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## MEETING

STATE OF CALIFORNIA AIR RESOURCES BOARD

CALEPA HEADQUARTERS COASTAL HEARING ROOM SECOND FLOOR 1001 I STREET SACRAMENTO, CALIFORNIA

THURSDAY, JULY 26, 2018

9:03 A.M.

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

BOARD MEMBERS:

Ms. Mary Nichols, Chair

Ms. Sandra Berg, Vice Chair

Dr. John Balmes

Hector De La Torre

Mr. John Eisenhut

Senator Dean Florez

Supervisor John Gioia

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Phil Serna

Dr. Alex Sherriffs

Professor Dan Sperling

## STAFF:

Mr. Richard Corey, Executive Officer
Ms. Edie Chang, Deputy Executive Officer
Mr. Steve Cliff, Deputy Executive Officer
Mr. Kurt Karperos, Deputy Executive Officer
Ms. Ellen Peter, Chief Counsel
Ms. La Ronda Bowen, Ombudsman
Ms. Emily Wimberger, Chief Economist
Ms. Veronica Eady, Assistant Executive Officer

A P P E A R A N C E S

APPEARANCES CONTINUED STAFF: Mr. Matthew Botill, Branch Chief, Climate Investments Branch, Transportation and Toxics Division (TTD) Mr. Mike Carter, Assistant Division Chief, Mobile Source Control Division (MSCD) Mr. Rhead Enion, Senior Attorney, Legal Office Mr. Bart Croes, Division Chief, Research Division (RD) Ms. Rebecca Fancher, Staff Air Pollution Specialist, Legal Office Ms. Rachel Gold, Air Pollution Specialist, Industrial Strategies Division (ISD) Ms. Jessica Gordon, Senior Attorney, Legal Office Ms. Maureen Hand, Air Resources Engineer, ISD Mr. Aaron Hilliard, Manager, Alternatives Strategies Section, MSCD Mr. David Hults, Assistant Chief Counsel, Legal Office Mr. Doug Ito, Assistant Division Chief, TTD Ms. Peggy Jenkins, Manager, Indoor Exposure Assessment Section, RD Mr. Jack Kitowski, Division Chief, MSCD Ms. Cheryl Laskowski, Manager, Climate Investments Policy Section, TTD Mr. Hyung Joo Lee, Air Pollution Specialist, Indoor Exposure Assessment, RD Ms. Cynthia Marvin, Division Chief, TTD Ms. Claudia Nagy, Senior Attorney, Legal Office Mr. Nicholas Nairn-Birch, Air Resources Engineer, Alternatives Strategy Section, Incentives and Technology Advancement Branch, MSCD

APPEARANCES CONTINUED STAFF: Mr. Nick Rabinowitsh, Senior Attorney, Legal Office Mr. Randy Reck, Attorney, Legal Office Mr. Scott Rowland, Chief, Incentives and Technology Advancement Branch, MSCD Ms. Rajinder Sahota, Assistant Division Chief, ISD Ms. Bailey Smith, Staff Air Pollution Specialist, Climate Investments Policy Section, TTD Ms. Linda Smith, Chief, Health and Exposure Assessment Branch, RD Mr. Jakub Zielkiewicz, Air Pollution Specialist, ISD ALSO PRESENT: Mr. Alan Abbs, California Air Pollution Control Officers Association Ms. Fariya Ali, Pacific Gas and Electric Mr. Brian Biering, Turlock Irrigation District Mr. Michael Boccadoro, Dairy Cares Mr. Drew Bowen, California Energy Commission Ms. Grecia Elenes, Leadership Counsel for Justice and Accountability Ms. Genevieve Gale, Central Valley Air Quality Coalition, Central Valley Asthma Collaborative Ms. Jayme Go, Valley Clean Air Now Mr. Rod Headley, Central California Power Mr. Bill Magavern, Coalition for Clean Air Mr. Colin Murphy, Nextgen California

## A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Mr. Mike Neuenburg, Sacramento Metropolitan Air Quality Management District

Mr. Luis Olmedo, Comite Civico Del Valle

Mr. Minho Park, Natural Resources Defense Council

Mr. Raul Portugal, Central California Power

Mr. Ed Randolph, California Public Utilities Commission

Ms. Cherene Sandidge, The Sandidge Urban Group, Inc.

Mr. Steve Uhler

Ms. Diana Vazquez, California Environmental Justice Alliance

Ms. Deanna Yee, Bay Area Air Quality Management District

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1 PROCEEDINGS 2 CHAIR NICHOLS: Okay. So we will begin the 3 public meeting with the Pledge of Allegiance to the flag, 4 which is over there. (Thereupon the Pledge of Allegiance was 5 Recited in unison.) б 7 CHAIR NICHOLS: All right. Madam Clerk, Please 8 call the roll. Hello. Roll call. 9 10 BOARD CLERK DAVIS: Hello. CHAIR NICHOLS: Hi. 11 BOARD CLERK DAVIS: Hi. 12 Dr. Balmes? 13 14 BOARD MEMBER BALMES: Here. 15 BOARD CLERK DAVIS: Mr. De La Torre? 16 BOARD MEMBER DE LA TORRE: Here. 17 BOARD CLERK DAVIS: Mr. Eisenhut? BOARD MEMBER EISENHUT: 18 Here. BOARD CLERK DAVIS: Senator Florez? 19 20 Assembly Member Garcia? Supervisor Gioia? 21 BOARD MEMBER GIOIA: Here. 22 23 BOARD CLERK DAVIS: Senator Lara? 24 Ms. Mitchell? 25 BOARD MEMBER MITCHELL: Here.

1 BOARD CLERK DAVIS: Mrs. Riordan? BOARD MEMBER RIORDAN: 2 Here. BOARD CLERK DAVIS: Supervisor Roberts. 3 4 Supervisor Serna? Dr. Sherriffs? 5 BOARD MEMBER SHERRIFFS: 6 Here. 7 BOARD CLERK DAVIS: Professor Sperling? 8 BOARD MEMBER SPERLING: Here. 9 BOARD CLERK DAVIS: Vice Chair Berg? 10 VICE CHAIR BERG: Here. BOARD CLERK DAVIS: Chair Nichols? 11 CHAIR NICHOLS: Here. 12 13 BOARD CLERK DAVIS: We have a quorum. CHAIR NICHOLS: Thank you very much. 14 15 Couple of announcements before we get started. 16 Is the interpreter here? 17 Yes. We will be providing interpretation services in 18 19 Spanish for Item Number 18-6-3, the Cap-and-Trade Auction 20 Proceeds Funding Guidelines for Agencies that Administer California Climate Investments. Headsets are available 21 22 outside the hearing room at the attendance sign-up table 23 and could be picked up at any time. 24 (Thereupon the interpreter translated.) 25 CHAIR NICHOLS: Thank you.

For safety reasons, please note the emergency exits to the rear of the room. In the event of a fire 2 3 alarm, we're required to evacuate this room immediately, 4 go down the stairs and out of the building until the 5 all-clear signal is given. We'll be returning to the б hearing room then as soon as we hear that signal. 7 Anyone who wishes to testify should fill out a

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8 request-to-speak card. These are also available out in 9 the lobby. We appreciate it very much if you turn it into 10 the clerk or an assistant before the item that you're interested in is called. 11

Also, we will be imposing a 3-minute time limit. 12 13 And we appreciate it if you summarize your testimony in 14 your own words, especially if you have written testimony 15 because that will go into the record.

16 So, a couple of things that I want to mention 17 which are not part of the normal prepared script. First 18 of all, I want to make sure that everybody knows there 19 will not be a regular board meeting in the month of 20 August. However, CARB is going to be hosting a workshop 21 in August that will focus on greenhouse gas reductions in 22 the transportation sector. We recently released the 2016 23 greenhouse gas inventory. And the great news is that the 24 greenhouse gas emissions continue to decline and that we 25 have achieved our 2020 target four years early.

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However, we have also seen a slight increase in emissions from the transportation sector, which including upstream emissions from fossil fuel extraction and refining accounts for half of our total State greenhouse gas emissions.

б While California has many transportation 7 regulations and policies in place to work towards our 2030 8 greenhouse gas target, through cleaner fuels, tighter 9 vehicle efficiency standards, and increased development 10 of -- deployment of zero-emission vehicles, we need to 11 understand why emissions have increased in this sector and how we can reverse course rapidly, looking at both fuel 12 13 supply and demand. This is especially critical when 14 climate change is happening faster than expected and the 15 scientific consensus is that globally we should be 16 striving for carbon neutrality, not just reductions but 17 actually a balance.

So look for more information on that soon in 18 19 terms of the scheduling of the date for the workshop. But 20 I want to make sure that the Board members know that you 21 are all invited. It will be a publicly noticed meeting, 22 but it will not be set for any decisions or actions by the 23 Board. And our chief economist, Emily Wimberger, who is sitting right in front of me, has been working on making 24 25 sure that we have a group of experts assembled to talk to

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us who represent the widest possible range of viewpoints on these issues so that we'll have an opportunity to really air the issues very fully.

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4 So, I also want to mention that we'll be back in Sacramento in September and October for our board meetings, then we'll be in Fresno in November, and then back in Sacramento to round out the 2018 agenda.

I've also asked that we move up item 18-6-6, the 8 9 Public Meeting to Consider Board Members' Initial 10 Staggered Terms, and that we hear it before we break for 11 lunch today, because we will be losing some of our Board members at lunch time and I think it's important that we 12 13 get that one taken care of.

14 So without further ado, let's begin with our 15 first Board item, the Public Hearing to Consider 16 Environmental Comments from John R. Lawson Rock & Oil 17 Company regarding Board Item 18-4-3.

18 VICE CHAIR BERG: Madam Chair, before we start 19 I'd like to recuse myself. I did recuse myself from the 20 original item, and it would be appropriate for me to do so for this one. 21 22 CHAIR NICHOLS: All right. Thank you. 23 Is there anybody else who needs to do so?

If not, we will excuse you.

And proceed, Mr. Corey, if you'll introduce this

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1 item.

EXECUTIVE OFFICER COREY: Yes, thanks, Chair. 2 3 The Board considered this item at its May 25th, 2018, meeting and approved Resolution 18-20. Staff is now 4 5 bringing this item back to the Board to consider a б response to environmental comments received during the May 7 Board meeting and to consider further action appropriate 8 in light of that comment. 9 I'll now ask Rhead Enion of their legal office to 10 begin the staff presentation. 11 Rhead. 12 SENIOR ATTORNEY ENION: Thank you, Mr. Corey. 13 In your May Board hearing you approved regulatory 14 amendments to the heavy-duty inspection and maintenance 15 program, referred to as HDVIP, and the Periodic Smoke 16 Inspection Program, referred to as PSIP, through 17 Resolution 18-20. These programs establish opacity limits 18 that vehicles must meet in order to legally operate in California. 19 20 Staff proposed five amendments to the HDVIP and 21 the PSIP: lowered opacity limits, smoke test retraining 22 requirements, reporting requirements, optional submission 23 of on-board diagnostics data, and opacity testing upon 24 sale of a vehicle. 25

At the May Board hearing we received one comment

letter that purported to raise environmental issues associated with the proposed amendments, including claimed issues under the California Environmental Quality Act, 4 CARB staff was unaware of the letter at the time, and so you did not have an opportunity to review staff's responses to those environmental comments at the May hearing. We have since made procedural changes to address such letters in the future.

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9 Subsequent to the May Board hearing, staff prepared responses to the comment letter. 10 The staff 11 responses are included as Attachment B to the resolution 12 before you.

13 CARB's certified regulatory program requires 14 staff to prepare a written response to environmental 15 comments prior to a vote of the Board. Therefore, we are 16 proposing today that you repeal Resolution 18-20 and 17 approve through Resolution 18-28 the response to environmental comments set forth in Attachment B as well 18 19 as the proposed regulatory amendments to HDVIP and PSIP 20 that you've already fully reviewed.

21 You may recall that at the May Board hearing, you 22 directed the Executive Officer to modify the proposed 23 amendments to provide an exemption to the proposed testing 24 requirement upon vehicle sale for family transfers under 25 the Periodic Smoke Inspection Program.

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1 Resolution 18-28 contains text reflecting this 2 directive; and staff continues to work on the directive in 3 the ongoing regulatory process. 4 In addition, the Board provided direction on 5 several other points, and those are under discussion for б follow-up as appropriate. 7 Resolution 18-28 before you today is otherwise 8 unchanged from the resolution you adopted at the May Board 9 hearing. 10 Thank you. CHAIR NICHOLS: Well, thank you, Mr. Enion. 11 12 Do any Board members have any questions about 13 this item? 14 I'm informed that no one signed up to testify on 15 So I will close the record on this item and indicate it. 16 that if we receive any written or oral comments after 17 today, they will not be accepted as part of the official record on this item. 18 19 So, the Board has before them Resolution 18-28. 20 Do I have a motion and a second? BOARD MEMBER DE LA TORRE: So moved. 21 BOARD MEMBER RIORDAN: Second. 22 23 CHAIR NICHOLS: All right. Thank you. 24 We will I think just do this on a voice vote. 25 All in favor please say aye?

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(Unanimous aye vote.)

CHAIR NICHOLS: Opposed?

3 Of course we have -- Board Member Berg has 4 recused herself.

Okay. The motion passes.

Thank you very much.

7 We are now going to move to Item 18-6-2. And I'm 8 just going to make a brief remark about SB 350. And I 9 know that we have a representative of the PUC who's with 10 us who is going to be commenting at the beginning. So if 11 you'll just come forward as soon as I finish with this.

So I just want to note that Board Member 12 13 Garcia -- Eduardo Garcia could not be here today. He is 14 an ex officio member and so he would not be voting on the 15 But he did provide us with a letter for the Board's item. 16 consideration on three of today's agenda items, including 17 SB 350 as well as the Cap-and-Trade Auction Proceeds Distribution item, also the issue of the Board member 18 19 terms.

I understand that the Board members have received his letter in their materials. Members of the public can request a copy of the letter from the clerk. Or at the front table the letter will be publicly posted on the Board's meeting page. This to make sure that there's complete adherence to the rules about public meetings.

1 SB 350 for integrated resource planning in the electricity sector will be the next staff presentation. 2 3 Pursuant to SB 350, our board must adopt greenhouse gas 4 planning targets for the year 2030 for the electricity 5 sector retail electricity providers. These targets will б be implemented through integrated resource plans, the 7 planning mechanism for retail electricity providers that eventually leads to procurement of energy resources. 8 And 9 this is a process that's done under the guidance of the 10 Public Utilities Commission.

Integrated resources plans will bring together under one umbrella greenhouse gas planning targets, statutory requirements for greater renewable energy generation, reliability and cost effectiveness requirements, and the need to minimize air pollution throughout the State with a priority on disadvantaged communities.

18 The 2017 Scoping Change -- Climate Change Scoping 19 Plan update established California's 2030 climate goal of 20 40 percent reductions from 1990 levels in greenhouse gas The scoping plan looked at economy-wide 21 emissions. 22 actions needed to reduce greenhouse gas emissions. And 23 the Board determined the 2017 Scoping Plan Update should inform the 2030 greenhouse gas planning target range for 24 25 the electricity sector for purposes of SB 350. This is

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actually simpler than it sounds.

The electricity --

(Laughter.)

CHAIR NICHOLS: The electricity sector has an active and important role to play in achieving the economy-wide greenhouse gas reduction target of 40 percent below 1990 levels and has already done a lot to get us to our current state of meeting the 2020 target.

9 So, with that, Mr. Corey, will you please10 introduce this item.

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EXECUTIVE OFFICER COREY: Yes, thanks, Chair.

12 As noted, the proposed SB 350 GHG planning 13 targets before you today are informed by California's 14 existing climate programs and incorporate policies for the 15 electricity sector to increase renewable energy and energy 16 efficiency. Though the integrated resource planning 17 process and through it as established GHG planning 18 targets, the State of California guides energy procurement 19 decisions in support of achieving California's climate 20 change goals, protecting public health especially in 21 vulnerable communities, and supporting the transition to 22 sustainable low-carbon economy.

23 Since December of 2015, staff has coordinated 24 with the California Public Utilities Commission and the 25 California Energy Commission, as well as having had

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several workshops to establish the proposed greenhouse gas
 planning targets.

Today we're presenting the proposed greenhouse gas planning targets for the electricity sector and each applicable load-serving entity in publicly owned utility. The proposed planning targets incorporate legislative direction provided in AB 32, SB 350, Governor Brown's Executive Order B 30-15, and Board direction that the 2017 Scoping Plan Update should inform the 2030 greenhouse gas planning target range for the electricity sector.

Before I ask Jakob Zielkiewicz to give a staff 11 presentation, I'd like to invite Ed Randolph from the 12 13 California Public Utilities Commission to provide his 14 remarks on the GHG planning targets and the collaboration 15 between the PUC and CARB. Due to time conflicts, we're 16 having Ed present his remarks before the staff 17 presentation. We'll have the California Energy 18 Commission's remarks following the staff presentation.

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And with that, Ed.

20 MR. RANDOLPH: I do want to thank you for 21 accommodating me early in this process. I do need to run 22 over to our own commission meeting which starts at 9:30 to 23 testify on an item there.

> CHAIR NICHOLS: I hope you'll make it. MR. RANDOLPH: So I'm doing double duty this

1 morning.

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I'm Edward Randolph. I'm the director of the Energy Division at the California Public Utilities Commission. I'm here on behalf of the Public Utilities 4 Commission to support the adoption of the SB 350 electric sector GHG emissions targets.

7 The CPUC supports the staff proposal to establish 8 a GHG planning target range for the electricity sector of 9 30 to 53 million metric tons by 2030 in the 10 apportionment -- or the apportion -- and to apportion the 11 GHG planning targets to individual electric load-serving entities based on CARB's cap-and-trade allowance 12 13 allocation methodology.

14 The CPUC appreciates the close coordination 15 between CARB, the CEC, and the PUC in developing this 16 planning target and the implementation of the new 17 integrated resource planning process as required by 18 The three agencies have been working closely on SB 350. 19 this issue for several years, and today's proposed targets 20 are supported by extensive analysis in the developing the 21 Scoping Plan Update and the CPUC's resolve modeling in our 22 integrated resource planning process.

23 The range encompasses the CPUC's integrated resource plan target of 42 million metric tons by 2030 for 24 25 the integrated resource plan, which the CPUC found

1 represents an increase in GHG reductions relative to the current policies and will allow for electrification of 2 3 other sectors including transportation and residential and 4 commercial buildings.

The range also allows for adjustments to be made in subsequent rounds of IRP based on experiences and lessons learned from the first round and as new analysis and other information become available.

The CPUC also supports the CARB's proposal to delegate authority to the CARB Executive Director to 11 update the LSE, load-serving entity, GHG planning target 12 ranges in the future rounds of IRP, provided the overall 13 electricity sector range is maintained.

14 This is particularly important as new community 15 choice aggregators may continue to form and expand in the 16 near term and load shares of the statewide total may shift 17 rapidly between the load-serving entities within and 18 between the integrated resource planning targets.

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I thank you for accommodating me early.

20 CHAIR NICHOLS: Thank you, Mr. Randolph. I -- We 21 would appreciate it if you would also convey my thanks and 22 appreciation to Commissioner Randolph, who I know led this effort on behalf of the commission. She came over and met 23 24 with us, and was very, very helpful in terms of providing 25 thoughts and guidance. So it's been a very good process

1 and we appreciate it

I certainly will. And she's very 2 MR. RANDOLPH: proud of the process and the coordination so far. 3 4 CHAIR NICHOLS: Thank you. 5 Okay. Let's proceed then to Jakob. 6 (Thereupon an overhead presentation was 7 Presented as follows.) 8 AIR POLLUTION SPECIALIST ZIELKIEWICZ: Great. 9 Thank you Mr. Randolph and Mr. Corey. 10 Good morning, Chair Nichols, Vice Chair Berg, and members of board. 11 As Mr. Corey mentioned earlier on today, I will 12 13 be presenting on the Senate Bill 350 Integrated Resource 14 Planning Electricity Sector Greenhouse Gas Planning 15 Targets for consideration for Board approval. 16 --000--17 AIR POLLUTION SPECIALIST ZIELKIEWICZ: I'll start 18 today's presentation with background on SB 350 Integrated 19 Resource Plans, or IRPs, GHG Planning Targets, how this 20 initiative relates to California's climate programs, and 21 the process that we've undertaken in developing the SB 350 22 IRP GHG Planning Targets. 23 Next, I'll discuss the proposed IRP GHG Planning 24 Targets, including a summary of the approach taken to 25 establish the planning targets, and the proposed process

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to update the planning targets.

Lastly, I'll provide the staff recommendation of approving the SB 350 IRP GHG Planning Targets.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: Today we're here to discuss one component of Senate Bill 350 that directs CARB to establish GHG planning targets for purposes of the Integrated Resource Plans that utilities will create.

10 Specifically, in coordination with the California 11 Public Utilities Commission and the California Energy 12 Commission, CARB is to establish greenhouse gas emissions 13 reductions planning targets for the electricity sector; 14 for each load-serving entity, or LSE, subject to CPUC's 15 jurisdiction; and for each publicly owned utility, or POU, 16 exceeding an electrical demand threshold.

In addition, these planning targets are to reflect the electricity sector's contribution to achieving the economy-wide GHG reductions target of 40 percent below 1990 levels by 2030.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: In the previous slide I mentioned that the GHG planning targets are to be set by CARB for purposes of the Integrated Resource Plans that utilities create.

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As such, it's important to briefly speak about the multiple requirements that fit together to form an IRP.

In general, an integrated resource plan is a utility plan for meeting forecasted annual energy demand through a combination of supply-side and demand-side resources over a specified future period; and in this case, the year is 2030.

9 The requirements or variables that California 10 utilities must balance in developing IRPs include meeting 11 the electricity's portion of the statewide GHG target, the 12 50 percent Renewables Portfolio Standard and doubling of 13 energy efficiency by 2030, promoting transportation electrification, minimizing impacts to ratepayers, 14 ensuring grid reliability and cost effectiveness, and the 15 16 need to minimize air pollution throughout our State with 17 priority on disadvantaged communities.

In addition, the State has a role to play in overseeing and guiding resource planning for California's utilities, and helping ensure that the electricity sector is planning for lower carbon resources that are reflective of the economy-wide GHG emissions reductions target of 40 percent below 1990 levels by the year 2030 as mandated by Senate Bill 32.

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CARB's role is to establish the GHG planning

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targets for the electricity sector and for the utilities.

CPUC and CEC, through their separate IRP processes, work directly with the utilities to develop the individual plans to reflect how the planning target will be achieved.

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7 AIR POLLUTION SPECIALIST ZIELKIEWICZ: As 8 mentioned previously, one of the objectives of SB 350 is for CARB to establish a GHG planning target to reflect 10 electricity the electricity sector percentage in achieving 11 economy-wide greenhouse gas emissions specified in SB 32.

12 You can see the progress that the State is making 13 to achieve our economy-wide targets. The solid blue line 14 shows is our GHG emissions have been decreasing. This 15 slide also depicts the State's AB 32 GHG target in 2020 16 and the SB 32 GHG target in 2030.

17 Recently CARB released the 2018 edition GHG 18 emissions inventory, which shows that for the first time we are below 1990 levels and below the 2020 target. 19

20 This reflects that our climate programs, as they are phased in and take root, are delivering the real GHG 21 22 reductions we expected to see and, in some instances, 23 overperforming.

24 The Board approved the 2017 Scoping Plan Update 25 in December of last year, which identifies the actions

that the State will take to achieve the 2030 GHG target 1 mandated by SB 32. 2

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The approved scoping plan actions span all 4 economic sectors, including the electricity sector. In the electricity sector, two of the main GHG emissions 5 б reductions measures include the 50 percent renewables portfolio standard and the doubling of energy efficiency savings.

9 As mentioned previously, these actions are also being planned for as part of the IRP process. 10

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12 AIR POLLUTION SPECIALIST ZIELKIEWICZ: This slide 13 shows the expected change of GHG emissions by economic 14 sectors between 1990 and 2030.

15 The left-most bars of each sector group are the 16 1990 levels of emissions and the right bars are the 17 expected GHG emissions in 2030 with implementation of the 18 scoping plan.

19 In general, we see decreases for all sectors from 20 1990 levels. Some sectors reduce emissions by more than 21 40 percent and some less.

22 The exceptions are the high global warming 23 potential and waste sectors where we see increased 24 emissions between 1990 and 2030 as a result of expected 25 growth in these sectors. In addition, as part of SB 1383,

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1 we reduce those gases by 40 percent relative to 2013 levels, not 1990 levels. 2

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For the electricity sector, we see a greater 4 decrease in GHG emissions than in other sectors. Indeed, in 2030, we anticipate GHG emissions will be between 51 percent and 72 percent lower than 1990 levels for the electricity sector. We expect the electricity sector to reduce GHG emissions more than other sectors.

9 Lastly, in 2030, cap-and-trade is expected to 10 deliver an additional 34 to 79 million metric tons 11 throughout the economy. So there will be additional emission reductions to the covered sectors on this slide 12 based on where it's most cost effective to reduce the 13 14 emissions. These additional reductions are not depicted 15 in the bar chart since the exact apportionment of GHG 16 reductions among covered sectors is unknown.

17 We know the Cap-and-Trade Program is already 18 influencing the electricity sector and reducing greenhouse 19 gas emissions by favoring lower carbon dispatch over 20 higher carbon dispatch.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: 22 As we 23 think about the SB 350 IRP GHG planning targets, we 24 recognize that the electricity sector is subject to 25 uncertainty and in a state of transition.

Greater electricity demand could result from more electric vehicles, electrification of our buildings and industry, population growth, and/or economic growth, among other factors.

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5 Likewise, energy efficiency programs, an economic б downturn, and decreased production may decrease 7 electricity demand.

8 It's important to recognize though that increased electricity demand does not necessarily mean higher 10 greenhouse gas emissions.

11 In fact, GHG emissions should decrease as 12 electricity supply serving California continues to be less 13 carbon intensive. With more renewables and storage 14 technology being deployed, and with ongoing work to better 15 integrate renewables into our grid, we should see lower 16 GHG emissions.

17 As a state, we need to achieve lower GHG-emitting 18 resources from the electricity sector, independent of 19 energy demand. IRPs can assist in achieving this goal by 20 supporting utilities in the proactive planning necessary 21 to create a modernized, reliable, low-carbon grid.

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23 AIR POLLUTION SPECIALIST ZIELKIEWICZ: This slide 24 focuses on the IRP process with roles for utilities, CPUC 25 and POU boards, and CARB.

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Load-serving entities and publicly owned utilities must consider numerous components when creating their IRPs. They make a number of assumptions about the future and about what electricity demand will be in 2030. They create IRPs to describe what investments they plan to make over the next decade.

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CPUC and the POU boards will be informed by IRPs and will make decisions to position the electricity sector to meet statewide GHG emissions reductions targets.

Decision may include, but not be limited to, procurement of new or renewable energy supplies, retirement schedules and/or operation modifications for natural gas plants, transmission and distribution infrastructure investments, procurement of storage, and electric vehicle charging infrastructure, to name a few.

16 It's important to note that CARB tracks statewide 17 GHG emissions and monitors progress of achieving our 18 climate targets through the GHG inventory.

19 CARB will evaluate progress and any need for 20 adjustments in meeting our climate targets through Scoping 21 Plan updates, which occur at least once every five years. 22 This update process provides an opportunity to adjust our 23 climate strategy and electricity sector planning targets.

24 In addition, interim updates to IRPs will be 25 made.

AIR POLLUTION SPECIALIST ZIELKIEWICZ: 2 Since 3 December 2015, CARB staff has coordinated with CEC and 4 CPUC pursuant to SB 350, and has engaged with a wide range 5 of public stakeholders to establish the GHG planning б targets CARB, CEC, and CPUC workshops were made available 7 via webcast, and a web-based comment system was 8 established to provide stakeholders with a medium to 9 publicly communicate their comments to CARB, CEC, and CPUC 10 staff on an ongoing basis.

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Public engagement and interview is important with all CARB processes, and SB 350 IRP GHG planning target setting is no different. We've held joint agency public workshops on the GHG planning target process. This is in addition to the numerous public workshops and webinars that CPUC and CEC have held with regards to the broader IRP process.

The recommendations provided by CARB by -- the recommendations provided to CARB by both the CPUC and the CEC regarding proposed GHG planning target methodologies are consistent with the approach CARB is proposing today, which I'll describe in a few minutes.

AIR POLLUTION SPECIALIST ZIELKIEWICZ: In addition to public workshops, we have undertaken a public

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1 process in the development of the staff proposal. On April 27th, 2018, CARB released the draft 2 3 staff report containing proposed GHG planning targets for 4 the electricity sector and each applicable load-serving 5 entity and publicly owned utilities. This document was б informed by stakeholder input during public workshops. An 7 accompanying draft environmental analysis was also released for a 45-day public review starting on April 27th 8 9 and ending on June 11th. 10 Throughout the public workshops and public process we have received and reviewed numerous written and 11 12 oral public comments. The final staff report was released 13 on July 13th. 14 --000--15 AIR POLLUTION SPECIALIST ZIELKIEWICZ: As 16 mentioned, a Draft Environmental Analysis was completed 17 and released in April. 18 Staff determined that implementation of the 19 proposed GHG planning targets under a conservative 20 approach may have potentially significant indirect impacts 21 to some resource areas. However, these impacts are mainly 22 due to short-term construction-related activities. 23 Today we are focused on the planning process rather than approval of any specific project. 24 It isn't 25 clear what type of projects will occur or be foregone as a

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1 result of the GHG planning targets. As such, we've taken a conservative approach to identifying potentially 3 significant impacts. Individual projects will go through 4 their own environmental analyses, at which time specific 5 mitigating projects and solutions can be identified to б address the impacts.

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The draft EA was released for a 45-day comment period which ended on June 11. No comments related to environmental issues were received.

Staff prepared a final environmental analysis which was posted on our website earlier this month.

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13 AIR POLLUTION SPECIALIST ZIELKIEWICZ: The 14 Scoping Plan Board Resolution adopted by the Board in 15 December 2017, directed staff to use the Scoping Plan to 16 inform the GHG planning targets for the electricity sector 17 and each utility pursuant to SB 350.

18 In the adopted Scoping Plan, table 3 summarizes 19 the estimated range of GHG emissions by sector. This 20 includes the 30- to 53 million metric ton range in 2030 21 established for the electricity sector as a component of 22 the broader 2030 economy-wide target of 260 million metric 23 tons in 2030. That range represents 51 to 72 percent 24 lower emissions than 1990 levels.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: CARB staff is proposing to establish the SB 350 IRP GHG planning targets as summarized here. I'll provide additional details on subsequent slides.

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I'll note that CARB's approach is consistent with the recommendations from CPUC and CEC.

7 CARB is proposing to establish a GHG planning 8 range for the electricity sector of 30- to 53 million metric tons in 2030. This range is equivalent to the range set in the Scoping Plan. CARB determined in this 10 11 process that this planning range remained the best option qoing forward. 12

13 In order to establish the specific load-serving 14 entity and publicly owned utility targets we apportion the 15 sector target to each entity.

16 Staff proposes to apportion the electricity 17 sector target among all POUs and investor-owned utilities, 18 or IOUs, using information that was provided by utilities 19 as part of Cap-and-Trade Electrical Distribution Utility 20 Allocation for the year 2030. This was part of the 21 Cap-and-Trade rulemaking approved by the Board in 2017.

22 There's one additional step for IOUs, since in 23 IOU territories load is served by Community Choice 24 Aggregators, or CCAs; Electric Service Providers, or ESPs; 25 and host IOUs.

IOU planning targets to CCAs, ESPs, and host IOUs based on 2 3 forecasted electricity demand in 2030. 4 The GHG planning target ranges CARB establishes 5 will be used by POUs and LSEs, or load-serving entities, б in their IRPs; and by CPUC and CEC in their respective IRP 7 processes. 8 Sorry, there's a lot of acronyms here. 9 (Laughter.) 10 --000--11 AIR POLLUTION SPECIALIST ZIELKIEWICZ: This slide 12 depicts the apportionment to investor-owned utilities and 13 publicly owned utilities as a pie chart and an equation. 14 Each IOU and POU's contribution to 2030 GHG

This additional step is further apportioning the

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15 emissions is based on estimated GHG emissions in the 2021 16 to 2030 allocation spreadsheet that was developed in 17 support of the Cap-and-Trade 2021 to 2030 allowance allocation for electrical distribution utilities. 18 Estimated 2030 electrical distribution utilities specific 19 20 emissions for each electrical distribution utility are divided by the sum of estimated 2030 greenhouse gas 21 22 emissions for all EDUs to obtain a percentage of the 2030 23 electricity sector GHG emissions. And that's depicted --24 it's a lot of words, but that's depicted in the equation 25 on this slide.

This EDU percentage is multiplied by the electricity sector range, or 30- to 53 million metric tons, to obtain an individual EDU GHG planning target. As discussed earlier, the planning target for an IOU is further apportioned to the CCAs and ESPs that operate in its territory based on shares of electricity demand.

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Approximately 77 percent of the target is apportioned to 6 investor-owned utilities reporting to CPUC, which are the blue colors in the pie chart.

Approximately 21 percent is apportioned to the 16 publicly owned utilities reporting to the California Energy Commission, which are brown colors in the pie chart.

14 The gray colors are the remaining 1.7 percent, 15 and these are the electrical distribution utilities below 16 the 700 gigawatt-hour threshold stipulated in SB 350, 17 meaning that they don't have to file integrated resource 18 The majority of these are publicly owned utilities plans. 19 representing approximately 1.7 percent of the target with 20 the remainder reflecting the four cooperatives subject to CPUC jurisdiction. 21

It's important to note that this is a zero sum game. So if the planning targets are adjusted higher or lower for any one utility, that impacts the share of the sector range available to other utilities.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: As part of process, we also evaluated three alternatives 30- to 53 million metric ton planning target range for the electricity sector.

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The 30- to 42 million metric ton alternative reflects increased action beyond existing statutes or other requirements, such as greater deployment of renewable energy and increased energy efficiency, or potentially new responses and innovative technologies developed by POUs and LSEs.

Based on stakeholder input we recognize that this low end of the range may be difficult to achieve for some of the smaller POUs due to cost effectiveness and unique regional factors such as physical system constraints.

A second alternative evaluated was 42- to 53 million metric tons. This high end of the range is not sufficiently broad enough to provide an ambitious signal to utilities to seek lower greenhouse gas emissions. This is particularly true in light of some of the larger utilities appearing to already be on track to exceed 50 percent RPS before 2030.

The last alternative evaluated was 65 million metric tons, which was the fair share concept of the electricity sector being responsible for 40 percent

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1 reductions by 2030 of 1990 levels. Existing mandates such as 50 percent RPS are likely to result in lower GHG 2 3 emissions for the sector, so this alternative is actually 4 higher than the estimated electricity sector GHG emissions 5 in 2030 under business-as-usual conditions.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: This slide depicts the various timelines that we're coordinating.

Yellow arrows indicate periods between IRP filing 10 and Scoping Plan adoption.

11 The green stars indicate CARB Scoping Plan 12 adoption.

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13 Blue stars indicate -- but our blue stars 14 indicate the January 1st POU adoption deadline as part of 15 the CEC process, and the May 1st LSE filing deadline with 16 CPUC, with the exception of this year, during which CPUC 17 extended the filing deadline to August 1st.

This depiction of IRP and Scoping Plan process 18 19 timelines does not account for exceptions such as 20 expedited Scoping Plan development due to Executive Orders or other factors, or updated POU IRP filings based on the 21 22 date of when POU governing boards adopt the IRPs.

23 We know that GHG planning targets will change 24 over time as better information becomes available, as will 25 individual IRP plans.

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At CPUC, the IRP process occurs every other year. Meanwhile POUs must submit IRPs to CEC at least once every five years.

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To coordinate these timelines, to streamline this process and to alleviate administrative burden, staff is proposing to seek Board approval for updates to GHG planning targets for the electricity sector, and corresponding LSEs and POUs, in coordination with the Scoping Plan process, which also occurs at least once every five years.

In interim years, we propose that authority be delegated to the CARB Executive Officer to coordinate with CPUC and CEC through a public process should individual entity planning targets change.

This is particularly relevant to CPUC IRP updates, where individual LSE target adjustments are likely, for example, when a new or expanding community choice aggregator shifts load away from an IOU.

As long as these individual entity adjustments do not result in changes to the electricity sector target, and the current proposed methodology is used, then we propose that the Executive Officer is delegated authority to approve revised utility GHG planning targets.

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AIR POLLUTION SPECIALIST ZIELKIEWICZ: Staff

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recommends that the Board certify the final environmental analysis; adopt the required CEQA findings and statement of overriding considerations; approve the proposed GHG planning targets for the electricity sector, the load-serving entities, and the publicly owned utilities; and to approve the proposed approach to update the GHG planning targets.

8 With that, I'd thank you. And if -- I don't know 9 if it's appropriate but I'd like to invite Drew Bowen from 10 the Energy Commission to provide remarks. Or is that your 11 duty? Sorry.

CHAIR NICHOLS: It's okay. You can do it. (Laughter.)

CHAIR NICHOLS: Hi, Drew. Welcome.

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MR. BOWEN: Good morning, Chair, members. My name is Drew Bowen. I'm the Executive Director of the California Energy Commission. And I am honored to be here this morning representing the commission and stating our strong support for the recommendations you just heard.

20 I want to thank Rajinder, Jakob and the whole 21 team.

This really has been a multi-year, complicated, but really excellent process. Lots of public input as you've heard. And we bring slightly different perspectives to how we view things. I think that makes

1 2 for a stronger product in the end.

You already heard from Ed Randolph from the Public Utilities Commission; and his focus is on the investor-owned utilities. Ours is on the 40-plus publicly owned utilities. And as you heard, only the top 16 by statute are required to file IRPs. And I just want to spend a minute briefly on the process.

8 We have -- we adopted guidelines last year for 9 the POUs. We think they're very good. And IRPs are not a 10 new concept. Some utilities have been doing them for 11 years; some utilities have never done them. But the 12 concept isn't new. But what's new about the way we're 13 approaching it is we're -- the statute directs the 14 utilities to look at a whole suite of options; and what 15 our guidelines do is provide a list of those options. So 16 it includes some of the things you've heard, like energy 17 efficiency, electrification of vehicles, critical 18 component, storage, demand response. And this is not a 19 one-size-fits-all situation. You've got utilities where 20 one of these tools in the toolbox works particularly well, maybe in another jurisdiction it doesn't work well at all 21 and other tools work better. 22

23 So it provides tremendous flexibility to these 24 individual jurisdictions - these are sovereigns - to make 25 decisions that fit their needs the best but still achieve

the goal.

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So we will review each of them as they come in. We already got one well ahead of time. The first reporting period is not due until January 1st of next year, but we already got one. And then, as Jakob pointed out, every five years thereafter the POUs are required to do updates.

8 So, we think this is a good-news story. I also 9 want to point out that the electricity sector deserves 10 some kudos for already reducing substantially against 1990 11 their GHG production, and obviously there's a lot of work 12 to do but there's really some good news there.

So again, thank you very much for the opportunityto speak, and we look forward to moving forward.

15 CHAIR NICHOLS: Thank you. It has obviously been 16 a long process, and it could be a little bit like the 17 Stockholm syndrome, that you've all been together so long 18 that you can --

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(Laughter.)

20 CHAIR NICHOLS: -- deliver each other's remarks.
21 But whatever the reason is, I really do
22 appreciate hearing this amount of commonality on the part
23 of the Agency. I know we get criticized -- government
24 gets criticized quite often for giving conflicting
25 mandates to people that we regulate. And there's probably

no single sector that has more regulatory agencies that they have to deal with than the electric utilities.

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So the fact that we have been able to streamline this process to the extent of being able to give very consistent signals is really very important, and it's a tribute I think to the leadership of the Governor's office in many ways in having insisted that we pursue common policy objectives. But as this presentation has shown, getting there is not always easy.

I do have one question. You may have covered it and I missed it. But what happens to the increasing number of entities out there that are forming as community choice aggregators, basically splitting away from the traditional utility model and working directly with customers as far as purchasing of resources?

AIR POLLUTION SPECIALIST ZIELKIEWICZ: Yeah, so in terms of our process, we do establish the targets for the community choice aggregators and other load-serving entities.

In the equation -- or in some of the more technical details, we in essence look at the load that's served by the existing IOUs, the investor-owned utilities. And that's a portion -- the CCs are a portion of the investor-owned utilities. But the targets are established for all the load services.

1 CHAIR NICHOLS: They're included in this? 2 AIR POLLUTION SPECIALIST ZIELKIEWICZ: They're 3 included indeed, yeah. 4 CHAIR NICHOLS: And enforcement, if you will, is 5 through the PUC? INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF б 7 SAHOTA: So for the IOUs and the CCAs that are formed 8 within the IOUs, IRPs are due back to the CPUC, and so the 9 CPUC has direct oversight of approval of the plans and 10 tracking progress. 11 CHAIR NICHOLS: Right. Okay. That answers my 12 question. 13 We do have three witnesses who've signed up to 14 speak on this item. So if you would come forward and 15 deliver your testimony. 16 MR. UHLER: Good morning, Board. And -- is it 17 on? 18 CHAIR NICHOLS: Yes, it is. You just need to get 19 close to it. 20 MR. UHLER: Thank you. 21 I turned in a written comment here related to my 22 comment was modified by staff, effectively censoring 90 23 percent of my comment. 24 And the staff also seems to think my comment has 25 nothing to do with the methodology, when I actually have

the image -- I don't know whether or not some of you only got the scanned version with no links. But I took three weeks before somebody actually put my comment on the site.

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I'm not here to talk about that. My main concern is this PATHWAYS Model. I've identified formulas that reference cells that are blank, and I was hoping to get answers to that so I could actually further comment on this.

9 I would suggest that the Board consider a Belton 10 suspenders approach instead of this mathematical mod -- or 11 in addition to this mathematical modeling, to actually use material resource planning, the kind of thing that Toyota 12 13 uses to plan their factories and stuff, where you can actually trace this stuff down. I'm looking to try to 14 15 find out why Sacramento County -- even though California's 16 meeting its 2020 goals, why Sacramento County has doubled 17 its greenhouse gas for electrical generation. I want to 18 get a handle on that.

19 I want to get a handle on what appears to be20 double counting. And I'm looking through all of these.

I produced a system that will turn the spreadsheet into a webpage so that you can move around the spreadsheet and find things like literal values in formulas, which is never a good idea in a system. They're hard to find, check, although my system goes out and finds

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them for me.

But these cases where something called uncertainty has a zero value, and then you find out the 4 cell references a blank cell that has nothing, I would like to have some answers to that.

And some of the commission stuff, there is a б 7 renewable net short -- on the commission. And there are 8 invalid formulas. And you might say, "Well, how can this 9 guy say they're invalid formulas?" It's simple. Α 10 formula if it has a parentheses, there has to be an equal 11 number of left- and right-hand parentheses. They have 12 formulas that don't have equal numbers, so the formula is 13 invalid. And it doesn't even meet the word problem 14 described in the text.

15 So, I think a lot of -- you should form maybe a 16 skunkworks for somebody to go in And actually review these 17 things and present something that you can look at, at your 18 leisure, and completely understand what these complex 19 things are. So that's basically it.

20 And once again, I would like to know the general 21 rule that allows your staff to modify the public's 22 comment. If appears you have a senior attorney who is 23 unaware of the meeting laws and the public record laws. 24 They've censored me and left that on the site for three 25 weeks. Who knows looked at it. But I would like to

1 before I leave here today have that rule or an explanation of how that happened 2 3 CHAIR NICHOLS: Thank you. MR. UHLER: Thank you. 4 5 CHAIR NICHOLS: Fariya Ali. 6 Yes. 7 Good afternoon -- or actually good MS. ALI: 8 morning still, chair Nichols and members of the Board. 9 Fariya Ali on behalf of Pacific Gas & Electric Company. 10 PG&E supports the electric sector GHG plan target 11 range as proposed by ARB staff and urges the Board to adopt the staff recommendation. 12 13 Specifically we support the staff's use of the 14 2017 Scoping Plan's range of 30- to 53 million metric tons 15 instead of a point estimate. This allows the electric 16 sector to move towards the State's overall GHG emissions 17 reductions goals while still providing flexibility. And 18 having flexibility through such a range is necessary in 19 order to balance the other objectives that the staff 20 highlighted in their presentation; and it also reflects 21 the uncertainty of what electric load and supply will be 22 in the future, such as the future in which the electric 23 sector helps to decarbonize other sectors like 24 transportation.

PG&E also agrees with staff's proposal for

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apportioning the overall electric sector target to 1 load-serving entities in a way that creates a level 2 3 playing field within EDU service territories. 4 And, finally, we support the plan to update the 5 electric sector target every five years in alignment with б the Scoping Plan. 7 PG&E believes the staff proposal is clear, 8 transparent, and fair. 9 Thank you. 10 CHAIR NICHOLS: Thank you. 11 MR. BIERING: Good morning, Chairman Nichols, members of the Board. The name is Brian Biering. 12 I'm 13 here on behalf of Turlock Irrigation District. 14 Turlock Irrigation District is a publicly owned 15 utility in the valley that operates its own balancing 16 authority. That's critical because the district is 17 limited in terms of its ability to achieve certain GHG 18 emission reductions within the balancing authority because 19 there's a need to balance both supply and demand. 20 We're supportive of the IRP targets that staff 21 has recommended because they provide the flexibility to 22 really account for the need to maintain reliability. 23 They, you know, provide the flexibility to make sure that 24 as we're planning to reduce our GHG emissions, we're also 25 achieving that at least cost to our customers. The

majority of our customers are located in disadvantaged 1 communities within the district. 2 3 So we're very supportive of the proposal. Ιt 4 does provide a lot of flexibility. But it also is very clear, transparent, and open process. So we're supportive 5 б of the process as well. 7 Thank you. 8 CHAIR NICHOLS: Thank you. 9 That concludes the list of witnesses who signed up to speak. Is there anybody else who wanted to speak? 10 11 Okay. Hearing none, we can go ahead and close the record here. 12 What else do we need to do? 13 14 Oh, here we are. Sorry. 15 So, we've closed the record, and we have the 16 resolution in front of us. 17 Do any Board members have any questions or 18 comments? 19 Dr. Sperling. 20 BOARD MEMBER SPERLING: I note that none of the 21 utilities are concerned with the allocation, so that's 22 seems good news. And it is great to see the agencies 23 working together on this. 24 My question has to be that -- these are planning 25 targets and there was a partial response to Chair Nichols

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a moment ago that PUC would be responsible for the IOUs in 1 terms of oversight. But I'm kind of curious, where does 2 this all lead? I mean who -- so who's going to be 3 4 responsible for all the others? And more importantly, 5 what's the plan for how to achieve these targets? I know б that's not part of this discussion, but I mean if we're 7 going to sit here talk -- I mean we talk about planning 8 targets, about all kinds of things all the time.

9 CHAIR NICHOLS: Yes, understood. I think that's10 a very important contextual question.

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Would you like to respond, Ms. Sahota?

12 INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF 13 SAHOTA: Yes. So you're right, it was a partial response, 14 because we talked about the entities that would be subject 15 to PUC oversight. There are also the POUs, the publicly 16 owned utilities, that are subject to their local board 17 decisions.

And as the director for CEC testified, they are putting out guidelines and will be reviewing and providing guidance on the IRPs for the POUs. There is no direct traditional kind of oversight that a regulatory agency like ARB or the way that PUC will be following the process for the IOUs.

24 Obviously, if the PUC is pushing a little bit 25 harder on the IOUs to be a bit more aggressive on things

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like the RPS, that does leave more space in the pie for the sector for the POUs. Our hope is that we can continue to work with the POUs to ensure that they are also doing 4 everything possible to reduce in a similar way or looking at their approach to IRP development the similar way that the IOUs will be doing.

7 It's a little bit awkward because under SB 350, 8 you have ARB setting the planning targets for the sector 9 and you have setting the targets for the individual 10 utilities.

11 But after this point, it goes back to the energy 12 agencies to actually implement the process, while we track 13 it against the statewide targets.

14 There are mandates that must be followed within 15 the IRP such as the SB 350 50 percent RPS, the doubling of 16 energy savings, storage requirements, all of those 17 targets. But the IRPs can be used to see if there's more 18 action that can be taken, and maybe coordinate that to 19 maximize the effectiveness of the overall policy to reduce 20 GHGs.

21 BOARD MEMBER SPERLING: Just to be clear, it's 22 voluntary for the munis and the other public entities, and 23 I'm just trying to understand. I'm not making any 24 judgment here.

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And then the rest of it is these targets are

being used as essentially guidelines as the PUC adopts and the districts adopt specific rules dealing with, you know, storage and everything else. Is that -- do I understand that right?

INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF SAHOTA: So it's mandated that the POUs and the -- the 16 largest POUs and the IOU CCAs, all of those entities, develop an IRP plan. To the extent that the POUs are held to the direct implementation of the plan, that falls back on the individual local boards and not to a State agency.

BOARD MEMBER SPERLING: Thank you.

CHAIR NICHOLS: Yes, Dr. Balmes.

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BOARD MEMBER BALMES: Just another question about implementation.

So I understand that the IRPs balance increased demand with the effort to reduce greenhouse gas emissions. And I guess I just wanted to hear a little bit more about how good we think we are at projecting demand as we push electrification in multiple sectors including transportation, surface goods movement.

21 So I realize that there's going to be an ongoing 22 process review. But do we feel like we have a handle on 23 this?

24INDUSTRIAL STRATEGIES ASSISTANT DIVISION CHIEF25SAHOTA: So we've used actual reported information by the

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utilities themselves to inform where we think that they're load growth will occur as we look long term to 2030.

The use of the Scoping Plan range for the sector began with looking at long-term pathways modeling, looking at increased electrification for what we were trying to do under the ZEV implementation plan, the new requirements for building electrification, all of those. So we use the best available data to actually include that in the modeling for the sector.

10 When it came to the individual utilities, we have 11 their own reported information about what they see as 12 their long-term load growth, procurement decisions, et 13 cetera. The five-year scoping plan process lets us revise 14 those and evaluate how close we were. And the individual 15 processes -- the two-year process at CPUC; the five-year 16 process at CEC, which is not consistent across all of 17 these, also allows for some updates here, and that's why 18 we're asking to have authority delegated back to the Executive Officer here at ARB in case there's new 19 20 information that warrants a change within the individual 21 utility like they're able to advance electrification 22 faster than we suspected in a certain sector, or poor 23 electrification, as long as the overall sector target is 24 maintained.

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CHAIR NICHOLS: Okay. So it's an unbalanced

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system in some ways. But we're working through it, and it 1 seems as though overall the Energy Commission has got a 2 3 mature, robust effort underway now to really work with the 4 POUs to make sure that they're carrying their piece of 5 this as well. б Okay. So with that, are we ready to move this 7 item? 8 VICE CHAIR BERG: Yes, I'll move the item. 9 CHAIR NICHOLS: Second? 10 BOARD MEMBER SPERLING: Second. 11 CHAIR NICHOLS: A second, Dr. Sperling. 12 All in favor please say aye. 13 (Unanimous aye vote.) 14 CHAIR NICHOLS: Opposed? 15 Abstentions? 16 Okay. Great. 17 Let's move along then to our next agenda item, 18 which is the Proposed Guidelines for the Clean Cars 4 All Program and an update to the Enhanced Fleet Modernization 19 20 Program, or EFMP, an acronym which deserves to fade into 21 the sunset, never to be heard again. 22 I think whoever thought that one up really was 23 not thinking about anything other than just getting an 24 acronym. 25 So the EFMP, as it still exists, is our

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scrappage -- vehicle scrappage program. It's a scrap and replace program. It's been operating in the South Coast and San Joaquin Valley Air Districts for the past three years. It has also a scrap-only program, which is run by the Bureau of Automotive Repair and has been operating since 2010.

The scrap and replace incentive programs reduce fleet emissions by accelerating the turnover and replacement of the existing fleet of vehicles with newer, cleaner, and more efficient vehicles.

Assembly Bill 630 created a new program called the Clean Cars 4 All Program, which is a new light-duty vehicle scrap and replace incentive program. This program, Clean Cars 4 All, codifies the existing EFMP Plus-Up pilot project as a formal stand-alone program.

So some consolidation of these various efforts is going on here.

A major goal of Clean Cars 4 All and EFMP is to benefit low-income and disadvantaged communities. Reducing emissions from the existing fleet is a component of our State implementation Plan for meeting clean air standards and also supports our climate a goals as well. So it really does both.

Today, staff is going to propose guidelines forthe Clean Cars 4 All Program as well as to propose an

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update to the old guidelines for the existing program.

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So, Mr. Corey, would you please introduce this item.

EXECUTIVE OFFICER COREY: Yes, thanks, Chair.

The Enhanced Fleet Modernization Program, or EFMP, was authorized by Assembly Bill 118 in 2007. Since then, the program has been funded by a one-dollar surcharge on motor vehicle registration, translating into about 35 million each fiscal year.

In 2014, the Board adopted revamped guidelines for EFMP and approved a new pilot project called EFMP Plus-Up. EFMP Plus-Up complements EFMP - there will be a few more acronyms - by providing additional incentives to lower income participants living in or near disadvantaged communities who purchase advanced technology vehicles.

16 EFMP Plus-Up is one of several light-duty equity 17 projects developed under Low-Carbon Transportation 18 Investments Program and supported by the Greenhouse Gas 19 Reduction Fund.

The proposed Clean Cars 4 All guidelines for lower income consumers the staff will present our intended to seamlessly transition from the existing EFMP Plus-Up project to Clean Cars 4 All.

Assembly Bill 630 also requires CARB to update the existing guidelines for EFMP. Staff is proposing to

1 make several relatively minor changes to the guidelines to streamline administration, enhance consumer protections, 2 3 and facilitate coordination with other clean 4 transportation incentive programs. The Clean Cars 4 All 5 Program is part of our broader low-carbon transportation б efforts, one of more than 40 climate investment programs 7 Later today you'll hear about new funding 8 guidelines for all 16 agencies including CARB that 9 administer climate investments. 10 With that, I'll now ask Nicolas Nairn-Birch with 11 our Mobile Source Control Division to give the staff 12 presentation. 13 Nicolas. 14 (Thereupon an overhead presentation was 15 Presented as follows.) AIR RESOURCES ENGINEER NAIRN-BIRCH: 16 Thank you, 17 Mr. Corey. 18 Good morning, Chair Nichols and members of the 19 Board. Today I will present for your consideration 20 proposed regulatory guidelines for the Clean Cars 4 All 21 Program and updated regulatory guidelines for the Enhanced 22 Fleet Modernization Program. 23 --000--24 AIR RESOURCES ENGINEER NAIRN-BIRCH: I will start 25 today's presentation with the review of recent legislation

authored by Assembly Member Cooper that creates the Clean
 Cars 4 All Program and requires CARB to update the
 Enhanced Fleet Modernization Program, or EFMP, setting in
 motion today's presentation.

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I will then provide background on EFMP including an overview of our progress to date. After this background I will then describe our proposal and finish my presentation with recommendation to the Board.

9 Our proposal supports EFMP and the EFMP Plus-Up 10 pilot project, a voluntary car scrap and replace program 11 for lower income Californians from underserved 12 communities.

EFMP consists of two components, a scrap-only program implemented by the Bureau of Automotive Repair, or BAR, and the Scrap and Replace Program, which CARB oversees. Scrap and replace has expanded in recent years by the addition of Cap-and-Trade funds and the expansion to the Plus-Up project, which encourages participants to purchase advance technology vehicles.

Today's presentation will focus primarily on the EFMP Scrap and Replace and the Plus-Up project. Together I will refer these simply as The Program.

24AIR RESOURCES ENGINEER NAIRN-BIRCH: Assembly25Bill 630 formalizes the Plus-Up project as stand-alone

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program, renaming it Clean Cars 4 All, and requires CARB to update the EFMP guidelines by January 1, 2019.

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AB 630 also directs us to coordinate Clean Cars 4 All with all other incentive programs supported by the Greenhouse Gas Reduction Fund.

Finally, the bill requires CARB to set annual goals for each district, evaluate the progress toward those goals, and post the evaluations on the program website.

Another bill, Assembly Bill 188 authored by Assembly Member Salas, requires CARB to update the EFMP guidelines and to allow more pickup truck drivers to participate.

Overall the bills allow the flexibility to keep those aspects of scrap and replace that we determine work well and to make necessary adjustments to enable Clean Cars 4 All to help the greatest possible number of Californians.

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AIR RESOURCES ENGINEER NAIRN-BIRCH: The South Coast and San Joaquin Valley Air District launched programs in July of 2015 with an initial annual budget of \$2.4 million per district. Since then, the legislature has allocated approximately \$110 million to the program. We've also been working to expand the program to

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new air districts, including the Bay Area Air Quality Management District, which expects to launch their program 3 by the end of 2018.

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4 We are also in the process of integrating the 5 program with CARB's other equity focused incentive б programs, such as one-stop shop and financing assistance. 7 One of the main reasons for doing this is to raise awareness, make it easier for the public to take advantage 8 9 of the program, and maximize environmental and economic 10 benefits for folks with the greatest need.

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AIR RESOURCES ENGINEER NAIRN-BIRCH: 12 While 13 scrapping in-use older cars and replacing them with newer 14 and cleaner ones provides air quality and climate change 15 benefits, another important objective is to provide lower 16 income and disadvantaged community members the benefits of 17 reliable fuel efficient transportation.

18 To increase accessibility the Board has 19 previously approved flexible guidelines that allow the air 20 districts to tailor their programs to the specific needs 21 of their own communities. We recognize that Scrap and 22 Replace is an intricate program for air districts to implement, with a number of unique challenges. 23

24 A key challenge is understanding what barriers 25 the participants confront when purchasing a new car. То

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address this, we provide support for air districts to partner with community-based organizations and encourage partnerships with trusted financial institutions.

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Consumer protection and education are essential to the success of the program. Air districts provide education on the pros and cons of the various vehicle technologies to ensure participants make informed decisions.

9 The district also helped the consumer get fairly 10 priced, reliable, and safe vehicle that is financially 11 sustainable. These guiding principles have been 12 fundamental to the success of the program thus far. They 13 also provide a firm foundation from which the program can 14 transition to its next phase and help Californians on a 15 larger scale.

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17 AIR RESOURCES ENGINEER NAIRN-BIRCH: One of the 18 core features that has worked well is basing the incentive 19 amount on the participant's income and choice of 20 replacement vehicle. Incentives range from \$2500 to 21 \$9500. The highest incentives go to folks with the 22 greatest financial need while also encouraging 23 participants to buy the cleanest vehicles.

As a program is focused on lower income drivers, all applicants must have a household income less than 400

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percent of the Federal Poverty Level. While participants can choose to receive a voucher for alternative forms of clean transportation, such as public transit or car sharing, in lieu of a replacement vehicle, to date this option has rarely been chosen.

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7 AIR RESOURCES ENGINEER NAIRN-BIRCH: Since they 8 launched three years ago, the pilot programs in the San 9 Joaquin Valley and South Coast Air Districts have together 10 replaced over 3500 cars. Encouragingly, 85 percent of the 11 replacement vehicles thus far have been advanced 12 technology. What is perhaps even more encouraging is that 13 the majority have been either plug-in hybrids, like the 14 Chevy Volt, or zero-emission cars like the Nissan Leaf. 15 Conventional hybrids like the Toyota Prius have also been 16 a very popular choice.

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18 AIR RESOURCES ENGINEER NAIRN-BIRCH: As mentioned 19 previously, a primary goal of the program is to benefit 20 disadvantaged communities. With programs operating in the 21 South Coast and San Joaquin Valley Air Districts, 22 approximately 70 percent of Californians living in or near 23 disadvantaged communities have access to the program. 24 Expanding the program to districts with larger populations 25 would increase this coverage close to 90 percent.

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For participants, the program provides newer and more reliable transportation, with a lower cost of ownership that provides economic boost to their families and local communities. So far, the average replacement vehicle is 18 years newer and twice as fuel efficient as the average scrapped jalopy.

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AIR RESOURCES ENGINEER NAIRN-BIRCH: Those benefits are going to the families and communities that need them the most. So far, more than \$26 million in scrap-and-replace incentives have been awarded.

Looking at the pie chart on your left, we see that 98 percent of this investment went to participants living in or near some of California's most heavily burdened communities. I'd also like to point out that 58 percent went to folks living within a disadvantaged community census tract.

In addition, the pie chart on your right shows that 93 percent of this total investment has gone to participants with household incomes less than 225 percent of the federal poverty level, or FPL. This income threshold is equivalent to \$56,000 for a family of four.

Only 7 percent of the State's investment went to participants earning more than 225 percent of the federal poverty level but less than the program's 400 percent

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1 income cap. This income cap is equal to about hundred thousand dollars for a family of four. 2 3 --000--4 AIR RESOURCES ENGINEER NAIRN-BIRCH: Even though 5 the pilot phase of the program was largely successful, we б have learned some important lessons over the last three 7 years. Despite a better than expected start in both the 8 South Coast and San Joaquin Valley, the growth in overall 9 participation hasn't been able to keep pace with the 10 increase in funding levels in recent years. 11 The districts are working to increase 12 participation through increased outreach and scaling up 13 support to process applications more quickly. 14 However, increasing participation is not simple. 15 With its multiple goals and emphasis on ensuring 16 applicants are able the find a car that's right for them, 17 this is an intricate program to implement. Each air 18 district's program by necessity consists of a multi-step 19 process, including community outreach, consumer 20 protections, education about the pros and cons of the replacement options, and partnering with vehicle 21 22 dismantlers and dealerships. 23 We're working closely with the air districts to

We're working closely with the air districts to provide them with the overhead support necessary to increase participation without having to take any

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shortcuts.

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This support also includes integration with other incentive programs to maximize the benefits to 4 participants. For example, in the near future we will launching the one-stop-shop program, which will streamline the application process, expand outreach, and also link applicants to other programs that they may not be aware of such as financing assistance.

9 Lack of financing has been identified as one of 10 the major barriers to participation so far. Many of the 11 equity focused incentive programs have common 12 requirements, such as low-income verification, consumer education, and outreach. 13

14 Finally, it can not be overstated that the 15 flexibility each district has to meet local needs and 16 leverage existing capabilities is critical to each 17 program's success.

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19 AIR RESOURCES ENGINEER NAIRN-BIRCH: This lessons 20 have informed our proposed guidelines for Clean Cars 4 All 21 and updates to the existing EFMP guidelines. After 22 consulting with BAR, we not proposing to make any changes 23 to their scrap-only program. This program will continue 24 being implemented statewide, providing \$1500 to low-income 25 drivers to scrap their functional higher emitting

1 vehicles. This program is extremely popular and regularly oversubscribed, scrapping about 25,000 older cars each 3 year.

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For Clean Cars 4 All, our proposal would 4 5 essentially formalize the existing EFMP Plus-Up pilot б project. Our proposed guidelines would create the general 7 framework for Clean Cars 4 All and detail the core 8 requirements each district's program must meet. These 9 requirements would ensure we continue to focus on 10 low-income drivers living in and near disadvantaged 11 communities, and maintain the emphasis on consumer protection and education. 12

Under our proposal, air districts would continue 13 14 to have flexibility to tailor their programs to the needs 15 of their local communities.

16 Our proposal would retain flexibility for CARB as 17 well, which will ensure that we can meet the AB 630 18 direction for coordination with other programs and make 19 adjustments when needed.

20 The Board would, for example, be able to adjust 21 the incentive amounts through the Low-Carbon 22 Transportation Funding Plan, consistent with how the EFMP 23 Plus-Up pilot project is currently administered.

24 The regular reporting and setting of performance 25 goals will help identify any adjustments that need to be

1 considered. We will collaborate with air districts in 2 impacted communities to set performance goals, including 3 number of replacement vehicles, types of replacement 4 vehicles, and the geographical distribution.

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Districts will continue to submit detailed reports every quarter, which we will use to conduct annual performance evaluations. The result of our evaluations will be posted on our program website.

9 We are also taking this opportunity to ask your 10 approval to increase the incentive available for the 11 alternative mobility option. As noted, there hasn't been 12 much interest in the option to date. And we believe that 13 increasing the incentive amount from its current maximum 14 of \$4500 to \$7500 may increase interest.

15 For context, the revised amount would align with 16 the amount for a hybrid replacement vehicle, the most 17 common type of replacement vehicle purchased so far.

Finally, the current EFMP guidelines apply a separate fuel economy eligibility threshold to minivans to ensure there's a replacement option that meets the needs of larger families.

As directed by Assembly Bill 188, staff is proposing to allow this threshold to also apply to pickup truck replacement vehicles. This proposal would, for example, allow participants to choose from at least three

fuel-efficient pickup trucks per model year.

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AIR RESOURCES ENGINEER NAIRN-BIRCH: In summary, our proposal builds on the success of the existing Scrap and Replace Program and is informed by lessons learned after three years of implementation.

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The proposal provides enough flexibility to ensure Clean Cars 4 All can make continual improvements and be easily coordinated with other equity programs.

10 It further ensures its staff will be able to set; 11 measure; and evaluate vehicle replacement goals each year, 12 which we will make publicly available.

13 Staff recommends the Board approve our proposed 14 guidelines for Clean Cars 4 All and our proposed update of 15 the EFMP guidelines. With Clean Cars 4 All, we look 16 forward to starting the next phase of scrap and replace. 17 In doing so, we'll continue to work closely with 18 implementing air districts and help new air districts come 19 on board.

20 This concludes our presentation. Thank you very 21 much.

22 CHAIR NICHOLS: Okay. We have a list of 23 witnesses here. So why don't we hear from them first. 24 And by the way, my slightly sarcastic comments 25 about the name of EFMP were not meant as a criticism of

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1 the program. It's a great program. I just feel that we 2 could do better in terms of marketing it. But we obvious 3 are doing well because a lot of people are taking 4 advantage of it anyway. It's just it would be nice if it 5 were better known, that's all.

Okay. Let's hear from Deanna Yee.

MS. YEE: Is this on?

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Good morning, Chair Nichols and members of the Board. Thank you for the opportunity to speak here today. My name is Deanna Yee, and I'm one of the staff members of the Bay Area Air Quality Management District. I am responsible for their Light-duty Electric Vehicle Grant programs.

Earlier this year, in March, we signed an agreement with CARB to receive funding for the EFMP Plus-Up Program. We're excited to give low-income Bay Area residents and disadvantaged communities an opportunity to replace their older, dirtier vehicles with newer, cleaner vehicles or alternative transportation options such as transit's air passes.

We are currently putting together our program and we're putting together the partnerships and infrastructure necessary for success. We anticipate doing a soft lunch at the end of this year in a pilot community before expanding the program to the rest of the Bay Area early

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next year.

Equity in transportation and electric vehicles has always been a topic of concern. High upfront costs and a lack of adequate charging infrastructure have been major barriers for low-income residents.

This program not only helps bridge the equity gap for the most vulnerable residents in our most vulnerable communities, but it also helps improve air quality and public health, and increases access to electric vehicles and the supporting infrastructure that is needed to meet State goals and improve the climate.

12 There is it still a lot of work for us to do to 13 get our program up and running, but we're thankful to 14 CARB's staff for their guidance and continued support 15 throughout this process.

We're also appreciative that we've received support from South Coast Air District staff, who run the Replace Your Ride Program, and San Joaquin Valley's Air District staff who run the Tune In and Tune Up Program.

20 We've also been working with staff from Sac 21 Metro's Air District, the Beneficial State Foundation, and 22 local community choice aggregators in our region.

Achieving equitable and affordable transportation options is a really big challenge. But when we come together with a sustained commitment, we can impact the

1 lives of low-income residents and disadvantaged

communities as well as the global climate more broadly.

Thank you.

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CHAIR NICHOLS: Thank you.

MR. NEUENBURG: Good morning to Chair Nichols and to the CARB Board and staff. My name is Mike Neuenburg and I'm representing the Sacramento Metropolitan Air Quality Management District.

9 Just on a side note as well: Assembly Member Jim 10 Cooper wanted to be here today but was unable to attend, 11 and just wanted to inform the Board of that.

I would like to take a moment to say thank you for the opportunity to speak to all of you today in support of the proposed Clean Cars 4 All and Enhanced Fleet Modernization Program guidelines with two requested modifications:

Sacramento Air District believes that this investment stream is an excellent path and looks forward in working with CARB to putting these funds into the DAC and low-income communities to reduce emissions, boost equitable mobility, and keep California at the cutting edge of clean transportation.

As with our Community Car Share of Sacramento, our innovative zero-emission car sharing program for low-income housing communities, these funds will continue to boost equity in Cap-and-Trade investments and bring clean mobility options into communities most burdened by air pollution.

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District staff are working diligently with local community partners to develop and implement a robust and efficient Clean Cars 4 All Program in the Sacramento region. But we believe two key program guideline modifications are necessary.

9 First, since significant initial start-up work is 10 required before Clean Cars 4 All becomes a reality, the 11 addition of seed money to help get the program off the 12 ground would go a long ways towards ensuring the program's 13 success in the Sacramento Region.

And second, and to be frank, our district seriously considered not moving forward with this Clean Cars 4 All due to an anticipated financial strain on local resources. We believe the current funding percentages allocated for program support require additional flexibility.

The nature of the program and the communities it will serve requires specialized outreach and community education. Based on evidence from the South Coast and San Joaquin Valley projects, these elements will require significant resources, and San Diego APCD opted to not run the program due to these concerns.

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Community partnership, robust outreach, and effective implementation are all vital components to the program's success and require huge amounts of district staff time.

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Our estimated true cost for program implementation and community outreach and education is 25 percent, versus the 15 percent offered by ARB. And our agency is using limited funds to cost share an additional 5 percent to help offset this gap.

10 We request that CARB staff allow a higher 11 percentage of funds towards these core functions.

And once again, I'd like to thank you for the 12 opportunity to speak to you today.

CHAIR NICHOLS: Thank you.

15 CAPCOA EXECUTIVE DIRECTOR ABBS: Good morning, 16 Chair Nichols and members of the Board. My name's Alan 17 I'm with the California Air Pollution Control Abbs. 18 Officers Association here to express support for staff's 19 proposed guidelines for the Clean cars 4 All Program.

20 And as a side note, I've also talked with Samir Sheikh, Wayne Nastri, and Jack Broadbent from San Joaquin, 21 22 South Coast, and the Bay Area individually. I know 23 Deanna's already been here to express the Bay Area's 24 support but I'm also expressing the support of the three 25 executive officers for this program as well.

As staff noted, this program has been a 1 tremendous success in the San Joaquin and South Coast 2 districts. We're looking forward to expansion to Sac 3 4 Metro and to the Bay Area. These -- this program aligns very well with a lot of the hard work that the air 5 б districts and CARB have done with AB 617 in identifying 7 disadvantaged communities and burdened communities and 8 providing support in those areas. 9 And in addition, as staff noted, there's a lot of 10 land-holding to get someone through the entire process, 11 from turning in an old vehicle to getting a new vehicle. 12 And so we also have -- I've also had support for CARB 13 staff to try to balance the administrative workload that 14 districts have to get folks through to the end of the 15 process and still provide the bulk of the funding to the 16 folks that need it most to get those clean cars. And so 17 thank CARB staff for all the work that they've done on that as well. 18 19 Thank you. 20 CHAIR NICHOLS: Thank you. MR. MAGAVERN: Minho would like to follow me if 21 22 that's okay with you. 23 Okay. Thanks. 24 Bill Magavern with the Coalition for Clean Air, 25 and also a proud member of the seersucker caucus today.

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(Laughter.)

CHAIR NICHOLS: I was just noticing you were looking very spiffy today.

MR. MAGAVERN: But when it gets over a hundred degrees...

CHAIR NICHOLS: Well, that's great.

7 MR. MAGAVERN: We have participated in the 8 workshops for this program and also submitted written 9 comments. But we were one of the sponsors of the Charge 10 Ahead law four years ago and also supported AB 630 and 11 we've had very productive discussions with your staff on 12 this program, so I want to thank Scott and Aaron and Nick 13 for being open to our input.

14 As noted, this program has many names. EFMP, 15 Clean Cars 4 All, Replace Your Ride in the South Coast, 16 Drive Clean San Joaquin. But by whatever name, we think 17 it's an important program. The benefits are in reducing 18 greenhouse gas emissions and reducing local air pollution 19 and providing important benefits to low-income drivers in 20 California who can see major improvement in their quality 21 of life from getting out of what's usually an old 22 polluting and unreliable vehicle into a much newer, not 23 only cleaner but safer and more reliable mode of 24 transportation.

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According to CARB, 44 percent of smog-forming

emissions from cars come from the 5 percent of vehicles that are more than 20 years old. So we really get a lot of benefits from addressing that sector of the vehicle fleet.

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5 And when we first started talking to people in б the legislature four years ago about giving disadvantaged 7 communities access to electric vehicles, we often heard, 8 "Well, people in disadvantaged communities don't want electric vehicles," or "Electric vehicles won't work for 10 the San Joaquin Valley." Yet, you saw from the staff 11 presentation, that 85 percent of the vehicles that are 12 part of the replacement program here are the advanced technology vehicles, from conventional hybrids, but even 13 14 more of them actually are plug-in vehicles. So we're 15 seeing a lot of demand in disadvantaged communities.

16 And as we look to expand, I want to particularly support three areas that the staff talked about: 17

The increase in value for the alternative mobility option, for those who will not want a replacement car but will be able to get around other ways.

21 Also outreach is so important, that we use not 22 only event-based models but also web-based models so that 23 more people know about this program. As the Chair noted, we need to get the word out better. 24

And, finally, integration and coordination, so

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1 that this program is not in isolation but works along with some of the other climate investment programs. 2 So, for 3 example, somebody getting a plug-in vehicle can get solar 4 on their roofs so they can plug into that clean 5 electricity. б Thank you very much. 7 CHAIR NICHOLS: Thank you. 8 I personally like Replace Your Ride. I think 9 that's a much better name. 10 (Laughter.) 11 CHAIR NICHOLS: That's a winner for the South Coast. Congratulations, Judy. 12 13 Okay. So Minho is next. 14 MR. PARK: Good morning, Chair Nichols and 15 members of the Board. My name is Minho Park, and I'm here 16 today representing the Natural Resources Defense Council.

An avid outdoorsman, I care deeply about the condition of our natural world. And as you all know, the transportation sector is the largest contributor to California's greenhouse gas emissions. And innovative programs like Clean Cars 4 All will go a long way in tackling these emissions.

Along these lines, we support staff's proposalfor the following two reasons:

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First, allowing more air districts to implement

retire-and-replace programs will broaden the reach of the Clean Cars 4 All Program and further its emissions capacity.

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Secondly, providing consumers with more flexibility in replacement vehicle choice will ultimately give them more incentive to replace their high emission vehicles.

I also want to support the comments made by our Charge Ahead California partner, the Coalition for Clean Air, especially regarding connecting consumers with other incentives to leverage multiple transportation related programs.

13 Close coordination with utilities is a perfect 14 example of how linking incentive programs can yield 15 additional greenhouse gas benefits. In fact, utilities 16 have invested over \$1 billion towards transportation electrification, 200 million of which provides charging 17 18 infrastructure for light-duty vehicles. And as a 19 provision of these investments, these utilities have made 20 commitments to support Air Resources Board programs such as Clean Cars 4 All. 21

22 We therefore encourage ARB to communicate 23 directly with utilities to operationalize these 24 commitments. This collaboration will connect clean air 25 replacement incentives with necessary charging

1 infrastructure development within low-income communities. This will also allow the utilities to tackle the 2 3 obstacle of charging infrastructure deployment while the 4 ARB can extend the value of their dollar by focusing on 5 the removal of aged, pollution-heavy vehicles from California roads. 6 7 We all deserve a clean and healthy environment, 8 and programs like Clean Cars 4 All will help us get there. 9 Thank you. 10 CHAIR NICHOLS: Thank you. 11 I believe that -- nope, one more. Sorry. 12 Valley Clean Air Now. 13 Hi. MS. GO: Good morning, Chair and members of the 14 15 Jaymee Go on behalf of Valley Clean Air Now. Board. We 16 just wanted to express our support for the Clean Cars 4 17 All Program guidelines. We believe that these guidelines 18 will help the program continue its success. And we 19 respectfully urge your adoption of the program guidelines 20 as they're proposed. 21 Thank you. 22 CHAIR NICHOLS: Thank you. I appreciate all the support for the program and 23 for the updating of the guidelines. Obviously there's 24 25 more to be done and this program along with other

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transportation enhancement programs needs to be better coordinated and made easier to implement I think by our 3 partners in the district.

4 I did just want to mention that the legislation 5 which brought us here today by Assembly Member Cooper was б a good push in the right direction in terms of having it be a stable existing program of its own. I think that's going to help us in the future especially when we have funding as we did, for example, with the Volkswagen 10 settlement where we needed to have the ability to utilize some of that money directly. This is going to be very 11 12 helpful.

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So, yes, Supervisor Serna.

BOARD MEMBER SERNA: Thank you, Chair Nichols.

15 First of all, as is somewhat customary, I want to 16 thank staff for all their hard work on this one.

17 I have a couple questions. I think the first is 18 probably best directed at our economist.

19 And, that is, there was some mention by one of 20 the speakers - it may have been Mr. Magavern - about 21 the -- kind of the general benefit of the program, not 22 just the critical part which is getting a clean car in --23 clean transportation in the hands of folks, especially 24 those in disadvantaged communities.

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But have we done any economic analysis in terms

of what we save -- what the program in the long run will save those consumers? Because they now have a newer car with fewer repair costs, fewer -- better gas mileage, so less maintenance costs overall?

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CHIEF ECONOMIST WIMBERGER: Yes, you point out a great benefit that I think we could do more to publicize. But that is a huge benefit if not just the air quality impacts. There are these hosts of different cost-saving measures for the participants. So we do have some of that information and we can make that more publicly available.

11 BOARD MEMBER SERNA: But to the Chair's earlier 12 comment about doing a better job of marketing, I would 13 strongly encourage you and your staff to think carefully 14 about how perhaps we begin to incorporate that into our 15 messaging and kind of the general structure of the 16 program, so that when someone that may potentially take 17 advantage of this opportunity is considering the entirety 18 of it, they're looking at it from the standpoint of their 19 pocketbook as much as, you know, saving our air and 20 reducing carbon emissions.

21 CHIEF ECONOMIST WIMBERGER: And that is a large 22 part of what happens at the events. You know, when those 23 discussions with the participants, there is a lot of 24 mention about the hand-holding that goes on. There is --25 it's a very labor intensive process to really go through

these steps. And so that is a lot of the discussion with the participants themselves is really showcasing a lot of the value to participating in a program.

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BOARD MEMBER SERNA: Great.

And then second comment/question directed at Mr. Corey is, we heard from a representative from my local district here in Sacramento about concerns over -- or challenges about implementation. And there have been other local air districts that have kind of taken it to an extreme that they're just not going to participate because of those challenges.

Maybe if you -- you know, I guess what I'd like 12 13 to hear from you is maybe a reminder for everyone in terms 14 of what we do and, in particular, what our executive 15 officer does and his executive staff to make sure that all 16 local districts, not just Sacramento, understand that 17 we're here to make sure that when we do extend and try to 18 refine these programs, it's not just, you know, one and 19 done at a hearing. We're actually going to be working 20 with those local air districts to make sure that they have 21 as smooth an opportunity to implement these programs as 22 possible.

EXECUTIVE OFFICER COREY: Thank you, Supervisor.
And a key point - and this point is always about the -you know, one, the words, but, two, the execution; and,

that is, districts are absolutely key partners in this program and several others. But to be -- get more to drill down, well, how do you translate that? Few things.

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4 One is that -- and these are some adjustments 5 we've made over the last few years in terms of recognizing б that a strengthened relationship with the districts is 7 going to be key to achieving our clean air and climate 8 goals. First is the CAPCOA Board. Board of directors 9 meets monthly. I go to every one of those meetings now. 10 Every single one. Been doing it for the last few years 11 because it's an opportunity at the leadership level of 12 every district, are there issues? There are issues we 13 need to work clear -- we use them for that. Have agendas 14 that Alan puts together. That's been a really useful 15 forum.

16 The other is at the working level, subgroups of 17 CAPCOA that members of this -- CARB's team works with in terms of, as you noted, not just the guidelines. 18 The real 19 challenge in the issues are implementation, make sure that 20 we have that feedback loop. And specifically with respect 21 to this program, South Coast and San Joaquin were out 22 first, so already have experience. We've been talking 23 with them and the broader CAPCOA, what can be learned from 24 the South Coast and San Joaquin experience, as other 25 districts are being brought in the program - Sacramento

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and Bay Area included. So there is that feedback loop. 1 And I would -- as reflected in CAPCOA's remarks, 2 3 I think it's been working. I mean these are complex 4 programs, complex feedback loop in terms of the ability to 5 learn and adjust. And as noted in staff presentation, б that learning will need to continue. And we will be 7 flexible to work through the districts on adjustments. 8 So those are some examples of how we're working 9 together. 10 BOARD MEMBER SERNA: Thank you. 11 BOARD MEMBER GIOIA: Madam Chair? 12 CHAIR NICHOLS: So if I may say, the bottom line 13 is here, that you're open to readjusting this percentages 14 that are allowable for administration, but you want to 15 sort of get the thing started and see how it works first 16 and work with the districts to make it easier for them to 17 implement the programs. 18 EXECUTIVE OFFICER COREY: Exactly. 19 CHAIR NICHOLS: Okay. Thank you. 20 Yes. 21 BOARD MEMBER GIOIA: Thanks for the presentation. 22 I think this is an absolutely important program. And I've 23 had a chance to speak with I know the organization that 24 ARB provided funding to about a year or two ago to do this 25 pi -- a pilot program in the Bay Area, - Community Housing

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Development Corporation of Northridge - which is running a program Bay Area wide with a different pot of -- pot of money. And I've had a chance to speak to folks who've participated in the program.

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And what they said was very consistent with this slide 7, which shows overwhelmingly most of the people who participated replaced their vehicles with a plug-in hybrid or conventional hybrid. And that was because there usually wasn't charging infrastructure available in their community. Many people lived in multi-family housing.

So I feel we somewhat have a two-tier system still, that until we can figure out how to link other dollars to make more battery electric vehicles available -- and I understand there'll be still a choice. But even your chart shows 15 percent were battery electric; 85 percent were various types of hybrids.

17 So I think we need to think about how, when we 18 have these dollars out in the community, we are aligning 19 dollars for EV infrastructure.

And of course multi-family housing -- I mean folks -- there are low-income individuals who want to get -- participate and get battery electric, but they can't because there's no charging available to them.

24 So I think this is good. But it's still a 25 two-tier system. Wealthier communities or just

1 middle-class communities will -- which have more charging infrastructure available will be able to get battery 2 3 electric, whereas everybody else is get -- lower income 4 are getting the hybrids. It's an improvement over the 5 gasoline vehicles, so I just want us to be aware of that. б I mean I've talked to real people who say, "I want a 7 battery electric. I can't because there's no charging 8 available. So you're program is helpful but it's not 9 exactly getting what I want."

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So I think we need to work harder in that.

11 So how would you anticipate thinking about that? 12 Because I think we can pat ourselves on the back and say 13 we're making progress, but we're making incremental 14 progress.

EXECUTIVE OFFICER COREY: I'll take a stab at this, because I want to refer to the Governor's Executive Order earlier this year --

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BOARD MEMBER GIOIA: Right.

19 EXECUTIVE OFFICER COREY: -- which really 20 underscored a few things.

One, it underscored for both our air quality and climate goals we need many, many more ZEVs; in fact, 5 million target by 2030. We're about 400,000 today. And it also recognized that infrastructure is a key element. Not only we're getting many, many more vehicles; I think

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1 we're at 35, 40 models we're coming up on, range is continuing to increase in terms of the vehicles, costs are 2 3 going down, energy density of the batteries continue to 4 increase. But the infrastructure and consumer awareness 5 are also key elements of moving forward as part of that б Executive Order, and then followed with the budget that 7 was just acted on was funding through CEC for 8 infrastructure investments. I think it was about 235 9 million this year and then a hundred million a year going 10 forward.

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BOARD MEMBER GIOIA: Right, right.

EXECUTIVE OFFICER COREY: Coupled with the PUC 12 13 action to further support infrastructure investments as 14 well as continue to work with local cities, counties, and 15 others that are investing, with an emphasis on the 16 challenge that you just noted, with multi-unit dwellings, 17 as well as how we're looking at the VW settlement, which 18 was a key element in terms of that consent decree with the 19 \$800 million over the next several years investment.

20 21 No silver bullet here.

BOARD MEMBER GIOIA: No --

EXECUTIVE OFFICER COREY: But ultimate -- all those elements are focusing at this issue of the key aspect that infrastructure investments play as well as the vehicles moving us forward.

BOARD MEMBER GIOIA: Right. Well, I know that the PUC-approved program for the investor-owned utilities 3 have -- I mean the utilities have indicated they want to 4 focus on multi-family, but they're -- at least, you know, 5 the PG&E program in Northern California is a relatively б modest program and I think it was scaled down -- I don't know. Is someone from the PUC still here?

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Because originally, there was a larger program 8 9 and it was scaled down.

10 And so, the problem is it's still a drop in the 11 bucket. So it's -- on the multi-family side, I think that's our biggest gap, especially with low-income 12 13 residents; and, frankly, also in city -- in other -- in cities like San Francisco, which have very expensive 14 15 multi-family housing. So it's a gap in both those types 16 of communities.

17 So the -- I'd like to see us continue to 18 encourage or look at funding for that segment. I'm not 19 sure how much is going to happen very soon. And so, it 20 remains -- I get all of this is long term, but it's not 21 happening soon. And so I think -- so the problem if it's 22 not happening soon, it's still this two-tier system. You 23 live in -- lower income you live in multi-family, you're a 24 ways off from getting infrastructure versus being in 25 single family in other communities.

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CHAIR NICHOLS: Good point. Well said. And,
 yes, we agree -- I agree.

Yes, Ms. Mitchell.

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BOARD MEMBER MITCHELL: I just want to make a few comments. Because this program has been in effect in South Coast for a couple of years now, since 2015; and it has been immensely successful, oversubscribed for the most part.

9 And one of the things that I think is most remarkable, which was highlighted in the staff report, is 10 11 that 85 percent of the vehicles chosen are advanced 12 technology. And from my recent discussions with our 13 technology staff, the Leaf is one of the vehicles most 14 often chosen. So there must be some charging 15 opportunities out there since people are choosing plug-ins 16 and zero-emission battery electric.

But implementation is likely to run over some hurdles. We now have on-line application. But you have to work with trusted partners, trusted partners in the dealerships that you deal with and any financing firms that you might be working with as well.

22 So it's certainly a worthwhile program, and one 23 of the great benefits is getting the experience of driving 24 a clean vehicle to our disadvantaged residents. So I 25 would say I'm glad to see it expanding to these other

areas. And at CAPCOA, ideas can be exchanged on how to
 make it work.

3 CHAIR NICHOLS: Um-hmm. Yes. Well, increasingly 4 the focus is on charging at work places and, you know, 5 that's a much more diverse group of locations. But we are 6 seeing a larger number of facilities that are putting in 7 charging that's available to employees. So that's a very 8 promising area.

9 BOARD MEMBER MITCHELL: And our staff has said 10 that about 15 percent of the vehicles that are chosen are 11 pure battery electric.

CHAIR NICHOLS: Um-hmm.

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BOARD MEMBER MITCHELL: So that's a pretty good percentage.

CHAIR NICHOLS: It's a good start --

BOARD MEMBER MITCHELL: I would say some 2500 vehicles --

18 CHAIR NICHOLS: -- better than the market as a 19 whole.

BOARD MEMBER MITCHELL: Yes.

CHAIR NICHOLS: Dr. Sperling.

22 BOARD MEMBER SPERLING: Yes, I have two items.
23 One is to follow on this discussion. It's recently
24 come -- on the charging infrastructure.
25 CHAIR NICHOLS: Uh-huh.

BOARD MEMBER SPERLING: It's recently come to my attention that if you're -- Okay, I'll give you a case study that happened. So there's a unit of 30 apart -- 30 units and they wanted charging infrastructure put in. The major utility said, "We'll pay 90 percent if you pay 10 percent." They said, "Okay, good deal."

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And then they found out later that the kilowatt-hour charge was going to be 35 cents -- 35 cents a kilowatt. You know, that's two or three times a normal residential rate.

And this is -- all comes back to the fact that in this arrangement that the PUC has with the utilities, is that they're allowed or I guess expected to make a return on their investment or at least to capture their investment. And so, they're doing things like that, which is counter to what we're trying to achieve.

17 You know, the overarching -- there's a couple 18 overarching points. One is that a public charging or any 19 kind of charging is never going to make money. It has to 20 be subsidized in one way or another. You can't make money 21 on selling electrons. And so in this particular case, 22 especially -- I mean with any apartments, but especially 23 low-income, I think there has to be special attention 24 given to subsidizing these charging units if we're going 25 to make these kinds of programs a success.

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The other point I wanted to follow upon is staff request. They said about this idea of more funding to -well, to increase the incentives for alternative mobility options. So I want to give a very strong resounding yes --

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(Laughter.)
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7 BOARD MEMBER SPERLING: -- to that. You know, 8 our goal here in California is -- to achieve our 9 transportation greenhouse gas reductions is to -- you 10 know, a strategy to get there is to reduce car ownership. 11 And I do want to say, at some point in these proceedings I 12 want to add -- embellish that and say the goal should be 13 to increase mobility but decrease vehicle use. We'll get 14 to that at one of our future proceedings.

15 But -- and that's especially relevant to 16 low-income people. They need to have more mobility. And 17 the world -- the transportation world has changed in the 18 last -- even just the last five years. There's a lot more 19 options out there, everything from dockless scooters to 20 dockless electric bike sharing and uberPOOL and Lift Line, microtransit services. All of this is brand new. 21

And I would strongly urge us to not only increase the funding but figure out how to make it attractive or to communicate it, market it better. It -- you know, the cost -- as someone pointed out, you know, with the cost of

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1 owning a car -- even if we give \$10,000, the cost of 2 owning a new car is about \$9,000 per year. Per year, 3 total cost of ownership.

4 And so having a new car, you know, okay, if it's 5 electric and so on you can save it. But owning cars is б expensive and it's not what we're trying to -- you know, 7 we're trying to reduce VMT. So I think this -- that whole 8 program should be greatly elevated and figure out how to 9 make it so that people can get access to all of these 10 other services. There -- often you get much better 11 service when you have this suite of options available to you than when you have to depend on one car and worry 12 13 about parking and registration and everything else.

Thank you for allowing me that little speech. (Laughter.)

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16 CHAIR NICHOLS: Well, one of the problems of 17 bringing anything in front of this Board is if -- you 18 know, it's a slice of the whole program, and there clearly 19 is a need which I certainly am feeling for this Board to 20 be able to tackle kind of the broader vision where the 21 transportation system is going. And we've had some 22 internal conversations about how best to tackle that, 23 because I think everybody wants to see us put our stamp on 24 something that's more of a comprehensive approach. But in 25 the meantime, we do have to deal with the individual

1 programs one at a time and just hope that we can do it in a way that doesn't undercut our abilities to do other 2 3 smart things, which I think has been provided for here. 4 BOARD MEMBER SPERLING: Yeah. In this case the 5 staff in their presentation specifically requested support б approval of increasing the amount of the incentives. 7 So --8 CHAIR NICHOLS: Yes. 9 BOARD MEMBER SPERLING: -- I don't know if we 10 have to do that in any kind of formal way, but --CHAIR NICHOLS: Well, we're going to have to 11 actually vote on this item, I believe. 12 13 BOARD MEMBER SPERLING: But that's not written 14 into the resolution as I see it. That was just kind of 15 a -- I don't know --16 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI: 17 It is --18 BOARD MEMBER SPERLING: -- how official that 19 request was. 20 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI: 21 It is part of the regulatory proposal in front of 22 you. 23 BOARD MEMBER SPERLING: Oh, it is? Okay. 24 CHAIR NICHOLS: So. 25 Thank you.

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(Laughter.)

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CHAIR NICHOLS: Yes, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Thank you. 3 As part of 4 the San Joaquin Valley, I really need to speak up with 5 this, because, you know, early work on it -- a reminder to everybody, I believe the Tune-in, Tune-up, the original, б 7 one of the major goals was in fact to get unregistered 8 vehicles registered and in compliance and, you know, talk 9 about meeting an important community need and 10 underrepresented community. So very powerful and reaching 11 those most polluting vehicles.

12 Boy, just like South Coast, we -- you know, 13 people are lining up hours before these events are 14 opening. So I don't think there's any problem of 15 interest. And I believe the law says vehicles older than 16 eight years. Now, I think we absolutely want to be 17 focusing on the older vehicles. But there's a huge group 18 out there to reach. But focusing on those older vehicles. 19 And that comment about 44 percent of smog producing 20 pollutants coming from 5 percent of vehicles over 20 years of age, boy, that is critical for South Coast and the 21 22 Central Valley for meeting our air quality standards, not 23 to mention the greenhouse gas opportunities there.

Do the districts have -- well, can we target those vehicles? Do the districts, are they able to get

1 DMV registration and send the postcard -- you know, I get in the mail all the time, "I'll buy your house." 2 3 (Laughter.) 4 BOARD MEMBER SHERRIFFS: Can we send people, "We'll buy your car"? 5 And wouldn't that be incredible if we could б 7 couple that to the alternative mobility option. You know, 8 how would that be for a win. 9 But serious question about DMV access. 10 MSCD ALTERNATIVE STRATEGIES SECTION MANAGER 11 HILLIARD: So our program partners in BAR do have a pretty robust access to DMV. I think we could probably work with 12 13 them to work something out within, you know, 14 confidentiality laws and things like that. But those are 15 some of the things that we have been working on with BAR 16 and seeing if we could target -- you know, more accurately 17 target some of these vehicles. So I think that's 18 something we can explore. 19 BOARD MEMBER SHERRIFFS: So it's not something 20 that we could do now but it's certainly in the realm of possible that if districts were interested in? 21 MSCD ALTERNATIVE STRATEGIES SECTION MANAGER 22 23 HILLIARD: Absolutely. I think we can explore the 24 possibilities with BAR, yeah. 25 BOARD MEMBER SHERRIFFS: Great.

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CHAIR NICHOLS: Any other Board comments?

If not, can we move this item. I have to 2 3 officially close the record. I don't think I did that. 4 And I'm supposed to point out that it will be reopened and 5 a 15-day notice of public availability issued. And if the б record is reopened for comments, then the public may 7 submit comments on the proposed changes that will be 8 considered at the time of final decision as part of the 9 Final Statement of Reasons. However, any comments that 10 are submitted just after this and before a notice is 11 issued will not be accepted as part of the official record of this agenda item. 12

And the executive officer may present the regulation to the Board for further consideration if warranted. If not, the executive officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

This is all part of our new language that we are using to make sure that we and everybody else are following the proper process here for finalizing rules consistently with comments -- with public comments.

22 Okay. The Board has before it Resolution Number23 18-25.

Do I --

BOARD MEMBER SERNA: Move it.

BOARD MEMBER SHERRIFFS: Second.

CHAIR NICHOLS: So moved and seconded. All in favor please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Opposed?

None.

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It carries.

Thank you.

9 Okay. We have another exciting opportunity here 10 on the next item dealing with our guidance on climate 11 investments. And I'm sure there's going to be quite a bit 12 of public interest in this one as well. We certainly 13 heard a lot about it over time.

14 I think as everyone knows, the funds that come 15 through the greenhouse gas reduction fund have been 16 enormously popular and have come to be quite well known 17 out in a number of communities. The fact that the 18 legislature was willing to recommit to a Cap-and-Trade 19 Program and a mechanism for these investments really 20 provides an opportunity for California to showcase what 21 can be done with a Cap-and-Trade Program that addresses 22 climate in a way that also deals with concerns about 23 impacts on the community as well. We are one of the few 24 jurisdictions in the world today that has a comprehensive climate program, and the fact that we are able to both 25

1 include a variety of different mechanisms for reducing emissions and targeting the investments of funds that come 2 3 to the State as a result of having a price on carbon has 4 proven to be something that is looked to in many other 5 places from far afield as something that is worthy of б consideration as governments around the world struggle to come up to what they're required to do under the Paris 7 8 Accord. And it also of course is in stark contrast to the 9 actions at the federal level in terms of simply putting 10 all action on climate away.

11 So, we have put here in California billions of 12 dollars to work in funding innovative technologies, 13 providing incentives for switching to lower carbon 14 technologies, as well as protecting our natural and 15 working lands as a source -- or as a place in which we can 16 store carbon for the long-term future.

17 We are focusing these investments under 18 legislative direction on the most disadvantaged 19 communities, those that experience some of the greatest 20 barriers to making transformational changes needed to 21 fight climate change. And it is noteworthy that many of 22 the same communities that are singled out for investments 23 from the greenhouse gas fund also suffer disproportionate 24 share of air pollution burden as well.

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So that there's a link here with our AB 617

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Community Air Protection Program, providing really an opportunity to align climate and air quality goals and to 3 focus public funds on the places and the people who need 4 it the most.

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California needs to continue to ensure that these funds are being spent well, because they are funds that the public is entrusting us with and, as I said before, because we are being watched very closely by people around the world.

10 And I think one element of our ability to be successful here is that the staff has done a really 11 outstanding job of developing guidance and forming 12 13 partnerships with other agencies at the State level, 14 regional and local level, as well as with many of our 15 The funding guidelines that we're looking stakeholders. 16 at here today provide the framework for over 20 State 17 agencies that implement dozens of programs and, as of last count, over 200,000 projects that have been assisted with 18 19 these Cap-and-Trade funds.

20 So I'm looking forward to hearing more about the 21 progress of the program and how we can continue to ensure 22 that we're providing meaningful benefits to residents 23 across the State.

> So, Mr. Corey, please introduce this item. EXECUTIVE OFFICER COREY: Thanks, Chair.

1 So today the State has raised nearly 8 billion in auction proceeds which, as you noted, the legislature 2 3 appropriates to programs across all our major economic 4 sectors. Over half of the projects funded today have 5 benefited our most disadvantaged communities, while б providing improved local air quality, better access to 7 transit and active transportation options; protecting our 8 agricultural lands; creating more resilient natural 9 landscapes; and supporting jobs.

We developed the funding guidelines for California climate investments to make sure agencies use the funds to facilitate GHG reductions and invest in disadvantaged and low-income communities.

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We last presented the funding guidelines to the Board in 2015; and since then, the program has evolved. The passage of Assembly Bill 1550 in 2016 raised the minimum investments for disadvantaged communities and established funding targets for low-income communities and households.

20 Last year, AB 398 identified new priorities for 21 climate investments and new appropriations created 22 programs not covered by the existing guidelines.

CARB staff have worked with our State agency
partners and stakeholders to incorporate these priorities
and develop new guidance to reflect this evolution of the

1 program. And with that, I'll ask Bailey Smith from the 2 3 Transportation and Toxics Division to begin the staff 4 presentation. 5 Bailey. 6 (Thereupon an overhead presentation was 7 Presented as follows.) 8 STAFF AIR POLLUTION SPECIALIST SMITH: Thank you, 9 Mr. Corey. 10 Today I will be presenting staff's proposed 11 revisions to the Funding Guidelines for agencies that administer California Climate Investments. 12 13 I will begin by giving you a brief overview of 14 the Climate Investment programs and how the Funding 15 Guidelines are shaping investments across the State. 16 Then I will discuss the evolution of the program 17 and how we are proposing to improve the guidelines to 18 better serve communities. 19 --000--20 STAFF AIR POLLUTION SPECIALIST SMITH: For the 21 past five years, California Climate Investments have been 22 reducing greenhouse gas emissions and achieving important 23 economic, environmental, and public health benefits. 24 To date, over \$2 billion has gone to projects 25 across the State, with over 1 billion benefiting

1 disadvantaged communities.

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We estimate this funding will reduce over 23 million metric tons of greenhouse gases over the coming years. These are in addition to the reductions we expect once high-speed rail is operational.

6 The investments are wide ranging and cover many 7 of California's major economic sectors. Among the 8 projects are 180,000 zero-emission and plug-in hybrid 9 vehicle rebates, 2500 affordable housing units, and 20,000 10 urban trees planted.

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12 STAFF AIR POLLUTION SPECIALIST SMITH: Since the 13 beginning of the program, the legislature has greatly 14 expanded the number of State agencies administering 15 California Climate Investments and the types of programs 16 that are being funded. Just last year the legislature 17 placed additional emphasis on public health by 18 establishing new incentive programs like CARB's Community 19 Air Protection grants, and created several new programs 20 that address impacts of climate change through adaptation, 21 resiliency, and wildfire prevention programs.

22 CARB alone administers over a dozen new and23 existing California Climate Investments programs

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STAFF AIR POLLUTION SPECIALIST SMITH: Because

CARB is required by statute to provide guidance for all agencies that receive money from the Greenhouse Gas 2 3 Reduction Fund, the expansion and evolution of the program 4 has led to today's updates of the funding guidelines. 5 They set guiding principles and identify statutory б requirements including investment minimums for certain 7 populations.

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8 We refer to populations identified by statute as 9 priority populations, which includes disadvantaged 10 communities, low-income communities, and low-income 11 households. The Funding Guidelines provide direction for 12 how agencies can target their investments to priority 13 populations, whether it be locating projects within 14 disadvantaged communities, providing jobs for local 15 residents, or enhancing cost savings for low-income 16 individuals.

17 The guidelines also contain requirements for 18 transparency and accountability that include reporting on 19 the status and outcomes of funded projects.

20 With the methods and reporting requirements identified in the Funding Guidelines, we have been able to 21 22 deliver consistent and reliable information to the public 23 and legislature.

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STAFF AIR POLLUTION SPECIALIST SMITH: Outreach

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is an important component of any incentive program.

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Through our Funding Guidelines we provide specific recommendations for how agencies conduct outreach.

Agencies have responded by significantly increasing public engagement and program development.

CARB is also directly supporting efforts on behalf of all climate investments.

8 In 2016, CARB contracted with the Foundation for 9 California Community Colleges to increase on-the-ground 10 outreach and provide a bilingual hotline and email for 11 inquiries.

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13 STAFF AIR POLLUTION SPECIALIST SMITH: In 14 addition to adding new programs, the legislature has also 15 enacted additional priorities and requirements for the 16 program.

In 2016, Assembly Bill 1550 increased the previous investment minimums for projects located within disadvantaged communities and added new investment minimums for low-income communities and households.

Assembly Bill 398 identified priorities for future investments that emphasize the importance of project outcomes beyond greenhouse gases.

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STAFF AIR POLLUTION SPECIALIST SMITH: We have

also learned a lot from listening to community advocates and residents, and these proposed updates are in response to much of this feedback, which I'll cover in the following slides.

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We've heard in the -- that these investments must foster job creation and job training and ensure that local businesses and residents are the recipients of employment opportunities.

Funds should provide quality jobs and job training that lead to long-term employment. Stakeholders 10 11 also want data on the jobs and quality outcomes.

We've heard the need for technical assistance and 12 13 capacity building in applying for funds. Many programs 14 have rigorous application processes, and some project 15 applicants need more help accessing these funds.

16 Another common theme was the importance of 17 meaningful engagement building partnerships and involving 18 local organizations.

19 Finally, across the State we've heard that it's 20 critical these investments don't end up causing harm to 21 already vulnerable communities. This week, community 22 groups have submitted three letters specific to the 23 proposed Funding Guidelines before you today. One letter 24 in particular from the California Climate Equity Coalition 25 provided actionable feedback on how to go further. Staff

1 proposes to revise the funding guidelines consistent with their feedback. 2 3 --000--STAFF AIR POLLUTION SPECIALIST SMITH: 4 The 5 proposed updates in the Funding Guidelines before you б today are centered on two primary themes. 7 First, prioritizing benefits beyond greenhouse 8 gas emissions across the broad portfolio of Climate 9 Investment Programs; and 10 Second, enhancing provisions to protected and 11 improve communities. I'll discuss a few these changes in more detail. 12 13 ------14 STAFF AIR POLLUTION SPECIALIST SMITH: The first 15 major change relates to how agencies demonstrate that 16 their programs meet the statutory requirements that 17 expenditures facilitate greenhouse gas emission reductions. 18 19 The 2015 guidelines requires agencies to quantify 20 greenhouse gas emission reductions from each project. 21 Agencies are doing this and will continue to do so to the 22 extent possible. 23 The proposed revisions require that agencies 24 evaluate how their program as a whole is facilitating 25 greenhouse gas emission reductions. This provides

agencies flexibility in tailoring their programs to meet community needs and ensure outreach and technical 2 assistance are available to those who need it. 3

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4 As an example, CARB's own Community Air 5 Protection Program, as created last year through Assembly б Bill 617, was appropriated \$255 million for incentives. 7 Under this approach, the Community Air Protection Program can fund a mix of both climate projects and air quality 8 9 projects. The Community Air Protection Program will still 10 be required to quantify the greenhouse gas emission 11 reductions for climate projects, but may also support other efforts like air toxic inning reductions, technical 12 13 assistance, and outreach as part of their broader program.

14 To support agencies in assessing and reporting on 15 a range of environmental and health benefits or 16 co-benefits, CARB staff is developing methods for agencies 17 to estimate co-benefits.

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STAFF AIR POLLUTION SPECIALIST SMITH: One co-benefit we want to highlight today is jobs.

21 We have updated our guidance on how agencies 22 should foster job creation and job training opportunities, 23 including strategies for targeted hiring.

24 We recommend -- the recommendations also 25 emphasize the importance of job quality.

In order to provide information about the employment benefits of Climate Investments, staff is proposing to make reporting on jobs mandatory. Jobs reporting by agencies was previously optional.

As we focus on more co-benefits and tell the story of the suite of benefits provided by these billions of dollars, we do not want to miss this critical piece.

The emphasis on job creation and job training is also aligned with the legislative direction in Assembly Bill 398, which identifies a need for transitioning our workforce to have the skills for a low-carbon economy.

12 Climate Investments programs can contribute to this objective by supporting jobs within low-carbon 14 sectors, and creating opportunities for the necessary training within these sectors.

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17 STAFF AIR POLLUTION SPECIALIST SMITH: In response to Assembly Bill 1550, staff updated the Funding 18 19 Guidelines to incorporate the new statutory investment 20 minimums for projects benefiting priority populations.

Staff updated the benefit criteria for each 21 22 project type, which administering agencies must use to 23 determine whether projects provide benefits to priority 24 populations.

Administering agencies must determine if a

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1 project meets the criteria for providing benefits and addresses an important community need.

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STAFF AIR POLLUTION SPECIALIST SMITH: Staff is proposing to add a guiding principle to the Funding Guidelines that requires all agencies to consider and avoid potential substantial burdens of their programs on disadvantaged and low-income communities.

9 All projects are likely to include trade-offs 10 that an administering agency will need to consider when 11 designing programs and selecting projects.

12 This principle is meant to get agencies thinking 13 about impacts early in the process to avoid unintended 14 consequences and protect public health.

15 The Funding Guidelines provide examples of 16 strategies agencies can use to avoid potential substantial 17 burdens.

18 The Funding Guidelines also emphasize the 19 importance of direct community engagement by agencies and 20 applicants to identify community needs and potential burdens. 21

22 Increased engagement with communities will result 23 in better projects that meet our State's climate and air 24 quality goals, and are better aligned with what 25 communities want from these investments.

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--000--STAFF AIR POLLUTION SPECIALIST SMITH: 2 Many of the changes have been informed by the early years of the 3 4 program, and from staff's ongoing engagement with agencies 5 and the public. Since the last Board version, staff has held an б 7 extensive public process to gather input on the changes in 8 the draft documents and how we can further enhance the 9 quidelines. 10 Staff attended, held, and co-hosted meetings in 11 partner with community-based organizations throughout the 12 State in the Bay Area, Central Valley, Los Angeles area, San Bernardino County, Imperial Valley and here in 13 14 Sacramento. 15 --000--16 STAFF AIR POLLUTION SPECIALIST SMITH: Today, 17 staff recommends the Board approve Resolution 18-27 and 18 its direction to finalize the 2018 Funding Guidelines. 19 As part of our statutory requirements, CARB staff 20 will continue to work with administering agencies to 21 develop quantification methodologies and guidance on 22 reporting outcomes including benefits to priority 23 populations. 24 Staff will also continue ongoing engagement with 25 communities across the State to increase program awareness

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1 and improve funding access.

Agencies will continue implementing these 2 important dollars in a way that improves meaningful 3 benefits across the State. 4 5 Thank you for your time today. 6 CHAIR NICHOLS: Okay. Thank you. 7 I'm waiting for the list here. 8 Okay. We're catching up with our list of 9 witnesses here. 10 Okay. We've got eight people who have signed up. 11 So let's get started. 12 MR. PORTUGAL: Good morning, Chair, Board 13 members, fellow airheads. My name's Raul Portugal. 14 And I'm here today to ask the ARB to work closely 15 with San Joaquin Valley Air Pollution Control District and 16 other local air districts who already have programs in 17 place and have clients or applicants in place ready for 18 the programs which they have available. 19 As a consultant, I work very close with a lot of 20 the low-income and disadvantaged communities around San 21 Joaquin, holding their hand through the process, applying, 22 getting everything ready. 23 Through our projects of repowers and replacements, we've seen a NOx and PM reduction of 98 24 25 percent. We've done about 600 of these projects

1 throughout the -- since the inception of the Carl Moyer program in 1998, and we're just here to kind of display 2 3 our matrix. 4 And the first page shows how we get all our 5 emissions reductions, all our cost effectiveness. б The next page shows your average NOx reductions 7 of 98 percent in a 1,000-hour-a-year operation. This 8 represents loaders which are -- usually this falls in kind 9 of a Lost Hills area. 10 The next slide represents the PM, also about a 98 11 percent reduction. And the last slide, especially highlighted is the 12 13 cost effectiveness of each one of these projects, which is 14 really, really, really cost effective to the Board and are 15 immediate. 16 And through programs like these that San Joaquin 17 already has in place, we can get the most meaningful 18 projects. 19 Thank you. 20 CHAIR NICHOLS: Thank you. 21 MR. HEADLEY: Good morning, Chair Nichols, Board 22 members and attendees. My name is Rod Headley. I'm the 23 president/owner of Central California Power in Shafter, 24 California, just outside of Bakersfield. 25 I've been associated with the local air districts

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through Carl Moyer and its inception since 1998.

My concern is the enormous amount of time it takes to complete projects. It is the responsibility of CARB appropriately -- to appropriately distribute funds to low-income and disadvantaged communities through meaningful and cost effective programs that will provide immediate emission reductions. The largest concentration of these areas lie in the San Joaquin Valley.

9 Our challenge to you is to allocate even more than the minimum required for these disadvantaged areas in 10 11 a timely manner. We have many projects in queue, one of 12 which has been approved by the air district and has been 13 awaiting funding from CARB for 11 months. This one 14 project alone would start reducing 95,000 pounds of NOx and approximately 5,000 pounds of particulate matter 15 16 immediately.

17 It takes one or two months for us to hold hands 18 with all the applicants and get them in the programs; the 19 Air Board, a couple months. Even though we have constant 20 contract -- contact with the Air Board, it still -- it 21 takes an inordinate period of time for approval and 22 funding from CARB. Somehow, if this process could be 23 streamlined, we could be putting equipment to work and 24 start reducing NOx and PM, which is our primary objective 25 and should be yours. This would benefit the low-income

1 and disadvantaged communities for which the program is intended. 2 3 I invite any of you to come to Shafter and see 4 firsthand the process it takes to complete our portion of 5 the project, especially Mary, Sandra, Judy and Tracy. б Clean air is not being -- but clean air is our 7 objective, but we need to remedy the cause for delay. Ιt 8 can't be that complicated. 9 Mary Nichols tweeted: "Get rid of dirty rumbling 10 diesel engines," which exactly fits into our goals and 11 ability by repowering, retrofitting new tier 4 finals into 12 pre-2004. 13 Do you have another slide? 14 Guess not. 15 Okay. We have --16 CHAIR NICHOLS: Sorry. 17 MR. HEADLEY: -- 16,000 horsepower of these low emissions non -- brand new tier 4 engines sitting on our 18 floor that's capable of 262,000 pounds of NOx reduction. 19 That's the other slide. 20 21 CHAIR NICHOLS: Thank you. 22 Okay. 23 MS. SANDIDGE: Hi. Good morning to the Board. 24 My name is Cherene Sandidge. I'm the principal of 25 Sandidge Urban Group. I am an affordable housing

developer that works exclusively in disadvantaged
 communities in the Bay Area.

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I wanted to come today to speak in favor of the proposal put before you, but to ask that there be two major modifications that would make the program more successful in disadvantaged communities, especially as they relate into the area of Richmond, California.

8 I'm sure it spreads out everywhere, but I'm 9 talking specifically for the Housing & Community 10 Development Department to take into consideration of 11 removing the density requirement for single-family housing. This would allow us to do scattered-site infill 12 13 housing on several -- many vacant lots that are plighting 14 and blighting local urban infill communities. Doing this 15 would allow us as nonprofits to also increase the 16 affordability in housing where our long-term goal is to 17 move -- sustaining and moving families and keeping them in 18 the community as they move out of our multi-family units and into a more economic beneficial housing situation for 19 20 them.

21 So having said that, I'm asking that this Board 22 instruct HCD to go back and take a look at those two 23 items, removing the density so we are successful at doing 24 single-family housing, as well as allowing us to cobble 25 together many, many sites in the same area and provide

affordable housing on those particular sites.

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But again, I raise to speak in support of -- and I know that we submitted some comments on this issue, but I don't think the comments were clear that we are talking about single-family housing and not the multi-family. So I wanted to bring that forward to make sure we're clear on those through our comments.

> Thank you very much for your time. CHAIR NICHOLS: Thank you for what you do.

Mr. Magavern next.

MR. MAGAVERN: Good morning again. Bill Magavern with the Coalition for Clean Air. We sponsored SB 535 with Senator de León which passed back in 2012; and also worked closely in 2016 with then Assembly Member Jimmy Gomez on AB 1550 which strengthened the requirements.

Of course the goal of both of those is to make sure that a good chunk of the climate investments are going to our disadvantaged communities and low-income communities, because those are the areas that usually are the hardest hit by the impacts of climate change, yet have the fewest resources with which to address those impacts.

22 So, we need investments like this. We're happy 23 with the progress that's been made so far and look forward 24 to more investments and more effective ones.

We've been working on these guidelines with your

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1 staff for years. So I want to thank Matt and Cynthia and 2 the whole team for the collaboration. We even co-hosted a 3 community meeting in Los Angeles with CARB, and my 4 understanding is that was very successful.

We have submitted written comments basically suggesting some improvements in three areas:

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One is avoiding harm.

Second is making sure that the investments are meaningfully addressing important community needs.

And, thirdly, requiring that the project applicants demonstrate how the project will deliver job training benefits to the priority community residents, those that are low-income people that most knead the job training.

So I heard in the presentation that there is a proposal to incorporate our suggestions. So look forward to hearing more about that.

18 19 And thank for your attention to this. CHAIR NICHOLS: Thank you.

20 MR. MURPHY: Thank you, members of the Board. 21 Colin Murphy of Nextgen California. To a large extent I 22 want to echo what Mr. Magavern just said.

23 We recognize that it's a significant 24 administrative and technical challenge to balance the 25 priorities of reducing greenhouse gases through GGRF 1 expenditure as well as addressing a lot of the issues that are facing disadvantaged communities. We'd like to 2 3 commend the Board and staff for how well they've done that 4 so far, and really just encourage to maintain the idea that there needs to be a balance and a focus on our 5 achieving multiple goals at once, including greenhouse gas б 7 reduction over the next decade. The expenditures from 8 GGRF are going to need to continue to drive out greenhouse 9 gases as well as addressing those.

So we don't see a problem with how they've been doing so far or with the proposals -- or the changes that have been proposed. I just want to really reinforce that that balance needs to be maintained through the coming decade.

Thank you.

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CHAIR NICHOLS: Thank you.

MS. ELENES: Good morning, Board. My name is Grecia Elenes. I'm with Leadership Counsel for Justice and Accountability. We're a local non-profit based in San Joaquin and Eastern Coachella Valley, working with low-income communities and communities of color there.

And I just wanted to echo a couple of the things that we've entered already and that was already submitted. But first we'd like to appreciate CARB's -- the staff's effort to strengthen some of the language that would have

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otherwise negatively impacted some of the community that we work in and especially those overburdened communities, specifically in changing some of that -- the language from "minimize" to "avoid" adverse impacts in disadvantaged communities.

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However, we do have three main points that we would like to elevate that we think would strengthen the guidelines themselves to ensure that these communities are receiving these direct benefits and that they're the ones deciding those projects themselves.

First and foremost we would like to recommend that CARB does not allow for any trade-offs when disbursing these funds. These trade-offs can often times have unintentional adverse impacts. And, you know, given the change in language, we think this would, you know, differ in that language.

And, you know, specifically, dairy digesters are often, you know, facilities that receive funds from the GGRF program. But we remain concerned about the air quality impacts both in the operation of these facilities but in addition -- but also in the additional cows and manure coinciding in the development of these digesters.

And similarly there's also water quality impacts which we have concerns that have -- there have not been enough analysis done to ensure that there is no water

1 quality impact. Given, you know, we are in a drought, a lot of these communities do rely on well water, and this 2 3 can again negatively impact. However, when CARB and other agencies are analyzing these applications, we would like 4 5 to recommend that they are more rigorous when given these б points that allegedly benefit these communities, because 7 oftentimes they are being funded when in reality if you 8 ask a community member from these very same communities 9 where the digesters, this was in no way something that 10 they wanted to see, this was not something that they see 11 as a benefit.

12 Which leads me to my next point, that when 13 these -- where these projects are coming across our 14 agencies that we -- that CARB encourages has strongly and 15 which are encouraging community participation in the 16 process and in developing the projects themselves. We've 17 seen this work in the Transformative Climate Communities Program where, you know, we have residents be the decision 18 19 makers themselves and it works. They know what works in 20 the communities. They are at the end of the day the 21 experts that know.

Lastly, and very quickly, I would like to just recommend that similarly as in the Affordable Housing and Sustainable Communities Program, that CARB set aside a rural set aside. These communities are often underfunded,

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1 underresourced, just overburdened in every sense of the word, and don't have the resources to have county or other 2 3 facilities apply for them. And so we have these 4 unincorporated communities that are severely disadvantaged 5 and sometimes the CalEnviroScreen score does not reflect that in it itself, and nobody's, you know, advocating for б 7 them except, you know, for us oftentimes. So we really do 8 encourage that.

9 You know, be more than happy to work with staff 10 on these recommendations. And our letter has been 11 submitted.

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Thank you.

CHAIR NICHOLS: Thank you.

MR. OLMEDO: Morning. My name's Luis Olmedo.
I'm the executive director of Comite Civico Del Valle.
And I have a very simple ask.

And I ask the Board to really take a look at the approach that the climate program has taken over the years. There's certainly a lot of progress. I'm very pleased with many of the things that the program has brought.

But there are still areas in California, like the eastern southern part of California, that -- Coachella and Imperial to be specific -- that as more funding gets invested, the gap of investment continues to keep us in

drought of any investment. And I don't believe that the program has done sufficient to be able to close that gap.

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And I'd like you to take a close look -- I ask that the members take a close look at the Program 617. Clearly, the leadership of CARB has been given the directive to 617 and put -- assembled a strong team to make 617 successful.

8 But they're not running in parallel speed. 617 9 has taken off. And perhaps at taking a look at the 10 leadership of the climate investments is important. Not 11 to take away from all the hard work the staff has done, 12 the outreach that they've done. But these models where 13 they're still looking at contracting a Sacramento base or 14 statewide consultant, they're not really investing in the 15 communities, not really connecting to the actual experts 16 in the communities, and continuing to use these models of 17 Sac State. Not to take anything away from them. But we 18 need to localize these investments. We need to bring the 19 experts locally. And for some reason, the program has been unsuccessful to do that. And that's what I'd ask the 20 21 Board, to perhaps give them some better direction, look at 22 what 617 is doing. They're so much further ahead -- I 23 feel that it's so much further ahead in terms of 24 engagement and it's something that I don't quite see in 25 climate investments.

Thank you.

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CHAIR NICHOLS: Thank you.

3 MR. BOCCADORO: Thank you, Madam Chair and 4 Michael Boccadoro on behalf of Dairy Cares. members. And 5 it's continuing to be disheartening to hear the concerns б raised about the Dairy Digester Program. And so I wanted 7 to use this opportunity to share with you some of the 8 tremendous success story that is the actual result of the 9 Dairy Digester Program in California.

It's one of the most successful and effective programs currently being implemented by the State. And I've got some handouts that are being shared with the Board members that I'm going to talk from today.

14 Since inception of the Dairy Digester Program in 15 2015 we've had six new projects come on line; that was in 16 addition to the 12 that were operating here in California. 17 There were 18 new projects that are in various stages of 18 development that have received grant funding from CDFA. 19 Just a few weeks ago 40 additional projects received grant 20 awards by CDFA.

21 When you total that all up between the new 22 projects that are being built existing, we have about 80 23 projects that are currently being built here in California 24 or currently operating. And there is funding for another 25 round in the 2018-2019 State budget, which should lead to

1 another 40 digesters. So its conceivable that we're going to have between 100 and 120 digester projects funded and 2 3 operating in the next four to five years. And that's a 4 tremendous success story, and it's owed to a lot of 5 It's owed to Senator Lara for having the vision people. б in 1383 to develop an incentive-based program for the 7 development of these projects. It's because Governor 8 Brown has invested \$260 million of GGRF now in dairy 9 methane reduction efforts in California. It's because of 10 the leadership here at your staff at ARB starting with 11 Richard and Edie and Floyd Vergara, and the rest of their teams on short-lived climate pollutants. But we're making 12 13 significant progress. And I've got a map of where those 14 80 projects are located.

But let me just give you some of the bottom lines about the program.

The average costs of reduction to the State is about \$8 per metric ton. At that level, this is the third most cost effective program of all those currently being implemented under your climate portfolio in the State.

21 More importantly, as these projects come on line, 22 it will be the most effective program in terms of 23 achieving total GHG reduction. There are -- you know, 24 these projects, bottom line, are going to get us well on 25 the path to achieving the 40 percent reduction that ARB is

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1 2 looking for in dairy methane manure.

So it's a tremendous, tremendous success story. 3 And rather than creating additional burdens on these disadvantaged communities -- the last 58, the last two 4 5 rounds that have been funded by CDFA are all pipeline б biomethane projects, which means they're not only not 7 creating NOx at the local level through energy creation, electricity creation; they're actually going to be 8 reducing NOx at the local level in large part because 10 we're going to be displacing diesel with renewable natural 11 qas.

12 Water quality benefits are also accruing. These 13 projects are required to line their lagoons as part of the 14 grant funding process. They're required to do the 15 outreach.

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So it's a tremendous success story.

17 I realize my time is up. I'm happy to answer any 18 questions that the Board might have if there are specific 19 ones. But we should be doubling down on the investment in 20 this program, not pulling back.

21 CHAIR NICHOLS: Thank you. Well, as you know, 22 the Board has been very supportive and worked hard on 23 making sure that this program is a success. I'm very 24 happy to see all this data, the emissions matrix and so 25 forth, and --

1 MR. BOCCADORO: Thank your staff. They did that 2 That's not ours. That's your staff -data. 3 CHAIR NICHOLS: Well, they --4 MR. BOCCADORO: -- doing the good work --5 CHAIR NICHOLS: -- you did a nice job of б organizing it. 7 MR. BOCCADORO: -- to show and document what the co-benefits are. And so a tremendous effort by your team 8 9 here at ARB. 10 CHAIR NICHOLS: This will be useful. Thank you. 11 MR. BOCCADORO: Thank you very much. CHAIR NICHOLS: Mr. Boccadoro was our last 12 13 witness, unless anybody else is ready to come forward. 14 So, it comes back to the Board at this point. 15 I want to say something, but I think maybe I 16 should do it more in the form of a question, because I 17 want make sure that my understanding here is correct. So from the beginning of the existence of the 18 19 GGRF, another lovely acronym, but the funds that we have 20 brought to the State through the sale of the small number of allowances that the State holds, we have been in the 21 22 position of being asked to advise but not having 23 responsibility for the actual allocation of these funds. 24 That is, the money comes into an account; it is 25 appropriated by the legislature every year through the

budget. Actually it's a separate -- its own separate process every year because these are funds that are very, very highly prized, as you can imagine. And they are being spread out over a large number of different kinds of projects.

б To the point that was made by Mr. Olmedo and 7 others as well, we don't get to decide how to divide those funds up. And we also don't control how the agencies that 8 9 do receive them through their own existing programs are 10 making the decisions about how to spend those funds. 11 Those are being done by other sister and brother agencies 12 out there. And so not to be -- not to try to duck this, 13 but the fact is that you don't have a single point where 14 ARB is developing a plan and then carrying that plan out. 15 The program just doesn't work that way.

And so therefore it is different from 617 in a very material way, where once ARB was given the task, we staffed up and, you know, started to develop the approach. And although I'm sure it's not perfect, it does -- it has shown a lot of progress in terms of reaching out into the communities and allowing people to see where our priorities are and where the funding is going to go.

This is an inevitable tension in a democratic society where, you know, you have -- the legislature is a branch of government which has specific responsibilities in the budget area and there's a lot of needs that they
 want to see addressed.

3 And so this is not to critique the decisions 4 they've made, just to say that it's a different kind of 5 process. And we're not able to do anything other than try б to advise, to make sure that the moneys that do come 7 through -- through this fund are at least being tracked, 8 that there's transparency about how the money is being 9 spent, that there's accountability in terms of assuring 10 that the funds have been used as they were supposed to be 11 used, and an overview I would say of the overall cost 12 effectiveness of these different types of projects, 13 because they really are meeting a wide variety of 14 different kind of needs.

So, for example, when it comes to the guidelines on affordable housing, we can certainly take those comments and pass them on. But unless I'm mistaken, we're not in a position to change the way that HCD decides what you can do with the money.

So, I guess my question to the staff that worked so hard on this is just whether you're seeing any kind of a coalescing, if you will, around the overall expenditure program here and whether you're feeling that we have the ability at least to, through these guidelines, you know, give direction that will make sure that we are getting

very significant benefits out of all of these expenditures
given the multiple demands on the program?

3 TTD CLIMATE INVESTMENTS IMPLEMENTATION SECTION
4 MANAGER BOTILL: Good morning. Matthew Botill, Climate
5 Investments Branch Chief.

б So, with these funds -- I mean with these Funding 7 Guidelines, we do have the responsibility to provide 8 direction on how to maximize benefits to disadvantaged 9 communities. And a number of comments that we've heard 10 are really centered around concerns about potential burdens to communities. And so, with the recommendation 11 12 that Bailey mentioned in her presentation, we're proposing 13 to increase some of the expectations on the agencies to do 14 more community engagement in our stance of those potential 15 burdens and factor that into their program design as they 16 move forward. So that's one specific area that we're 17 looking at as a response to comments.

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CHAIR NICHOLS: Okay. Thank you, Mr. Botill. Mrs. Riordan.

BOARD MEMBER RIORDAN: Following along on your comments, I think we can take one step further perhaps to be available to help people know where to go to get answers for some of their issues that were raised today, and I've heard others. For instance, the housing. Maybe we know somebody within the housing agency that's handling

1 this, so we can give direction to somebody who wants to do 2 infill housing. I see us needing to sort of make that 3 connection for people.

And then, finally, to say to staff, I just hope that we continue to support any effort on wildfire prevention and response and readiness. It's so apparent to me, living where I do, that we really have some big issues, plus what's occurring up here near Yosemite right now.

10 So I hope we just keep kind of pushing that 11 little envelope as far as we can because I think it's a 12 real major issue for us in California right now.

CHAIR NICHOLS: Thank you.

Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Chair Nichols.

16 I wanted to follow up on Mr. Botill's response to 17 your question, which I really appreciated.

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CHAIR NICHOLS: Um-hmm.

BOARD MEMBER BALMES: And I want to also echo what Mr. Olmedo said about, I think so far so good, early on, with the AB 617 implementation process, because I think we are learning and teaching each other - meaning CARB, staff, with the various organizations concerned about implementation of AB 617 - how to work together. And I think it's been -- it's been very positive

experience for me so far, and so I -- I think he's right, that we can -- we have learned as an agency about how to engage with communities through the 617 process. And I realize that we're only advising these other agencies. But if we could advise them, as Mr. Botill suggested, about community engagement, it would be better for this program.

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CHAIR NICHOLS: Yes, I agree. I'm wondering maybe this is a question for the executive officer - what kind of resources we have available to do that? I mean are we in a position do more than just, you know, publish some guidelines and then sit back and let them play out?

13 EXECUTIVE OFFICER COREY: From an implementation standpoint, no, I think, because it's just -- that's a 14 15 major, major effort. But from a -- some lessons learned 16 and from an interaction with the leadership of the 17 agencies, yes, that -- I think that's a reasonable and 18 appropriate follow-up discussion. We certainly have been 19 working with the staff of the other agencies. But I could 20 see a point, you got a leadership of the other agencies really talking about some of these lessons learned. 21 But when it comes to their full-on solicitation process and 22 23 implementation on the ground, that's a major, major task 24 that really full -- more than eclipses what we'd be able 25 to execute on.

BOARD MEMBER GIOIA: Madam Chair? CHAIR NICHOLS: Yes.

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BOARD MEMBER GIOIA: Two comments. One is just to follow up on the responses to the joint letter we received. So can you talk about the other changes you're anticipating making? I agree, I thought there were very good points raised in the joint letter, that the Coalition for Clean Air and others signed on to. So how do you intend to sort of respond?

10 And, second, yeah, the issue of density on 11 housing is a good one. And I think, as the Chair pointed 12 out, those are the grant requirements set by other State 13 agencies. We're just doing sort of the guidelines that 14 really address working with communities specifically. And 15 I'm very familiar with the situation that the speaker 16 mentioned. I think it's reflective, happens around the 17 State: How do you build on vacant lots in a community?

So I think it would be good to think about in various ways how we communicate that to the State; but, frankly, others as well. I think that's -- housing advocates should communicate that as well to the State agencies that actually set grant requirements in addition to any comments we make. And I'm glad to do that. So the responses to the letter.

So the responses to the letter. TTD CLIMATE INVESTMENTS IMPLEMENTATION SECTION

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1 MANAGER BOTILL: Yeah, happy to.

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So broadly, the Climate Equity Coalition submitted a letter with three components that we were talking about here today.

So the first was that we recognize within the Funding Guidelines that displacement and exposure to toxics is a concern for communities and a potential burden that may come from the implementation of some of these investments.

The second was that we require when projects are being awarded funding and reporting on the outcomes of their investments that they identify the community need that that project is really targeting.

And then the third comment that they provided to us was that as projects are being implemented, if they are indicating that they're providing jobs training and jobs benefits, that they show and they demonstrate how those benefits were targeted to disadvantaged and low-income communities.

And so, we support and kind of agree with the concept of these changes and look forward to being able to work to update the guidelines after the Board meeting to address these comments within the guidelines.

24 BOARD MEMBER GIOIA: So there'll be communication 25 back with the coalition?

1 TTD CLIMATE INVESTMENTS IMPLEMENTATION SECTION MANAGER BOTILL: Yes. And our plan is to -- subject to 2 3 approval of the resolution, to go and make my specific 4 text edits to the guidelines. 5 BOARD MEMBER GIOIA: Thank you. 6 CHAIR NICHOLS: Other comments? 7 Yes, Dr. Sherriffs. 8 BOARD MEMBER SHERRIFFS: A question whether the 9 guidance, the advising includes anything about 10 recommendations for branding programs? You know, I love the California Climate 11 12 Investments Cap-and-Trade dollars at work. It's important 13 that the public understand this is their money working for 14 them. 15 I don't know if we can go out and get the dairies 16 that have renewable natural gas, we can put brands on 17 their cows, or how we can get that out there, but --18 (Laughter.) 19 TTD CLIMATE INVESTMENTS POLICY SECTION MANAGER 20 LASKOWSKI: Hi. CHAIR NICHOLS: Hi. 21 TTD CLIMATE INVESTMENTS POLICY SECTION MANAGER 22 23 LASKOWSKI: My name is Cheryl Laskowski. I'm the 24 manager -- policy manager under the Climate Investments 25 Branch.

1 Yeah, we've worked really hard over the past few years with our public information officer to create a 2 3 branding and a logo for this program and with our agencies 4 to ensure that they are using the branding and their solicitation materials and to the extent feasible on the 5 б projects themselves. They've done a much better job over 7 the past few years and are starting to get that branding 8 and that name recognition out there.

9 We've got -- we have requirements within our 10 Funding Guidelines. Our information officer also works 11 with the other communications liaisons at the other 12 agencies to assist in the communication at the social 13 media publication of the program and the projects that 14 result.

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CHAIR NICHOLS: Always good to mention it.

16 I'm wondering whether this isn't a time to go 17 back to our friends at CalEPA who run the Climate Action Team and suggest that it would be a good idea to have a 18 19 meeting to talk about these guidelines, and to perhaps 20 start a process at least of doing some joint education 21 around the community outreach piece of this. I don't want 22 to say that all wisdom resides at the Air Resources Board, 23 but I definitely think we have some experiences to share 24 and it would be a good idea to do something like that, you 25 know, sometime within the next few months. If we can --

1 if we could get that going, that would be great. 2 EXECUTIVE OFFICER COREY: We'll do that. 3 Actually I think it's an excellent idea. And I think it serves as a forum that -- in terms of the multiple 4 agency -- the 15 agencies we're talking, I have to pull 5 б them together for that discussion. 7 CHAIR NICHOLS: Yeah. I think there would be a 8 lot of interest in participating. 9 Okay. Thank you very much. 10 This record on this item is now closed. And we have a resolution in front of us. 11 So, it's time for a motion and a --12 13 BOARD MEMBER EISENHUT: Motion. 14 CHAIR NICHOLS: -- second. 15 VICE CHAIR BERG: Second. 16 CHAIR NICHOLS: A motion from Mr. Eisenhut. 17 Thank you. 18 Okay. All in favor please say aye. 19 (Unanimous aye vote.) CHAIR NICHOLS: Opposed? 20 21 Hearing none. 22 Any abstentions? 23 Okay. This is good. It's really -- it's nice to 24 get this moving. Appreciate all the hard work that went into it. 25

As I indicated at the beginning when I did my opening monologue, I'm asking that we now move to the last item on the agenda, and then take a lunch break before we do the presentation on remote sensing.

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So -- actually we could even postpone further I suppose, but depends how long this takes.

7 So, the last item was the initial staggered terms 8 for voting members of the Board. This item was set in response to AB 197, which did a number of things, 10 including changing the Board's membership in two significant ways. First of all by adding two ex officio 11 non-voting legislative members to the Board; and the 12 13 legislature has done that by appointing from the Assembly 14 side Eduardo Garcia and from the Senate Ricardo Lara.

15 Secondly, AB 197 set up a framework for the 16 voting members of the Board to serve fixed six-year terms 17 after a transition period that the bill calls, quote, 18 initial staggered terms.

19 This is something that as far as we can tell has 20 not ever been done before. And normally if the 21 legislature sets up a new system of appointments to 22 anything or a new board, they decide themselves what the 23 terms are going to be. But this time they decided to give 24 that task to us to create our own terms and figure out how 25 to stagger them.

It's taken a long time from the passage of this legislation to actually get this proposal in front of the Board. And honestly, I think in some ways it might have been easier if we had just put all the names in a hat and drawn the numbers out. But -- because asking any group of people to decide on their own tenure of their terms is a rather challenging task, let's put it that way.

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8 However, I would like to say that the staff 9 approached this in a way that I think was very sensible, 10 which was to look at the needs of the institution primarily as their first criterion, and then to try to 11 figure out how to allocate the slots. Saying that there's 12 nothing perfect would be an understatement. But the idea 13 14 that there would be sort of three groups and that there 15 would be enough stability over time so that there wouldn't 16 be any huge changes in any one year, that the staff who 17 have to deal with these confirmations, which all of us who've been through this I think will recall as quite a 18 19 long and extensive process. And of course, that's what 20 the legislature wanted, was they wanted to have the opportunity to bring Board members in front of them and to 21 22 ask a lot of questions and make sure that everybody who 23 serves on this Board had to answer for whatever the big 24 issues were that the Board was dealing with and that the 25 legislature was concerned about.

So the idea of switching from a board which was 1 totally at will but which over successive administrations 2 3 has been extraordinarily stable to one which is now -- has fixed terms is a fairly momentous change. But the idea 4 5 was to make it as painless as it could be, recognizing -б and I've seen some of the coverage on this, so I want to 7 be clear. These are not term limits. These are terms. 8 That is, the Governor at any time when the person comes to 9 the end of the term, or the legislature in the case of the 10 two legislative appointments, could appointment either a 11 new person or someone who's already there and keep them in 12 that office for as long as successive governors want to do 13 that.

I have to say parenthetically, by the way, just because I've seen some accounts that indicated that I was asking for or had already decided that I was appointing myself to be the Chair until 2020, that is not something within my power to do, vast as those powers may be.

(Laughter.)

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20 CHAIR NICHOLS: The fact is that AB 197 is very 21 clear that the Chair has to be a member of the Board but 22 the chairmanship, chairpersonship, whatever, is up to the 23 Governor to decide. So the next governor will have the 24 ability to decide who he wants to serve in that position. 25 And he can either pick from any one of us who are already

1 here; or if there's a vacancy, he can make a new appointment and make that person the Chair. 2

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So if you're listening out there, potential 4 governors, please know that we're not taking away your authority.

Finally, I think what I wanted to say is that, you know, this staggering process was -- the idea that there should be a stagger could be -- you could divide it up many different ways. You know, you could have one every year, you could have two, whatever.

11 The three is consistent with the way that most existing boards and commissions already work and also is 12 13 consistent with the way most nonprofit boards that I'm familiar with work, which is if you've got a big board, 14 15 you don't have more than a third of them turning over in any given year. 16

17 Other than that, in terms of how this gets 18 presented or was presented - and I think maybe our counsel 19 is going to address this as well - but I just want to say 20 that there was a lot of concern given that this is 21 something that affects us that there would be a temptation 22 on the part of the Board members to get together and 23 decide this issue on their own, either in groups or as a 24 whole, not in a public process. And so the staff 25 proceeded I think in a very careful way to speak

1 individually to the different Board members one-on-one, but not to try to brief groups of Board members so that we 3 were not in danger of violating the open-meeting laws, which is a big concern. 4

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So this is the first time that there has been a public discussion about this issue, and we're all in it.

There is a staff report in front of us. But before going to that, I think Ms. Peter had a couple of words she wanted to add.

10 CHIEF COUNSEL PETER: There is a staff report, a PowerPoint that's coming up right now. 11

Good morning, Madam Chair, members of the Board.

13 This is unprecedented occurrence to have the 14 chief counsel give the staff presentation, which is --15 follows along with what Chair Nichols just said, this is a very unusual process. 16

17 So some of this was already touched upon, but let 18 me hit a few high points.

19 The statute, which is Assembly Bill 197, raised, 20 as the Chair noted, a number of complicated and different 21 issues for us. Took some time to work through. So today 22 in front of us is the proposal for the 14 voting members 23 of the Board.

24 And so for the public, I'm going to go through a 25 few more points, which somewhat echo what Chair Nichols

1 just did. --000--2 3 CHIEF COUNSEL PETER: So AB 197 gave us --4 changed the governance of the Board in two significant 5 points: We have the two ex officio members, Senator Lara б 7 and Assembly Member Eduardo Garcia, who've been on our Board since this went into effect. The legislature 8 9 appointed those. 10 Now, for the terms, as the Chair noted 11 previously, everybody was at will. And then AB 197 for 12 the first time puts together these terms; and they're not 13 term limits, as noted. They are terms. 14 So what we have here is -- one other point I 15 wanted to mention that was not mentioned before is AB 197 16 specifically sets out that members can be reappointed. So 17 it's not even up for discussion. It says right in AB 197, 18 everyone can be reappointed. And there can be no --19 there's no limit on how many times people can be 20 reappointed. So this applies both to the two legislative appointees and then the 12 gubernatorial appointees. 21 22 So -- in person -- I just want to note. I've 23 been here for a while, and this is a great board. So if 24 anybody asks me, I would like to suggest all of you be 25 reappointed, because --

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(Laughter.)

CHIEF COUNSEL PETER: -- I think this is a very effective board and very dynamic and very engaged. So that's a little, you know, commercial for all of you.

> CHAIR NICHOLS: Thank you for that commercial. (Laughter.)

CHIEF COUNSEL PETER: So as I said, we don't have any guidance for how we're supposed to proceed. And so we came up with a staff proposal. So instead of just showing up and say, "Hey, you guys, what do you want to do?", we thought we would put out a few of the things that we as 12 staff thought that you might want to think about.

13 There was no closed session on this before. 14 There's been no meetings. All of you were instructed when 15 you got the memo for us is that you need to be extremely 16 cognizant of the Bagley-Keene requirements. And I'm sure 17 you always are anyway. We just wanted to make that a high 18 level and very clear request because that's -- obviously 19 you don't want to have, you know, deals being made.

So here we are. So we wanted to have a 20 21 transition to the six-year terms. We wanted to maintain 22 the institutional knowledge.

23 We did not want to have all six air districts 24 come up at the same time. We wanted to spread them out. 25 That's a problem if you just start drawing straws. You

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don't know how this is all going to shake out.

So obviously some members are going to have a shorter period of time than other members. Otherwise we 4 can't effectuate a stagger. And so we have three different end dates. We have one end date of December 31st, 2018; second tier is December 31st, 2020; and the third tier is December 31st, 2022.

8 So what we're doing here is all terms then on 9 that basis conclude within six years of the effective date 10 of the statute. So by January 1st, 2023, all of the 11 members on the Board will have, you know, finished their 12 six-year terms.

13 And then finally, I think this is something since 14 it has been a while that the staff recommends that this 15 vote go -- proceed today.

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17 CHIEF COUNSEL PETER: So what we have here is for those three tiers I outlined, there's three members in the 18 19 first tier, five members in the second tier, and six 20 members in the third tier.

21 One of the reasons they are skewed or clustered 22 towards the end is we have a new Governor coming in, you 23 know, in January of 2019, which I understand has 3,000 appointees, and so we actually had let -- we shifted the 24 25 gubernatorial ones for the most part towards the end. And

1 that was one of the rationales for that. So going to the next slide. 2 3 --000--4 CHIEF COUNSEL PETER: So here's our first tier 5 that comes out with December 31st, 2018. So obviously the б two legislative appointees are in this group. And the 7 reason they were put in this group -- or one of the 8 reasons they were put in this group was that we didn't 9 want to presume what the legislature wanted to do. 10 So conceivably they would take the position that if we put them in a later term, then they would be bound 11 by that, because the statute is not clear. It says that 12 13 the Board sets the initial terms. So we did not to -- you 14 know, we wanted to give the legislature absolute authority 15 to do whatever they wanted to do. 16 But we needed to set a term. We wanted to give 17 kind of a heads-up. So we set that term at December 31st, 2018. 18 19 So once again, just as I said before, for any of 20 you, if the legislative appointees can get reappointed by 21 their respective Senate and the Assembly. So that was the 22 purpose for that. 23 Ron Roberts is not running for office again and he will not be eligible by operation of law to have his 24 25 position on the San Diego County Air Pollution Control

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1 District. So we put that one into the first term. --000--2 3 CHIEF COUNSEL PETER: Going to the second term --4 second tier. So we took the remainder of the five air 5 districts and all of the others -- the six gubernatorial б appointee positions and we put them in two different 7 statuses. So this is the for 2020. 8 So what we were trying to do here is -- as I 9 said, Ron -- Supervisor Roberts is off, so that one's 10 already proceeding. So I already explained why that went 11 early. This one is -- Dr. Sherriffs is from the San 12 13 Joaquin Valley Air Pollution Control District. And that 14 has a very unusual statute. And they actually already had 15 a four-year term. The Governor only could appoint the 16 person -- their two representatives to that board for 17 four-year terms. And they get confirmed every time 18 they're voted. 19 So on top of that the legislature in AB 197 20 dropped a six-year term on top of the four-year term. So 21 we specifically put Dr. Sherriffs in this --22 (Laughter.) 23 CHIEF COUNSEL PETER: -- because his four-year 24 term is up in 2020. Not exactly at the same time but the 25 same year, he has to go through a confirmation for both

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the local term, which is a gubernatorial appointee, and 1 the six-year term for that thing. And so at least on the 2 3 first shot out of the gate here we've tried -- we put them 4 both in 2020, because there will be two confirmation 5 decisions and potentially could be done in one hearing. б But that also depends on the legislature and the Governor. 7 --000--8 CHIEF COUNSEL PETER: So going to the last group. 9 Basically, this is the remainder of the gubernatorial 10 appointees. The Vice Chair we put in a different term than the Chair's term. And we put the current vacancy in 11 there as well. 12 13 So that's basically the super high level thinking of the staff that went into this. We recommend that the 14 15 Board consider the draft resolution. But once again, that 16 is totally up to the Board how they want to handle this. 17 So thank you. CHAIR NICHOLS: Okay. Any questions or comments 18 19 from any of the Board members? 20 BOARD MEMBER GIOIA: One question. 21 So whatever we decide in a resolution, is this 22 binding on the Governor or can the Governor set the terms as he likes? 23 24 CHAIR NICHOLS: No, this is it. It's up -- it's 25 us.

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BOARD MEMBER GIOIA: 1 Right. 2 CHAIR NICHOLS: It's on us. 3 BOARD MEMBER GIOIA: And then the Gov -- so this 4 establishes the terms for the different positions? 5 CHAIR NICHOLS: Right. 6 BOARD MEMBER GIOIA: Got it. 7 Thank you. 8 CHAIR NICHOLS: Yeah, but it goes with the 9 position, just to be clear again. 10 If someone were to leave early in their tenure, 11 an appointment can happen, but it only goes to the end of 12 the term of that position and then they have to be 13 reappointed. So --14 CHIEF COUNSEL PETER: That was one of the legal 15 issues that took a while to parse through, is what the 16 difference if the term runs with the person and if it runs 17 with the office. And there's some great case law from 18 over a hundred years ago that does give us some guidance 19 on that. But it is -- it's -- once again the legislature 20 did not address that in the statute. But that is -- what 21 the Chair just said is absolutely correct. The terms go 22 with the position. 23 CHAIR NICHOLS: Okay. 24 Yes, Mr. Florez. 25 BOARD MEMBER FLOREZ: Yeah. Of course I have a

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couple questions.

2 So let me -- I won't try to monopolize time. But 3 I did want to start with maybe to legislative 4 representatives.

What was the reason that we only posted it this morning? What's the public policy rationale that such a momentous type of vote would only post today?

8 CHIEF COUNSEL PETER: So the agenda was posted 10 9 days ago, after July 13th, and it said this was the item. 10 The staff proposal did not come up. To some extent 11 putting the staff proposal out on this actually takes away, in my view, you know, the discussion of the Board. 12 13 Each of the Board members got the list on the 13th. Ι 14 think it went five minutes before it got posted, so --15 with the admonition about don't violate the open meetings 16 law of course.

And so it was. And I know it did get circulatedby some people. That's fine.

BOARD MEMBER FLOREZ: Well, it got circulated by me. So I -- and the reason for that is some of us represent EJ communities, for example, or various other communities, so I think we like to talk to those folks before the meeting. Not just among ourselves, but we like to check in, kind of just ask, "What do you think?" In this particular case, the two EJ

representatives are first out, if you will, or terms began. Let's use another term rather than term in or term out. When does the clock start ticking is really the way to look at it. And for the EJ representatives from both the Senate and the Assembly, that is the first up.

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б And a lot of this is optics in some sense. You 7 know, I think the Chair mentioned or someone mentioned 8 that we could have thrown in the hat and pulled out. That 9 may have been even better, quite frankly, in terms of the 10 optics. I see industry representatives with, in some 11 sense, terms are beginning. Clock starting to tick in 12 2022. And then I see EJ representatives' terms start to 13 start in 2018. And I think that's -- you know, if you 14 kind of look at it, I'm just wondering the optics of that. 15 I mean why couldn't an EJ representative be in the 2022 16 slot and an industry representative be in the 2018 slot? 17 CHIEF COUNSEL PETER: I'm not exactly sure what 18 you mean by the industry representative. 19 BOARD MEMBER FLOREZ: Well, we had an ag 20 representative, correct? CHIEF COUNSEL PETER: Well, the ag --21 22 BOARD MEMBER FLOREZ: We had an auto 23 representative, correct? 24 CHIEF COUNSEL PETER: The agricultural

25 representative is the agricultural representative.

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1BOARD MEMBER FLOREZ: Those would be the industry2folks that I am referring to.

3 CHIEF COUNSEL PETER: Okay. So let me take a 4 step back --

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BOARD MEMBER FLOREZ: Okay.

CHIEF COUNSEL PETER: -- so that --

BOARD MEMBER FLOREZ: And before you do, let mejust ask one more so you can combine it.

9 An I guess for first time seeing this, I would have expected some alternatives. I would have expected 10 some scenarios. You know, if you look at the Water Board 11 or the PUC or some of the other boards, they have 12 13 prescriptive examples of term limits. In some cases, it 14 goes four, four, five, in terms of the Water Board. The 15 PUC a very similar type of cadence. Our cadence is off, 16 as you compare those other agencies.

And, yes, the legislature prescribed it. But I'm just wondering if we took that kind of cadence into account prior to making the recommendation to this Board -I would have liked to have seen some examples what other boards are doing - how that compares to this particular recommendation.

And I would have liked to have affected groupsbeing able to weigh in on their view of this.

And you're right, I think you mentioned there are

some open seats. Ron Roberts is leaving. We have a
 gubernatorial seat that's open. Yet that's on the 2022
 list.

I mean there were a lot of different ways to do 4 5 I guess I would have preferred -- and I just wondered it. б why we let it out the same day; we don't have 7 alternatives; we don't have any options, if you will; 8 there's no chance to check in with folks. People are 9 waiting. They see the item but there's no real meat to 10 this particular thing. And it is momentous. I mean this 11 is a pretty big change. This isn't a small change. This 12 is something that kind of affects the trajectory depending 13 on the next gubernatorial appointment obviously. And I 14 don't necessarily see the work put in in terms of giving 15 us various scenarios and options.

16 CHIEF COUNSEL PETER: Let me address the 17 scenarios and options first.

18 You're right, there -- in almost all of the 19 situations when you look back at other boards and 20 commissions, there was -- it's in the statute how to do 21 it. This is very -- this is unusual. And I would like to 22 think in -- and you never know what the legislature as a 23 whole thinks when they pass something. But they did know 24 that you have a very long-standing board here, and so 25 they're giving this Board and you here today -- and the

staff proposal is just -- you can consider it or you cannot. Okay. So that is -- you know, that is -- it's, as opposed to regulatory items where we went through workshops and so forth, this is really somewhat different.

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So we didn't do alternatives. The CEC, as I mentioned, they did draw lots, and that was in the statute. The Governor had to appoint them within 30 days. All five of them drew lots to see who got the 1, 2, 3, 4, 5 years. So that was in the statute.

And there's a lot of other examples about that. This one did not have that, so we thought, okay, well, this is -- and that's why I laid out the staff considerations for doing it.

14 Let me just check on the -- touch base on your other point about the EJ people not having input.

16 So the input goes to the legislature. I mean 17 that's who makes the appointments. The assembly makes one 18 appointment and the Senate makes the other appointment. 19 Obviously you know that. Both you and Mr. De La Torre 20 were appointed by your respective heads. And from my 21 point of view, if you both are reappointed again, that's 22 great.

23 And I see where the EJ role comes in is talking to the appointing organization, which is the Rules 24 25 Committee in the Senate and the Speaker. And if we

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1 actually put the legislative members at the end, the argument would be that we were tying their hands by 2 3 putting them later. 4 And so to the extent --5 BOARD MEMBER FLOREZ: Why would that be? You б just said they could be replaced any time by the 7 leadership. 8 CHIEF COUNSEL PETER: No. No, once -- now. But 9 once the initial terms go in, they're set. So that's 10 the --11 BOARD MEMBER FLOREZ: So somebody in the 2022 12 slot -- I'm glad you just said that, because -- so 13 somebody starting today with a vote in the 2022 slot is 14 locked, correct? 15 CHIEF COUNSEL PETER: Right. That is correct. 16 So --17 BOARD MEMBER FLOREZ: Right. So that's why this is a momentous vote. 18 19 So if you are someone in the 2022 slot -- and you 20 just have said earlier that next governor could come in and change this. But if you're in the 2022 slot, the next 21 22 governor can't necessarily change it, correct. 23 CHIEF COUNSEL PETER: They can't change --24 BOARD MEMBER FLOREZ: They cannot. I just want 25 to make sure we're really clear.

Right, right. But I'm --1 CHIEF COUNSEL PETER: BOARD MEMBER FLOREZ: So that they cannot. So --2 3 CHIEF COUNSEL PETER: But -- excuse me. You 4 talked about -- not to interrupt you but to interrupt you. 5 BOARD MEMBER FLOREZ: Yeah. 6 (Laughter.) 7 CHIEF COUNSEL PETER: On the enviro --8 BOARD MEMBER FLOREZ: That's okay. I'll probably 9 interrupt you in a moment. 10 CHIEF COUNSEL PETER: Your honor. You know, I 11 was trying to like, you know, Get back into my litigation mode here. 12 13 So, what -- I think you're correct, is that there 14 is -- should be a process, and I don't know -- I know 15 people either nominate themselves to the gubernatorial 16 appointees and they -- and they solicit suggestions. But 17 the environmental justice people, if they have a view of 18 that -- you know, on this point, their audience is 19 actually the legislature. This group --20 BOARD MEMBER FLOREZ: Right. But they just got 21 this today. How are they supposed to call Toni Atkins 22 this morning or Speaker Rendon today if the exact 23 specifics of this proposal was literally out this morning?

> CHIEF COUNSEL PETER: Because --BOARD MEMBER FLOREZ: How much reaction time is

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1 that for the leadership of the legislature to weigh into this when our vote is five hours later?

CHIEF COUNSEL PETER: They're given five-months' notice that the term is up at the end of 2018. And then they can say, "We think that" -- you know, as I said, I think they -- I would think it would be great if --

7 BOARD MEMBER FLOREZ: And they say, "We'd like 8 this slot to be in 2022"?

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CHIEF COUNSEL PETER: No.

10 BOARD MEMBER FLOREZ: That's exactly what I'm asking you right now. I'm asking you why we would not 11 switch EJ into the slots of 2022. And the leadership can 12 13 continue with either myself or Mr. De La Torre, or whoever 14 they'd like, but at least the clock starts in 2022 as 15 opposed to 2018.

16 CHIEF COUNSEL PETER: Actually what -- they have 17 the option now in January 2019 to appoint both of you to 18 six-year terms. So you will have the most continuity of 19 anybody else here.

20 BOARD MEMBER FLOREZ: Okay. Let me disagree with 21 that.

22 If the leadership wanted -- if these two EJ terms 23 started in 2022 - let's just -- follow me here, let's say 24 that the proposal was that - are you saying that the EJ 25 representatives would be off in 2018 if they were simply

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reappointed?

CHIEF COUNSEL PETER: No. There's a question -there's a --

BOARD MEMBER FLOREZ: They would have the longer
of the term, quite frankly.

б CHIEF COUNSEL PETER: The existing people would 7 have the longer term, but the leadership who appoints them 8 would not have the opportunity. We would have locked them 9 in -- we've taken away their discretion to appoint 10 somebody. And we are taking away their discretion to the 11 end of this year. Then they have the opportunity. If AB 197 said it was a term limit or didn't specifically make 12 13 it absolutely clear they could be reappointed, then we 14 would be tying their hands.

BOARD MEMBER FLOREZ: Yeah, I disagree with that analysis.

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CHIEF COUNSEL PETER: I understand.

18 BOARD MEMBER FLOREZ: I understand the semantics, 19 but the reality is we have just got a new Pro Tem that's 20 going to have a very long term. We have a Speaker that 21 has a much longer term. Both of those overlap in each of 22 those situations. I think the governor -- the next 23 governor should be concerned, quite frankly. I think what 24 you've said is concerning, that you have two gubernatorial 25 appointments in 2022, and that will be the case until such

time the gov -- you're tying the governor's hands, not the legislature, in this proposal.

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CHIEF COUNSEL PETER: So the legislature actually 4 wouldn't have -- they could amend the statute still, and they didn't do it initially.

BOARD MEMBER FLOREZ: Exactly. Do you want the legislature -- do we want Mr. Garcia to come back and -he's written this letter saying he doesn't like the process. It's public. Everybody has it here on the dais. Do we want -- are we inviting the legislature to go back and change the statute?

CHIEF COUNSEL PETER: 12 So one thing the 13 legislature could do is say that this -- term limits only 14 applies to gubernatorial appointees, and that's --

15 BOARD MEMBER FLOREZ: The legislature can do a 16 million things. And do we want them to do that?

17 I would say that we should offer some options, 18 that you should give this Board an opportunity to go back 19 to their communities. I think people should have an 20 opportunity to look at various situations. If they're 21 going to draw lots, withdraw lots, whatever that may be. 22 But we're just hearing about all these alternatives today.

23 CHAIR NICHOLS: We have three witnesses who've signed up to testify. So maybe we should hear from them, 24 25 unless anybody else wants to engage at this point.

1 BOARD MEMBER BALMES: Could I just make one point 2 of correction. 3 CHAIR NICHOLS: Please. 4 BOARD MEMBER BALMES: My esteem colleague from 5 the University of California who's a transportation б engineer is not an industry representative. 7 (Laughter.) 8 CHAIR NICHOLS: Yeah, it's a kind of expertise 9 that he represents, not an industry. 10 You can argue about the slot for agriculture, so 11 somebody who has expertise in that area. 12 I guess you happen to be in the field, right? You do it. You're one of them. 13 14 BOARD MEMBER EISENHUT: Background. 15 CHAIR NICHOLS: Yes, yes. Background. 16 Okay. So, Ms. Vazquez. 17 MS. VAZQUEZ: Hi. Good afternoon. I'll say it's 18 morning afternoon. But my name is Diana Vazquez. I'm here on behalf of the California Environmental Alliance. 19 20 And really I think it was a lively conversation. 21 There was a lot of points that Mr. Florez raised that we 22 have concerns. Specifically I think there's more 23 questions than anything, given that we were just seeing 24 this proposal this morning. We were able to actually kind of gather some thoughts. But I think really the questions 25

are, I think the EJ seats that were brought up I think there's an explanation on that.

3 But really with the fact that we were involved in 4 the passage of 197 two years ago, I think really the 5 premise is how do we provide legislative oversight in this б process and really providing the input that we need? Ι 7 think it was a little bit -- you know, I think 8 enlightening to see that the staff provided those 9 recommendations process, but we just heard this like 30 10 minutes ago. I think it's really, where is the process 11 that we can actually comment and really provide the input 12 that we need, and specifically on the terms and how the 13 terms are being staggered to bring the continuity that we 14 want specifically on some of the EJ seats? And understand 15 if leader -- if the legislature wants to weigh in, they 16 should have a say how the terms are being drafted, and not 17 an afterthought. And that's one of the things at least 18 for us is concerning.

Another aspect is really looking at some of the really health experts are being termed out earlier than some of the other expertise are being mentioned, specifically industry and ag. Those are being termed out in 2022, and really getting a rationale why that's happening.

Another issue that's really for us is, this took

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two years in the making, and there was really no input from anybody to really provide the insight that's needed. And now we're really rushing it within an hour -- and I don't even know if it's a voting resolution. If it's going be voting, it seems as if folks can vote yes or no depending on how individuals feel. But I don't know if the Board has that chance to actually talk to their constituency to really get that input.

9 And really what we ask and urge the Board to really consider, just having more of a transparent process 10 11 for us to really say, hey, this is going to be affecting us in the next two years, four years, and six years. 12 And 13 really another question is, are all the individuals who 14 are getting reappointed, because there's no limits, are 15 they also going through a Senate confirmation process? Is 16 that also provided in the system? And if it is, is it 17 just for new appointments or reappointments?

So those are the kind of questions that we have. And I really appreciate, you know, a little bit more insight on that before we actually vote on this?

Thank you.

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MS. GALE: Good morning, Board members. My name
is Genevieve Gale here on behalf of Central Valley Air
Quality Coalition.

I would like to say I'm really happy to be here

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1 today. It's been really hard in the valley recently. There's been a lot of smoke and a lot of smog, and so I'm 2 3 really happy to breathe some air up here. My headache has 4 gone away and it's a little easier to breath. So I do 5 want to say that I -- some people say they're happy to be б here, but I'm really happy to be here.

(Laughter.)

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8 MS. GALE: So I'm speaking on behalf of not just CVAQ but also Kevin Hamilton of Central California Asthma 10 Collaborative. And I want to speak on the topic of 11 process.

12 So CARB normally proceeds with really excellent 13 standards of process. Things are posted early. Workshops 14 are hosted. Sometimes staff even reach out to 15 stakeholders to make sure that their voices are heard. 16 And those materials are usually in draft form. Staff 17 listens to the public, make edits, bring that back to the Board before a final vote occurs. 18

19 And in this instance, it seems the process is 20 limited public review. So we found out about this 21 proposal from an L.A. Times article yesterday, which was 22 kind of surprising. And then we couldn't see the actual 23 proposal until this morning. And I know I haven't been 24 here that long, but this is the first time I've seen this 25 type of process.

1 And so we are concerned that these normal standards that will decide the leadership of this Board 2 3 are being circumvented or just changed in this instance. 4 And we are concerned, and we wish that there was more 5 public comment, that there was more a chance to even look б at the proposal. And like Mr. Florez says, time to speak 7 with Board members, especially those who are supposed to 8 represent environmental justice. 9 And so we ask for a little more review -public -- opportunity for public review on this proposal. 10 11 And those are my comments today. Thank you. 12 CHAIR NICHOLS: Thank you. 13 BOARD MEMBER GIOIA: Madam Chair? 14 Go ahead. 15 We have also one more person who signed up at the 16 last minute, Luis Olmedo. 17 MS. ELENES: Good morning, Board members. Μv 18 name's Grecia Elenes with Leadership Counsel for Justice 19 and Accountability. And I'm here just to echo a lot of, 20 you know, the comments and concerns of my -- our partners 21 at the Central Valley Air Quality Coalition, the Central 22 California Asthma Collaborative, and the Central Environmental Justice Alliance. 23 24 You know, given CARB's influence on, you know, 25 not just EJ communities but just really all California,

all their public health. As Genevieve mentioned, we're 1 having a really, really hard time breathing in the valley 2 3 right now. And it's sad to see that this decision can be made today without any public process. And, you know, to 4 5 date so far on the processes that I have been involved б with the CARB, you know, it's been great. You guys are 7 very attentive, you're very receptive and respectful to our comments, you know, which is contrary to some of, you 8 9 know, the councils and the boards that we encounter in the 10 valley.

So it's typically, you know, refreshing to be 11 12 here. But today, you know, we're a little disappointed to 13 see that this decision that is so monumental can be made 14 today and that, you know, from our perspective, especially 15 the EJ community that we work and that we serve and that 16 are typically, you know, a second thought for most people, 17 that they're being in a sense forgotten given that the 18 environmental justice seats, you know, are potentially --19 are one of the first to be replaced. And so that's, you 20 know, a huge concern for us.

And all we ask of you today is just, you know, to put off this decision, to allow a true democratic process to allow public, to allow us engage with the communities that we work with to get their input, so that way we can then, you know, provide that to yourselves. And that's

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all we're asking for today is just, you know, let's puts this off, allow folks to be truly engaged, you know, to be meaningfully, you know, brought into this process and to create a more thoughtful decision at the end of the day.

Thank you.

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MR. OLMEDO: Thank you. Back again. Luis Olmedo, executive director of Comite Civico Del Valle.

I try and make sense of all the different changes that have occurred in such a short period of time.

I want to say I'm very pleased to work with all of you. And I think I've had the opportunity we work more closely with some and not as much with others. But I know that all of you are open to talking about environmental justice and listening to environmental justice.

15 I feel that we have this great opportunity to 16 work with the representatives that are sitting here as 17 representatives of environmental justice. And while I think that there's -- what I'd ask is that there be 18 19 sufficient time, and I think that's what I hear, to really 20 look at this. I've had the privilege of working as a 21 designee of environmental justice with Senator Dean 22 Florez. I would expect that with the new appointee of 23 environmental justice, that that opportunity opens up as 24 I was -- didn't have enough time I think to work well. 25 with the previous appointee, Diane Takvorian. We didn't

1 have enough time to do enough work is what I'm trying to say. But I have plenty of time to work with her. 2 3 I really ask that you have -- that we get your 4 support to make this a fair process. You know, a process 5 that gives us some continuity and some true б representation. And I'm in support of all the comments 7 that have been made from Senator Dean Florez. I know that 8 I've spoken with Assembly Member Garcia, also a member. 9 And I agree with many of these points. So -- and as well 10 as those points put forth by the environmental justice 11 colleagues that are here representing this issue. 12 Thank you. 13 BOARD MEMBER GIOIA: Madam Chair? 14 Over here. 15 CHAIR NICHOLS: Oh, Mr. Gioia. 16 BOARD MEMBER GIOIA: Thank you. 17 First I want to start by saying I appreciate that 18 there's probably no perfect path forward or solution on 19 this. The legislation was ambiguous and it sort of left 20 it up to the Air Board -- the staff of the Air Board to 21 sort of figure this out. 22 So saying that -- and I know this is a tough 23 discussion, because every time any argument that's given 24 one way or another may be interpreted as dealing with a 25 particular individual.

And so I want to make sure that any general comment I make is not -- doesn't refer -- is really not reflective of who holds the seats. It's more about just sort of process. Right?

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5 And I respect what people said on process. Ι б think whatever we do, this version or something else, I 7 understand that having a process is important for sort of 8 a public integrity point of view. And I know it's hard 9 for people to come up, I just want to acknowledge, to 10 speak to us on this issue, because if you're from the EJ 11 community, if you're from industry, if you're from the environmental community, you're going to be concerned that 12 13 some comment you make is going to have an effect on a 14 Board member, which I suspect is why we don't have a lot 15 of people speaking on this - let me be real - because 16 people don't want to, you know, get on the wrong side of 17 folks.

18 And so anything you say doesn't -- you know, I'm 19 happy with -- I understand, so I'm willing to live with 20 whatever outcome. But I just want to raise -- I think 21 since we did get a letter from Assembly Member Garcia who 22 serves here and who also, as he says, was one of the lead 23 authors for AB 197, I do think we owe it publicly to at 24 least answer the two questions in his letter; which I 25 think he raises two issues - right? - which is it would

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seem that having more even distribution, like 4, 5, and 5,
 right, in the staggering of the terms would avoid
 significant turnover.

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And then his second one, which is, it would be more logical and aligned with the intent of AB 197 again, he's one of the authors - to have Board members who have served longer than six years end their terms earlier than Board members who have not yet reached their six-year term.

10 I would appreciate staff explaining. I think he 11 owes it -- I mean I think there's -- anyone can make different interpretations of what to do. But I think 12 13 he -- it's owed answering the two questions in his letter. 14 I mean if I had a comment on any initial reaction I have 15 from this it's that -- that there didn't seem to be rhyme 16 or reason about how long people served in calculating the 17 So there are people -- number of people who have terms. served less than six years, including some of the air 18 19 district representatives, who are coming up earlier than 20 people who served for 27 years or 14 years.

21 So -- and I don't know if the intent wasn't 22 clear. He's stating the intent is that it is more 23 consistent to have those who've served longer than six 24 years end their terms earlier than those who have not yet 25 reached their six years.

So I mean if the statute had said that, then we would know what to do. The statute didn't say that, so I understand.

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But I think it's fair just to complete the record to respond publicly to the two issues that he raised in his written letter as a member and as a coauthor on the legislation.

8 CHAIR NICHOLS: If I may, as a matter of 9 privilege here. So, I negotiated directly with Assembly 10 Member Garcia when this bill was going through, and had a 11 role in urging the Governor to sign the legislation.

12 It was not something that the Administration 13 sought. This particular item was not something that the 14 Governor was supportive of, and he really was somewhat 15 reluctant to sign it, frankly.

16 You have to look at this as sort of a political 17 science question in a way. The constituency for deciding 18 who gets to serve on a board of this kind, although 19 ultimately it's the public who wins or loses, depending on 20 how we perform, it's actually the appointing authorities who have the interest in this issue. In this case, 21 22 leadership of the Assembly and the Senate and of -- and the Governor. 23

And the Governor was very insistent on his prerogatives, including being able to fill any vacancies

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up until the last time -- last minute that he could in office even if those aren't confirmed at the end of the day by the legislature. Hopefully they would be. But he would be in a position to make the appointments that are up to him. So that would be filling the Ron Roberts position. And of course, with the other position that's been vacated, if he makes an appointment before the end of the year, that also will have to come up for confirmation. But as -- so he's got that.

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10 And the leadership of both houses, through their staffs and personally, also indicated a great interest in 11 12 having control over their own appointments to the maximum 13 extent possible. And in fact at one point there was 14 discussion about whether they would be able to make their 15 appointments at will and not have to -- not be subject to 16 the terms at all if -- the statute isn't totally clear on 17 that point. But they have made it very clear that they 18 believe that they will be subject to the six-year terms as 19 well.

But just to be -- just to make the point that, with all respect to Mr. Garcia who is the author of the bill, the opinions that count in this matter primarily in terms of putting this out and getting it done and then having those who have interest in who gets the positions go to those appointing authorities, as our chief counsel

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said, because that's where the power actually resides in this situation. And we could shuffle the positions around some. And, you know, I don't think it would make a huge amount of difference one way or the other. But that was -- that really is the impetus behind doing this now.

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б VICE CHAIR BERG: Maybe this would be a good time 7 to answer a couple of the questions that we did get from 8 public comment, that if you are -- first of all, it isn't 9 term limit. So it's really important to understand that 10 terminology. My understanding, it was an opportunity for 11 that individual position to come up and the choice to be 12 made. Did they need a different type of expertise? Was 13 there something different about the Board that we needed a 14 different type of leadership? And so a six-year term was 15 an opportunity for someone to come on board and work hard 16 and be very dedicated, and at that six-year point the 17 authority could then reappoint, and then they will have to 18 go through confirmation again. So they do go through the 19 entire process again and serve another six years.

20 But there's no limit. That person could 21 continue, as Barbara Riordan has so honorably done, for a 22 couple decades. And so that process is still in place.

But to answer the question from the floor, yes, they do go through confirmation again. And to me where the public input is is in seeing a position come up, is to

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talk to the convening authority. This isn't about each one of us going out to the area that we represent and have a whole roomful full of people come up and really advocate for one position or another. And I think that's important in that.

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б CHAIR NICHOLS: You used a magic word, which is 7 "represent." And I do want to speak to that point, 8 because my understanding of the law is that when you are 9 appointed to serve on a board, regardless of the 10 specifications for your position, whoever -- you know, 11 whatever seat it is that you're filling, you are not their 12 as a representative. Once you're on that board, your duty 13 is to serve to the best of your independent knowledge and 14 ability as a member of that board. I think that's a kind 15 of a critical confusion that sometimes comes up in terms 16 of -- obviously if Mr. Eisenhut's -- I'm going to pick on 17 him because he's right here -- is in agriculture. People 18 who are in that field are likely to turn to him with 19 questions. And we would hope that he would go talk to 20 people from that constituency when he gets a chance about 21 what's going on with the Board, because we rely on him to 22 bring that expertise to the Board. But he is not expected 23 to go out and consult or seek support for every vote that 24 he takes on the Board or to be seen as being the 25 representative of agriculture when he's serving on this

1 Board.

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So...

3 CHIEF COUNSEL PETER: Thanks to my Assistant 4 Chief Counsel, David Hults, who just pointed out that 5 that's actually in the statute. So, the statute that sets б out your expertise in subdivision G specifically says: 7 "All members shall exercise their independent judgment as 8 officers of the State on behalf of the interests of the 9 entire State in furthering the purposes of this division," 10 which is the entire air quality division.

11 What they did do, and started decades ago, is 12 they had areas of expertise. There's no agricultural 13 seat. That seat can be of a couple of different 14 categories. It's law, agriculture, and so forth.

The air district ones are -- there's certain air districts - South Coast, Bay Area, San Diego - there's certain ones that were -- San Joaquin -- that were called out.

19 The other seat that Ms. Riordan's in is for any 20 of the other 30 districts can also be on that that are not 21 specifically called out.

In terms of the expertise, I think it's the experience in transportation, automotive, you know -- you know, because originally if you go back in time, that was -- the focus, you know, 50 years ago was on

automotive. And so I think that what the specific
 specialty expertise for those members show that there
 needs to be a range of views.

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For the air districts, Supervisor Serna, he was the latest one added on. There was a decision by the legislature a number of years ago that we needed to add one more, you know, not designated -- and they did it just a little bit different. They said of the Northern Sacramento Valley District, somebody from that group. And so there is a group.

11 So the legislature has tinkered with the -- with, 12 you know, what kind of, you know, additions to it. And 13 the Board therefore is getting bigger, which is why we're 14 in this room as opposed to next door, because they're 15 building our bigger, expanded diaz in the next room where 16 we normally meet.

But it goes back to decades ago where the legislature said, you know, look at your, you know, experience or your connection within air districts and so forth. But you serve all the people of the State of California.

So a longer version of what you just said, ChairNichols.

24 BOARD MEMBER FLOREZ: Madam Chair, can I just ask 25 a question. I understand the nuances and the weeds about

who we represent and who we don't. Everybody has a different style. People check in, some people don't.

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I like to check in with EJ communities. I think I'm expected to do that.

But I do think that as a board, taking all of our 5 б hats off as industry, one thing that hopefully we can 7 agree on, this is not a good process. Posting this the 8 same day and voting on it is not a good process. It's not 9 reflective of who this Board is. It's not reflective I 10 think of the character of the way we operate. I don't see 11 any harm in moving this over to the September meeting. I would like to see staff come with options even if we come 12 13 back with the same proposal. And at least it gives the 14 opportunity for folks to comment. And I think that's what 15 this Board is about. We are a public board. We don't 16 serve each other. We serve the public.

So I would like to make a motion to carry this over to the September meeting and direct staff to come back with some recommendations on alternatives. I may not get a second, but I certainly think the public deserves it.

22 CHAIR NICHOLS: Well, we have a motion on the 23 floor. Is there a second 24 BOARD MEMBER SHERRIFFS: I'll second it. 25 CHAIR NICHOLS: Okay. Then I think we should do

1 a roll call vote.

Ŧ	a forr carr vote.
2	Clerk will call the roll.
3	BOARD CLERK DAVIS: Dr. Balmes?
4	BOARD MEMBER BALMES: No.
5	BOARD CLERK DAVIS: Mr. De La Torre?
6	BOARD MEMBER DE LA TORRE: No.
7	BOARD CLERK DAVIS: Mr. Eisenhut?
8	BOARD MEMBER EISENHUT: No.
9	BOARD CLERK DAVIS: Senator Florez?
10	BOARD MEMBER FLOREZ: Aye.
11	BOARD CLERK DAVIS: Assembly Member Garcia?
12	Supervisor Gioia?
13	BOARD MEMBER GIOIA: No.
14	BOARD CLERK DAVIS: Ms. Mitchell?
15	BOARD MEMBER MITCHELL: No.
16	BOARD CLERK DAVIS: Mrs. Riordan?
17	BOARD MEMBER RIORDAN: No.
18	BOARD CLERK DAVIS: Supervisor Roberts?
19	Supervisor Serna?
20	BOARD MEMBER SERNA: No.
21	BOARD CLERK DAVIS: Dr. Sherriffs?
22	BOARD MEMBER SHERRIFFS: Yes.
23	BOARD CLERK DAVIS: Professor Sperling?
24	BOARD MEMBER SPERLING: No.
25	BOARD CLERK DAVIS: Vice Chair Berg?

VICE CHAIR BERG: No. 1 BOARD CLERK DAVIS: Chair Nichols? 2 3 CHAIR NICHOLS: No. BOARD CLERK DAVIS: Motion is defeated. 4 5 CHAIR NICHOLS: Okay. Well, then I guess the б next step is to proceed to the motion. 7 Oh, sorry. 8 BOARD MEMBER DE LA TORRE: I didn't know that was 9 going to happen. I thought we were still talking. 10 CHAIR NICHOLS: Oh, sorry. Go ahead. 11 You can talk. BOARD MEMBER DE LA TORRE: Thank you. 12 13 Frankly, I think I'm the canary in the coal mine 14 on this. I'm the one who shifted in the middle of this. 15 And if I hadn't shifted, I'd be the 2022 person. But I'm 16 not. I'm the 2018 person now. 17 And for the EJ folks, I want to -- there's a 18 duality to these roles. And I understand your concerns 19 about the EJ part of it. It's the legislative part of it 20 that is why these two seats are being -- are in the first 21 tranche, in the first group.

It's because the legislature passed this bill. If this bill hadn't been done, we wouldn't be here having this conversation. We would all be at will. And we would all be removable by the appointing authorities at any

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time.

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The legislature created the legislative/EJ spots before they did this bill. This term bill. They had the opportunity to be very clear about what they wanted to do with the EJ/legislative seats, and they did not. So, they're lumped in with everybody else in this case.

So as has been mentioned over and over again, I'll note in that L.A. Times article that was mentioned it took them 12 hours to correct a mistake in their article, which was that this isn't term limits, it's just terms.

11 There is no limit. So as was mentioned, could be 12 reappointed over and over again by whoever the appointing 13 authority is.

So there is nothing that is changing here today. This is not a regulatory item that requires all of the processes that you're talking about. It's just a housekeeping thing, that we all are here, we'll continue to be here until someone decides we're not. And that's as simple as it gets.

In terms of the legislative bodies, I know that Ellen has been talking to ledge counsel for quite a while about this issue, which is why it took this long, was to get to some kind of understanding of what this was going to look like.

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I do want to address the two points that Assembly

Member Garcia raised. The first, he asks why not do 4, 5, and 5 in each of the groups, '18 '20, '22. Well, we're doing 3, 5, and 6. That's a difference of one. That's not a huge change.

5 Obviously he has a personal preference. It 6 wasn't written in the legislation. So, the fact that 7 there are two legislative seats, we have a Speaker and a 8 Pro Tem who can reappoint easily or not, that's going to 9 happen at the end of this year. And then those people are 10 going to have six whole years. The first long terms are 11 going to kick in at that point.

And then Roberts' -- Supervisor Roberts' slot
obviously will be a brand new person as well.

So that's for the terms and the way we broke this out.

In terms of the second question, how long people have been on the Board? Two of the three people who were in that first tranche, in the 2018 tranche, are long-term members, myself and Mr. -- and Supervisor Roberts.

I happen to have switched over. In fact, I just spoke to somebody who thought I'd just been here a month. (Laughter.) CHAIR NICHOLS: You made a big impression. BOARD MEMBER DE LA TORRE: I had to let them know that I'd been here for seven years. But that -- two of the three have been here for a long time, and therefore it isn't about new versus old. Again, it's just a reshuffling.

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And going forward - I think this is very, very important - the reappointing that may or may not happen, new people will come on board. People will leave of their own volition - that has happened - from this Board as well. And there will be slots that come open that way.

9 Today, the Governor has five slots at UC Board of 10 Regents that are empty. Those are termed slots. That 11 impacts how they're doing their work.

We will have that same impact somehow. We can't avoid it. This is just a new mechanism that will create that shuffle that's going to happen organically over time. And, you know, it will play itself out. It's just a new form of math.

17 I was not supportive of this legislation. Ι 18 would have been with the Governor back then when this bill 19 was making its way through, because I thought, you know, 20 if it ain't broke, don't -- you don't need to fix it. But the legislature wanted to have a chance to check on the 21 22 members every six years. Fine. We just -- again, this is 23 just a transition. Everyone will have continued access to 24 all of us. The legislature will have access to some of 25 us, not the two legislative appointees. So I won't ever

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1 have to go before the Senate for this seat.

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But the public will have a chance to engage there. We'll have a chance to engage with the Governor's office, or with the legislative offices on this.

And I'll point out neither the Speaker nor the Pro Tem said anything about what was happening today.

CHAIR NICHOLS: No.

BOARD MEMBER DE LA TORRE: And so I think --

9 CHAIR NICHOLS: Nor did any of our other
10 stakeholders, and they've been well aware of the fact that
11 this was coming.

BOARD MEMBER DE LA TORRE: And certainly not the Governor's office.

And I'll close with this. I was part of some legislation creating a new authority before I left the legislature, and Governor Schwarzenegger was able to seed that board with his folks before he left. And it -- I wasn't very happy back then.

But this an existing board, and so you want that continuity. We've got a great group here that works well together. And that's what we need to be focused on, is to move onto the work and the regulatory work and all the other wonderful things that we do as a board. And just, you know, move on from this transition that we've got to go through.

1 You know, for folks who are concerned about 2 Governor Brown making appointments versus whoever the next 3 governor's going to be, again I just cited an example of 4 the previous governor making decisions for this governor 5 that still have impact today. It's just part of the б process. It's just part of the process. And we're not 7 going to change that here. 8 And I'm sure the next governor will be okay with 9 a few of the folks here remaining on the Board. Maybe not 10 everyone, but for the most part. So I'm very supportive 11 of just, you know, going with the staff recommendation. 12 We could, you know, nitpick it to death. But the bottom 13 line is nothing's really changing. And so let's just move 14 on. 15 Thank you. 16 CHAIR NICHOLS: Thank you. I'm glad I didn't cut 17 you off. 18 But I do think we should put the motion on the 19 table at this point. 20 BOARD MEMBER DE LA TORRE: I'll move that. VICE CHAIR BERG: And I'll second. 21 22 CHAIR NICHOLS: All right. Moved by Mr. De La 23 Torre, seconded by Ms. Berg. 24 Again, let's just do the roll call. 25 BOARD CLERK DAVIS: Dr. Balmes?

1	BOARD MEMBER BALMES: Yes.
2	BOARD CLERK DAVIS: De La Torre?
3	BOARD MEMBER DE LA TORRE: Aye.
4	BOARD CLERK DAVIS: Mr. Eisenhut?
5	BOARD MEMBER EISENHUT: Aye.
6	BOARD CLERK DAVIS: Senator Florez?
7	BOARD MEMBER FLOREZ: No.
8	BOARD CLERK DAVIS: Supervisor Gioia?
9	BOARD MEMBER GIOIA: Aye.
10	BOARD CLERK DAVIS: Ms. Mitchell?
11	BOARD MEMBER MITCHELL: Yes.
12	BOARD CLERK DAVIS: Mrs. Riordan?
13	BOARD MEMBER RIORDAN: Aye.
14	BOARD CLERK DAVIS: Supervisor Roberts?
15	Supervisor Serna?
16	BOARD MEMBER SERNA: Aye.
17	BOARD CLERK DAVIS: Dr. Sherriffs?
18	BOARD MEMBER SHERRIFFS: Yep.
19	BOARD CLERK DAVIS: Professor Sperling?
20	BOARD MEMBER SPERLING: Aye.
21	BOARD CLERK DAVIS: Vice Chair Berg?
22	VICE CHAIR BERG: Yes.
23	BOARD CLERK DAVIS: Chair Nichols?
24	CHAIR NICHOLS: Aye.
25	BOARD CLERK DAVIS: Motion passes 11 to 1.

CHAIR NICHOLS: Thank you. That was a very rich, robust discussion, and I'm glad it's over. And let's now take a break and have some lunch. And we will not be doing an executive session over lunch. I know people have other things that they need to move on to today as well. Do you want to take a full hour for lunch or --no, let's try to get -- let's get back at 1:30 and we'll do the last item. Thank you. (Off record: 12:53 p.m.) (Thereupon a lunch break was taken.) 

1 AFTERNOON SESSION 2 (On record: 1:37 p.m.) 3 CHAIR NICHOLS: All right. So, we are actually 4 back from lunch in case anybody was in doubt. And our 5 next item is the informational presentation about our use б of satellite remote sensing data to estimate pollution 7 levels across the State, which is a very interesting 8 topic. 9 However, before I turn to Mr. Corey, I want to take a moment to recognize one of our leaders from the 10 11 staff, and certainly one of longest serving division chiefs as far as I know in CARB's history. 12 Bart Croes has let us know that he is retiring this fall. 13 So I want to 14 say a few words about him because this may be the last 15 time we've got a chance to embarrass him in public. 16 He's already blushing. 17 Bart joined CARB in 1981, which was 37 years ago. He became chief of the Research Division in 2000. 18 In his 19 career Bart has been a major part of the organization's 20 success. He's worked on the main topics facing the agency 21 such as acid deposition. He's worked with most of the 22 field studies of the 1980s and 1990s that informed policy 23 to reduce particulate matter and ozone. 24 As division chief over research, he oversaw the 25 writing of the early action plan for AB 32, the motor

vehicle air conditioning portions of the Pavley and advanced clean car regulations, the programs dealing with hydrogen -- I'm sorry, hydrogen -- with HFCs and other chemicals.

And he also oversaw the multi-year Lake Tahoe atmospheric deposition study that was aimed at better understanding the impact of air pollution on the clarity of Lake Tahoe.

9 Bart is well known and respected in every major 10 academic area that works with air pollution and enjoys the 11 respect and admiration of his staff and the broader CARB 12 community.

13 So, Bart, I want to congratulate you on your 14 impressive public service career. And I think on behalf 15 of the entire Board, I can thank you for your work and 16 give you our best wishes for your retirement.

So having now put you on the spot, would you liketo say a few words.

(Laughter.)

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20 RESEARCH DIVISION CHIEF CROES: Thank you very 21 much, Mary, for those gracious comments.

It's been my pleasure to work for the Board all these years. I never imagined when I first started that I would continue on such a long career here. But it's -the position, as you know, has evolved, you know, where we

1 dealt with ozone and then it became PM2.5, and now greenhouse gases and multi-media issues. It's been 2 3 interesting all along. And it's very impressive what the 4 Board's been able to accomplish over all these years, and 5 I've really been glad to be a part of that. б Thank you. 7 CHAIR NICHOLS: Thank you. Thanks very much. 8 Okay. Now, we can go to the --9 BOARD MEMBER BALMES: Mary? Mary? 10 CHAIR NICHOLS: Yes. Oh, please. BOARD MEMBER BALMES: I just have to take this 11 12 opportunity to --13 CHAIR NICHOLS: Indeed. 14 BOARD MEMBER BALMES: -- say something about Bart 15 because I've worked with him for a long time. 16 I was on the Research Screening Committee before 17 being on the Board. So, I don't know how far we go back, 18 but it's pretty far back. 19 And so it's been great to work with you as a 20 fellow colleague in research with regard to air pollution 21 for a long time. But in the last few years I appreciate 22 your willingness to listen me and some of my crackpot 23 ideas. And especially I think it's been important by your 24 embracing my sort of passion for understanding co-benefits 25 of climate change mitigation policies.

1 So I'm going to miss you. Thanks. 2 RESEARCH DIVISION CHIEF CROES: Thank you, John. 3 4 CHAIR NICHOLS: Thank you. I shouldn't have cut off any Board members. 5 6 Anybody else have any comments they want to make? 7 Okay. Well, thanks. 8 Okay. Let's talk about now satellite remote 9 sensing. Exciting topic. 10 Richard, you want to do the intro? 11 EXECUTIVE OFFICER COREY: I do. I'm quite ready. Today the Board's going to hear how staff are 12 13 using satellite remote sensing data to estimate air 14 pollution levels and support air quality decision-making. 15 Staff will present results from our ongoing 16 collaborations with NASA, and describe plans that take 17 advantage of recent and upcoming advancement in satellite 18 capabilities. 19 I'll now ask Dr. Hyung Joo Lee to give the staff 20 presentation. 21 Hyung Joo. 22 AIR POLLUTION SPECIALIST LEE: Thank you, 23 Mr. Corey. 24 Good afternoon, Chair Nichols and members of the 25 Board.

decision-making. instruments.

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(Thereupon an overhead presentation was Presented as follows.)

AIR POLLUTION SPECIALIST LEE: Today I'm going to tell you about our in-house and collaborative research using satellite remote sensing data to support air quality

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8 AIR POLLUTION SPECIALIST LEE: I will begin with an overview of current satellite capabilities to measure 10 air quality. Then show how this data is being used to 11 support our programs.

I will conclude with some of the exciting 12 13 development expected from the next generation of satellite 14

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16 AIR POLLUTION SPECIALIST LEE: This is a 17 satellite image taken during the Thomas fire last December 18 demonstrating their capability to show the transport of wildfire smoke and the affected areas. However, to derive 19 20 the air quality levels, we need more quantitative data from the satellite's sensors. 21

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23 AIR POLLUTION SPECIALIST LEE: How do we obtain 24 such quantitative air quality information from satellite 25 sensors?

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This video shows NASA's MODIS sensor in orbit, which has been widely used for PM research. This sensor observes reflected sunlight from the earth, from both the atmosphere and the surface. To derive air quality information, NASA performs a calculation to extract the signal of reflected sunlight contributed by the atmosphere alone.

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9 AIR POLLUTION SPECIALIST LEE: There are advantages and limitations of using satellite data to 10 11 estimate air quality. The key advantage is wide spatial 12 coverage that complements currently available ground 13 monitors. This is particularly useful in areas without 14 ground monitoring. Satellite data from NASA are publicly 15 available at no cost and because consistent method are 16 used to derive air quality data, satellite observations 17 are comparable across the globe.

18 On the other hand, satellite data can only be 19 retrieved during daylight hours and in cloud-free 20 conditions. Most of the satellites are polar-orbiting and 21 only provide a snapshot of air quality information during 22 the satellite overpass time. Satellite sensors measure 23 through the column of air between the ground and the 24 satellite, and multiple statistical and physical 25 approaches have been developed to infer ground level air

quality information. However, this particular discrepancy is still critical for ozone because the majority of the signal to the satellite sensor comes from the stratospheric ozone layer.

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AIR POLLUTION SPECIALIST LEE: This is a list selected satellite remote sensing data available to estimate air pollutant levels including criteria pollutant, greenhouse gases, and other gaseous pollutant.

Each satellite product has different spatial and temporal resolution and data accuracy. And the selection of a specific data product will depend on the purpose of CARB's programs. This list is still evolving as advanced satellite instruments are deployed.

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16 AIR POLLUTION SPECIALIST LEE: We have applied 17 satellite data in a way that is complementary to ground monitors and other research tools. To achieve the 18 19 following three objectives: To screen for air pollution 20 hotspots; to track progress from California's control 21 program; and to augment research studies on various policy 22 relevant topics. Our in-house and collaborative research 23 activities will be presented in the following slide to 24 give specific examples of how we have supported CARB's 25 programs using satellite capabilities.

AIR POLLUTION SPECIALIST LEE: California has one of the densest ground monitoring networks in the world. And in fact, this network is needed to translate satellite measurements into air quality data. Still, ground PM2.5 monitors are not located in each area where people live.

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These spatial gaps can be filled by using satellite data, potentially identifying previously unrecognized PM2.5 hotspots.

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Aerosol Optical Depth, or AOD, is a measure of light extinction by particles and therefore reflect 12 particle abundance in the atmospheric column. Because of this physical property, AOD has been used as a predictor 14 of PM2.5.

15 We use statistical models to identify the 16 relationships between AOD and measure PM2.5, and these 17 relationships are used to estimate PM2.5 in the areas with 18 satellite AOD data but without ground PM2.5 data. These 19 PM2.5 estimates fill in the spatial gaps of ground PM2.5 20 measurement.

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22 AIR POLLUTION SPECIALIST LEE: This is our first 23 satellite research effort published in 2016. We estimated 24 PM2.5 concentrations using 10 kilometer resolution AOD 25 data for the years 2006 to 2012. The figure shows average

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PM2.5 levels in California, with a 7-year study period. Higher PM2.5 was estimated in highly populated areas; the San Joaquin Valley, the southern valley in particular; and the U.S.-Mexico border areas.

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Because of the expanded spatial coverage provided by the satellite data, these PM2.5 estimates were incorporated into the most recent version of CalEnviroScreen 3.0.

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AIR POLLUTION SPECIALIST LEE: This slide shows how satellite data fills in the spatial gaps of PM2.5. The figure on the left represents interpolated PM2.5 using only ground PM2.5 monitors. The interpolation method is a common approach that uses adjacent ground PM2.5 measurement to estimate PM2.5 in between monitors and was employed in older versions of CalEnviroScreen.

The figure on the right shows our satellite-based PM2.5 estimate from the previous slide as used in CalEnviroScreen 3.0, filling in almost all of the spatial gaps from the traditional approach.

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AIR POLLUTION SPECIALIST LEE: 10-kilometer resolution MODIS AOD data have been used for air quality and health research all over the world. But air quality and health scientists expressed the need for higher

1 resolution data. In response, NASA released one kilometer resolution AOD data, called MAIAC AOD. To take advantage 2 of this date for our programs, we recently estimated one 3 4 kilometer resolution PM2.5 levels for all of California 5 for 2016. The major advantage of 1 kilometer over б 10-kilometer data is that we now can look at community 7 level PM2.5 distributions and identify higher PM2.5 areas 8 within a city. When we apply this estimation method in 9 future years, we can potentially track progress in AB 617 10 communities.

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AIR POLLUTION SPECIALIST LEE: The next slides show results from our collaborative research with NASA's jet propulsion laboratory in Pasadena and Emory University. JPL recently released 4.4 kilometer resolution AOD data from the MISR sensor that can be used to estimate all four major PM2.5 components - nitrate, sulfate, organic carbon, and elemental carbon.

19 The MISR sensor is unique in that other satellite 20 sensors generate data only on total PM2.5 without data on 21 these components.

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AIR POLLUTION SPECIALIST LEE: As shown in these figures, all four components generally decrease in Southern California from the period of 2000 to 2009, on

the left, through 2010 to 2015, on the right, indicating that PM2.5 mitigation strategies have been effective in this region. For each PM2.5 component, the extent of the 4 changes varied in each of 4.4 kilometer grid. The grid-specific progress of the PM2.5 component can be used to assess their relative contribution to total PM2.5 trend in each location.

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8 Because each PM2.5 component is derived from 9 different source types, this assessment helps prioritize 10 PM2.5 component and their source types that need to be 11 further targeted to reduce total PM2.5 levels.

We are currently working with JPL to extend this 12 analysis statewide and through 2018.

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15 AIR POLLUTION SPECIALIST LEE: We have studied 16 using spatially resolved PM2.5 concentrations to estimate 17 exposures for health studies. In the field of 18 environmental epidemiology many health researchers have 19 already benefited from satellite-based exposure estimate, 20 and the use of satellite data for health studies, is 21 becoming more popular. We are also using satellite data 22 for more spatially representative environmental justice 23 analysis, complementing our ground monitoring based 24 analyses. For example, we plan to corporate one kilometer 25 resolution PM2.5 estimate into the next version of

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CalEnviroScreen.

In a previous Board item, we highlighted our airborne survey of methane super-emitters with JPL and the California Energy Commission. And we are beginning to use available satellite data on ammonia and nitrogen dioxide. This data will be used to compare with air quality models and emission trend.

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9 AIR POLLUTION SPECIALIST LEE: In the next few years, we expect to see more advanced satellite instrument 10 11 that will further support CARB's programs. In 2016, NOAA 12 launched a geostationary satellite called GOES-16, 13 designed to provide AOD data every 15 minutes at 14 2-kilometer resolution. Such high temporal resolution 15 enables us to estimate near real-time PM2.5 levels and 16 therefore track in-state and interstate PM2.5 transport. 17 This data should be available later this year.

18 After 2020, there will be two new NASA satellites 19 with advanced technologies. JPL's MAIA is designed 20 specifically for PM, providing daily particle size and 21 composition. TEMPO will be on board a geostationary 22 satellite, which is capable of retrieving hourly pollutant 23 levels, including formaldehyde and ground level ozone. 24 These satellites will enhance our capabilities to identify 25 sources and quantify transport across and between air

basins.

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In addition to these federally funded satellites, there will be numerous commercial satellites, some of which will produce air quality information with potential to inform our programs.

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AIR POLLUTION SPECIALIST LEE: In conclusion, satellite remote sensing is a powerful and cost-effective tool to support our programs. In our in-house and collaborative research, satellite-based PM2.5 estimates have been used to screen for air pollution hotspots, fill the spatial gaps of ground PM2.5 monitors, and track the progress of PM2.5 mitigation strategies.

14 These research activities have supported 15 CalEnviroScreen and satellite data also have the potential 16 to track progress related to AB 617 activities, and State 17 implementation plans.

Satellite applications need to be combined with ground resources, such as stationary and mobile monitoring because each data resource has different spatial and temporal scales and therefore different advantages and limitations.

In the near future, new satellite sensors will benefit CARB's programs due to additional pollutants, higher spatial resolution, and increased frequency.

AIR POLLUTION SPECIALIST LEE: This concludes my presentation. Thank you for your attention, and we are happy to take your questions.

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CHAIR NICHOLS: Great. Thank you.

You want to start?

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BOARD MEMBER BALMES: Yes. Thank you for that presentation.

9 Just for my fellow Board members, I actually 10 utilize remote sensing data from satellites in some of my 11 research, including on wildfires. And so I think it's 12 really great that the Research Division is developing an 13 expertise in this area. So thank you, Dr. Lee.

I guess the one question I have from your presentation is, in the conclusion slide, you mentioned tracking progress with AB 617 and SIPs. So I think with SIPs there's no question that we can track progress over time with satellite data.

But tell me how you're going to use -- track progress with AB 617. I realize we have finer resolution data for PM2.5 than we used to from remote sensing. But I still think it's going to be -- I still have trouble understanding how we're going to use that to track progress with AB 617 at the community level.

AIR POLLUTION SPECIALIST LEE: Well, we have

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1-kilometer resolution PM2.5 estimate. And that is in 2016. So we are going to apply this estimation approach 3 to future years, so after AB 617 start. So we can compare 4 this 1 kilometer PM2.5 concentration before and after AB 5 617.

б BOARD MEMBER BALMES: Okay. So I get that. So 7 what we aren't going to be trying to do is monitor on a 8 semi-continuous basis using the satellite data how a 9 specific community like Richmond is doing after -- after 10 we start implementing the community air monitoring program 11 and emissions reduction program in Richmond, right?

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Maybe I wasn't clear.

13 I have trouble seeing -- I can see before and 14 after long term, on a long-term time scale. But I don't 15 want the Board members to think that we're going to be 16 able to continuously monitor with satellite data how we're 17 doing with 617. I mean I guess it's theoretically possible, but... 18

19 CHAIR NICHOLS: Yeah, I was going to say, why 20 not? Why shouldn't we?

21 BOARD MEMBER BALMES: Well, let's see what they 22 say.

23 RESEARCH DIVISION CHIEF CROES: So, Dr. Balmes, there are other data products that we're going to take 24 25 advantage of. So, for example, the elemental carbon data

that we showed, I think that would be a good way to track 1 progress on diesel PM sources. 2

And, you know, one other advantage of satellite 4 data is we're able to go back in time pretty far, to 2001, and, you know, look continuously what's happened as the control programs have evolved.

You know, limitation are -- we're limited to the pollutants that can be looked at with the satellite data.

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BOARD MEMBER BALMES: Exactly.

10 RESEARCH DIVISION CHIEF CROES: So, for instance, toxics are very difficult. Things like BTEX aren't 11 measured by satellites, like Chrome VI and lead that 12 13 communities are worried about. So obviously there would 14 have to be other approaches.

15 We do have a collaboration we didn't talk about 16 in this presentation with San Jose State University and UC 17 Riverside where they're trying to take the 1-kilometer PM2.5 down to 1- and 200-meter resolution. 18 So we're 19 hoping that approach if successful will help it in this 20 regard as well.

CHAIR NICHOLS: Yes. BOARD MEMBER SHERRIFFS: Yeah, thank you. Amazing. Okay. Thanks.

Who else is using the data? How big a user are

we compared to other folks who are tapping into this? And can you say a little more about how this complements the ground monitoring. Does it replace some ground monitoring potentially? Are we there yet? And how the cost compares, what's this cost as compared to the ground monitoring?

7 BOARD MEMBER BALMES: While you're thinking of 8 your answer, I'm reviewing a paper right now that -- from 9 the CDC, the environmental health tracking program at CDC 10 that is using a version of this data, not at the 11 1-kilometer resolution yet.

So it's being applied -- in fact, there are Emory collaborators are the same people that collaborate with the CDC.

15 RESEARCH DIVISION CHIEF CROES: So just to take 16 your questions in order.

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17 So this is not a replacement for ground monitors; 18 it's complementary to it. So ground monitors measure what 19 people breathe 24/7. This is away to, you know, get a 20 fairly consistent method applied to the entire State. You 21 know, obviously you can't put ground resources at every 22 location. And this ability to go back in time to 2000, I 23 think is very important as well.

At this point everything is free to us, you know, from these federal agencies. And I think overall it's a

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very cost-effective program, you know, because you get
 global concentrations.

We appear to be the single biggest user of this data. I'm not aware that local districts, other states. I think EPA uses the data a bit. But, you know, we're actually working hand in hand with the researchers at NASA and JPL. And I think having Dr. Lee has really been quite a step change for us in our ability to access this data.

BOARD MEMBER SHERRIFFS: Thank you.

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CHAIR NICHOLS: Yes, please.

BOARD MEMBER SERNA: Thank you.

So on that point, how proprietary is the data? Are academic institutions -- do they have access to this? So that -- especially geographers. I happen to be a proud one. I mean, having earned an undergraduate degree in geography. Are programs at the university level accessing the data, will they access the data, help refine the use of the instrumentation?

AIR POLLUTION SPECIALIST LEE: Anybody can access the data. But NASA provides the raw data. So that's not a text file so they can't just look at the AOD values right away. But instead they have a specific data format. So we need to open that satellite format data to the Excel file, the text files. So then we can use it.

But one of the challenges for the general people

is to open the decode, the satellite data format. So that was the big challenge for them.

So if -- once we have that decoding process, then the next part is to use the statistical model to relay the AOD and PM2.5. So the big challenge is to decode the satellite data format.

7 BOARD MEMBER SERNA: That's encouraging to hear. 8 It seems like this is a terrific opportunity to, I mean, 9 explore kind of an unending capacity to develop all kinds 10 of schematic cartographic products, if you will, whether 11 in the form of dissertations or otherwise, in terms of 12 understanding the relationship between fine particulates, 13 criteria pollutants, and things like transportation 14 networks and growth and development and commerce. I mean, 15 it seems like the opportunities are endless here.

Thank you.

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17 CHAIR NICHOLS: I guess my question relates more 18 to the future of these kinds of programs. I remember 19 reading some articles in the fairly recent past about 20 cutbacks for funding for satellite programs and NASA; and 21 curious to know kind of where are we right now and where 22 does it look like we're headed?

23 RESEARCH DIVISION CHIEF CROES: So we did speak 24 to our colleagues at NASA and JPL about this concern. So 25 we know from them that certain climate-oriented

1 satellites, you know, that measure greenhouse gases, those 2 have been mothballed. You know, ones that they had 3 planned to put into space to increase capabilities. But 4 it seems like these advanced next-generation satellites 5 that measure air quality parameters are still scheduled to 6 be launched, and it seems like there's still a full 7 commitment to that aspect of the program.

In fact, NASA is funding, you know, a fair number of health researchers to utilize this data. For example, the children's health study is using some of this data as well.

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CHAIR NICHOLS: So there maybe is a shift in priorities but not necessarily a backing away completely.

RESEARCH DIVISION CHIEF CROES: I think it's more they've continued what they're doing on air quality and they're slowing down, they're discontinuing some of what they're doing on climate change.

18 CHAIR NICHOLS: And I saw an article but no 19 follow-up that possibly some private organizations 20 including Environmental Defense fund were looking at 21 taking over their own climate satellite. Is anything 22 going on with that?

23 RESEARCH DIVISION CHIEF CROES: We're actually in 24 pretty active discussions with Environmental Defense Fund. 25 So they've put out a proposal to do what they call

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1 MethaneSAT. So this would be private sector or -satellite that measures methane fluxes in general. 2 And 3 then, you know, we've demonstrated this technology called AVIRIS-NG that can identify specific super emitters to 4 5 within a few meters. And so we've -- we're joining forces б with them to try to get both the satellite approaches, 7 which are very complementary, launched in the next few 8 years. We're both in a money-raising mode right now. And 9 then we're in active discussions about how we share data 10 and make that publicly available.

11 CHAIR NICHOLS: I think that's really important 12 not to try to supplant the work that the federal 13 government should be funding but more to just put 14 California's stamp on some of these research programs if 15 we can find the means to do it with, given all the 16 resources that we have both in science and in funding 17 potential.

So good. I'm glad to hear that's going on.
Any other questions or comments from the Board?
We have one person who signed up to speak on this
item.
Luis Olmedo.
MR. OLMEDO: Hello again. My name's Luis Olmedo,

24 executive director of Comite Civico Del Valle.
25 And a couple of things I would like the staff in

the Research Division and the Board to really consider is there's a lot of research priorities right now happening in the community -- environmental justice communities. And like to see actionable research happen. And would like to see these partnerships happen with local community organizations.

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7 I haven't seen significant or sufficient 8 partnerships from the Research Division at ARB 9 establishing these partnerships. I know they're very excited, and I don't want to put any credit to any, but 10 11 the enthusiasm that I perceive is that they're very excited about the data sector, very excited about the 12 13 satellites, very excited about research that perhaps may 14 not even benefit the actionable type of research that 15 communities are looking for right now.

16 AB 617 is putting forth a lot of research 17 activity in the entire State and making a significant 18 We need the Research Division to focus on investment. those research studies, prioritize those communities. 19 We 20 need a lot of help. There's going to be methane research. 21 There's going to be all types of toxics and criteria type 22 of pollutants. Research that's going to be happening on 23 the ground. We need the Research Division to focus on the communities, on environmental justice, on disadvantaged 24 communities. That's the language that I like to hear. 25

My concern is that when we're exploring into 1 these privatized models that are vulnerable to 2 privatization or vulnerable to -- there are large --3 there's sensors out there that the Research Division 4 5 continues to use that are not open source, they're not -б you know, I've heard feedback where it's like we just care 7 about the end number, we don't care about how you arrive It's, like, no, that's not true. 8 to that number. You 9 care about how you get to that number, because otherwise 10 what kind of credibility and validity do we have as 11 community researchers, community scientists? We don't. 12 We want to operate at the standards that government and 13 ARB is going listen -- is going to pay attention to our 14 research and to the information we bring forth.

So I do -- I would like to ask the Research Division and the Board and the executives, who's always been very supportive, to really help us redirect them into working with communities moving forward.

19 CHAIR NICHOLS: Luis, I think -- if I may, I 20 would like to suggest a process for you to do this. 21 Because I don't really think you want the Board to stop 22 doing some of the far-reaching, globally significant 23 research we are still doing and we will continue to do. I 24 think what you want is to see how that can be applied and 25 used better to answer questions that you have about air

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quality in the community.

I think the way or the place that would be the most effective to do that would be through the Research Screening Committee, which is the body that has to approve the research plan and the research funding and to approve all of the reports that come in from research that we fund.

8 So this isn't just the Research Division people, 9 you know, doing research themselves. They're also 10 spending money up through academic research to try to get 11 more studies done and to leverage more studies. And I think you do have a lot to contribute in terms of how to 12 think about what kinds of studies would be the most 13 14 useful. But the stage at which I think that's going to be 15 the most useful -- I'm looking to Mr. Corey. He was 16 looking a little bit puzzled at me because he doesn't know 17 where I'm going with this. But I really do feel like 18 the -- from what I've seen in the past at least that if 19 you were able to be involved in the process that every 20 year comes up with the suggestions for where research should be done and what kinds of studies and the RFPs, 21 22 that you could in fact have a big influence on those and 23 get more of exactly what you're asking for. And you can disagree or have a different idea. I just thought -- I 24 25 want to just sort of have that discussion since, you know,

Mr. Olmedo has taken the time and the trouble to come and think about these issues with us, that we should have some sort of a response.

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EXECUTIVE OFFICER COREY: No, he has. 4 In fact, 5 we've got -- working with Luis on a number of fronts. And б I think your characterization of really what informs the 7 overall research projects that are brought to this Board 8 and ultimately many projects that run over the course of the years, it is the research plan. And in fact I think 9 10 one of the transitions that we've been making and was 11 presented to this Board earlier in the year was really 12 transitioning to a longer term research plan rather than a 13 year by year vision.

So I think that is the right form. In fact, taking this exchange here I think a starting point. Actually Luis and I are meeting later this afternoon. We'll have this conversation and we'll pull the -- I think some follow-up steps with the Division in terms of how the research plan connects and where those opportunities are.

> BOARD MEMBER BALMES: Madam Chair, may --CHAIR NICHOLS: Yes.

BOARD MEMBER BALMES: I would just -- having been on the Research Screening Committee for a long time, and knowing how those solicitations go out, you know, they haven't gone out really to the community folks. You know,

they've gone out to various academic institutions and other stakeholders. So I think that's one way we could do things differently. We could actually inform people of the research plan at a -- more broadly, the research planning process.

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And just like I mentioned earlier when we were б 7 talking about the greenhouse gas reduction fund, spending from another agencies, you know, where we give 8 9 community -- I would say actually give community 10 engagement advice guidance, I think that we in planning our research efforts with a long-term planning process 11 that Mr. Corey mentioned, that we, you know, heed the call 12 13 to have more actionable research that will benefit our 617 14 process. I mean I actually think that -- As Dr. Lee 15 mentioned in his response to my question, that there's a 16 lot of rich opportunities to do before-and-after research 17 with AB 617 implementation. So I just -- I think we can 18 shift our goals a bit with regard to the research planning 19 process to be more community engaged and AB 617 20 supporting.

21 CHAIR NICHOLS: So we agree with you. And thank 22 you for the comment. I think we need to give some thought 23 to how best to institutionalize it to make it real, so you 24 don't have to have people spending all day every day, you 25 know, at CARB to have that kind of influence. But we can

1 make sure that there are engagement points along the way 2 and that this kind of thinking informs what the staff is 3 doing as they interact with the research community as 4 well.

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So thank you.

MR. OLMEDO: And, Madam Chair, let me just close my comment, is I agree with all the comments. I think all of you pretty much completed my entire thought.

9 Dr. Balmes closed it very well. I think he said 10 it much better than I did. With limited time, I just try 11 to get to what my vision would be. I do not want to 12 hinder on progress. I think it's great, the Research 13 Division, what they're doing.

And so I did skip into the -- you know, what my vision would be.

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So thanks to all of you.

CHAIR NICHOLS: Thank you.

Okay. That is the conclusion of our agenda,
except for any public comment, if anyone signed up for the
general public comment.

They didn't.

Okay. Well, then we're actually finished and wecan adjourn. Thank you all very much.

(Thereupon the Air Resources Board meeting adjourned at 2:16 p.m.)

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