road and provide the assistance that consumers need -- low income consumers need to get into the cleaner vehicle.

So as part of that, the program includes quite a bit of financial education, case management for participants, so they understand all of their options, not just on the financing but through the entire transaction process. We've had -- we've begun discussions about can we take the CVRP rebates and make them assignable at the time of sale, so that that rebate can come into the initial transaction up front.

And so -- and we've also included charging opportunities as part of those grants for individuals who purchase plug-electric vehicles. So as we think about that with the money that ARB has, I think many of those elements are embodied in the programs that we have.

Certainly CEC is doing a lot as well, much more broadly in

terms of how to build the multi-unit dwelling infrastructure throughout the State, not just in conjunction with our programs, but for all vehicle deployments that we see.

BOARD MEMBER GIOIA: And I realize there's new standards for the construction that are going to result in that.

CHAIRPERSON NICHOLS: I'm going to cut the dialogue here for a moment.

Okay. Supervisor Roberts.

BOARD MEMBER ROBERTS: Thank you. First of all, I think Supervisor Gioia raises some good points. And it does -- it's not just, you know, providing the funding, especially getting into the multi-family, and maybe we need to incentivize, especially the new things that are coming on line, so the -- it's much easier if you can design this thing at the start. Very difficult to retrofit many of these facilities no matter how well intended, but it's a worthy goal. No question about it.

I think the rural bus district issue speaks for itself. Never has so little made so many so happy. It -- and I think that's -- that's excellent. I mean, it's an extension of what we've been doing with buses in school districts for a long time, getting kids out of the diesel and getting them into something that's far cleaner. So it

doesn't -- you know, it's something that's well outside of my area, but I think that was good.

A couple things. When we last visited this, the definitions of disadvantaged --

(Ringing through the speaker system)

CHAIRPERSON NICHOLS: Are we waiting for an announcement?

BOARD MEMBER ROBERTS: Somebody is trying to edit me, I can tell.

(Laughter.)

CHAIRPERSON NICHOLS: That's not a sound I've heard here before. That's -- I'm curious.

BOARD MEMBER ROBERTS: In any event, the -- I'm curious about the dis- -- the definition of disadvantaged and how it may have evolved from last year.

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER ROBERTS: There were some anomalies, if you remember, in just the way we were looking at census tracts and things.

CHAIRPERSON NICHOLS: Well, I was going to raise that comment with respect to the recommendation, in terms of changing the percentage, but it is an interesting point that as we're using the term technically now, the disadvantaged communities that we're targeting with SB 535 for the 25 percent and 10 percent are the communities that

not only are low income but also are -- score at the top of the scale, if you will for unemployment, for concentrations of people who don't speak English. You know, there's a variety of tests that go into it.

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Plus, then they have to also have the worst pollution, not just air pollution, but they consider water pollution, and landfills in the area and so forth. Undoubtedly, those communities are deserving of special consideration under our funding. But the question with the truck money is after you've already met that test, and you're just looking at where to put the rest of the funds for truck and bus, anybody who's living in a community that has a lot of trucks and buses in it is experiencing a disproportionate amount of pollution exposure by definition. They may not also be the very poorest and the other, you know, meet all the other sociological tests, but they are people who are experiencing a disproportionate amount of pollution that we can do something about.

So I guess that's my only concern about changing percentages as a -- whether that is really going to be the ultimate test or the ultimate way of getting to where we need to go overall.

BOARD MEMBER ROBERTS: Madam Chairwoman, I couldn't agree with you more, because we're seeing that

there's not necessarily that exact one-to-one correlation that frequently the impacts may be in communities that we couldn't qualify in, and I'd like to be able to do that.

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I don't know if we've actually mapped out, based on whatever new definition we have, but the shot came last time, where all of a sudden we looked at a map and bears -- didn't bear any resemblance to what I would -- what I knew to be disadvantaged communities in San Diego County.

And I don't -- have we mapped whatever new definition is operative now?

CHAIRPERSON NICHOLS: There is an adopted map now that is being used.

DEPUTY EXECUTIVE OFFICER CHANG: Yes. So the definition of disadvantaged communities is done by the Secretary of CalEPA, and those definitions haven't changed from the last time that the Board saw them.

BOARD MEMBER BALMES: They're using CalEnviroScreen, right?

DEPUTY EXECUTIVE OFFICER CHANG: Exactly. Right.

CHAIRPERSON NICHOLS: Right.

BOARD MEMBER ROBERTS: So we're operating the same way we did last time?

DEPUTY EXECUTIVE OFFICER CHANG: Yes.

BOARD MEMBER ROBERTS: Well, I've got a problem

with that. As we saw last time, it just didn't -- it made little or no sense when we applied that to San Diego with respect to where our disadvantaged communities were. Too many of them were left out of it?

CHAIRPERSON NICHOLS: Well, they did go back and relook at some of the classifications, based on the fact that some were missing data. And so I can't speak to all of the -- all of them, but they didn't change.

DEPUTY EXECUTIVE OFFICER CHANG: It didn't change.

CHAIRPERSON NICHOLS: Okay.

BOARD MEMBER BALMES: I actually -- not in my role as a CARB member but as a professor at Berkeley, I wrote a letter to Gina Solomon and, well, George Alexeeff of OEHHA, with some of these concerns, in particular, the mixing of water and land use issues as well as air pollution. I think it, no pun intended, muddies the waters.

(Laughter.)

BOARD MEMBER BALMES: So I think it --

BOARD MEMBER ROBERTS: Well, we don't have any water, so that shouldn't be a problem.

(Laughter.)

BOARD MEMBER BALMES: That's true actually.

(Laughter.)

BOARD MEMBER BALMES: Anyway, I got back a response from OEHHA that they are considering changes to CalEnviroScreen, but those haven't happened yet.

CHAIRPERSON NICHOLS: It hasn't happened. It has not happened yet.

Okay. Well, duly noted.

Yes.

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BOARD MEMBER ROBERTS: And let me return to the thing that I mentioned at the start.

CHAIRPERSON LLOYD: Yes, your comments about systems.

BOARD MEMBER ROBERTS: The innovation fund --

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER ROBERTS: -- which has some significant amount of money in it, if you had a -- if you were developing a new transportation project that was cable driven, that I am comfort would outperform anything we have from a greenhouse gas standpoint, is that going to be eligible under whatever definition we're using for innovation? And does it have to be connected to a disadvantaged community?

INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER CHRISTENSEN: Supervisor Roberts, thank you. Peter Christensen.

And I appreciate the question, because I've seen

a conceptual drawing of the proposal in San Diego, and I think it's quite interesting. It has a couple of opportunities for benefits. One is that it's a zero emission technology, as I understand it. It's electrically driven, much like a gondola that we see in many of the other areas in California, but it also provides opportunities for VMT reduction.

BOARD MEMBER ROBERTS: Yep.

INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER CHRISTENSEN: I know that our staff are looking at those emission reduction opportunities and looking at what the benefits are and trying to find the right fit within our portfolio of funding programs.

I think it's very consistent with many of our projects. It's obviously not a bus, so it's not a bus pilot.

BOARD MEMBER ROBERTS: No. No, that's what -- it's better than a bus.

(Laughter.)

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INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER CHRISTENSEN: Exactly. And I think that it provides the emission reductions that are consistent our project, so it's something that we're looking at.

BOARD MEMBER ROBERTS: Well, I guess -- and I'm not asking that we assign money to it, but I'm just asking

is the door open to use these funds or is our definition of innovation maybe not innovative enough?

(Laughter.)

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funding plan.

INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER CHRISTENSEN: Yeah. And so we're still in the process -- we're in the very early process of designing our solicitation for the truck and bus pilot.

BOARD MEMBER ROBERTS: Okay.

INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER CHRISTENSEN: We've had many community work group meetings so far, but we don't anticipate that that will be finalized for probably another couple of months yet. So we do see that there's an opportunity for that.

BOARD MEMBER ROBERTS: So the definition doesn't preclude something like that from perhaps being submitted?

INNOVATIVE HEAVY-DUTY STRATEGIES SECTION MANAGER

CHRISTENSEN: I don't think that that's precluded in our

BOARD MEMBER ROBERTS: Okay. Because I didn't know if we were so tied to buses or conventional sorts of transportation. And, you know, it may -- at the end of the day, your analysis may say that this isn't the solution, but --

CHAIRPERSON NICHOLS: Yes, but there will be a competitive process.

BOARD MEMBER ROBERTS: And I have -- I would love a competitive process. That's what I'm saying. And we're looking at this as how do we get the hard to get at some of our job centers and other places --

CHAIRPERSON NICHOLS: I understand.

BOARD MEMBER ROBERTS: -- where a whole lot of money to try to do, you know, BRT or something along those lines, where we have to cross freeways and canyons and other things, where this is ideally suited as a transportation solution. So if you'll bear with us. We'd love to work with you and show that there are other tools in the transportation toolbox.

CHAIRPERSON NICHOLS: I think you made the point well.

BOARD MEMBER ROBERTS: Thank you, Madam Chairwoman. Thank you.

CHAIRPERSON NICHOLS: Dr. Balmes.

BOARD MEMBER BALMES: Well, I'll make my comments brief, since we're not even halfway across the Board yet. I wanted to say primarily that I agree with Supervisor Gioia's comments, in particular about the increase -- support for the increase from 50 percent to 75 percent funding going to disadvantaged communities.

I have concerns about our -- about the CalEnviroScreen not perfectly outlining the disadvantaged

communities as I just mentioned. But that aside, I do think that even though there's more money available under this proposal at 50 percent -- you know, we're going from 100 percent to 50 percent, and I am supportive of the 75 percent figure.

CHAIRPERSON NICHOLS: Okay. Mrs. Berg.

BOARD MEMBER BERG: Thank you very much, staff.

It's very exciting to see such a long list of witnesses

and so many in support. So that certainly does indicate,

as my fellow past Board members have mentioned, great job.

I would like a comment, probably maybe even from Mrs. Peter about the legality of the fuel cell exemption. I am for that exemption, but since it was brought up in testimony, as maybe not being within our purview, I thought it might be helpful if you could make mention of that. Oh, Ms. Kerns.

SENIOR STAFF COUNSEL KERNS: Hi. Debbie Kerns legal. SB 1275 did not require a certain deadline for this. It only required that we come to the Board by June 30, 2015. So the plan right now is just to defer that category for three years. And I believe that that is in compliance with this statute, because it didn't require a specific date that it had to be effective.

BOARD MEMBER BERG: Great. Thank you very much for that. And then since the disadvantaged percentage has

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   been brought up, I'm concerned about moving from the 50
    percent. Because of the definition, I don't know what it
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    is restricting, other communities that are highly
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    affected? And so maybe, Chairman Nichols, as you proceed
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    in this discussion, if this is an amendment we want to
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    consider, if somebody could give us some more detail.
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             CHAIRPERSON NICHOLS: Yes, I was --
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             BOARD MEMBER BERG: -- that would allow us to
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   really --
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             CHAIRPERSON NICHOLS: -- going to ask --
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             BOARD MEMBER BERG: I don't know how to think
   about it.
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             CHAIRPERSON NICHOLS: -- to talk more about
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    that --
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             BOARD MEMBER BERG: Okay. Great. I appreciate
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    that.
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             CHAIRPERSON NICHOLS: -- about that issue.
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    thought it would be good to just kind of get all the
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    issues out on the table as we usually do, and then try to
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    focus in on the ones that seem to need further work.
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             BOARD MEMBER BERG: Great. And then my last
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    comment is that the CVRP has been enormously successful as
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   we know. We have been oversold, except for this
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   particular year, and the year is not over yet.
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And so we're keeping all of our fingers and toes

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crossed that we won't have a wait list. And this is a result, as those of us that did attend the Governor's EV summit, and Tom Turrentine's research from UC Davis showing that only 17 percent of car buyers were aware of the CVRP. So outreach is really important. But Dr. Wallerstein's observation is more money is really going to be needed if we're really successful on our outreach.

So somehow we need to mesh to make sure there is a sense of fairness. But it makes me really nervous when we talk about extreme successful outreach, and then very long, long waiting lists, which would really inhibit us from being able to do point of sale. There's a lot of things. So I just want to acknowledge that we're really walking a lot of fine lines here. Very exciting, but still a lot of fine lines.

CHAIRPERSON NICHOLS: I'm going to start at the other end here with Mr. Eisenhut. You don't have to have any questions or comments, but if you do, I'll call upon you.

BOARD MEMBER EISENHUT: Thank you, Chairman Nichols. You took me by surprise.

(Laughter.)

BOARD MEMBER EISENHUT: I just have one comment, very focused and small. By my calculation, fifteen hundredths of one percent of the total investment, and

that has to do with the mobile ag upgrade pilot program, I'm very supportive of this. I'm excited about it. I think this gives an opportunity for small family farmers who want to make a contribution as we turn our attention to mobile ag issues, who want to make a contribution to clean air in the valley to economically have the means to do so. So I think that's an exciting addition to the program, and clearly I support it.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Ms. Miller -- Ms. Mitchell.

BOARD MEMBER MITCHELL: Thank you, Chairman.

I just want to begin by emphasizing the comments that Dr. Wallerstein made about the percentage of monies we're actually getting here at CARB to do the job that we're charged to do, which is reduce the greenhouse gas emissions in the State. But I see a great opportunity here also to combine that charge of reducing greenhouse gases with also reducing criteria pollutants in air toxics, because the mechanisms that we employ to do the one can do the other.

And so I hope that we can get more money, but I also hope that we will all be looking at this in expansive way to get the most that we can get from the money that we invest.

The second point I want to make is that how successful I think we have been with the CVRP program. It's -- you know, we never have enough money for the applicants under the program. I think it's important that we continue that. I agree that the rebate for fuel cells is where it ought to be. This is a brand new car. And when we put electric vehicles on the market we gave that incentive for that brand new technology. And I think that it's appropriate to do that now to get fuel cells up and running on our roads.

And we're doing a lot of work hand in hand with the Energy Commission for hydrogen fueling infrastructure. So all of those things go together. We thank Jim McKinney and his group for the partnership we have the Energy Commission.

Supervisor Gioia raised a very important point about multi-family housing. This is a challenge, I think, for all of us in charging at multi-family housing. That goes hand in hand with charging at the workplace. And I think if we have a good infrastructure for charging at home and charging at the workplace we will have come a long way in reaching the goal that we need to reach to electrify transportation.

Those are my primary points. The point of sale rebate I think needs some study, because we need to keep

the integrity of the program. I think there is possibilities there for fraud, collusion, whatever, and so we need to maintain the integrity of the program. And however we can do that, if we can get more money out at the point of sale that's good, but I think we need to be cautious about how we do it.

So I think that's all I have on my notes. Thank you.

CHAIRPERSON NICHOLS: Okay. Professor Sperling.

BOARD MEMBER SPERLING: I have -- since so many
have spoken and said such wise things, I only have -- I
have one tiny thing and one major comment -- thought.

The tiny one is that on this point of sale issue, the research shows that if you give the money at point of sale, it has twice the impact. And so I understand all the constraints we have about, you know, putting dealers in a position where there's no certainty of the money, and now we're applying all these income constraints. But, you know, a few people have mentioned the idea, well maybe carve out some of it, you know, maybe for, you know, low income, median -- moderate income people, you know, where it would be point of sale in that way. I'm not sure, but I think -- I just want to add my voice to the idea that the point of sale makes a lot -- it makes our money go a lot further. It would be much more effective. So it's

not just a programmatic issue.

Okay. The big idea is that, you know, looking -listening to all these programs that are being developed,
and as the money -- the pool of money increases, I get
increasingly nervous that we're getting too prescriptive.
We're carving it up too much into many boxes. And, yes,
there's certain categories that absolutely make sense, the
CVRP, you know, for light-duty vehicles and some programs
to spur the heavy-duty near-zero or zero emission
technology.

But there's a whole lot of things that can be done out there that are much less expensive and could have a lot of impact. And many of those -- some of those ideas were presented, so I'm kind of trying to bring together all of those ideas that people were talking about. People were talking about more investment in bikes. And I happen to agree that that's a really good investment. I've ridden a bike in L.A. on the so-called bike route and had a freeway lane cut right across -- you know, a freeway ramp cut right across it, and, you know, cars accelerating 60 miles per hour. That's not exactly my definition of a desirable bike opportunity.

(Laughter.)

BOARD MEMBER SPERLING: So, you know, clearly I come from Davis where the community has invested for

decades in building up a very safe, protected infrastructure for bikes. And I think that the State should be investing much more in this. And I've talked to Caltrans and the Transportation Commission, and, you know, it's hard to get things restructured. And there's all these formulas. But this is an opportunity here, because it doesn't require huge amounts of money, but it does require substantial -- so anyway, so there's the bikes, there's the neighborhood electric vehicles, and I know there's some interest in San Diego, there's some interest in the South Bay COG where they've done some demo projects, and this is relatively low cost.

And by the way, these tend to be more amenable to low income moderate income people. It's a way of providing it. You've got the new mobility options, where not Uber and Lyft like they are now, but, you know, where they do actual ride sharing. So Uber pool, Lyft line and then there's a lot of micro transit companies getting started.

There's the vanpooling that we've talked -- heard about. There's the ag vehicles. We could even put, you know, Board Member Roberts -- Supervisor Roberts gondolas into that category perhaps. But the idea is that we ought to -- I think we ought to think seriously about breaking up these boxes, these boundaries, and categories, and

making it more competitive. And many of these can be on a cost effective basis, because we're not talking about R&D, where it is hard to do cost effectiveness. We're talking about commercial activities, but just doing a lot more of it and a lot better.

And so the idea is more of a focus on innovation, in a cost effective way, and more competitive in that sense. And, you know, I'm not saying go whole hog into this, but if we're going to do a three-year plan for sure, we should be thinking about it a little more strategically and a little more competitively. And as Dr. Wallerstein said, there's lots of money, but this money can disappear very quickly and very easily, as we've seen. So I think we're getting to the point where we have a responsibility to think about it, and in this more cost effective way.

CHAIRPERSON NICHOLS: Okay. Mr. De La Torre.

BOARD MEMBER DE LA TORRE: Thank you. Just a couple of things. On the EFMP, or trade in, or you know, taking these older cars and getting rid of them, I know at a previous conversation I raised the possibility of us working with these nonprofits that buy cars from -- they don't buy. They take donations of cars and the people get the tax break for the value of the donation from the nonprofits. There's a whole lot of cars there that I think are probably beat up and old, otherwise we wouldn't

be giving them away for that tax benefit. And so I think that that's a place -- you know, I don't know if it would qualify with our current framework, but it seems like there's a whole of lot of cars there that rather than have them put those cars back on the street, somehow we could take them in and get rid of them.

Vans. I know there isn't a passenger van electric vehicle. I've asked a lot of folks about it, but I think -- or smaller bus, in order to help with transit. I think that's something that, you know, we should try to find a way to support. It could be vanpools. It could be some kind of localized transit service that feeds the bigger transit lines. It's just -- you know, to me getting that many people into a vehicle and getting them around makes a lot of sense. If we -- short of a full-sized bus.

And there is some interest out there. I've -- in my rounds of talking to folks, they seem to be very interested. There just isn't one of those vehicles out there right now. And that's something that I think we could bring some value added with our monies and working with the manufacturers.

On the rural school district funding, now Prop 39 is dedicated for schools and school districts. And to this point, we haven't done a whole lot with schools and

school districts, because they've got that money. Is -does this mean we have a change in attitude toward schools
and school districts or is this because of the rural
nature of these vehicles? I mean --

CHAIRPERSON NICHOLS: We've been working on buses for a long time, school buses.

BOARD MEMBER DE LA TORRE: So it predates Prop 39.

CHAIRPERSON NICHOLS: Oh, yeah. Yeah. Yeah, by many years.

BOARD MEMBER DE LA TORRE: And it does not indicate that we're looking at doing more with school districts than this.

CHAIRPERSON NICHOLS: We even have used fine money, you know, from settlements, directed them towards turnover of the bus fleet. We're getting pretty close to having gotten rid of most of the oldest, dirtiest buses in California, because of a long paydown period. But as you know, a lot of school districts don't have buses at all or don't have their own buses. So it's just been a specialized area that we've worked on.

BOARD MEMBER DE LA TORRE: All right. So it doesn't indicate, in any way, that we're changing our approach to this, because they do have that pot of money and no one else does?

CHAIRPERSON NICHOLS: No.

BOARD MEMBER DE LA TORRE: Not that I don't want them to have it, but they've got it. So the bang for our buck is, I think, better elsewhere, in general. And then on this 50 and 75 percent question, I'm open to it. Frankly, the big jump in the dollar amount -- you know, one of my favorite sayings is I'd rather have X percent of something than 100 percent of nothing.

This is one of those situations where the jump is so big and the dollars are so much more that to me, going down to 50 percent -- and that doesn't mean we wouldn't go over 50 percent, that we could just do the 50 percent.

We'll see what comes out over the course of the year and then next year we revisit when we see what the dollar amounts are next year.

The other thing about the goods movement sector is that those vehicles are all over the place. So they could be spending a substantial amount of time in the communities we're talking about, communities like mine, just not -- they're not parked there or whatever the criteria is. They're not domiciled in that place and therefore they wouldn't qualify otherwise.

So I see the need for having that flexibility, certainly in this first year where we're having this bump up. So I'm okay with it for year one. And then let's see

where we are. Let's see what the data shows.

Thank you.

want to commend staff, as everybody has, but you have brought together some coalitions in my memory that have not necessarily been so strong. And we're really going to need them in the future to make this all succeed. So I appreciate the opportunity to have listened and worked a little bit with some of these coalitions. And thank you for your efforts, and I know they're going to put a lot of effort into the next month or two. We'll need you very much.

This is an excellent plan. I think it has some great opportunities. And even though Mr. Cunha said some nice things, I am very supportive of agriculture and believe that one of the programs has some opportunity. The vanpool for workers, it will be great to follow this along and see how successful we are, and then hope to maybe get some more funds in another year to look at some of the agricultural communities that are in maybe big districts, but are somewhat forgotten. And any of you who have been in those agricultural districts and looked at the conveyances that people drive or use to move from one site to another, you'll know those are the people we need to target and to help provide ride in a clean safe van.

I think we have some little pockets of agriculture throughout California that could benefit by this type of a program. And so you're going to be a great beginning in the San Joaquin Valley, but we could look at some of the other parts of California as successors to a good program.

And with that, I'll stay thank you. And I'm ready to support the staff recommendation.

CHAIRPERSON NICHOLS: Great. Well, just to bring it back to that point, I certainly heard a number of suggestions of things that we could be doing more of. Particularly I, too, am intrigued by opportunities in the areas of niche kinds of technologies that could make a big difference that we're not yet doing much with, including the vans, but also things like bicycles, which I see a lot of future for.

I think it's important that we do recognize that this is a new program. This is being ramped up substantially. The number one thing that we have to do is to demonstrate that we can spend the money well. It's not a question of demand or need. We know both of those things exist very, very broadly. It's a question of what happens when the auditors come. And the fact is that we're going to be audited. In fact, we should ask for an audit ourselves before it's done to us, because this kind

of support and enthusiasm you can get just disappears, one Solyndra, one -- you know, one technology that we invest in that blows up somewhere, and suddenly, you know, we're the laughing stock.

I hate to be the conservative on this group, but in this case I really am. I just want to be -- I want to be careful that we do -- that we build on our successes. I think there's some pretty bold things already included in this proposal, certainly some new ideas that have been pointed out. And I think they've all gotten a lot of support and enthusiasm for them, but I think the staff has had a -- has had a really interesting time and has done a very creditable job of balancing a lot of different options.

I do want to mention also that we need partners at Caltrans. We need partners at the Energy Commission. We have a lot of partnership there with the fuel side of things. They are investing with the 118 money, the AB 8 now money and equal amount -- equal to ours roughly in terms of charging and fueling and so forth. There's a lot of money going into deploying things like multi-family charging out there.

MR. McKINNEY: Oh, very much so. Yes, Madam Chair.

CHAIRPERSON NICHOLS: So anyway, but we -- and we

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   know that our transportation planning system is stressed
    in a variety of different ways, and that we can play a
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    role in helping with some things that aren't just
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    hardware. But we are unique in being the hardware -- the
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    hardware agency. We are the people who can fund the
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    technologies. And so I do want to play to our strength in
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    that regard.
             So having said that, unless somebody feels
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    compelled to do something to amend the resolution, I would
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    be happy to entertain a motion to approve the staff
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    proposal.
             BOARD MEMBER ROBERTS:
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                                    I move it.
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             BOARD MEMBER MITCHELL: Second.
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             CHAIRPERSON NICHOLS: All in favor, please say
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    aye?
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             (Unanimous aye vote.)
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             CHAIRPERSON NICHOLS: Any opposed?
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             Any abstentions?
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             Great.
                     Thanks very much all. I look forward to
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    having some great proposals come in and seeing the funds
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    go out as soon as we get our budget.
             And now, we'll take a one-hour break. Let's try
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    to be back here by 2:00 and it will really be 2:05.
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             Thanks everybody.
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             (Off record: 1:04 PM)
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               (Thereupon a lunch break was taken.)
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AFTERNOON SESSION

(On record: 2:07 PM)

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CHAIRPERSON NICHOLS: Good afternoon, ladies and gentlemen. We're ready to resume the meeting. Some of our Board members are finishing up their lunch in the back, but they can hear us also. So we are ready to get back to work.

The next item on the today's agenda is a set of proposed modifications to the Cap-and-Trade Regulation.

The Board first considered the Cap-and-Trade Regulation in 2010. Since that time, the regulation has been updated several times and we've seen many implementation milestones, including our 100 percent program compliance in 2014, and three joint auctions with our partner Quebec. The successful implementation of this program establishes an important mechanism that can continue to reduce greenhouse gas emissions past 2020 as part of the newly established mid-term emission targets.

The Board may recall that existing Board resolutions direct staff to consider and propose new compliance offset protocols, and periodically review and update existing compliance offset protocols. Staff presented the proposed amendments before us today in December of 2014.

These amendments include the addition of a new

offset protocol for rice cultivation projects and an update to the existing forestry protocol to include regions of Alaska.

ARB staff developed the offset protocols through an extensive public process. And this package today incorporates this Board's direction, public comments on the December 2014 rule-making package, and further discussions with stakeholders. Collectively, the proposed amendments will improve clarity for offset project developers and provide additional cost containment opportunities for covered entities.

The proposed amendments before us today represent continued movement in California's Cap-and-Trade Program and will ensure that our program continues to provide an economic incentive for major investment in cleaner, more advanced technologies, while also giving businesses the flexibility to choose the lowest cost approach to reducing emissions.

I will now ask Mr. Corey to introduce this item.

EXECUTIVE OFFICER COREY: Thank you, Chairman

Nichols.

So today, staff will present for Board consideration a set of proposed amendments to the Cap-and-Trade Regulation. These modifications clarify implementation of the compliance offset program, address

stakeholder concerns, respond to Board direction, and result in an increase in the supply of compliance instruments for use by covered entities. As part of the staff presentation, we'll also provide an update on the status of the offset program.

In response to the December 2014 Board resolution, staff continued to work with stakeholders, which included holding a public workshop to develop modified regulation and protocol language for Board consideration. The modified regulation language and protocols were released for public comment on May 20, 2015 This built on the extensive public process we engaged in to develop staff's proposal.

Staff is requesting the Board to vote to adopt the amendments that would continue to enhance the effectiveness of the Cap-and-Trade Regulation.

Now, Arnab Pal from the Climate Change Program Evaluation Branch will begin the staff presentation.

Arnab.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST PAL: Thank you, Mr.

23 Corey.

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Good afternoon, Chairman Nichols and members the Board.

This presentation will focus on proposed amendments to the California cap on greenhouse gas emissions and market-based compliance mechanisms regulation, otherwise known as the Cap-and-Trade Regulation.

These targeted amendments include the addition of a compliance offset protocol for rice cultivation projects, an update to the compliance offset protocol for U.S. Forest projects, related regulatory changes, and process for transitioning rice early action offset credits.

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AIR POLLUTION SPECIALIST PAL: For this presentation, I will provide a brief overview of the Cap-and-Trade Offset Program. The presentation also includes an overview of the regulatory timeline and the extensive public process leading to these amendments.

Additionally, I will summarize the environmental analysis prepared for the proposed amendments and offset protocols, in accordance with the California Environmental Quality Act, or CEQA. The final portion of this presentation will present staff's recommendation.

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AIR POLLUTION SPECIALIST PAL: Greenhouse gas emissions from regulated entities have a compliance

obligation under the Cap-and-Trade Program. Last year,
the Cap-and-Trade Program reached two milestones.
California linked with Quebec on January 1st, 2014 and has

held three successful joint auctions.

Second, the first annual deadline for surrender of compliance instruments equal to 30 percent of 2013 emissions with a compliance obligation was in November of 2014 when 100 percent of the covered entities met their compliance obligation as required by the regulation.

Beginning this year, transportation fuel and natural gas suppliers will be phased into the program.

Looking forward, the next Cap-and-Trade compliance deadline is November 2nd, 2015 when entities will need to surrender compliance instruments equal to the remaining 70 percent of their 2013 emissions and 100 percent of 2014 emissions.

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AIR POLLUTION SPECIALIST PAL: The Cap-and-Trade Regulation includes elements designed to minimize compliance costs without compromising environmental integrity. Offset credits may be used to meet up to eight percent of an entity's compliance obligation each compliance period. Allowing offsets increases the supply of compliance instruments in the market, making the offset program an important cost containment mechanism under the

Cap-and-Trade Program.

Including offsets in the program also spurs voluntary emissions reductions outside cap sectors and supports the development of innovative technologies. The reductions achieved by offset projects provide important environmental, social, and economic benefits by reducing greenhouse gas emissions and supplying green jobs inside and outside California.

Emissions reductions achieved by offset projects must meet rigorous criteria to be approved as a valid compliance instrument. Offsets must be real, additional, permanent, quantifiable, verifiable, and enforceable. AB 32 and the Cap-and-Trade Regulation require any reductions used for compliance to be beyond what would otherwise be required by law, regulation, or legally binding mandate, and to exceed what would otherwise occur in a conservative business-as-usual scenario.

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AIR POLLUTION SPECIALIST PAL: The offset program and the original four compliance offset protocols were adopted as a part of the original Cap-and-Trade Regulation on October 20th, 2011. Staff worked for almost two years establishing the program, which included developing materials such as forms, instructional guidance, training materials, and internal procedures and getting the first

ARB-accredited offset verifiers trained and ready to review projects prior to issuing the first ARB offset credits on September 23, 2013.

To date, ARB has issued more than 20 million ARB offset credits to over 125 individual projects, of which almost 1.7 million were retired to meet annual compliance obligations in November 2014.

The 1.7 million represents approximately four percent of the total compliance instruments due last fall. Additionally, almost 100 verifiers have been trained and accredited, 18 verification bodies accredited, and three offset project registries approved to help administer the program.

The Board has approved one new and three revised offset protocols developed by staff since the initial adoption of the regulation.

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AIR POLLUTION SPECIALIST PAL: The offsets program is still relatively young and still maturing. There's been a steep learning curve for project developers, verifiers, and approved offset project registries who are accustomed to working in the voluntary offset market.

The compliance offset program is more stringent to support a regulatory carbon market, and includes

regulatory requirements and oversight, which results in stricter adherence to Board-approved protocols.

Because offset developers, verifiers, and offset project registries are still shifting to a compliance offset program process, ARB currently performs audits on 100 percent of projects to protect the integrity of the program and the investment in offsets.

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AIR POLLUTION SPECIALIST PAL: ARB has met all regulatory timeline requirements for issuing ARB offsets to compliance offset projects and has eliminated the backlog of early action projects for all project types except forestry.

Forestry projects have proven to be more complex than other projects to review. ARB has recently brought on additional full-time staff and has redirected internal staff to complete processing the early action projects by this fall. In the coming weeks, staff will be contacting forest early action project developers with estimates for when their projects will be reviewed.

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AIR POLLUTION SPECIALIST PAL: Since the Board's initial consideration of the Cap-and-Trade Regulation in 2010, the Board has issued several resolutions directing staff to review compliance offset protocols and proposed

changes as needed. Three of the key Board resolutions are summarized on this slide.

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AIR POLLUTION SPECIALIST PAL: Staff is proposing a sixth compliance offset protocol for rice cultivation projects and an update to the existing U.S. Forest Projects protocol.

These protocols are incorporated by reference in the proposed amendments and are being considered by the Board as a part of this rule-making package. Staff is also proposing modifications to the requirements for early action offset credit transition for rice cultivation projects in the regulation.

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AIR POLLUTION SPECIALIST PAL: After workshops and stakeholder consultation, staff began the formal process for this rule-making on October 28th, 2014 by releasing the proposed amendments to the regulation, including the rice and U.S. Forest protocols, as well as all supporting documentations in accordance with SB 1085 for a 45-day public comment period.

In response to Board direction, staff presented a set of proposed amendments to the regulation at the December 2014 Board hearing. The Board approved Resolution 14-44 directed the Executive Officer to

consider additional modifications to the proposed amendments as a part of a subsequent 15-day rule-making package. The Board also directed the Executive Officer to complete the environmental review process by preparing written responses to all environmental comments received.

On February 20th, 2015 staff held a public workshop to discuss the proposed protocol modifications. Following the workshop, staff posted the 15-day proposed modifications to the regulation and the rice and U.S. Forest protocols, and placed the revised rice and U.S. Forest protocols along with supplemental documentation into the rule-making record for public consideration.

The comment period for the 15-day regulatory package ended on June 4th, 2015. On June 15, 2015, ARB posted its responses to environmental comments received in accordance with ARB's certified regulatory program. At the end of this presentation, we will ask that you consider adoption of this regulation and direct staff to complete the Final Statement of Reasons for submission to the Office of Administrative Law by the end of August 2015 with an anticipated effect date of late this year or the beginning of next year. Staff will also be preparing updates -- updated guidance to ensure all stakeholders have a common understanding of the updates.

AIR POLLUTION SPECIALIST PAL: As I mentioned, staff is prosing a new compliance offset protocol for rice cultivation projects. This is the first crop-based offset protocol considered by ARB. Conventional rice cultivation practices with flooded rice paddies serve ecological functions as man-made wetlands; but also generate anaerobic conditions that enhance methane production and emissions.

Methane is a potent, short-lived climate pollutant. The proposed protocol uses the DeNitrification DeComposition, or DNDC, model to quantify greenhouse gas emission reductions from changes in rice cultivation practices that maintain yields and preserve current associated ecological benefits.

Potential greenhouse gas emission reductions are estimated to range from 0.5 to 3 million metric tons carbon dioxide equivalent through the year 2020.

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AIR POLLUTION SPECIALIST PAL: There are 6 major rice producing states, including California, the Gulf coasts of Louisiana and Texas, and the Mississippi Delta primarily in Arkansas, but also extending to Missouri and Mississippi.

Because of geographical differences, it is important to tailor suitable compliance practices based on

geographical location and regional business-as-usual farming practices. Staff identified two compliance practices for the California rice growing region; switching from wet-seeding to dry-seeding and early drainage in preparation for harvest.

Staff is also proposing two compliance practices for the mid-south states; cyclical wetting and drying of the rice field during the growing season, and early drainage in preparation for harvest.

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AIR POLLUTION SPECIALIST PAL: Staff is also proposing several other modifications to the protocol in response to comments received during the 45-day comment period, Board direction, and new information. These streamline and improve the accuracy of the protocol, including: One, providing detailed methodologies for calculating soil properties from data obtained from the SSURGO and STATSGO2 databases; two, allowing the use of weather station-based reanalysis products as a first source of data to simplify account for missing weather data; and three, providing new methods for calibrating the DNDC model that increased the accuracy of the model by incorporating data from project reporting periods; and four, reducing the number of DNDC runs needed.

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AIR POLLUTION SPECIALIST PAL: I will now provide a brief update on the measures ARB is proposing to help implement rice cultivation projects. Staff is proposing to provide a conservative, fixed, structural uncertainty value instead of relying on a value that was dependent on the total project acreage participating, which will allow for the elimination of the previously required two-step offset project data report.

Staff is also proposing to provide quantification tool for use by participating farmers to simplify data input, quantify emissions reductions, and provide record keeping capability consistent with the proposed protocol requirements. This will be ready for beta testing this fall with the final version potentially available by the winter.

Finally, we are undertaking a limited term pilot program to provide funding to cover the cost of verification pending Board approval of the rice protocol. This would aid ARB's evaluation of the best methods for alternate less intensive verification of rice cultivation projects that would retain the existing level of rigor in the compliance offset program's verification process.

As with all protocols, staff will update the Board at least annually on the status of the rice protocol as directed in Resolution 11-32. And as with other

adopted protocols, staff will make rice project data, including location, available for all stakeholders to track the implementation of this protocol.

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AIR POLLUTION SPECIALIST PAL: Many of the proposed updates to the existing U.S. Forest protocol are technical updates that reflect the latest science. The first update expands project eligibility to regions of Alaska. Data required for implementing projects in Alaska is now available from the U.S. Department of Agriculture Forest Service Forest Inventory and Analysis National Program making it possible to expand this protocol. Fifteen-day modifications incorporate the final data required for mill efficiency and wood products generated.

Staff is also proposing updates to the common practice values in the assessment area data file used for establishing the baselines for improved forest management projects on private lands. This update is also based on updated data from the Forest Inventory and Analysis Program. These updates are made approximately every five years, and this is the first time staff is updating these values since the protocol was originally considered by the Board in 2010.

Staff originally proposed the updates to the common practice values as a part of the quantification

methodology updates considered by the Board last year.

Staff is proposing them again as a part of this package.

This additional time was provided to ensure stakeholders had sufficient opportunity to review and comment on these proposed technical updates.

This version also includes a change to the classification of high and low site class productivity codes to bring them into alignment with the stratification of site classes used in the updated common practice values. Like the updated common practice values, staff is proposing this change for the second time.

Staff is also proposing updates to the minimum baseline level calculations to raise them to be consistent with the level of rigor of existing voluntary protocols. The update allows -- also allows areas that have experienced natural disturbance, such as wildlife or wind storm, to be designated a distinct LMU. Finally, areas designated as high conservation value forest may be designated a distinct LMU to help minimize the impact of the minimum baseline level change on projects.

Following Board direction, ARB has worked with the Department of Forestry and the Board of Forestry and Fire Protection, Calfire, to ensure the protocol is aligned with the California Forest Practice rules.

The requirements for even-aged management were

originally taken from the California Forest Practice rules, and the clarifications provided here are taken from the same sections of the Forest Practice Rules. ARB is not adding or replacing any of the existing protocol requirements, only clarifying how they are to be implemented for protocol purposes for both in-state and out-of-state projects.

Staff will develop guidance to point to the relevant definitions in the Forest Practice Rules to ensure a common understanding of the California requirements.

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AIR POLLUTION SPECIALIST PAL: As a part of 15-day changes, staff is also proposing to further clarify how to define comparable sites for determining the financial feasibility of baseline growth and harvesting regimes. Staff is proposing limiting required corrections to errors that would have greater than a five percent impact to the baseline or to quantified GHG reductions or GHG removal enhancements.

Additionally, staff is proposing to allow projects on public lands to use modeling to help define the project baseline instead of relying solely on comparable sites, because comparable sites have been difficult to identify.

And finally, verifiers will be allowed to use paired sequential sampling in cases where a small number of monumented plots cannot be located.

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AIR POLLUTION SPECIALIST PAL: Staff conducted an extensive public process to develop the proposed protocols, including public workshops, working group meetings, and a webinar on updates to the U.S. Forest common practice values.

The rice protocol workshop and working group topics focused on quantification, environmental impacts, and modeling.

U.S. Forest protocol workshop topics included updates to common practice values, expansion into Alaska, clarifications regarding eligibility of projects, and changes to the quantification methodologies previously approved by the Board.

Staff released discussion drafts of each proposed protocol and has had two informal public comment periods before releasing the 45-day package. Staff posted supplemental resources and documentation on the official rule-making webpage, including data to support the forestry common practice update.

Staff also helped many informal meetings with stakeholders to discuss proposed changes to the protocols.

An amended proposed regulatory package was released for formal public comment on May 20th, 2015. Supplemental documents were again posted on the official rule-making webpage.

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AIR POLLUTION SPECIALIST PAL: ARB prepared an environmental analysis, or EA, for each of the proposed compliance offset protocols, which are included in the chapter 3 of the respective staff reports prepared for each protocol in Appendices B and C to the Initial Statement of Reasons. The EAs were prepared according to the requirements of ARB's certified regulator program under CEOA.

ARB used the CEQA environmental checklist,
Appendix G, from the CEQA guidelines to identify and
evaluate environmental resource areas that may be
impacted. The checklist includes criteria related to
resource areas, such as biological resources, cultural
resources, geologic and soil resources, and hazardous
material among others.

ARB conducted a programmatic level environmental analysis, which concluded no significant adverse impacts from the new rice cultivation protocol and the same types of impacts from the updated forest protocol as were found when the forestry protocol was first analyzed in 2010 as a

part of the environmental analysis included in Appendix O for the Cap-and-Trade Regulation, referred to as the Functional Equivalent Document, with the quantification that those same impacts would be extended in geological -- geographic scope by the expanding project eligibility to areas of Alaska.

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AIR POLLUTION SPECIALIST PAL: In conclusion, staff recommends that the Board approve the proposed resolution, which includes approval of written responses to the environmental comments received on the proposed amendments; adoption of the CEQA findings and Statement of Overriding Consideration, adoption of the final regulation order, and adoption of the proposed rice cultivation projects and U.S. Forest Projects Compliance Offset Protocols.

The resolution before you also directs the Executive Officer to finalize the Final Statement of Reasons for this rule-making and submit the completed regulatory package to the Office of Administrative Law.

Thank you very much for your consideration, and we would be happy to answer any questions you may have. But before we begin to answer questions, I'd like to introduce Deputy Secretary Jenny Lester Moffitt, from the California Department of Food and Agriculture.

Jenny will now come to the podium to address the Board on these proposed amendments.

CHAIRPERSON NICHOLS: Welcome.

MS. MOFFITT: Thank you. Okay. Now I think I'm live. My notes say good morning, but I guess I should clarify, and say good afternoon, Chair Nichols and Board members. Thank you for this opportunity to make a few comments on behalf of the California Department of Food and Agriculture on the agricultural rice protocol.

This protocol is significant in that it is the first on-field agricultural offset to be consideration -- in consideration of the Cap-and-Trade Program.

California's agricultural sector has an important opportunity to participate in voluntary incentives portion of the Cap-and-Trade Program, and I commend your leadership and your staff's work on this protocol.

Back in 2013, CDFA testified with Edie Chang on the joint legislative hearing of the Assembly Select Committee on Sustainable and Organic Agriculture, and the Assembly Select Committee on Agriculture and the Environment discussing climate change and agricultural issues.

The development of agricultural offsets was one of the topics noted at the hearing. We had just begun the discussion on this rice protocol, and it was not without

its challenges. These challenges stem from establishing implementation, reporting, and verification procedures that do not jeopardize the credibility of the program, our State agencies, and those who are working at the ground level to reduce greenhouse gases.

Any protocol proposed at the Board for consideration must have real quantifiable, verifiable, and enforceable metrics as defined by staff, and those who are working on the ground to reduce greenhouse gases.

As you know, agriculture is a dynamic system that requires much flexibility when developing these incentive programs. There was a lot of attention given to establishing the science behind this protocol. A little over two years later, after very useful, intensive, and productive discussions with your staff and stakeholders, most of those challenges of the rice protocol have been addressed.

The result is the first crop-based agricultural offset protocol for your consideration today. These benefits in addition to producing a safe, high quality food source, include efforts to address air quality and reduce greenhouse gases.

This ag offset protocol will provide an incentive to growers in the Sacramento region that grow rice to reduce greenhouse gases while providing other benefits

such as food production and wildlife habitat for birds.

We know that this rice offset protocol will be well received by early innovators in the rice production, and I understand that there will be continued discussions on the eligibility of early action projects. We are in support of this ag offset rice protocol, and believe that collaboration between ARB staff, CDFA, and stakeholders should continue. We also look forward to working with ARB and other commodities and stakeholders to advance further and future offset protocols as well.

Thank you so much.

CHAIRPERSON NICHOLS: Thank you for joining us.

I'll now call the list then of people who have signed up to testify on this item beginning with Michael Wang from WSPA.

MR. WANG: Madam Chair, members of the Board.

Good afternoon. Mike Wang with the Western States

Petroleum Association.

We submitted comments earlier, and I will only highlight them here. As WSPA stated in the past, we have significant interest in the offsets program, because of the important role offsets play in a well structured market-based system. We support a vigorous offset program. Such a program will increase in importance as the cap continues to decline and localized emission

reduction opportunities diminish.

It is clear that the current and future viability of offset protocols will be critical to the success of California's GHG emission reduction program. Today, I speak on two issues, and I'll describe them very briefly.

ARB's original offset market design, while cautious in terms of geographic and use limitations provided a useful framework for the development of an offsets market.

However, the proposed changes for the forestry protocol would undermine the technical integrity and the framework and erode consumer and investor confidence in the offset market by creating uncertainty.

Specifically, ARB's proposed changes to the compliance offset protocol for the Forest projects appear to be based on an incorrect baseline that will further diminish the supply of offsets obtained from qualifying forestry projects.

We understand the ARB's conservative approach to offsets. However, WSPA shares the concerns of other cap-and-trade stakeholders that ARB's proposed common practice values used to determine baseline timber stocking levels are unreasonably high.

We recommend that ARB adjust the proposed common practice values based on the average timber stocking

levels over an extended period of time. Timber stocking averaged over a 25-year period would more accurately account for fluctuations in the timber market. This adjustment would also minimize disincentives for offset projects during times when the motivation to harvest is highest.

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We also recommend that ARB remove the proposed basal area retention limit to accommodate necessary regional variation in the forest project -- and forest management practices and stimulate interest to -- in both in-state and out-of-state forestry projects.

The second issue we have concerns the offset protocol changes and recommends some solutions. We are concerned that protocol -- we understand that protocol reviews must be predictable and transparent with responsible -- with reasonable timelines between reviews and updates. Changes in protocols or changes within compliance periods should be avoided, as these changes tend to disrupt the offsets supply and demand balance, and undermine market confidence in offsets generated pursuant to complicated protocols.

We support -- again support the program, and we look forward to working with staff in the future.

CHAIRPERSON NICHOLS: Thanks.

Now, that we have this new system, where we

project on the back wall, I don't need to call people's names anymore, so just please be ready to come up when the last speaker before you is done.

MS. PASSERO: Thank you. And I'm not Alex Leumer, but I -- I'm Michelle Passero. We can cross off Alex. We just knew it would be one of us that would be speaking here today.

CHAIRPERSON NICHOLS: Okay. Thank you.

MS. PASSERO: We appreciate the opportunity to speak on this issue. And we do strongly adopt -- support the adoption of the rice protocol and the inclusion of Alaska in the forest protocols. We think they're both important for expanding the breadth of reductions that we're able to achieve both in California and even beyond California, and they also help advance conservation and other public benefits.

We appreciate the hard work that staff has dedicated to clarifying certain items in the forest protocol as well. We just want to mention both on the even-age management and logical management unit, those definitions, we signed onto letter with the Climate Action Reserve and others offering some further clarifications that could be helpful just for being able to interpret and verify. So if there's opportunity and maybe some follow-up guidance on these issues, then we'd be happy to

help. And I'm sure you'll near from others on some recommendations there.

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So overall, thank you very much and we're happy to help as we move forward on this. Thanks.

CHAIRPERSON NICHOLS: Thank you.

MR. RYNEARSON: Chair Nichols and Board members, Gary Rynearson, Green Diamond Resource Company. I'm a registered professional forester. I was also on the team that originally developed the protocol that this body approved in 2010. And I was a member of the State Board of Forestry for seven years. I only say those things as my qualifications for understanding both the rules and these protocols.

We submitted a letter under the name Green
Diamond under my signature. We also were co-signatory to
the multi-stakeholder letters that went in, including the
CAR letter, which Ms. Passero just identified as
identifying some recommended technical changes. We're
fully supportive of those changes.

While these rules -- while these come very close to representing the California Forest Practice Rules, there's some subtle technical differences that are not reflected in these changes, and we'd request that you consider those technical changes that are offered in the multi-stakeholder letter that has been authored by CAR.

And you have some very concise and precise changes that are recommended.

So with that, we would -- we do fully support this program. We think it's a great program. We support the inclusion of Alaska into this program. And I respectively request that you consider making those technical changes.

CHAIRPERSON NICHOLS: Thank you.

MR. RYNEARSON: Thank you.

MR. BRINK: Madam Chair and board members, I'm Steve Brink, vice president of California Forestry Association.

I want to point out just a few things, and I'll leave it to many of the other commenters to talk about the specifics which you've already heard a few already. But you have an excellent set, in our opinion, of substantive written comments from Blue Source, from Climate Action Reserve, Pacific Forest Trust, Verifiers and others. And has already been pointed out to some extent, the amendment package still misses the mark in a couple of areas.

And I've got it boiled down to three basically. There's still requirements of the Forest Practices Act's rules that are not in the protocol. So the clarity wasn't provided, which will add time and cost for the registrant and the verifiers that's unnecessary.

There's still language that's inconsistent with the Forest Practices Rules. And third, there's proposed changes, some of which have already been alluded to in the first couple speakers that have subjective requirements associated with them.

That's going to also add unnecessary -- in our opinion, unnecessary costs and time for the registrant, the verifiers, and the offset staff to plow through what an appropriate response to a subjective requirement might be.

Six months ago, we suggested to the Board and to this offset staff that you utilize the technical work group or a portion of it that Climate Action Reserve used several years ago that built the forestry protocol from scratch. That didn't happen.

And we'd also pointed out to staff that several years ago, Chair Nichols, you forged an agreement with CalFire to utilize their forestry expertise for ARB matters when appropriate. That didn't happen either.

And the result is the staff did not have the forestry expertise to get the language right, so we ask as you move forward to consider through resolution that you direct staff to either use a technical work group for future changes, or if you don't want to do that, at least direct them to use the agreement you have with CalFire to

get the forestry expertise that's needed to get the language right, so that there's clarity for efficient and effective implementation of the forest protocol.

Thank you.

CHAIRPERSON NICHOLS: Thank you. I don't usually do this, but I think I'm going to take a poll here just cause -- looking at who's signed up. So how many other witnesses here are here to make similar comments in terms of things that they think are wrong with the protocol or the way it was developed?

One, two, three, four -- okay. There's a whole batch of you. And I think it's probably basically -- I'm not going to accuse you of saying exactly the same thing, but it's going to be pretty close. So I think it would maybe be more efficient, if I may, if I ask the staff to respond now to those -- to those specific comments about the forestry practice -- Forest Practice Rules, how they interact with our proposal. And then you may or may not be satisfied, but at least it may save us a little bit of time. I'm hoping anyway.

So could I turn to Ms. Sahota.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: Good after, Chairman Nichols. And in the staff presentation, we noted that we did work with the Board of Forestry and we did work with Calfire on the new

clarifications regarding even-age management and the offset protocol for forestry.

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So the staff actually shared text back and forth with those agencies to make sure that we were aligned with the current rules. The intent is not to add additional requirements for even-age management to in-state projects.

But the other part was, we hadn't -- we needed to add enough clarity on how forest practice rules work. So the out-of-state projects were held to the same requirements as in-State projects. And obviously, in-state project developers are more familiar with our Forest Practice Rules.

In moving some of the text over into the protocol, it would have been impractical to move over hundreds of pages of text from the Forest Practice Rules. So we took what was absolutely needed at a minimum to reflect the absolute needs for the protocol itself, and we've committed to do guidance to refer back to the larger Forest Practice Rule to make sure that the definitions there are the ones that are used for the terms in the protocol, and to make sure that stakeholders have an additional regulatory reference when they're applying those requirements to their projects.

And so that would be guidance that we were putting out, just like we would do for any other project

1 protocol that we have.

CHAIRPERSON NICHOLS: So you feel that you did coordinate with the Department.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: We absolutely did coordinate with those agencies. We didn't do a formal public work group with Calfire and Board of Forestry. We had an agency-to-agency collaboration with them, and that was reflected in the 15-day changes that were put out for public comment.

CHAIRPERSON NICHOLS: Okay. Well, obviously, people they choose to disagree or still continue to have disagreements with the text, but it seems to me that what's important here in terms of what we're being asked to consider approving today is that you incorporate the rules from the Board of Forestry into this rule. And to the extent that there's questions about how that would work, you're going to address them through guidance.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: That's correct.

CHAIRPERSON NICHOLS: Okay. To continue, Mr.

Brink I guess is next up. He just went. Sorry. Just -we heard from you.

Mr. Kleinhenz.

MR. KLEINHENZ: Thank you so much. And I will -- thank you for having me here today. I'll try to honor

your wishes and leave out the redundant pieces of this statement. My name is Brian Kleinhenz. I represent Sealaska Corporation, which is a native-owned corporation in south east Alaska, so I'm hailing from Juneau.

I'm here today to address the forest protocol.

And I wanted to thank the Board for considering Alaska's inclusion in this protocol, and particularly on behalf of the native peoples of Alaska.

The Tlingit, Haida, Tsimshian peoples of southeast Alaska, their land management ethic really parallels in a lot of ways this forest offset protocol. They really are enthusiastic about the opportunity to participate. And we really wanted to thank you for that opportunity.

We do have a few technical concerns, which I think you'll hear later today. Maybe the only one that's unique to us is we're concerned about the baseline carbon level. And we believe that once we're full stakeholders in the process, we can be of some assistance in showing access to different information and some opportunities to maybe bring it more in line with our experience and expectations of managing forest lands in Alaska.

So just to conclude, I would really urge the Board to please consider and take action to include Alaska in the protocol today.

And I thank you so much for your time.

CHAIRPERSON NICHOLS: Thank you.

MR. PARKHURST: Chairman Nichols, members of the Board, ARB staff, thank you for the opportunity to speak this afternoon.

Shortly, you'll vote on the rice cultivation project's compliance offset protocol. This is a huge milestone. It will be the first crop-based protocol approved for use in any Cap-and Trade Program. It is a gateway to other protocols from agriculture, and it addresses many of the critical criteria necessary for those protocols, including the use of biogeochemical models such as DNDC and consolidated reporting.

ARB staff put forth extraordinary effort in this protocol as was evidenced in their presentation. They conducted four working group meetings, visited farms in California and Arkansas and met with world renowned experts. Their work should be commend.

This milestone would not have been possible without the partnership of a number of organizations, particularly the California Rice Commission, the White River Irrigation District in the mid-south, as well as funding from USDA, NRCS through two conservation innovation grants.

Speaking of the mid-south, I have a letter today

from our partners supporting the protocol and encouraging you to adopt it, and you should have it up there with you.

As the largest uncapped sector, agricultural lands offer an unparalleled opportunity for generating greenhouse gas reductions. Agriculture current represents 10 percent of U.S. Greenhouse emissions. However, if we continue with business as usual, the World Bank estimates that agriculture could be responsible for as much as 70 percent of the planet's emissions by 2050.

The approval of the rice protocol opens the door for the development of other agricultural standards what will pay farmers for reducing emissions. With this precedent, the stage is set for a nutrient management protocol to reduce nitrous oxide emissions from fertilizer.

This effort could apply to more than 400 million acres of crop land across the U.S. and contribute millions of tons of greenhouse gas reductions while protecting or even improving farmer's yields. Once approved, it's critical that rice protocol get off to a good start. In particular, the verification is an important issue. Verification of rice projects is currently 50 percent of their total development cost.

I'm pleased that CDFA and ARB are working with stakeholders to find ways to reduce this cost of

verification while maintaining a high degree of environmental rigor. As that work continues, you'll see EDF at the table helping to move practical solutions forward.

On the other hand, we need to be very careful with the disclosure of data. While having project location information is important for making sure one farmer doesn't risk a total project, if confidential business information is made public, farmers will not participate. I'm confident we can find a way to do that through the implementation of this protocol.

I strongly encourage you to adopt this protocol today and send a powerful message to farmers and ranchers across the country that they have a new revenue stream available by reducing greenhouse gases associated with their practices.

Thank you very much.

CHAIRPERSON NICHOLS: Thanks. Thanks for all your help in moving this along.

MR. MORAN: Good afternoon, Ralph Moran with BP.

BP is an obligated party under the Cap-and-Trade Program. And we're also involved in developing offsets for the Cap-and-Trade Program. So we're also concerned about the impact of these revisions on the ability of the forestry protocol to supply offsets into the future, and

we're concerned about the offset program in general.

We were a joint signatory to a letter that included several large RPs, as well as those more closely involved forestry. I mean, you're hearing from a lot of them today. There's a lot of expertise on forestry in this room, and I think it's important that we take advantage of that to get the protocol to the right place.

We're concerned about the large impact this is going to have on a protocol that has been looked at as very promising. By our numbers, these revisions will reduce potential future supply by some 40 to 60 percent. That's a big number, and I'm not sure that's been discussed. It seems like the impact on supply of offsets from the revisions would have an impact on your thinking here.

So while that's significant on its own, we also view it a symptom of a larger problem. There's a lot of warning signs in the offset program right now. There's been concerns for a long time about the limits on use of offsets. There's been concerns about the small handful of protocols that we have approved to date pretty far into the program. We have limited geography from which offsets can be sourced, including inability to source them in places like Mexico, where there's great potential. And Mexico is even called out for in the regulation.

We've also seen a chilling effect from the recent ODS invalidation investigation. It appears also that RPs, for whatever reason, regulated parties, are not using their full allotment of offsets, for whatever reason that may be, a view of the risk or something else.

And if all offsets aren't used, it impacts all regulated parties, because it increases the demand for allowances unnecessarily.

So all of this leads us to two conclusions. First of all, we have to be very careful about moving this protocol forward without being sure that we utilizes all the expertise, and without being sure of the impact on supply. And secondly, in a bigger picture sense, we need a process in place to look at these warning signs in the offset market, and look at the impact cumulatively of everything that's been happening lately, just to make sure we're getting the proper balance between maintaining the environmental integrity of the program, and getting the full cost containment benefit from the program.

Thank you.

CHAIRPERSON NICHOLS: Thanks.

MR. McKEE: Chair Nichols, Board members, I'll try to eliminate some of my comments. My name is Mik McKee, and I'm here on behalf of the Oregon Climate Trust.

The Climate Trust strongly supports high quality

offsets and was a partner in developing the offset quality initiative with Pew Center on Global Climate Change, the California Climate Action Registry, the Environmental Resource Trust, GHG Management Institute, and the Climate Group. We have 18 years as a quality leader in the carbon offset market.

I'd like to recognize the work that the staff has done, and I understand -- and we understand the need to update the protocol for U.S. forest projects. However, we're concerned that the proposed changes will inhibit the continued growth of this sector.

In short, The Climate Trust believes that several of the proposed technical changes will limit the willingness and ability of landowners to develop forest carbon projects. And this is particularly true for states outside of California.

We are also concerned that the questionable level of stakeholder participation in developing these proposed changes only serves to reinforce the perception that environmental markets are highly vulnerable to policy change, and therefore have high investment risk.

The Climate Trust strongly urges ARB to form a technical committee and use the expertise here to provide guidance on the proposed changes to U.S. Forest protocols.

Additionally, the Trust believes it is critical

for ARB to consider the importance of encouraging continued market participation, rather than prematurely restricting this relatively young and still maturing sector.

Thank you.

CHAIRPERSON NICHOLS: Thanks.

DR. HRUBES: Chairman Nichols, members of the Board. My name is Robert Hrubes. I'm Item number 8. I was on my way down the aisle when I was beat to the punch, so I hope I'm still able to speak.

CHAIRPERSON NICHOLS: Okay.

DR. HRUBES: So I'm a Registered Professional forester in California. I am the executive vice president of Scientific Certification Systems, SCS, Global Services, and we are an ARB accredited verification body under the forestry protocol, and we also are accredited on all of the other voluntary forestry protocols that exist. And we've been doing this work for many years.

I've been personally auditing around every region of this world -- of this country, as well as outside of this country for over 25 years. My basic message for you is that if, in fact, offsets from the forest sector are important in the overall goals of the Cap-and-Trade Program, that one needs to be very cognizant of the willingness of forest landowners around the country to

willingly and voluntarily decide to engage in the form of a project. And that any changes that disincent forest landowners from participating, run counter to the overall objectives of the Cap-and-Trade Program.

And it's my conclusion, based upon my experience doing this kind of work for many years, that the changes being considered now will serve as a very strong disincentive for forestland owners outside of California to voluntarily decide to engage and develop projects to create offset credits that can be used in the Cap-and-Trade Program.

For that reason, I urge you to reconsider the action before you.

Thank you.

CHAIRPERSON NICHOLS: Okay. So back to the list.

MR. CARNEY: Hi. My name is Sean Carney. I'm president of Finite Carbon.

Finite Carbon has singed on to two different letters with over 20 organizations asking for further review of the carbon -- the forest carbon offset protocols before they're adopted.

That says what it says. I would like to actually talk about one specific issue to give you an example of how this process has actually gone over the last year.

As a company, Finite Carbon is developing over 19

carbon offset projects for the system. Those 19 projects will deliver over 20 million tons by 2020. That's approximately a quarter of all forestry projects or about 10 percent of the overall cap on offsets between now and 2020. By any definition, I believe Finite Carbon would be considered a stakeholder in this process.

As part of the September Board meeting, where the common practice numbers were presented, and the Board then directed staff to go back to stakeholders, ask them for their input so I quote there can be, "Sufficient time to review and comment on the common practice values".

The common practice values are numbers in an Excel sheet on a piece of paper. There is data behind those numbers that generate those numbers. In order to allow us time to sufficiently comment on these numbers, we have to review the work that goes into these numbers. This is a concept that was taught to me in second grade of show your work.

I can't review the numbers that are published without the work that goes into them. We've actually asked on several occasions that the methodology that has been to develop -- that was put in place to develop the existing common practice numbers and the updated common practice numbers be released to us to review. This has not been done.

All of this data is available, publicly from the FIA. That is the data that was used to develop the common practice numbers. We have not been able to replicate any of the common practice numbers based on that publicly available data. I'm asking that before you proceed with adopting this, you, at the very least, give us the opportunity to review the common practice methodology and release it.

So what I'm here to ask for at this time is that the methodology, the numbers that were used to create the existing common practice numbers, and the methodology, the calculations used to calculate the update to the common practice numbers both be released.

As of right now, both have been created in black boxes. Nothing has been presented to the public for our review. It has all been done behind the scenes, by a very few number of individuals, and not put out for public comment and review.

That concludes my comments.

Thank you.

CHAIRPERSON NICHOLS: Okay.

MR. WILLIAMS: Good afternoon. Roger Williams with Blue Source. Thank you for the opportunity to provide a few comments. First, a sincere word of thanks to the tireless work that the ARB staff has been putting

into this program. It was also quite refreshing to hear about the added resources that are going to be dedicated towards early action review. That's certainly welcomed.

My company, we are the oldest and largest offset developer in the United States. We have registered over a third of the forest carbon credits currently in the compliance program. So we were an early adopter. We've been at this for relatively quite a long time. And our early action projects certainly have been waiting for well over a year for ARB to complete their review. And I would emphasize that that is nothing to disparaging against existing staff. It's just purely there haven't been enough folks working on the review. So that has been certainly welcome to hear that there are several more people that are going to be working on that component.

We are also excited about the inclusion of Alaska along with the adoption of the rice protocol. I want to dovetail though some of the comments that have already been made, and kind of focus on the process a little bit. I think we've heard a little bit that I think the sentiment is -- from ARB staff is that the processes -- they've run through the process and have done so pretty well. I would like to suggest that this process could be greatly improved.

And one key area would be around inclusion of a

technical working group. This has come up earlier, but I really want to emphasize this. There were comments that were made around liaising with other agencies, but I think it was just a missed opportunity to not engage folks, registries, verifiers, landowners, other stakeholders that are living and breathing this to be able to comment on it earlier on in the process.

I think the process as it exists right now is that staff that has too much on their plates that are behind on review of projects are also responsible for crafting updates to this regulation, to this protocol.

They've made mistakes. The language is not where it needs to be, and that is something that has been supported by Calforests, Pacific Forest Trust. Twelve other stakeholders have signed on to a letter saying they haven't gotten it right yet, but yet today you're deciding on whether you're going to move ahead on it.

I think an improvement in the future would be to have a technical working group that can be engaged on the front end, so that we're not waiting and wondering what's going to be released in the draft, have two weeks to quickly analyze everything and comment, and then at least what we're seeing so far is that most of those comments are not incorporated.

It's a little bit backwards from what it could

be. And I think if a technical work group would be established, it would also take pressure off of staff.

Thank you. I'm out of time, but we have a lot more to say on this, and I wish I had more time, but much appreciated.

CHAIRPERSON NICHOLS: Okay.

MR. STRAUSS: Good afternoon. My name is Josh Strauss, and today I'm here on behalf of IETA. IETA is a multi-stakeholder group of over 140 businesses across California and the globe. We want to express our support for ARB's progress on the rice protocol, while at the same time voice our concerns over ARB's proposed amendments to California's forest protocol.

IETA looks forward to seeing the rice protocol's adoption as soon as possible. We also encourage staff to explore future opportunities for additional modification in order to heighten the protocol's workability, scalability, and economic viability.

IETA supports ARB's efforts to issue forest protocol updates as California's offset program matures and forest conditions change. But we believe major protocol modifications, particularly at this stage in the program's infancy are both risky and unnecessary.

We are concerned that many of ARB's proposed revisions could adversely affect California's still

nascent offset market, shaking confidence, particularly that of landowners, lowering participation, and reducing future volumes to an already constrained market.

IETA therefore requests ARB strongly consider maintaining the current version of its compliance forest protocol while allowing the incorporation of eligible Alaskan forest projects into the California program.

California's forest protocol is critically important, so we should take the time to get it right.

These offsets are not only about cost containment enabling linkages and climate benefits. They also generate substantial environmental co-benefits.

particularly -- with this in mind, IETA particularly encourages ARB not to accept the new protocol system for the establishment of minimum baseline levels for improved forest management projects with stocking above the common practice level. The new system for establishment of minimum baseline levels does not serve to increase the robustness of the California program, and it will result in the exclusion of projects that would have -- that would have had meaningful climate and conversation benefits.

We acknowledge that ARB has expressed a desire to maintain standards equal to or more stringent than those seen in the voluntary market. As such, ARB feels

obligated to make this baseline modification to mirror Climate Action Reserve's protocol. However, we argue that the most important goal of ARB's program is to maintain a system of rules that promotes the highest quality of forced offsets.

In this particular case, the addition of the minimum baseline rules does not improve offset quality, and therefore does not merit adoption into the compliance program.

Finally, IETA urges ARB to carry out forestry and other future proposed protocol modifications in an inclusive, predictable, and transparent manner.

Specifically, we recommend that ARB pursue an effective engagement approach similar to that used for the rice protocol.

Such a process would include clear communication and engagement with all stakeholders, including experts and regulated parties. On behalf of IETA thank you for your time and this opportunity to comment.

CHAIRPERSON NICHOLS: Thank you.

MR. BUTTNER: Good afternoon. My name is Paul Buttner with the California Rice Commission. When I was here last December, of course, I was highly supportive of this regulation. At that point in time, I really thought we were going to get to the finish line on a really

important issue to me, and that is early action. And I feel like we've fallen short of that, and I'll explain why and why it's so important to me.

Some seven or eight years ago, I started out -- I convinced eight of my growers to join me in the pilot scale efforts to really prove out the fact that we could do this. I have four left standing, and three of those four are doing things that actually could -- they're doing the practice as a part of this proposal.

However, the problem with it is one of these pilot scale producers, unfortunately the largest one that I have, doesn't quite have the records -- the pre-207 records that provide the information that have to go into the DNDC model to do a site-specific baseline analyses.

I think you can imagine that this particular grower started these practices in '07 after AB 32 was passed. Certainly, even then, it was impossible to understand exactly what data would be required now in 2015, let alone the three to five years prior to 2007. We know that this producer started these practices then. We simply don't have all the data necessary in the regulation to calculate that baseline.

I now have 15 years of experience of hocking conversation plans to my growers, most of them in the wildlife habitat area. I can tell you without question

the absolute most important thing for me to have is an early adopting producer, a large one especially, that can stand up in front of his peers and help me sell that program.

Once we get through today, a lot of the work in promoting this to the rice industry will be mine. And if we can't get this large producer to get these credits acceptable under this program, my job will be infinitely harder. Instead of having 5,000 acres to talk about, we will have just over 1,000 to try to convince a half a million acres of rice growers to embrace this and engage it. They need compelling stories from my three remaining pilot producers that are on the table, especially the largest one, for me to do this work effectively.

So while I said support in December, I wish I could say support now. I will not say oppose. I'll just say I'm a little disappointed that we weren't able to figure this one out going into today's hearing.

CHAIRPERSON NICHOLS: Thank you. I agree with you, we need to do something to fix this problem, and we need to do it on an expedited basis. I don't know whether you've had any recent conversations with my staff about how to do this or not. But within the last week or so at least, we've talked about finding a methodology that could work, understanding that, you know, we're not the IRS and

people don't always save every record that they might want to have or that we would like them to have that could make this work.

So I'm hoping that we can come up with some kind of a system, either to find alternative records or some sort of default process that can be used. I think you would understand, and I don't think you would agree, that we should just do nothing, because that would not be helpful to the future either, but hopefully we can find a way to bridge the gap here. And I'd really like and hope it will be possible after this meeting is over for you to sit down with ARB staff and find a way to bridge this gap, because we agree with you, you can't -- you're not going to be able to get other people to sign up, unless we can get over this hump.

So we do care about making this protocol usable.

MR. BUTTNER: Well, thank you. I look forward to that work over the coming months.

CHAIRPERSON NICHOLS: Thank you.

MS. VAN ZUIDEN: Good afternoon, ARB Chairwoman, Board, and staff. Thank you for the opportunity to provide comments today. My name is Claire Van Zuiden, and I'm with California Strategies commenting on behalf of CE2 Carbon Capital, a California based company that finances carbon offset projects.

Currently, there are two types of carbon offsets that ARB staff reviews for compliance purposes in the Cap-and-Trade Program, those utilizing early action protocols, and those utilizing compliance protocols.

The ARB Cap-and-Trade Regulation requires ARB to review compliance reporting periods within 45 calendar days. However, there is no regulatory timeline specified in the regulation for ARB to review of an early action reporting period.

We have been told that additional staff and resources have been allocated in the offset group to help expedite early action projects, and we're very supportive of this work continuing.

We greatly appreciate ARB responding to these requests from the offset community. In the future, we feel that it would make sense to have equal review times for both compliance and early action offset projects.

This policy equality would provide project developers with certainty that both compliance and early action reporting periods begin review within 45 days.

This will also ensure that early action projects are not unfairly penalized and that project developers and investors are rewarded for heeding ARB's request to seek and reduce emissions early on in the program.

In addition, we respectfully request

clarification from ARB on submission deadlines for early action offset reporting periods, since the January 1st, 2016 and August 31st, 2016 approval deadlines for early action offset credit listings and ARB OC issuances respectfully are fast approaching

Thank you again.

MR. BARBANE: Hello, and thank you. My name is Zach Barbane and I work with ecoPartners, and we are foresters and technical consultants working to develop forest carbon projects around the world.

I'm here today to voice my concern the consequences the proposed changes to the U.S. Forest protocol would have on the program. Three proposed updates, the calculation of the minimum baseline level, the restrictions on even-age management, and the updates to the common practice values will have the effect of increased development and verification costs, while simultaneously decreasing potential credit generation.

With increasing costs and decreasing benefits, the proposed changes effectively reduce forest owner eligibility and thus participation. We all recognize the value this protocol plays in forest conservation, the management of health and sustainable forests, as well as air quality improvement.

I ask the Board to consider these consequences in

your decision. We support the other proposed changes to the protocol. However, we are concerned that these three changes will significantly hurt future participation in the program. Thank you, and we look forward to continuing to work with ARB staff in the future.

CHAIRPERSON NICHOLS: Thank you.

MS. BEST: Thank you very much for the opportunity to speak. Madam Chair, members of the Board, I'm Connie Best. I'm the co-CEO of the Pacific Forest Trust. I'm a former member of the work group that led to what has become the U.S. Forest Compliance Protocol.

We applaud the ARB's leadership in implementing AB 32 as an effective model for the rest of the nation and the world. PFT has been a long-time partner with you in seeking to harness the climate benefits of forests to meet the State's ambitious greenhouse gas reduction goals.

In fact, the ARB's forest protocol has been the centerpiece of the offset program. These real durable emissions reductions also ensure conservation and sustainable management of forest's very high standards for wildlife habitat, watershed values, and sustainable rural communities, not only in California, but across the country, ten states and counting.

We commend you and your staff for these achievements. And I want to note we are very supportive

of the inclusion of Alaska in the program. It seems like a perfectly normal and appropriate expansion, and the very welcome news that there will be more action for the early action projects, so we can catch up and do justice for those that have taken the most risk on behalf of the offset program.

However, the success of the forest protocol in this initial period leads me to question the need for any material changes so soon in the process. We've only just gotten under way. And while there have been improvements to the language in the proposed set of changes since they were first presented, unfortunately PFT continues to share the view of many environmental organizations, verifiers, forest owners, and project developers that some of this new language still adds, rather than reduces, complexity, ambiguity, and confusion without enhancing environmental values or stringency.

Further, as you've heard from others, I think the current process has highlighted the need to more thoughtfully determine a statistically appropriate methodology and timing for updating the common practice values.

If you do adopt the proposed amendment package in its entirety today, I want to emphasize the importance of issuing direction to staff to provide guidance or

administrative clarifications for the full range of outstanding issues. And I urge the Board to establish a regular predictable process for forest protocol updates.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you. Thanks for all your work on this.

MR. MURPHY: Good afternoon, Chairman Nichols, members of the Board. My name is Edward Murphy. I, like Gary, was on the two and a half year process to build the protocol that we started with. And I have been actively attempting to bring you projects under this system and still have yet to get a registered ton.

I would point out that I do think that the staff is working hard, but also as we have suggested, they're being asked to do a Herculean task. And it does not surprise me that when they contacted CalFire, that CalFire suggested that your current protocol language looked like their language. It does look like their language.

Unfortunately, because they aren't practitioners under the language, they wouldn't notice the subtle but very important technical differences between the protocol and the full language that's in the Forest Practice Rules.

A fairly simple one, when we plant a site, we have an option under the State law to bring the inspector out and say it is obviously stocked. It saves a

tremendous amount of actual field verification and plots. That small sentence of waiver is inside the two pieces of text that staff picked up to establish what the stocking requirements were in the Forest Practice Rules, leaving out the biggest cost saving in the actual regulation for individuals.

So the verifier stuck with language that now suggests that you have to have plots for verification of stocking when you can obviously see that a site is stocked. That's just one example, but that's the kind of important piece that a stakeholder work group, including forestland owners and practitioners, would have identified and did immediately in the two weeks we were given to read the new rules.

But that's where the -- both the agencies might not have seen that that language was missing. So just an example of I think the process that we're involved in. I would urge that the Board do approve the rice protocol, do approve the inclusion of Alaska, and I would urge the Board establish a quick turn-around time for a stakeholder work group to be able to provide that high technical expertise that's required to really bring this into alignment with the Forest Practice Rules.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

MS. HALBROOK: Hello. Claire Halbrook with Pacific, Gas, & Electric Company.

First, I'd like to state our strong support for the new rice protocol, and addition of Alaska into the existing U.S. Forestry Protocol.

However, I would like to echo some of the concerns you've heard today about other changes to the U.S. Forestry protocol, and the impact those might have on the supply of offsets. We've signed on a number of coalition letters to that effect.

We understand that ARB is pursuing many of these changes to ensure the environmental integrity of the program. And we certainly agree that periodic review and update of the protocols is necessary to achieve that objective.

But moving forward, we just would encourage ARB to carry out these activities in a predictable manner that is clearly communicated to stakeholders and leverages, all of the expertise we have here in the room today.

As we look towards 2030, the role of offsets in ensuring access to cost effective emissions reductions, and demonstrating to other jurisdictions that voluntary actions can play a role in reducing emissions, while also stimulating the economy will become increasingly important. It's worth the time to get it right, and I

would just like to thank staff for their commitment today to provide additional guidance following the hearing today.

Thank you.

MR. PATNEY: Good afternoon. I'm Arjun Patney, policy director with the American Carbon Registry. As an approved offset project registry for the California Cap-and-Trade Program, we share ARB's commitment to offset protocols that reflect the best possible science. We're also dedicated to the demonstration of a robust offset program to achieve cost effective emissions reduction.

We recommend that ARB today adopt the proposed 15-day package version of the forest offset protocol without proposed amendments for even-aged management requirements. Those are sections 3.1(a)(4), A through D, and without the proposed amendments for modification to minimum baseline calculation for IFM -- for IFM projects. That's Section 5.2.1(d).

In general, our concerns with regard to the proposed protocol amendments are two-fold. Significant protocol changes are being made too soon, which will undermine market confidence in the offset program.

Second, the changes will dramatically impact offset supply. Should the current protocol amendments be approved, 50 percent of the pipeline of forest project in

which investments have been made will no longer be technically or economically feasible.

We agree that periodic offset protocol updates are important. However, we believe that updates should be conducted on a regular, approved, fully public, and predictable schedule. In this case, substantive technical changes to the forestry offset protocol are being proposed for approval only two and a half years into the program, when forestland owners, project developers, and investors are still gaining foundational knowledge, experience, and confidence.

It's important to note that since the launch of the program in January 2013, only eight compliance offset -- compliance forestry offset projects have received our bucks. This is due to the uniquely time-consuming nature and substantial upfront investments required for forest carbon offset project origination, contracting, development, registration and verification.

We recommend to the Board that significant amendments to protocols be conducted on a published and predictable time frame aligned with the phases of the program and with broad stakeholder input. This would allow forest landowners to plan their investments and better manage risk, enabling them to continue to deliver high-quality, low-cost offsets that allow California to

put a price on carbon pollution without hindering the economy.

We further recommend the delayed adoption of the amendments for even-age management requirements and minimum baseline calculation for IFM projects. With regard to these specific technical areas, we collaborated with the Climate Action Reserve and industry to develop and propose to ARB alternative language to improve workability of these requirements, while ensuring integrity.

We would like to request that these proposals be considered by staff. Delayed approval of these two technical amendments will provide an opportunity for stakeholder input and improvement from technical experts, while also allowing sufficient time for the current pipeline of projects in which investments have been made to enter the market and provide needed offset supply.

Thank you for the opportunity to provide our comments to the Board.

CHAIRPERSON NICHOLS: Thank you.

MR. BOYD: Good afternoon. I find myself in a rare predicament here.

(Laughter.)

MR. BOYD: I thought I was going to be last and I was going to thank you for allowing me to back clean-up,

but now you've added to the list.

CHAIRPERSON NICHOLS: Not going to work.

(Laughter.)

MR. BOYD: Anyway. I'm Jim Boyd. I'm a founding partner of Clean Tech Advocates, a graduate of the Air Resources Board and a few other places where Mary and I have been together.

And I appear before you here today on this item on behalf of the Chugach Alaska Corporation, which is one of the several Alaska native corporations created by the Alaska Native Claims Settlement Act created to serve the interests of Alaska native people, and in this case the people of the Chugach region.

Chugach Alaska Corporation strongly supports the staff's recommended update of the U.S. Forest's compliance offset protocol to include project eligibility in parts of Alaska, and urges the Board to take action today to approve the staff's recommendation. Much time has passed, much effort expended to reach where we are today, and frankly it's time to move forward.

Approval will facilitate Chugach Alaska
Corporation and other Alaska native corporations, one
you've heard from just today, to participate in the
California carbon market through developing of compliance
forest offset projects, something Chugach has been looking

to do since the inception of the California program.

Alaska forest project developments will not only contribute significant amounts of core -- of carbon offsets to the California market, but will help sustain these magnificent Alaska forests, reward sustainable forest management practices, protect old growth forests, and in so doing help achieve social, environmental, and economic benefits for Alaska native populations.

The two largest forests in the U.S. national forest system are located in Alaska, one being the Chugach National Forest of more than five million acres.

The Chugach would like to express its thanks to the staff for all their help and hard work over these many months in reaching their recommendation to include Alaska regions in the program and look forward to continued work with the staff as the Chugach folks work to bring projects to fruition.

But if I might add a personal note, if not a note just barely mentioned in the Chugach letter, Chugach was so grateful to get into the program. And in recognizing that there were problems with the program, nonetheless said move forward today.

But I want to add a personal note. I have followed the development of the staff's presentation since its very inception, since the beginning of efforts, not

only for the Chugach people, you know, our client, but frankly as an unpaid advisor to the Board of American Carbon Registry, who you just heard from. And I'm aware -- we are all aware of all the concerns and issues that have arisen.

And now I ask at this late date, having heard everything, that you give serious consideration to what you've heard about process and procedures and potential chilling effects.

I'm hopeful that, and I'm 100 percent dependent upon your staff to take your guidance to deal with guidance document language to address as many of these problems as your lawyer can see fit can be addressed within the parameters --

(Laughter.)

MR. BOYD: -- of your proposal, because it is incredibly important to me as a lifetime proponent of saving forests, having worked for Secretary Nichols as Secretary of Resources, that we move forward and get this done, but please get it done right.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you. As always, we appreciate your advice, Jim.

MR. LILLY: Good afternoon. I'll try to be quick. A lot has been said already. I'm Paul Lilly. I'm

- 1 a research scientist with the Spatial Informatics Group.
- 2 | We've worked with ARB in the past on a variety of
- 3 | forest-related projects. We were part of the working team
- 4 | that developed the offset protocol in the first place.
- 5 | We've also completed 12 early action and compliance
- 6 projects that are currently generating seven and a half
- 7 | million offsets. We are also signatories on the CAR
- 8 letter that's been mentioned.

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I do want to make sure to acknowledge the time and effort that went in to writing these proposed modifications. This is definitely highly technical stuff. And, in general, we think you guys did a really good job.

We do share a lot of the concerns over technical details that others have mentioned and hope that we an work with staff to iron out these concerns. I'll highlight some potential effects that we are concerned about. We're assume they're unintended to illustrate why we hope that these things can be addressed.

First, with regards to the clarification on limitations to the use of even-age management practices, we actually think the proposed modifications are great for California, but we're concerned about impacts out of State. The modifications actually run contrary to regulatory requirements and BMPs in some other states. I mean a hardwood forest in Vermont is very different than a

mixed conifer forest in Sierra Nevada, and what works in one is not necessarily appropriate in the other.

Basically, it just means that out-of-state projects aren't going to be as good as they could be.

Managers aren't going to be able to use the best available methods to accomplish things like ensuring regeneration, especially of species that need full sun, of managing for the impact of dear browsing, which can just devastate young trees that are regrowing, and also for creation of habitat in the northeast. Early successional habitat for song birds is very important. This is an important tool that can be used to create that.

Second, just to comment briefly on the new method for calculating the minimum base-line level. We understand the motivation to address this, but we worry that the net effect is going to be to reduce the amount of land that comes into the program. Offset projects are complicated. It's not obvious, looking at a piece of land, whether or not it's going to make a viable project. And it can take a lot of work just to get to the decision point, whether you want to go forward with it or not.

From our perspective and in our experience, this complexity is a real barrier for entry. And without things as they stand right now with a certain amount of incentive for highly stocked land, landowners are going to

be much more likely to pass on the opportunity. And that means we could end up with, you know, more greenhouse gas emissions not less.

We appreciate for sure the challenges that are -exist when developing and modifying these protocols, we
hope that ARB will take advantage of the wealth of
expertise in this room in the stakeholder community that
we're willing to bring to bear.

Thanks very much.

MR. NICKERSON: Chairman Nichols, member of the Board, ARB staff, my name is John Nickerson. I'm with the Climate Action Reserve, and I also am a registered professional forester. And I also had something to do with the development of the protocols. I've been in it for a long time.

I want to say that as an OPR, we see a lot of the problems that come to our desk and ultimately we share with the Air Resources Board as a partner in trying to find solutions. One of the problems that we've been seeing lately has to do with even-age management. We see the verifier interpretation of harvest that exceed 40 acres, the landowner gets questioned. And the type of even-age management is a thinning. Well, it is a type of even-age management, but it certainly wasn't the intent of the protocol back when we put it together to constrain

that type of a harvest.

So clarification is needed. What we're seeing with verification is that it's moving from any kind for forester judgment, or professional judgment, to a literal interpretation of the protocol. And that means that we have to be real clear in the protocol. And to avoid problems like this, I commend ARB staff for taking on these issues of even-age management, for taking on some of the other issues of the financial constraints and trying to act clarity to it.

Now that being said, I am in agreement with some of the other previous speakers that the target was just missed by a little bit, in terms of trying to hit the forest practice rules.

And in the spirit of offering a solution, what we did at the reserve is we put together some suggestions, just little nudges to the current language on how that can be made better, so that it wouldn't pose the same sort of barrier that you're hearing today that has to do with the definition of even-age management, with the buffers and all of those things.

I think just a little nudge to the language can make it a lot better. So we are here to help on that and hopefully our suggestions will be helpful.

Aside from the forest protocol -- well, along

with the forest protocol, we are very supportive of the inclusion of Alaska into the program. And I hope that soon Hawaii will also be up before you. I know that we are working with others, including ARB staff, to get the data to together, so that will be coming to you some day in the future.

And also, the Reserve is very proud of the role that it played in development of the rice protocol and very supportive of its current iteration as it is before you today. And we strongly support the adoption of that protocol. Thank you very much.

CHAIRPERSON NICHOLS: Great.

MR. ROBARDS: Chair Nichols and members of the Board, Tim Robards with New Forests. Our forest carbon partners fund has the largest number of forest projects and offset credits that have been issued to date under the ARB forest protocol.

Our -- I want to start my comments today on a -- with some good news. Our Trinity timberlands forest carbon project, which issued ARBOCs this week in record time from the end of the reporting period to when the offsets were issued, 278 days. We believe that this shows that the offset development process is becoming more systematized as project developers, verifiers, registries, and ARB staff gain experience with the system.

As someone who has been working on the protocol since version one of the CAR protocol, I am pleased with the success and would like to thank all the ARB staff for their dedication and hard work in making this work.

I would like to present a quick example, which has been talked about before, on technical matters. And that has to do with when the split and site class that was done. The FIE site classes go from one from the highest site to seven to the lowest. And this -- it was split -- was moved from between three and four to between four and five. And what this has neglected is that if I put my forest biometrician hat on as a statistician standpoint is it's missed a target population of a forest, and it's included in there a lot of unproductive forests that's not used for timber and could not be used for carbon project.

And therefore, you end up with 80 or 90 percent of the forestland that actually could go into a carbon project is now in the high site class, which isn't -- which is worse than getting rid of the site split, in that it's skewing the common practice numbers and making them unduly high, and not representative of where they should be.

Discussions with various stakeholders does have value, and ARB staff has been making themselves available for discussions, and they reach out frequently to garner

input from project developers and others. The above example is one where they sought FIA expertise, but project developers could have given a different perspective, and the split could have been done correctly without creating an error.

The protocol revisions, I'm going to echo what other folks have said, leave uncertainty in certain sections, and that's going to lead for additional -- to additional guidance being required. We would like to offer to engage with ARB staff as they develop that guidance. And, in particular, we think it's important to give careful consideration to the logical management unit definition. We also would like to recommend that additional staff be created, and that could be -- especially since we think there is going to be with these changes additional interpretation needed, which suggested that could be funded either from auction proceeds or from a fee on offset transactions and CITSS.

Our view is that the success of this system will create significant conservation value across the U.S. and is, and serves as an effective outreach mechanism in climate change mitigation policy, which is a primary goal of AB 32 to reach out beyond California.

So thank you very much. Appreciate your attention.

MS. BUSSEY: Good afternoon, Madam Chairwoman Board, staff. My name is Julia Bussey. I represent Chevron.

We ask you today to vote in favor of offset supply, to vote in favor of the rice protocol, and to vote inn favor of including Alaska in the forestry protocol. We also ask you to reconsider these technical changes that so many people have raised with serious concerns. These are very technical, but they are very important. They have the potential to discount the forestry market by 40 to 60 percent.

So, in fact, making this kind of a change is something that we should do with caution. So we simply ask that you try to do the right thing, make the right decision today by allowing people who have that technical expertise to have the input.

And today, what we would like to raise is just simply to support the rice protocol and the Alaska protocol in your deliberations.

So as usual, I'm giving you back a little time. Thank you.

MR. SKVARLA: Good afternoon. My name is Mikhael Skvarla. I'm here on behalf of the California Council for Environmental and Economic Balance.

At this point, I think everyone has hit the high

points of what our concerns are. We do want to mention that we've been big supporters of Cap-and-Trade. We continue to support the offset program and offset supply, which is always a beneficial thing to that program, in terms of the cost savings and potential cost containment.

As you've seen, there's a diverse set of stakeholders in this room that share mutual concern with regards to the technical provisions of the update to the U.S. Forestry Protocol, while at the same time supporting the rice cultivation protocol and the inclusion of Alaska.

We echo those concerns and would support some of the recommendations with regards to perhaps splitting the question today, adopting the rice protocol as well as the inclusion of Alaska, and putting aside and having a technical working group on the provisions that need to be tweaked just enough to get it over that finish line.

And with that, appreciate the time to comment. CHAIRPERSON NICHOLS: Thank you.

I believe that is the last witness. Yes. Okay great. So we'll close the record on this item.

I would like to, I think, just reflect a little bit on where we are before we move for more discussion. Rice protocol and -- including Alaska appear to be overwhelmingly successful. No problem. We can -- we can do that.

So the issue is the forestry changes. And I just want to reflect that my view on this topic has been this is a complicated one for me. And as Mr. Boyd pointed out, these forestry issues are something that I, too, have been engaged with for more time than I really care to remember. And I am troubled by what we've heard today, partly because I think we're confusing the desire to have offsets and a robust offset program with the desire for technical rigor in how we assess whether offsets are real, verifiable, excess, et cetera.

I mean, we wouldn't be here today if it weren't for the fact that there was a science need, a compelling need to make some changes in the existing protocol. And that science, as I understand it, moves us in the direction of saying that somethings that might previously have been considered to be eligible as offsets wouldn't be anymore, whether it's 40 percent, 60 percent, 10 percent, two percent or whatever that, you know, you follow the lead of what we -- you know, what we know from science as it evolves. And you have to, on some regular basis, acknowledge that, and be prepared to live with that. If there aren't as many offsets as you'd like, that's just the way it is.

On the other hand, if we're being -- if we felt that, you know, we weren't listening to real expertise

that should have been accounted for, I would feel that we should, you know, delay again and try to do more work on this issue.

The kinds of objections that I'm hearing are mostly of the kind, and I may be misquoting people slightly, you're not listening to us experts. And we know how to go out and look at a tree and judge. And you should be basically willing to accept something that is, in some way, more based on judgment than what we would accept at any other kind of offset, that -- because it's trees that we're dealing with and forests. And forests are different and they're special that we should somehow have a system, where we don't require as much rigor and as much technical information as you could get before deciding whether something is a real offset or not.

And I just -- I don't think we can sort of encourage that kind of thinking. I mean, I think we should recognize differences in different systems. And they are different, but not sort of assume that just because, you know, 9 out of 10 foresters think something is right, that's the right answer, even if they are all very good foresters and do a good job of management. That doesn't necessarily translate into a system of offsets that are real, verifiable, enforceable, et cetera, et cetera. So there's got to be someway to make that

translation work.

Having said that, I feel like we've made some progress here in terms of a better understanding of how these -- how these requirements would work, but there's clearly a need for, at a minimum, some kind of fairly formal process by which there would be an interaction between ARB staff and the interested parties here to spell out in more detail, probably in writing, you know, what's going to be acceptable and what isn't going to be acceptable, whether it's done through some sort of formal, you know, question and answer type of document or some other form of guidance. That it's just going to have to be -- clearly clarification is called for.

So with that, I think I'd like to ask the staff sort of how you will respond to what seems to be a rather large number of people from various interest groups here who are asking for some focused process by which they can at least make one more effort to get closer to what they think the protocol should look like.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: Well, thank you, Chairman Nichols. And as the staff, what we would be doing is developing a guidance document, and we would want to share that draft guidance document with all stakeholders, and invite a public comment period of a couple of weeks, and meet with

stakeholders during that time and after that time, and understand where we may have added additional clarity or where additional clarity is still needed, prior to finalizing that document and putting it up on our website.

In terms of the process for that, what we foresee is probably having a webinar to talk through what our intent was in some of these areas, based on some of the areas that have been identified for clarification in some of the comment letters, using that slide deck, having that webinar, and then using some of that feedback to draft that initial guidance document, and then putting that back out for public comment before finalizing it.

CHAIRPERSON NICHOLS: Well, I think that responds in large measure to what we've asked for. I imagine people would have preferred that we have done all of that before today, understanding that there is some need to bring closure to these items, especially since this is actually a rule-making that we're involved in here.

And so you can't just keep playing on forever.

You sort of have to reach a point at some stage where you say, okay, this is what the rule looks like. Now, we're going to talk more about how we interpret it.

That is one of the strengths I think of the process that we've been undertaking here with Cap-and-Trade.

Okay. I'm going to ask my fellow Board members if they have questions or comments at this point starting with you, Ms. Mitchell.

BOARD MEMBER MITCHELL: I'm just wondering, because a large number of our speakers this morning -- this afternoon asked for a technical advisory committee. And I know that is done in a lot of different contexts. Would it be useful to have such a committee working with you to develop the guidance document?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: So the process that we're proposing in terms of the webinar, inviting comment, that would be open to all technical experts. The process to draft the guidance document and then put that out for public comment, that would also invite experts to engage with us.

So I feel like the process that we're already proposing incorporates an opportunity to have technical experts, the project developers who will be implementing the projects, the verifiers who will be reviewing the projects, and any other interested parties such as the stakeholders may want to purchase those offsets an opportunity to all see and hear what everyone is saying, and see how it gets laid back out in the draft document.

BOARD MEMBER MITCHELL: Yeah, the issue that I see with that is that you may not have a really good back

and forth dialogue with just a couple of webinars. Do you have a draft guidance document already or are you proposing to do that?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: We are proposing to do that. We have one for the existing protocol. And as we would, if the Board voted to adopt this version, we would put out a guidance document for that one as well. We do have a moving Q&A document that we do. And as we questions, we update that periodically. So that's another mechanism that we have for providing clarity. But because we're hearing that there's very specific areas that have been identified in stakeholder letters, we would want to focus and make sure those are addressed in the new guidance to support a potential new protocol here.

BOARD MEMBER MITCHELL: What we are hearing from some of the speakers is very specific kind of language. Something was omitted that probably should have been included. But I am -- I'm a little skeptical that your process -- your webinar process will work really well.

I might suggest, and this is just a suggestion, that you -- you have a lot of expertise here in the room. We have a lot of expertise. That you begin the process with a face-to-face stakeholder meeting, and you start there, and then you can go from there to webinars and

to --

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: We can certainly do that. We can certainly go through a first cut of explaining what staff intended in the various updates. And the clarity is really around even-age management requirements. And so that's the area that we would focus on. We can do an in-person meeting, workshop, of what the intention was and how some of the stakeholder comments we believe are already mitigated in additional text in the protocol, and then take public comments before we do a cut at a draft set of guidance documents. We could certainly do that.

CHAIRPERSON NICHOLS: I think that's a good suggestion.

BOARD MEMBER MITCHELL: I think that might be a useful way to proceed.

CHAIRPERSON NICHOLS: You see heads nodding here.
Yes, Ms. Berg.

BOARD MEMBER BERG: Thank you. When I came into the meeting, I really had more of a sense, as you Chairman Nichols, about how this is going. But as the testimony went on, I think I became more and more uneasy. We have such a broad stakeholder group that is uncomfortable, and there seems to be specific technical issues around two various main issues here.

But one thing that, you know, I'd like clarification on is when were the documents available for the stakeholders to review?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: When we put out the 45-day package last October, everything was put out as part of the rule-making package at that point.

BOARD MEMBER BERG: So we haven't made any changes to the baseline or the even-age management since last October.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: We have updated the even-age management per Board direction in December to make sure it completely aligned with the California practice rules, so we did update that part of the -- in the 15-day process. The common practice values are based on data that's collected and calculated and processed by the U.S. Forest Service.

That process occurs approximately every five years. After the workshop -- after the Board hearing in December, we held a webinar where we had the U.S. Forest Service on the webinar with us to explain to stakeholders how they calculated and how they processed the data to generate the common practice values that are being proposed in the protocol.

BOARD MEMBER BERG: And when -- what date did

that happen?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF SAHOTA: The webinar was in February with the U.S. Forest Service.

BOARD MEMBER BERG: Okay. All right. Well, I certainly echo Ms. Mitchell's idea face-to-face. I think there is too many and too much either confusion or call for clarification for me to feel comfortable to pass the forestry protocol without some assurances that we're truly going to look at these issues and not in cursory way, but in a meaningful way. And if, in fact, we find some areas that we should have looked at differently that you feel comfortable that you can bring this back to the Board.

I absolutely agree with the Chair that our goal is to make sure that we have a protocol that is verifiable and is real. That is our job. But on the other hand, we don't want to have so much misunderstanding that this was a critical offset that we were putting together that we were anticipating would be one of our stars. And so we again walk a very fine line. And I want to make sure that staff does have enough time and resources and really feels the support to be able to get it right.

CHAIRPERSON NICHOLS: Mr. Corey, we talked during the process of getting ready for this hearing. You mentioned getting some more resources to this effort in

terms of staff to actually deal with the backlog of early action and help make sure that we're able to carry out all these obligations. Can you report on how that's all going?

EXECUTIVE OFFICER COREY: That is correct,

Chairman. One that I talked about really were two
elements. One were the positions that we got from last
fiscal year and the process we've gone to fill them, one
of which included an additional expert in this area.

The other one was internal restructuring within our divisions. I spoke over the -- when I gave a report to the Board earlier this year, I talked about a number of restructuring plans over the course of the year basically anticipating some of the challenges that would be -- that basically we're going to face this year and next.

One of them was recognizing the offset challenge. So basically we've shifted some folks over that are coming up to speed, that they -- one of the focuses was clearing up what really was -- and you've heard it from a few commenters on the early action offset backlog and working through that. We did get a number of -- slug of compliance rate offsets in the program at the same time and it really did put a drain. But we are knocking those down, working through that process, and by virtue of some of the adjustments here have made some efficiency

improvements.

So new staff, some reassignment of existing staff, and basically focused on working through this implementation and moving things through more efficiently.

CHAIRPERSON NICHOLS: All right. Well, I feel like we've kind of come to a point where we've done as much as we can do at this level with this project. So I think we probably ought to approve the package that we have in front of us, but with the clear directive to the staff to go back and initiate further intense, focused process on this forestry protocol. I think following Ms. Mitchell's suggestion to start with a meeting with those who have been most active, and then proceeding, as was suggested by Ms. Sahota with the workshop webinar and draft approach. And hopefully, we can get this thing then in shape to be able to implement.

BOARD MEMBER RIORDAN: Can that be made a part of the guidance document. In other words, the instructions to staff to develop just what we've talked about, but encompassed or wrapped around --

CHAIRPERSON NICHOLS: Well, I think our -- it would be in the resolution that we would be directing the staff to develop guidance that included those elements.

EXECUTIVE OFFICER COREY: That's correct. And the process that I'm getting is very clear that the

product is guidelines, but the guidelines follow from the process you just talked about, initial sit down, a webinar, a posting of draft, receiving comments on the draft, ultimately with the purpose of a fully fleshed out process with greater clarity reflected in guidance.

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CHAIRPERSON NICHOLS: I think that's --

BOARD MEMBER RIORDAN: Let me move then the item including that Mr. Corey has just enumerated as the guidance from the Board to the staff to work on the guidance for this forestry protocol.

CHAIRPERSON NICHOLS: All right. Do we have a second?

BOARD MEMBER BERG: And I would be willing to second that with the intention that staff be open to unintended consequences, and be willing to bring that back if they find any.

CHAIRPERSON NICHOLS: Okay. That was a yes.

EXECUTIVE OFFICER COREY: Yes, right.

CHAIRPERSON NICHOLS: Yes, Mr. Eisenhut.

BOARD MEMBER EISENHUT: I would just like to not include this as part of the motion, but just to remind staff of Chairman Nichols commitment to Mr. Buttner as we move forward with this process, so that that doesn't get lost.

CHAIRPERSON NICHOLS: Yes. Agreed.

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             EXECUTIVE OFFICER COREY: Yes.
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             (Laughter.)
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             CHAIRPERSON NICHOLS: Okay. All right.
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    that then, prepared to take a vote.
             All in favor of the resolution with the amendment
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6
    as proposed by Ms. Riordan and seconded by Ms. Berg,
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   please say aye?
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             (Unanimous aye vote.)
9
             (Supervisor Gioia not present.)
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             CHAIRPERSON NICHOLS: Any opposed?
             Abstentions?
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             Okay. That's it. Thank you all very much.
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13
             We've got some people with airplanes to catch
14
    from San Diego, so I'm hoping we can move them up quickly
15
    and begin this item. There's a lot of interest I know on
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    the part of the Board in hearing this update.
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             Good work on that last item. It's a tough one,
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   but we'll get it right.
19
             All right. Shifting teams here. Ms. Magliano
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   has been released by the Little Hoover Commission.
    were over there this morning. I was late this morning
21
22
    because I was testifying in front of the Little Hoover
23
    Commission about the Salton Sea. Really.
2.4
             All right. Are you going to be the presenter?
25
             No, it's you Sarah Dominguez. Okay. Well -- oh,
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1 I must have some little speech I'm supposed to give here.
2 Just a minute. Just a minute. I'll find it.

BOARD MEMBER ROBERTS: Madam Chairwoman?

4 CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER ROBERTS: And I know you're aware of it that our guests from San Diego are -- need to leave here at 4:30 to make their flight, because of the promise I made to them they'd be done.

(Laughter.)

BOARD MEMBER ROBERTS: So I know staff will be very efficient. And I know they will be very efficient. And this is largely a good news item, so --

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER ROBERTS: -- I'll get out of the way.

CHAIRPERSON NICHOLS: Just an update, but I know there's a lot of interest in it. It's an informational item on the San Diego Association of Governments draft Sustainable Communities Strategy, or SCS.

And this is the second one that they've done.

They were the pioneers and now they're at it again. And SANDAG is currently accepting public comments through July 15th. This item does not require any formal action, but we do have an opportunity to hear from staff about their preliminary evaluation of the SCS and to have some

discussion before it goes final this fall.

So again, we want to welcome our guests from SANDAG. And, Mr. Corey, you can introduce this item.

EXECUTIVE OFFICER COREY: Right. In fact, in the interests of time, I'm going to go right to Sarah Dominguez to give the staff presentation.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST DOMINGUEZ: Thank you, Mr. Corey, Chairman Nichols, and members of the Board. Today's presentation is one in a continuing series on Sustainable Communities Strategies, or SCSs, being developed to the requirements of SB 375. The San Diego Association of Governments, known as SANDAG, has been focused over the past four years on implementing its first SCS adopted in 2011.

They've also been working on their second SCS, which contains strategies similar to those in the first plan. In this presentation, I will give an overview of the San Diego region's 2015 draft SCS, and the next steps in ARB's process of evaluating the region's greenhouse gas determination.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Under SB 375, the Air Resources Board has the responsibility to set

regional greenhouse gas reduction targets for the 18 metropolitan planning organizations, or MPOs in California. Using the targets set by ARB as goals, each MPO must develop an SCS as part of its regional transportation plan, or RTP.

The MPO must demonstrate whether the SCS, if implemented, would meet the reduction targets set by the Board. Once an MPO adopts the SCS, it will be submitted together with a greenhouse gas quantification demonstration to ARB for review.

Ultimately, local governments have a key role, both in the development of the projects and policies that are reflected in the SCS and in implementing the SCS through local land-use decisions and actions.

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AIR POLLUTION SPECIALIST DOMINGUEZ: In 2010, the Board set greenhouse gas targets for SANDAG of seven percent per capita reduction by 2020 and 13 percent per capita reduction by 2035 from a base year of 2005.

In 2011, SANDAG adopted its first RTP/SCS. ARB staff reviewed SANDAG's greenhouse gas determination using our general review methodology and found that it was reasonable.

ARB issued an executive order accepting SANDAG's determination that the 2011 SCS, if implemented, would

meet the targets. Development of the current draft plan, known as San Diego Forward: A Regional Plan, began in early 2012. The draft was released for public review on April 24th and the comment period is open through July 15th.

A final plan is expected to be adopted by the SANDAG board of directors this fall. The target that this plan needs to meet are the same as the prior plan, seven and 13 percent. When ARB updates the SB 375 targets next year, these updated targets will apply to SANDAG's third SCS, which would be adopted in 2019, assuming a regular four-year update cycle.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Before we describe the 2015 plan, let me mention some of the steps that SANDAG has taken to implement the previous plan. In 2011, the SANDAG Board committed to completing several actions prior to the approval of the second SCS. This slide highlights some of these actions, as well as other steps that SANDAG has taken.

The SANDAG board has recently adopted several policies that support the plan's implementation. The regional complete streets policy, for example, promotes a transportation system that is safe and accessible for all users. And the active transportation implementation

strategy will serve to enhance bike and pedestrian access to public transit.

In 2013, SANDAG adopted the Bicycle Early Action Program that committed \$200 million from the local tax measure TransNet to expand the region's bicycle network and complete high priority projects within 10 years.

The transit-oriented development strategy is due to be adopted by SANDAG's Board next month, and it will assist the region to create transit-oriented development projects and neighborhoods. In addition to establishing policies that encourage local and regional action, SANDAG awarded a total of \$18.4 million in 2012 and 2013 to support local projects, with two TransNet funded grant programs.

SANDAG'S Active Transportation Grant Program funds pedestrian and bicycle infrastructure projects and programs. The Smart Growth Incentive Program funds transportation related infrastructure improvements and land-use planning.

Several transportation projects in the 2011 plan have already been completed. Rapid bus service began operating last year with five routes that provide faster access to several job and population centers, including downtown San Diego and the UC San Diego campus.

SANDAG has also added links to its regional

bikeway system, including a segment on the Bayshore
Bikeway that is currently 15 miles long, but when
completed will extend for 24 miles around the San Diego
Bay. This facility will provide a safe connection for
bicycle commuters and expanding existing recreational
opportunities.

Another addition to the transportation network, since the adoption of the first plan, is the completion of eight miles of carpool lanes on Interstate 805 between Chula Vista and San Diego.

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AIR POLLUTION SPECIALIST DOMINGUEZ: San Diego County is the second most populous in California. It is home to a little over three million people, and is forecasted to grow by another 700,000 for a total population of 3.8 million by 2035.

The current growth forecast anticipates less growth than the previous plan, which had forecasted over four million people by 2035. The county has many unique features that influence the regional economy and inform SANDAG's planning process, including several military bases that represent the largest concentration of military forces in the U.S., and is also home to 18 tribal governments with jurisdiction over 19 reservations, the most of any county in the U.S.

Especially important, is its international border with Mexico, which has several points of entry, including one of the busiest land border crossings in the world at San Ysidro.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Most of the county's population is concentrated in the western third of the county near the coast. The communities in this region vary greatly in size and type, including urban cities like San Diego and suburban cities, like Escondido.

Some cities have a mix of urban and suburban elements, including both walkable, transit-rich neighborhoods and dispersed auto-dependent neighborhoods. Of the 18 cities, San Diego is the largest and accounts for about 40 percent of the county population. Almost half of future population growth by 2035 is forecasted to occur in San Diego.

Like much of California, San Diego County has a historic pattern of suburban growth, but due to regional growth management efforts over the past decade, the region is adopting policies for more compact urban-centered growth.

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AIR POLLUTION SPECIALIST DOMINGUEZ: The region's development pattern has been evolving for some time now,

as highlighted in these maps. The regional growth forecast made back in 1999 is depicted on the left, and the current forecast on the right. Of the colors you see on this map, gold represents housing, brown represents jobs, and green represents open space. Each individual gold and brown dot represent 10 new housing units and 10 new jobs respectively. As shown on the map on the left, local governments previously expected a large amount of expansion to the east.

In contrast, the map on the right represents the growth pattern as reflected in updated local government land-use plans as of 2014. The cities and the County of San Diego are now expecting to grow up instead of out with more compact development in urbanized areas resulting in an increased amount of protected open space.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Next, I'll talk about how the 2015 plan is continuing to build on the policies of the first SCS. SANDAG's current plan is a refinement of the first SCS and continues to provide a range of mobility options in the region by 2050. But the current plan goes further by investing in emerging technologies, such as electric vehicles, car sharing, and mobility hubs.

The RTP/SCS has been combined with the region's

2004 regional comprehensive plan, which served as the regional blueprint to create a unified planning document that not only addresses land use and transportation, but also reflects the region's goals for social equity, a healthy environment, and economic prosperity.

The current plan continues to advance the urban area transit strategy, which was reflected in the 2011 plan. This strategy sets a boundary around the region's major residential, employment, and activity centers within which the majority of transit investments are to be directed.

Its goal is to increase transit ridership and reduce vehicle miles traveled by providing more frequent and more efficient transit service near jobs and housing. The 2015 plan calls for the completion of active transportation projects and some transit projects earlier than previously planned.

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AIR POLLUTION SPECIALIST DOMINGUEZ: The new plan uses transportation investments to support compact development and supplements the suite of infrastructure projects with technology measures that increase the efficiency of the transportation system and provide more mobility options.

Since 2011, the county general plan, five city

general plans, and over 30 specific plans have been updated to reflect the compact mixed-use development goals of is the SCS. These local plans result in a regional forecast for more multi-family housing, more infill development, and more jobs and housing near transit.

The county currently has a robust transit network, including the coaster commuter rail, sprinter light rail, and a trolley light rail network. The regional also has an extensive local bus network as well as the recently established bus -- rapid bus services mentioned earlier.

This plan allocates 45 percent of the RTP budget through 2035 for transit. These investments will improve the frequency of existing commuter rail, light rail, and local bus services. The plan also expands the transit network by extending the light rail trolley line and adding to the rapid bus system.

Because of the recent adoption of the bicycle early action plan and complete streets policy, many active transportation projects will be completed in the next decade, and all of SANDAG's future infrastructure projects will accommodate all users of the system, regardless of age, ability, or mode of travel.

Managed lanes on the highway system continue to be an important part of the plan's transportation

strategies. Managed lanes refer to carpool, vanpool, express, and transit-only lanes that prioritize HOV travel. Many of the rapid bus routes will rely on these managed lanes.

To maximize the efficiency of the whole transportation system, the plan invests in transportation system and demand management strategies. SANDAG continues to promote existing carpool, vanpool, and safe routes to school programs, and invests in new programs that support car sharing, and the creation of mobility hubs, which integrate a variety of transportation options.

Finally, this plan recognizes the need to support the emerging electric vehicle market by incentivizing the installation of a robust network of chargers that would expand opportunities for EV charging.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Let's now turn to the process that SANDAG used to develop this plan.

In 2012, just a few months after adopting the 2011 plan, SANDAG began engaging stakeholders to discuss priorities for the current update. Numerous policy advisory committees and work groups focused on a variety of issues such as active transportation, public health, tribal transportation, energy, and freight. SANDAG also worked with a network of community-based organizations and

environmental justice groups that helped to analyze elements of the plan and provide outreach support to local communities.

Prior to releasing the plan, SANDAG held 12 public workshops and held seven more after the draft plan was released in April.

To develop the RTP project list, SANDAG started with a set of projects that included those from the 2011 plan, then ranked the projects using evaluation criteria to create two alternative network scenarios. Based on public feedback, these two scenarios were blended into a third scenario that became the draft plan.

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AIR POLLUTION SPECIALIST DOMINGUEZ: This slide identifies performance measures as represented in SANDAG's 2015 SCS, which reflect how the region will change by 2035 as compared to the plan's base year of 2012. Due to more compact growth, as well as increased transit investment in key corridors, the number of people living within a half mile of high frequency transit would increase from 35 to 58 percent of the total population by 2035.

Similarly, the number of jobs located within a half mile of high frequency transit would increase from 42 to 68 percent. More people are anticipated to use transit in response to the improved access to transit service.

The number of daily transit boardings more than doubles from 366,000 daily boardings in 2012 to 787,000 in 2035.

The increased availability of transit, in addition to the investments in bike and walk facilities, would also help increase the number of people using these alternative modes of transportation. The share of bike, walk, and transit trips would shift from 14.3 percent in 2012 to 16.4 percent by 2035.

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AIR POLLUTION SPECIALIST DOMINGUEZ: Because SANDAG's RTP/SCS extends to 2050, it also looks at longer term trends in the region. Here are just two examples of the broad changes that would occur in the region by 2050 if the plan is implemented.

In 2012, about 36 percent of all housing units in the county were multi-family. Under the updated plan, over 82 percent of the new housing built in San Diego region between 2012 and 2050 would be multi-family. The plan's land-use strategies also result in benefits for open space. By 2050, 55 percent of the region would be preserved as open space, parks, habitat or farmland.

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AIR POLLUTION SPECIALIST DOMINGUEZ: SANDAG has invested significant resources over the past four years to develop an activity based model. This type of model

allows SANDAG to simulate individual and household transportation decisions, and allows for a more nuanced analysis of alternative policies and projects. In addition, SANDAG is using updated data and information such as a new travel behavior survey, a 2014 demographic forecast, and updated cost of travel assumptions.

These data and inputs help to calibrate the model and improve the region's ability to forecast future transportation behavior.

SANDAG released the activity based model on-line, making it available for public review and improving the transparency of the region's modeling system. SANDAG continues to enhance and refine the model.

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AIR POLLUTION SPECIALIST DOMINGUEZ: ARB's role is either -- is to either accept or reject SANDAG's determination that the 2015 SCS, if implemented, could meet the targets set by the Board. SANDAG estimates that this draft plan would result in an 18 percent per capita greenhouse gas reduction by 2020, and a 24 percent reduction by 2035. These numbers are substantially higher than the greenhouse gas benefit of the prior plan.

For the past several months, ARB and SANDAG staff have been working together to gather information and discuss the plan's development. Now that the draft plan

has been released, along with numerous technical appendices and other supporting information, staff will be reviewing all of this publicly available documentation as we complete our technical evaluation.

In its evaluation, staff will focus on four core aspects of the modeling system consistent with ARB's general review methodology established in 2011. This includes looking at the performance of the activity based model and other off-model tools to understand how they capture the greenhouse gas impacts of strategies in the plan. Staff is also carefully reviewing SANDAG's inputs and assumptions.

SANDAG has completed five model sensitivity tests, and staff will be looking at the results to assess whether the model is adequately sensitive to key SCS strategies.

Staff is also looking at a variety of performance measures, including changes in land-use density and transit ridership, which may help to explain changes in vehicle miles traveled and related greenhouse gas emissions from passenger vehicles.

Staff will continue to work with SANDAG to get further clarification on strategies, model documentation, model tooling tools, off-model adjustments and assumptions, so that we can complete our evaluation and

prepare a recommendation.

Once SANDAG adopts the plan in the fall, it will submit a final greenhouse gas determination to ARB, which triggers a 60-day review period. At that time, staff will review the final SCS for any changes from the draft that may affect staff's recommendation.

The executive officer will then issue an executive order, either accepting or rejecting SANDAG's determination.

This concludes my presentation of SANDAG's draft RTP/SCS. I would now like to introduce Gary Gallegos, the Executive Director of SANDAG and invite him to address the Board.

Gary.

CHAIRPERSON NICHOLS: Welcome.

MR. GALLEGOS: Thank you, Madam Chair and members of the Board. Please to be before you again. And given the time constraints, I'm going to alter my presentation a little bit, because I think, first of all, your staff did an outstanding job of presenting what's in our plan. And, to me, that's usually a good indicator of the growing partnership. And I want to take this opportunity to thank the staff here at CARB, because I think we've -- our relationship continues to evolve. And it's clear that you guys understand our plan by the outline that you just

gave.

So I'm very briefly going to focus, Madam Chair Board members, on -- because I think it's one thing to have a plan, but it's another thing to get it done. And at SANDAG, I think, one of the advantages that we bring to the table is that we're not just responsible for putting a plan together, we actually are also responsible for implementing it.

And so when you see that, you know, we got targets of seven and 13, and we're at 18 and 24. And let me highlight that even though there's no target at 2050, but since our plan goes out that far, we estimate that our greenhouse gas reductions out at 2050 would be in the magnitude of a 30 percent reduction.

And I think one of the reasons we've made progress is projects that we've gotten done, and, you know, implementation matters.

So very quickly, I would like to cover much of the activity that we've had over the last four years that I think has helped us achieve the success. First of all, we completed 20 miles of what I would characterize as our showcase project on I-15. I-15 used to be San Diego's most congested corridor in the nineties and the first decade of the new century.

And that's now gone to being one of our best

performing corridors, because we spent about \$1.4 billion, added four managed lanes. We also have now opened a BRT line that runs on that. It's the I-15 express. It's carrying about -- it's been in operation a little over a year. It's carrying about 5,000 passengers a day. And it's increased the transit ridership in that corridor by 40 percent.

We've also -- are in the process of implementing another BRT that will serve the international border and the housing rich areas of San Diego in Chula Vista

National City all the way to downtown San Diego. And we expect to have that in operation by 2016.

Last year, we opened arteriole based rapid bus system that serves the communities from UCSD all the way to the job centers in downtown. That is carrying about 7,000 passengers a day through the first month and been a pretty exciting project through, what I would characterize as, one of the strongest transit markets we have in the San Diego region.

You know, San Diego's home to the second busiest commuter rail corridor in the country, next to northeast corridor. And one of our limitations is as busy as that rail corridor had -- has been, only half of it's double tracked. The other half is run on a single track. And since the last plan we put -- and I should have probably

started it by saying, you know, it's really not fun being first. Man, I've got to tell you guys, I'd rather be second or third or fourth given our past record, but it is what it is. Here we here again.

But since the last time, we've now got about three-quarters of that track that's double track. So we've made tremendous progress in double tracking. That's improved our on-time performance, both for inner-city rail and commuter rail.

We're now engineering one of Supervisor

Roberts -- and Supervisor Roberts plays a unique role in
that not only is he a CARB Board member here, but's also a

SANDAG Board member and our vice chair. And probably one
of his, you know, big important projects has been our
mid-coasts projects, which would extend the light rail
really north of Interstate 8 and really connect San

Diego's two biggest job centers with all our housing
centers from in the south part of the county and the north
part.

A two billion dollar project, we expect, if the Board says yes tomorrow, we start our utility relocation in July of this year, and we expect to start heavy construction on this \$2 billion light rail line that should be a showcase for us in San Diego next year sometime with, you know, service hopefully in '17, '18 in

that time frame, to actually start revenue service.

We've -- one of the things that I think is important, and I would highlight to the CARB Board members, that I think it's not only important that we build new stuff, but that we take care of the stuff that we already have. And we've invested a billion dollars in modernizing our oldest and highest ridership light rail lines in the line -- in the region. We've added new low-floor cars. Those really improve the ability particularly for many of our patrons that have disabilities can -- before we had to put them on a ramp, and, you know, get them into the light rail car. Now, they can roll-on roll-off. Our on-time performance has improved and our transit ridership has improved.

Your staff covered -- you know, we introduced an HOV lane on 805. Very successful. Already carrying 35,000 vehicles a day or about 72,000 passengers every day.

On the active transportation program, you know, we brought forward \$200 million. One of the unique things is we're actually implementing the projects. And we've got a fair amount of scar tissue to show about how hard it is for those of you that think everybody likes bicycle projects --

(Laughter.)

MR. GALLEGOS: -- not always the case when you're going through urban California. And so we're slugging through getting bicycle projects, you know, not just planned, but getting them built in the San Diego region.

We received unanimous approval from the Coastal Commission for our north coast corridor project.

Something that happens rarely in terms of working with the California Coastal Commission. But I think this is really a hallmark project that will add lanes to I-5, but will also continue the double tracking. And we added a bunch of environmental enhancements to really make the corridor a much more productive corridor.

And a very quick example, because we're constrained by right of way, in order to make the lanes fit, we have to build large retaining walls to be able to, you know, not have to buy more right of way. But we got creative in working with the Coastal Commission. So instead of building one really tall retaining wall, we're going to build two retaining walls and offset them. And in between that it's a bike line that provides a bike facility along the interstate system outside of the operating right of way, a very creative way to provide more access for other folks.

And I know time is short, but two other quick -- three other quick things actually, is we're working on a

new port of entry with Mexico that we're taking the lead on, that would provide 20-minute border-crossing times. I would highlight to the Air Resources Board that Mexico is California's largest export market. California exports more products to Mexico, more of them through Otay Mesa within often with wait time of two and three hours. And we're proposing to build a new border crossing that would allow that time frame to be reduced to 20 minutes.

And we're doing it through tolls, and we're doing it through real-time pricing, where we change the price based on the capacity of the facility. That's how we manage to keep that 20 minutes and be able to make that promise.

The last two things is -- the second -- the second to the last is we bought a toll road. As a guy that's spent the last 30 years, you know, implementing big projects in the San Diego region, and really in northern California for a short period of my career, it's always -- I would tell you it's easier to buy one that's already built than to build one from scratch.

But we took a toll road that was run by the private sector and really was underutilized. And that was I think the motivations for our board to go buy this. On a good day, that road would carry around 20 to 25 thousand passengers. We were able to restructure the tolls, lower

the tolls, something that doesn't happen very soften, and we've now seen the traffic more than double. So we're -- on a typical day, we're carrying somewhere between 45 to 50 thousand passengers on an existing toll road.

We still have a debt, but there is an example where government can reduce prices and still make it up on the volume. We are actually generating more than enough money to cover our cost on that toll road.

And last but not least, I would probably be remiss if I didn't highlight that a new tool that we hope to add to the San Diego toolbox -- and let me plead for some help here from CARB and others, is we've recently finished the study on a skyway. And I've got to admit when I first started working on that study, I was a little bit of a skeptic. But two things moved me from being a skeptic to a true believer.

And one was, first of all, the capacity of the system, and the fact that on these skyways, we believe we can move somewhere between two and three thousand people per hour. A freeway lane on a really good day, on a flat area will probably carry around 2,000 vehicles per hour. And if there's only one or so person in each of those vehicles, you can see that this has the capacity of being pretty close to one freeway of lane.

But probably most importantly to me is that, you

know, we looked at what would it cost to do this. And the cost, depending on where you're at, we believe ranged somewhere between 30 to 40 million a mile. And if we contrast that with light rail in the San Diego region, lights rail, depending on where you're at, is going to cost somewhere between 300 to 400 million a mile.

So if we can build a facility that will be just as functional for about 10 percent of the cost, that's one of the ways that we catch up. And so we're excited about connecting. One of the things San Diego has struggled with is how to connect our downtown area with Balboa Park and the San Diego Zoo and the major attractions that we have there, about a two-mile facility that we want to try it on.

But we've also looked at beyond just that, you know, how do we connect to the beaches. And one of our things that -- one of the alternatives we have in the plan is to extend light rail down there, but there's going to be a lot of challenges in extending light rail on what street you go to and how many cars you take out and what street you impact. And we believe that the aerial system will help mitigate some of these at a much lower cost.

So, Madam Chair, let me conclude by saying that's sort of a list of where hopefully we're not just talking the talk, but we're walking the walk. And I think that

that's one of the reasons that we've been able to exceed seven percent and get all the way to 18 percent.

But I would leave you that one of the challenges moving forward is that we've been able to do this because we've been able to advance sales tax dollars from bringing them forward. But our sales tax program is no different than your visa card. It's got a limit, and eventually we'll max out to the limit.

And I think as we move forward, if we want to do more of this to help reduce greenhouse gases, you know, resources are going to be constrained as we look into the future. And so we would encourage CARB to continue to push for more resources. I think the cap-and-trade piece was something that we continue to be grateful for every dollar that we get out of cap-and-trade. But to be honest, maybe sometimes a little disappointed because I think the peanut butter has been spread pretty thin.

And, I don't know, when we look at our SCSs, you know, right now I would argue the progress we've been making is because of the projects that I just talked about. And a lot of those are being funded with local sales tax dollars not with cap-and-trade dollars or other resources

CHAIRPERSON NICHOLS: Sure. Well, I know the time is short, but I just would say that I would agree

with you, cap-and-trade is intended to be, and I suspect always will be, a very limited source of funds for the State. It was never intended to be a revenue raising program, as it's turned out, with a very small auction. We've generated enough funds to do some good, which is terrific, but to shift the kind of investments that we need to fundamentally transform or transportation system is going to take much more serious effort. And there is conversation underway within the administration and with the legislature about what that might look like in the future. I don't have any news to report here, but I can tell you that there's growing awareness of the need.

MR. GALLEGOS: And so I guess my point is that if we want to continue to see progress like this, we're going to have to make sure that we can invest in the things that are in our plans.

CHAIRPERSON NICHOLS: That's been something that we've heard from the MPOs from the very first day of SB 375.

MR. GALLEGOS: Yes, ma'am.

(Laughter.)

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CHAIRPERSON NICHOLS: So there's a consistent message here.

(Laughter.)

MR. GALLEGOS: We've been consistent.

CHAIRPERSON NICHOLS: Appreciate it, and appreciate your good work in implementing the plan that you have. I think there are a number of us who want to have a conversation about, you know, expanding the role of land-use agencies going forward, and how we look towards the future in terms of the role that cities and counties can play in actually delivering the kinds of greenhouse gas reductions that we're going to be needing.

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SB 375 is sort of structured in a particular way to look at a baseline and how you're doing on that. And, you know, I think you've fulfilled your requirements, and done what you've said you were going to do. So no criticism about that.

MR. GALLEGOS: I would be remiss if I didn't really highlight the 18 cities in the county, because one of the things that happened is the county redid its general plan and downzoned a lot of land in the back country, but that meant that the cities had to upzone the stuff, so that we could still achieve the housing stock that we need to provide the growth that we anticipate. And that's happened. So our 18 cities and the county have stepped up to the plate.

CHAIRPERSON NICHOLS: Congratulations.

MR. GALLEGOS: Thank you.

CHAIRPERSON NICHOLS: Okay. Further comments?

I know these gentlemen have a plane to catch, that's why I'm rushing a little bit, because I know they're -- sorry.

BOARD MEMBER ROBERTS: I just want to thank Gary. Yeah, I told you it was largely a good news story.

CHAIRPERSON NICHOLS: Yeah.

BOARD MEMBER ROBERTS: He works tirelessly. He has a great staff. We've got a lot of good things happening, so I was confident you'd enjoy the report. Now we'll let him get out of here.

MR. GALLEGOS: Thank you.

CHAIRPERSON NICHOLS: Thank you.

I may be headed in the same direction in about two minutes, but we have one more information item on the agenda. And this may seem like a no-brainer. Exercise is good for you, right?

(Laughter.)

CHAIRPERSON NICHOLS: But there's a little bit more to it than that, which is that the staff wants to share some research that sort of helps to deal with the question that I used to get asked all the time, which is, you know, I like to run along the median strip along San Vicente Boulevard, am I doing my health more harm by running next to where there are cars than anything I'm gaining by getting the exercise of being out there

running?

And the answer is that is yes.

Okay. Well, we may be giving you short shrift with this one. I apologize, but that's what happens when you come at the end of the day.

(Thereupon an overhead presentation was presented as follows.)

MR. MOORE: Yes. Thank you members of the Board.

And I have always been accused of speaking quickly, so

maybe that's an advantage today.

CHAIRPERSON NICHOLS: Go for it.

MR. MOORE: So this health update will focus on the many health benefits of incorporating physical activity into our daily lives and how our environment can influence our physical activity patterns.

Public health is the core of ARB's mission. The evidence of the health benefits of physical activity is so compelling that the World Health Organization and Center for Disease Control and Prevention both list physical inactivity as one of the most important health risks that -- for disease the individuals are able to change. This evidence led to the creation of national physical activity guidelines in 2008.

In that same year, this Sustainable Communities and Climate Protection Act was passed which supports

California's goals to reduce greenhouse gas emissions through coordinated transportation and land-use planning to promote more sustainable communities.

There are many anticipated benefits of these sustainable community designs, including reductions in vehicle use, increased mobility through development of transit options, economic growth, and conservation of open space.

Importantly, how sustainable communities are designed can promote increased physical activity of people living in these communities which has the potential to greatly improve public health in California.

With the next several slides, I'll describe some of the ways that the built environment can encourage increased physical activity and why this is important for public health.

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MR. MOORE: Studies are beginning to measure how the built environment can impact health and physical activity through changes in behavior. This rapidly expanding area of research will determine the effectiveness of different aspects of the built environment to promote community health.

For example, studies conducted in Southern
California have found that children that have access to

green spaces, such as parks and nature trails within their neighborhood, are more physically active. In fact, greenness in smart growth communities seems to be more effective at encouraging physical activity in children than greenness in traditional neighborhoods, indicating that the quality and characteristics of the green space is important.

In addition, adults who live in denser neighborhoods incorporating mixed-use designs and more street intersections exhibit higher levels of physical activity and improved cardiovascular risk factors. Adults living in these types of neighborhood also have lower rates of certain chronic diseases.

Increased access to public transportation may also influence physical activity. One study indicates that many Americans meet their physical activity recommendations during their daily walk or bike to public transportation. Additionally, a novel before and after study conducted in Los Angeles, including funding by ARB, showed that the installation of a new light rail line can alter travel patterns and physical activity levels of individuals living close to those new stations.

So we can see that the built environment can increase physical activity, but why is it so important for the health of Californians?

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MR. MOORE: There is overwhelming evidence associating physical activity with wide array of health benefits in children and adults, but we will focus on those that the current body of literature strongly and consistently supports. Physical activity in children and adolescents is associated with increases in aerobic fitness, reductions in cardiovascular and metabolic risk factors, such as high blood pressure and cholesterol, the maintenance of a healthy weight and reduced risk of acquiring an obesity-related disease.

It has also been shown in controlled clinical trials to improve self-esteem and effectively treat symptoms of depression. Physical activity is associated with many health benefits in adults as well, such as increased aerobic fitness and functional capacity, decreased Risk of premature death, and the chance of acquiring certain cardiovascular, metabolic, and cognitive diseases, as well as certain types of cancer.

Also, physical activity has been shown to effectively treat many diseases, such as type 2 diabetes, heart disease, and osteoarthritis as well as improve physical and mental function and mood.

Next, we'll look at the overall relationship between increased physical activity and the magnitude of

that health benefits.

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MR. MOORE: Studies evaluating different levels of physical activity have consistently reported that the greatest health benefit occurs when sedentary individuals start becoming active. Further increases in activity levels result in further risk reduction, but the rate of reduction is not as pronounced. To give you a sense of how dramatic the effect can be, many studies indicate that the magnitude of the health benefits associated with leading an active lifestyle is similar to that seen in individuals who quit smoking.

In a long-term study of 50 year old men, those who were sedentary but became active reduced their mortality risk by half, and those that quit smoking saw a 40 percent reduction.

So increased physical activity can have a substantial impact on our health, but when referencing the physical activity recommendations, we need to consider how individuals can incorporate physical activity into their daily lives and determine what level of physical activity is needed to see these benefits.

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MR. MOORE: Researchers and policy experts commonly group physical activity into four categories:

Occupational, recreational, household, and transport-related activity, such as walking to work or school. Based on the current research, it is recommended that adults participate in 150 minutes of moderate to vigorous physical activity a week to realize substantial health benefits.

As long as the duration and the intensity are equivalent, the specific nature of the activity isn't important. This means that it is possible for an individual to meet his or her physical activity goals without participating in a structured exercise program. Some examples of moderate intensity activities are brisk walking, mowing the lawn, stair climbing or playing with children. This recommended amount of physical activity can not only be achieved in many ways, but research indicates that it can be accrued in increments as short as 10 minutes at a time.

So we have seen that physical activity can come in many forms. Over the next two slides, we'll examine the association between transport related physical activity and health.

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MR. MOORE: Research on active transport and children -- childhood health conducted in the United States is sparse with most of the work being done in

European countries. Even so, these studies suggest that children that bike to school have higher aerobic fit levels, flexibility and muscular strength, and a lower risk of being overweight than those who take the bus or a car.

The results of a longitudinal follow-up study indicated that a good percentage of children that bike or walk continued to use active transport into adolescence and young adulthood. In addition, students who commuted via car or buses as young children, but began walking biking later in their school career also saw increased health benefits similar to those that actively commuted throughout their schooling, reinforcing the idea that it is never too late to start.

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MR. MOORE: Like children, adults can also substantially benefit from active transport. A large review of active transport research in adults identified significant decreases in premature mortality in those who use active transport for commuting.

In this analysis of 18 separate studies, an approximately 10 percent reduction in death rates was seen in those individuals who regularly walk or bike. Also based on the results of a large meta-analysis, occurrences of acute cardiovascular events, like stroke or heart

attack, were 11 percent lower in adults who walked or biked for transport. Cases of type 2 diabetes were also significantly lower in adults who biked and walked on a regular basis.

Although being physically active is health for almost everyone. What about the health risk of increased exposure to air pollution when you're exercising outdoors.

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MR. MOORE: Although regular physical activity can still be beneficial, there are groups that are more vulnerable to the negative effects of air pollution, especially when exercising. Air pollution exposure has been linked in numerous studies to acute and long-term decrements in lung function and increased inflammation and symptoms in healthy and asthmatic children and adults. Also, asthmatics exhibit greater reductions in lung function and increased inflammation when being physically active in areas with higher levels of air pollution.

Even healthy adults show signs of pulmonary and systemic inflammation and altered vascular function when exposed to air pollution when exercising outside. This indicates that we should all minimize our exposure, whenever possible, and that sensitive populations should alter their behavior based on air quality.

Being aware of the significant health benefits

associated with activity, as well as the negative impacts of air pollution, are there ways to reduce our exposure to air pollution when being physically active outdoors?

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MR. MOORE: Current research does support some measures that can be taken to reduce air pollution exposure. For example, a Berkeley study indicates that selecting low traffic roads, just a block or so off of major roadways can reduce traffic related air pollution exposure when biking, demonstrating that placing bike lanes on less car traveled routes can reduce exposure.

Additionally, a Southern California study found that public parks within neighborhoods with higher pollution had significantly lower levels of nitrogen dioxide and PM2.5 than the surrounding neighborhood streets, indicating that shifting outdoor activity to a park environment can reduce exposure.

It has also been shown that schools with more green space around and within the school grounds have lower indoor and outdoor traffic-related air pollution levels. Interestingly, tree count at the schools was associated with lower air pollution levels, again suggesting that the specific type and quality of green space may play a role.

There are also two national programs that address

mitigation strategies focusing on children and adolescents. The School Flag Program run by the U.S. EPA uses brightly colored flags to help children, parents, school personnel, and the community be aware of daily air quality conditions, so that they can alter their activity accordingly.

Safe Routes to School is a national program administered by the U.S. Department of Transportation that invests federal funds to improve biking and walking infrastructure, to encourage active transport to school, and improve safety. As the above studies suggest, altering our built environment can mitigate air pollution exposure during outdoor activity, and as we have seen the built environment designs can also encourage physical activity

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MR. MOORE: Research to help us understand community designs that reduce pollution exposure and promote increased physical activity are underway. ARB has recently completed or is currently involved in many projects related to the interaction between physical activity, air pollution, the built environment, and health.

This list includes a bicycle commuter study looking at ultrafine particulate matter exposure and lung

function along a high and a low traffic commuting route.

Another current study is assessing the relationship
between the walkability of neighborhoods, air pollution
exposure and health outcomes. There are also projects
evaluating how complete street and transit stop designs
affect air pollution exposure and travel behavior, and how
the siting and design of sound walls and vegetation
barriers affect the distribution of air pollution.

Next month, a seminar is scheduled for July 22nd to highlight the results of the recently completed before-and-after light rail project. Almost as critical as the research itself, we must ensure that the results of this work are distributed to all of those that can individually benefit or use this information to positively influence community health outcomes. Upon completion of these projects, we will develop fact sheets that will be housed on the ARB website for community access. We will also work in conjunction with ARB's Sustainable Communities Program to effectively communicate findings to other stakeholders.

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MR. MOORE: In conclusion, almost all Californians can see improved health from increased physical activity, regardless of age, sex, ethnicity, or health status. In addition, the way that our communities

are designed can have considerable impact on physical activity. Communities with higher levels of greenness, more walkable streets, and easier access to public transportation have been shown to encourage physical activity, including active transport, in the residents of these neighborhoods.

By incorporating physical activity into their daily lives, Californians can take a significant step towards reducing the risk Of disease and enhancing their quality of life, leading to dramatic improvements in public health throughout the State.

The Research Division staff are currently conducting or in the planning phase of many projects evaluating the health impacts of sustainable community design, including the impact of these design principles on physical activity levels.

Thank you for your time, and I would be happy to answer any questions.

BOARD MEMBER BERG: Thank you very much for a great report, Brian. And it really comes at a good time right after we're hearing about the SB 375 and the importance of that. So very good job.

Also, Dr. Balmes is very involved in a lot of this research, and so I'd like to call on you to make a couple comments.

BOARD MEMBER BALMES: Well, first of all, I again want to congratulate Brian on a nice presentation. I know it's tough to give a presentation at the end of the day like this.

(Laughter.)

BOARD MEMBER BALMES: And welcome to the ARB staff. I know you're a relatively new hire. It's nice to see an exercise physiologist hired by the Research Division. And I have to like a presentation that cited two of my papers.

(Laughter.)

MR. MOORE: That was completely based on merit, I swear.

(Laughter.)

BOARD MEMBER BALMES: But your last slide about if exercise could be a pill, it would be -- it should be prescribed. There's actually now guidelines for physicians to always ask about exercise when we're taking a history from patients and to prescribe exercise. And I always do that now, because the evidence is really strong. And it's not just about your physical health, your cardiovascular health. It's actually about your cognitive health. And as some of us are not getting any younger, there's actually really good evidence that the onset of dementia is put off by exercise, even in people who are

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    susceptible to Alzheimer's. So I encourage all my Board
    members to get their 30 minutes a day, five days a week of
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    exercise. But thank you, Brian.
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             MR. MOORE: Thank you.
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             BOARD MEMBER BERG: I'm so inspired.
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             Any other comments?
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             (Laughter.)
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             BOARD MEMBER BERG: Do we have any public
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    comments listed?
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             BOARD CLERK JENSEN: (Shakes head.)
             BOARD MEMBER BERG: Well, with that, can I have a
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   motion to adjourn?
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             BOARD MEMBER BALMES: So moved.
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             BOARD MEMBER SPERLING: Second.
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             BOARD MEMBER BERG: All in favor?
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             (Ayes.)
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             BOARD MEMBER BERG: Thank you very much.
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   you, staff. It was a long day. We had covered a lot of
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   material. Please thank all the presenters and everyone
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    that had an agenda item. Everybody did a great job.
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    Thank you very much.
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             (Thereupon the Air Resources Board meeting
23
             adjourned at 4:51 PM)
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