MEETING

STATE OF CALIFORNIA AIR RESOURCES BOARD

BYRON SHER AUDITORIUM

SECOND FLOOR

1001 I STREET

SACRAMENTO, CALIFORNIA 95814

THURSDAY, JUNE 27, 2013

9:09 A.M.

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

A P P E A R A N C E S

BOARD MEMBERS:

Ms. Mary Nichols, Chairperson

Dr. John Balmes

- Ms. Sandra Berg
- Mr. Hector De La Torre

Supervisor John Gioia

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Ron Roberts

Supervisor Phil Serna

Dr. Alex Sherriffs

Professor Daniel Sperling

STAFF:

Mr. Richard Corey, Executive Officer
Dr. Alberto Ayala, Deputy Executive Officer
Ms. Edie Chang, Deputy Executive Officer
Ms. Lynn Terry, Deputy Executive Officer
Ms. La Ronda Bowen, Ombudsman
Mr. Bart Croes, Chief, Research Division
Mr. Dan Donohoue, Chief, Emissions Assessment Branch, Stationary Source Division

APPEARANCES CONTINUED STAFF: Ms. Jennifer Gray, Air Pollution Specialist, SIP and Local Government Strategies Section, Planning and Technical Support Division Ms. Peggy Jenkins, M.S., Manager, Indoor Exposure Assessment Section, Research Division Mr. Nesamani Kalandiyur, Air Resources Engineer, Transportation Analysis Section, Planning and Technical Support Division Mr. Kurt Karperos, Chief, Planning and Technical Support Division Ms. Deborah Kerns, Senior Attorney, Office of Legal Affairs Ms. Cynthia Marvin, Chief, Stationary Source Division Mr. Paul Milkey, Staff Air Pollution Specialist, Technical Analysis Section, Stationary Source Division Ms. Christina Morkner Brown, Staff Attorney, Office of Legal Affairs Ms. Claudia Nagy, Attorney, Office of Legal Affairs Ms. Annmarie Rodgers, Manager, Climate Action and Research Planning Section, Research Division Dr. Linda Smith, Chief, Health and Exposure Assessment Branch, Research Division Mr. Jon Taylor, Manager, Transportation Analysis Section, Planning and Technical Support Division ALSO PRESENT: Ms. Jenny Bard, American Lung Association in California Ms. Pamela Bensoussan, Deputy Mayor, City of Chula Vista Mr. Andrew Chesley, San Joaquin Council of Governments

APPEARANCES CONTINUED ALSO PRESENT: Mr. Stuart Cohen, TransForm Mr. Justin Fanslau, California State Association of Electrical Workers Mr. Gary Gallegos, San Diego Association of Governments Mr. Steve Heminger, Metropolitan Transportation Commission Mr. Justin Horner, Natural Resources Defense Council Mr. Hasan Ikhrata, Southern California Association of Governments Mr. Chris Jones, Researcher, University of California, Berkeley Dr. Daniel Kammen, Professor, University of California, Berkeley Mr. Joe Krovoza, Mayor, City of Davis Mr. Howard Levenson, Cal Recycle Mr. Marc Luce, Supervisor, Napa County Mr. Mike McKeever, Sacramento Area Council of Governments Former Senator Don Perata Mr. Michael Quigley, California Alliance For Jobs Ms. Rhodesia Ransom, Chief, City of Tracy Planning Commission Mr. Ezra Rapport, Association of Bay Area Governments Mr. David Schonbrunn, Transdef.org Mr. David Siegel, Chief, Air, Community and Environmental Research Branch, Office of Environmental Health Hazard Assessment

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

ALSO PRESENT:

Ms. Kara Vuicich, Alameda County Transportation Commission Ms. Amy Rein Worth, Mayor, City of Orinda

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PROCEEDINGS 1 CHAIRPERSON NICHOLS: Microphones, for those who 2 3 are not familiar with this particular set-up, if you want 4 to speak, you have to actually press the base of your 5 microphone so the green light goes on. And otherwise, if you're not speaking, it's б 7 probably better to keep it off, just because then we don't get any feedback from all the other electronics we have up 8 9 here. 10 Welcome, everybody. Good morning. The June 27th 11 2013 public meeting of the Air Resources Board will come 12 to order. And before we begin any of our other business, 13 we will all please rise and say the Pledge of Allegiance 14 to the flag. 15 (Thereupon the Pledge of Allegiance was 16 recited in unison.) 17 CHAIRPERSON NICHOLS: The Clerk of the Board will 18 please call the roll. 19 BOARD CLERK JENSEN: Dr. Balmes? 20 BOARD MEMBER BALMES: Here. 21 BOARD CLERK JENSEN: Ms. Berg? 22 BOARD MEMBER BERG: Here. 23 BOARD CLERK JENSEN: Mr. De La Torre? BOARD MEMBER DE LA TORRE: 2.4 Here. 25 BOARD CLERK JENSEN: Supervisor Gioia?

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BOARD MEMBER GIOIA: 1 Here. 2 BOARD CLERK JENSEN: Mayor Pro Tem Mitchell? 3 BOARD MEMBER MITCHELL: Here. BOARD CLERK JENSEN: Mrs. Riordan? 4 5 BOARD MEMBER RIORDAN: Here. 6 BOARD CLERK JENSEN: Supervisor Roberts? 7 BOARD MEMBER ROBERTS: Here. 8 BOARD CLERK JENSEN: Supervisor Serna? 9 BOARD MEMBER SERNA: Here. BOARD CLERK JENSEN: Dr. Sherriffs? 10 11 BOARD MEMBER SHERRIFFS: Here. 12 BOARD CLERK JENSEN: Professor Sperling? 13 BOARD MEMBER SPERLING: Here. 14 BOARD CLERK JENSEN: Chairman Nichols? 15 CHAIRPERSON NICHOLS: Here. 16 BOARD CLERK JENSEN: Madam Chairman, we have a 17 quorum. 18 CHAIRPERSON NICHOLS: Thank you very much. We 19 certainly do. We have almost entirely a full house, which 20 is great. Before we do anything else, I want to introduce 21 our two Board members, one of whom has already been sworn 22 in, and that's Mayor Judy Mitchell, just sitting to my 23 right, and the other, who is about to be sworn in and 24 who's brought a few friends and family along with him for 25 the occasion.

1 And I would like to invite now a former member of 2 this Board, Senator Mark DeSaulnier, who's gone on to do a 3 few good things since he left us, to come up and do the 4 swearing in, or are we going to do it down at the podium? 5 Where are we actually going to make happen? Has anybody б figured that out? 7 BOARD MEMBER DeSAULNIER: You better not let us 8 up there or we'll --9 (Laughter.) 10 CHAIRPERSON NICHOLS: Oh, and he's also 11 accompanied by another member of the legislature, Loni 12 Hancock. Okay. Why don't you come up here and we can use 13 a mic up here. 14 SENATOR DeSAULNIER: We haven't rehearsed this, 15 so we'll see how it goes. 16 (Laughter.) 17 SENATOR DESAULNIER: If we do it wrong, you might 18 not be lawfully -- which might be a benefit. 19 BOARD MEMBER GIOIA: It may not be such a bad 20 thing. 21 (Laughter.) 22 SENATOR DeSAULNIER: First off, it's delightful 23 to be back here with a lot of former colleagues and all 24 the great work that this institution does. 25 And it's a delight to swear in my friend, my

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1 former colleague on the Contra Costa County Board. So, John, if you'd raise your right harm. 2 Т — — 3 BOARD MEMBER GIOIA: I --4 5 SENATOR DeSAULNIER: -- John Gioia ---- John Gioia --6 BOARD MEMBER GIOIA: 7 SENATOR DeSAULNIER: -- do solemnly swear --8 BOARD MEMBER GIOIA: -- do solemnly swear --9 SENATOR DeSAULNIER: -- that I will support and 10 defend --11 BOARD MEMBER GIOIA: -- that I will support and defend --12 13 SENATOR DeSAULNIER: -- the Constitution of the 14 United States --15 BOARD MEMBER GIOIA: -- the Constitution of the 16 United States --17 SENATOR DeSAULNIER: -- and the Constitution of the State of California --18 19 BOARD MEMBER GIOIA: -- and the Constitution of 20 the State of California --21 SENATOR DeSAULNIER: -- against all enemies 22 foreign and domestic --23 BOARD MEMBER GIOIA: -- against all enemies 24 foreign and domestic --25 SENATOR DeSAULNIER: -- that will bear true faith

1 and allegiance --2 BOARD MEMBER GIOIA: -- that I will bear true 3 faith and allegiance --SENATOR DeSAULNIER: -- to the Constitution of 4 the United States --5 BOARD MEMBER GIOIA: -- to the Constitution of б 7 the United States --8 SENATOR DeSAULNIER: -- and the Constitution of 9 the State of California --10 BOARD MEMBER GIOIA: -- and the Constitution of the State of California --11 12 SENATOR DeSAULNIER: -- that I take this 13 obligation freely --14 BOARD MEMBER GIOIA: -- that I take this 15 obligation freely --16 SENATOR DeSAULNIER: -- without any mental 17 reservation --18 BOARD MEMBER GIOIA: -- without any mental 19 reservation --20 SENATOR DeSAULNIER: -- or purpose of evasion --BOARD MEMBER GIOIA: -- or purpose of evasion --21 SENATOR DeSAULNIER: -- that I will well and 22 23 faithfully --24 BOARD MEMBER GIOIA: -- that I will well and 25 faithfully --

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1 SENATOR DeSAULNIER: -- discharge the duties upon 2 which I am about to enter. 3 BOARD MEMBER GIOIA: -- discharge the duties upon which I am about to enter. 4 5 SENATOR DeSAULNIER: Congratulations. 6 BOARD MEMBER GIOIA: Thank you very much. 7 Thank you, Loni. 8 (Applause.) 9 SENATOR DeSAULNIER: It may be the last time you 10 smile. 11 (Laughter.) 12 CHAIRPERSON NICHOLS: Are you suggesting that there are issues here. 13 14 (Laughter.) 15 SENATOR DeSAULNIER: No. We're all one big happy 16 family. 17 CHAIRPERSON NICHOLS: Great. 18 Well, I think, as John Gioia knows, he has a very 19 important role to fill here. The Bay Area seat on this 20 Board does have a distinguished history, and so we're looking forward to having you continue that tradition. 21 Ιf 22 you'd like to say a few words. 23 BOARD MEMBER GIOIA: Well, I don't want to take 24 up much of our time. I know it's a busy day. But I just 25 want to say I'm really honored to serve with all of you.

This has been an amazing Board that has led, not only this country, but led the world on so many policies with regard to air quality. And so I'm looking forward to serving with all of you, and, of course, our Chair who's been named as the 100 -- one of the most 100 influential people in the world, because of her environmental work.

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And so I'm really proud to be representing the Bay Area, because I think in the Bay Area we have been very progressive on many of these issue. And, of course, I need to acknowledge Senator DeSaulnier, who had this seat a few years ago. And so -- and Senator Hancock. We've had great leadership out of our delegation in the Bay Area, and I know have worked with the Air Resources Board.

15 And I just want to acknowledge some of my staff 16 who are here. I appreciate you all coming and supporting 17 me, because as you all know, especially to the county 18 supervisors and city council members and mayors who serve 19 on this, as well as the others, but when you're elected to 20 a council or board of supervisors, this other work is the 21 extra work you do on top of everything else every day. 22 And everybody here does this whether they're the electeds 23 or not elected, because they care about this work. It's very important work, and I look toward to continuing this 24 broader work for the benefit of the State of California. 25

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So thank you.

CHAIRPERSON NICHOLS: Thank you so much. It's 3 great to have you here, and I just want to acknowledge 4 again -- because Judy Mitchell was sworn in at our 5 Haagen-Smit Symposium in Long Beach, gosh, sometime ago б now, a few weeks. A few weeks -- the importance that this 7 Board has placed on the liaison relationships that we have with the local air districts. Unlike some other agencies, we don't have local branches. We are partners with the 10 local districts, most of which actually were created 11 before the State Air Resources Board even came into 12 existence.

13 So it's always been a interesting dynamic, and it 14 is a dynamic between the State and the local air boards to 15 try to make sure that we're collaborating and mobilizing 16 all of our resources as effectively as we can. I think in 17 recent years, we've enjoyed some really excellent times, 18 because we've all come to recognize that with the looming 19 threat of global warming, there's more work than any of us 20 can do separately or collectively. And so finding the 21 best ways that we can all be helping to make a difference 22 in moving our State forward is really the task that has 23 been added to everything else we do to protect public 24 health and try to promote clean technology. So these are 25 very good times to be on the Air Board, and I really want

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to welcome both of you to our midst.

I need to announce a couple things at the 2 3 beginning, one of which is that we have speaker cards for 4 anyone who wishes to testify and did not sign up originally on-line. We ask that you fill out a card and 5 б give it to the clerk of the Board over here at the desk. 7 If you have signed up on line, you don't have to fill out 8 a card, but we do need you to check in with the clerk just 9 to make sure that your name is still on the list.

We will be imposing a three-minute time limit on speakers, and we appreciate it if when you come up to the 12 podium to speak, you put your testimony in your own words and not read your written testimony, because we will have 14 it in writing and we can read faster than you can talk.

(Laughter.)

16 CHAIRPERSON NICHOLS: For safety reasons, we have 17 to point out the exits at the rear of the room and to the 18 side of the dais where we're sitting up here. If there is 19 a fire alarm, and we had one earlier this week actually, 20 we will be told to clear the building and stay -- proceed 21 by stairs outside to the park until we get the all-clear 22 sign and are allowed to come back. Every once in awhile 23 alarms just go off randomly in this building. It seems 24 they vacated several floors earlier this week. So I'm not 25 hoping that that's going to happen but just to be

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1 prepared. Okay. With that, I think we can move straight to 2 the agenda. And our first item, which is a consent item 3 4 is 11 research proposals, which have been bundled together 5 in one item. б So I first need to ask the clerk if any witnesses 7 have signed up to speak on this item? BOARD CLERK JENSEN: (Shakes head.) 8 9 CHAIRPERSON NICHOLS: No. Are there any Board members who would like to see 10 this item taken off of the consent calendar? 11 12 Seeing none. 13 Then we close the record officially and I Okay. 14 will ask if the Board members have had an opportunity to look at the proposals, if you have any questions you'd 15 16 like to ask? 17 If not, then I would like a motion and a second 18 ear 19 BOARD MEMBER RIORDAN: I'll move, Madam Chairman, 20 that we adopt the staff recommendation to approve these. 21 CHAIRPERSON NICHOLS: Thank you. 22 BOARD MEMBER BALMES: Second. 23 CHAIRPERSON NICHOLS: There's a second from Dr. 24 Balmes. 25 Okay. All in favor please say?

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(Ayes.) 1 CHAIRPERSON NICHOLS: Any opposed? 2 3 Any abstentions? 4 BOARD MEMBER SPERLING: Chairman Nichols. I'm 5 recusing myself from this vote. б CHAIRPERSON NICHOLS: Dr. Sperling is not voting 7 on this item. 8 BOARD MEMBER BALMES: Madam Chair, I should do 9 that as well. 10 CHAIRPERSON NICHOLS: Okay. Both of you. Then 11 you have withdraw your second. BOARD MEMBER BERG: So I'll do the second. 12 13 CHAIRPERSON NICHOLS: All right. Then we'll have 14 a second. 15 Yes. 16 BOARD MEMBER GIOIA: Just one want comment. Ι 17 wanted to make the comment after we approved it. I think 18 it's really appropriate that we're approving the study 19 developing a new methodology for analyzing potential 20 displacement, because we're going to hear this morning a 21 presentation from the Bay Area about its Sustainable 22 Communities Strategy. One of the issues is how to avoid 23 displacement. And the strategy attempts to do that. And 24 this study is going to help inform, I think, the regions 25 as they adopt their Sustainable Communities Strategy. And

1 it's timely that it's today.

12

2 CHAIRPERSON NICHOLS: Thank you for noting that.3 It's very timely.

Okay. So having completed our first item, we can
go on to number two, which is also -- we've got several
consent items this morning. This one is the public
meeting to consider a State Implementation Plan revision
to update the demonstration of contingency measures for
the annual PM 2.5 standard for the San Joaquin Valley.

10 Did we have any speakers signed up on this one 11 either?

BOARD CLERK JENSEN: (Shakes head.)

13 CHAIRPERSON NICHOLS: Okay. Any questions or 14 comments? Any of our representatives from the valley or 15 any staff have anything to add?

This is a obviously straightforward part of the usual SIP process. But if none, then we can just go ahead and have a motion to approve it.

BOARD MEMBER SHERRIFFS: Motion.
BOARD MEMBER RIORDAN: Second.
CHAIRPERSON NICHOLS: All in favor say aye?
(Ayes.)
CHAIRPERSON NICHOLS: Any opposed?
Any abstentions on this one?
No. Good.

Okay. We also have the opportunity to appoint a new member to the Environmental Justice Advisory Committee. This is a consent item, but I'd like to ask for just a comment from the staff on where we are on this process?

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Mr. Corey, if you'd like to give us an update.

EXECUTIVE OFFICER COREY: Sure, Chairman Nichols. As you mentioned, staff is proposing the appointment of Luis Olmedo from Imperial County to the Environmental Justice Advisory Committee, making a 13th member. And as you recall, AB 32 directed the Board to convene the Committee of at least three members by '07 to advise the 12 13 Board in developing the original scoping plan and any 14 other pertinent matter implementing the Global Warming 15 Solutions Act of '06.

16 And the first Advisory Committee was appointed 17 back in January of '07 to advise the Board on the first 18 scoping plan. Earlier this year, staff solicited 19 nominations to convene the Environmental Justice Advisory 20 Committee to advise the Board on the update to the scoping 21 Two former members plus seven new members were plan. 22 appointed to the Committee at the March Board hearing. Per the Board's direction, three additional members from 23 24 underrepresented regions of the State were also appointed 25 to the Committee.

And in early May, staff received multiple 1 nominations for Luis Olmedo from Imperial County to sit on 2 3 the Advisory Committee. Mr. Olmedo has 12 years of 4 experience addressing environmental justice issues in 5 Imperial County. Staff believes he would be an excellent б addition to the Committee. And as a result, staff is 7 recommending that the Board appoint him as an additional 8 member.

9 CHAIRPERSON NICHOLS: Thank you. Mr. De La Torre was the person who initially, I think, made the 10 11 recommendation that we expand the Environmental Justice 12 Advisory Committee. And in your original proposal, I 13 think we were looking at Inland Empire and the valley as 14 places that were underrepresented. But I hope you will 15 agree that Imperial is also a place that's in serious need 16 of additional representation.

17 BOARD MEMBER DE LA TORRE: Absolutely. I wanted 18 to thank my fellow Board members for supporting this 19 effort. It was clear when we came up with the first list 20 that that area, which is a significant area, and has 21 tremendous pollution issues, was not represented. And so 22 to have somebody from the Inland Empire/Imperial Valley is 23 very important to getting the kind of input that we need 24 as we move forward. So thank you all for doing this. 25 Thank staff for doing the extra work. I really appreciate

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1 it.

BOARD MEMBER BALMES: And if I might just chime 2 3 in. I've worked with Mr. Olmedo with regard to asthma in 4 the Imperial Valley on the California Department of Public 5 Health's California Breathing program and found him to be б well-informed, as well as a strong advocate for 7 environmental justice. 8 CHAIRPERSON NICHOLS: That is great. I'm really 9 looking forward to this new committee beginning its work 10 in helping us with our scoping plan. 11 Okay. Would you like to move the appointment then or move the item? 12 13 BOARD MEMBER DE LA TORRE: So moved. 14 BOARD MEMBER BALMES: Second. 15 CHAIRPERSON NICHOLS: Second, Dr. Balmes. 16 Okay. All in favor please say aye? 17 (Ayes.) 18 CHAIRPERSON NICHOLS: Any opposed? 19 Any abstentions? 20 Great. All right. Our next item is the CoolCalifornia 21 22 Cities Challenge Award. And this is a fun project. We 23 are blazing new trails here, and we're recognizing cities that have been at the forefront of this. 24 25 We want to acknowledge the top three cities that

1 participated in the CoolCalifornia city pilot project. This is one of those situations where everybody who 2 3 participated actually is a winner, but we did have a 4 competition for those who achieved the most by way of 5 reductions as a result of this program. So I am going to ask staff for a few words on this one as well. б 7 Mr. Corey. 8 EXECUTIVE OFFICER COREY: Yes, Chairman Nichols. 9 And before I introduce staff and the presentation, I did 10 want to acknowledge a new face at the table here. I'm 11 going to say a new face but an old face, but it doesn't 12 come off quite --13 (Laughter.) 14 CHAIRPERSON NICHOLS: Well, it's getting worse, 15 Richard. 16 (Laughter.) 17 EXECUTIVE OFFICER COREY: I'm trying. (Laughter.) 18 19 BOARD MEMBER SPERLING: Familiar. 20 EXECUTIVE OFFICER COREY: That's the word. 21 I want to acknowledge Edie Chang as our new 22 Deputy Executive Officer. Edie brings with her over 20 23 years of experience with ARB in our Mobile Source Group, 24 our Planning Group, our Stationary Group, and our Climate 25 Group, and just extraordinary creativity, drive,

communication skills, and we are just very pleased to have 1 her in this position. 2

CHAIRPERSON NICHOLS: Yes. We are indeed very 4 lucky to have Edie with us. The only thing that I find a little bit appalling is that she's been with us for 20 Was she in elementary school when she started? vears. (Laughter.)

8 CHAIRPERSON NICHOLS: Part of our special 9 program.

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(Laughter.)

11 CHAIRPERSON NICHOLS: That's wonderful. Thank 12 you.

13 EXECUTIVE OFFICER COREY: All right. The AB 32 14 Scoping Plan recognizes the actions by local government, 15 as well as individual Californians will help us in meeting 16 the climate goals. Many local governments in California 17 are already leading the way in their efforts to address 18 climate change.

19 The cities that we'll acknowledge today are 20 taking a community-oriented approach to climate change by 21 encouraging their residents to reduce greenhouse gases. 22 Through the CoolCalifornia Challenge, these cities have 23 worked to raise the climate awareness of the residents and 24 to exchange them -- or rather engage them into taking 25 action.

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1 The CoolCalifornia City Challenge is part of an ARB-funded research project with UC Berkeley, with the 2 3 goal of evaluating strategies to encourage voluntary 4 greenhouse gas emission reductions at the household level. 5 The presenters for this item are first Ms. Annmarie б Rodgers of the Research Division who will provide some 7 background on both CoolCalifornia.org and the 8 CoolCalifornia City Challenge. Then Professor Daniel Kammen, from UC Berkeley, the principal investigator for 9 10 the research project, will provide some complementary 11 comments. 12 After that, we'll ask Chairman Nichols to step 13 down to the podium to present each of the cities with the 14 awards. And with that, Annmarie. 15 16 CLIMATE ACTION AND RESEARCH PLANNING SECTION 17 MANAGER RODGERS: Thank you, Mr. Corey. 18 (Thereupon an overhead presentation was 19 presented as follows.) 20 CLIMATE ACTION AND RESEARCH PLANNING SECTION 21 MANAGER RODGERS: And good morning, Chairman Nichols and 22 members of the Board. This morning, I will provide you 23 with some background on the CoolCalifornia.org website and 24 the CoolCalifornia City Challenge Awards Program. 25 ARB has put into place a suite of programs to

address the largest sources of greenhouse gas emissions, through regulations and market mechanisms, but we need the involvement and commitment of all Californians in their everyday lives to complement and support those efforts.

Recognizing that voluntary greenhouse gas emission reductions are an essential component of California's effort to meet the AB 32 and 2050 goals, ARB has developed a variety of tools and resources to support voluntary efforts. The CoolCalifornia.org website was developed through a partnership among ARB, the nonprofit Next 10, and the Renewable and Appropriate Energy Lab at the University of California, Berkeley.

13 The goal of CoolCalifornia is to provide easy 14 access to tools and resources to support the voluntary 15 efforts of local governments, small businesses, households 16 and schools to reduce greenhouse gas emissions. Resources 17 housed on the CoolCalifornia.org website include carbon 18 calculators for household and small businesses, climate 19 action planning resources and tips for reducing emissions 20 for local governments, a searchable database of financial 21 incentives for emission reducing projects, emission 22 reduction success stories, and recognition programs, such 23 as the CoolCalifornia Small Business Award Program, and most recently, the CoolCalifornia City Challenge. 24

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The CoolCalifornia City Challenge is a pilot

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1 competition engaging thousands of households and cities across California to conserve energy, reduce their carbon 2 3 footprint, and help build more vibrant and sustainable communities. The Challenge is also an ongoing ARB 4 5 research contract with Renewable and Appropriate Energy б Lab at UC Berkeley. Additional sponsorship for the 7 competition was provided by the nonprofit Next 10 and by 8 Pacific Gas & Electric Company.

9 The objectives of the challenge are to evaluate 10 the effectiveness of a city-to-city competition for 11 encouraging voluntary carbon footprint reductions 12 throughout the community, and to quantify the household 13 greenhouse gas emissions reductions that result from this 14 type of program.

15 Cities have long been leaders in reducing 16 greenhouse gas emissions, and many cities in California 17 have already adopted and begun implementing climate action 18 plans.

Programs like the CoolCalifornia Challenge seek to foster stronger connections between local governments, community-based organizations, and households with the goal of encouraging significant voluntary carbon footprint reductions throughout the community.

The Challenge began in early 2012 when cities had to apply to join the program by securing official support

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for their city by February 28th. The competition formally launched on May 1st. The first stage of the competition was a qualifying round, where each month for three months the cities competed to be a finalist. Since then, the finalist cities have been competing for the title "Coolest California City". And the competition just wrapped up on May 30th.

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Today, we are announcing the top three cities in the competition and showcasing their accomplishments. We plan to run the competition again beginning in fall of 2013 with the launch date set at September 1st. The application deadline for interested cities is August 15th. 12

13 Cities from across the State applied to 14 participate in this pilot round of the Challenge, which 15 required that they secure support from their city manager. 16 Eight cities completed the application process 17 successfully: Davis, Chula Vista, Tracy, Sacramento, San Jose, Citrus Heights, Pleasanton, and Pittsburg. 18 And many 19 others are interested in joining future rounds of the 20 competition. Over 2,600 households signed up in eight 21 participating cities.

22 Households tracked driving and home energy use 23 in easy-to-use on-line software, which was built from the 24 same data that underlies the CoolCalifornia household carbon calculator. Households earned points for their 25

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city every time they entered data or reduced their emissions. And each point also earned the household a raffle ticket for a prize from their city.

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Cities worked to engage residents through various events, including farmers markets, festivals, and other activities, such as holiday lighting exchanges where old inefficient holiday lights were traded for newer LED versions, free screenings of sustainability-themed movies and even city-sponsored solar energy efficiency rebates.

Households responded by pledging further reductions and taking action to reduce their emissions from transportation and household energy use through activities such as biking instead of driving or hanging laundry to dry instead of using the drier.

The 1,000 most engaged households used 50 percent lessen energy than similar households and reduced energy an additional seven percent during their involvement with the program. Total savings from energy and transportation were 224 metric tons of CO₂ equivalent.

As mentioned, the Challenge is also an ongoing ARB research contract with UC Berkeley. Because participants track their driving and home energy use, this program offers a rare opportunity to measure the greenhouse gas emissions and reductions of households that report their data throughout the program. In this pilot

round, participants received points every time they entered data about their driving and household energy use into on-line software. They earned triple points every time their emissions declined. As a result, the point system provides insight into both how committed participants were to tracking their emissions and how committed they were to reducing them.

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Over the last year, the roughly 1,000 of the 2,600 participating households with energy and vehicle reports reduced more than 220 metrics tons of CO2 equivalent greenhouse gas emissions, equivalent to taking about 90 California homes off the electrical grid for a 12 year.

14 Another component of the research includes 15 surveying participants. Preliminary findings provide 16 valuable insights into the households that participated in 17 the competition, including demographic and socioeconomic characteristics, attitudes, and the motivations that led 18 19 them to join the competition.

20 The study will help the future effort -- help 21 inform future efforts to promote and quantify voluntary 22 carbon footprint reductions, and help establish best 23 practices for citizen engagement and community capacity 24 building.

In the long run, we hope programs like this will

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foster meaningful engagement of Californians in the
 State's effort to tackle climate change.

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I'm joined at the table today by the research team. Dr. Dan Kammen and Mr. Chris Jones. Mr. Jones is a researcher at the CoolClimate Network a research program of the Renewable and Appropriate Energy Lab at UC Berkeley. He also currently serves as co-chair of the Behavior, Energy, and Climate Change Conference, and is a doctoral student in the Energy and Resources Group.

He also led the development of the CoolCalifornia Carbon calculators, and is also coordinating research on nine other projects including the California -- the CoolCalifornia City Challenge.

Dr. Kammen, the principal investigator of the City Challenge Project, is among the world's leading authorities on energy efficiency and renewables. Dr. Kammen is the Director of the Renewable and Appropriate Energy Laboratory, where he is a professor of both energy and public policy.

He was a coordinating lead author on the intergovernmental panel on climate change reports, serves as envoy to the U.S. Department of State, and is a frequent advisor to political and NGO leaders. I invite Dr. Kammen now to say a few words about the role of efforts, like the Challenge, in meeting California's 1 climate goals.

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Dr. Kammen.

DR. KAMMEN: Thank you very much for the chance 4 to speak. And you can tell I'm literally speechless over 5 this event.

(Laughter.)

7 CHAIRPERSON NICHOLS: I've never heard you with a 8 voice like that before.

9 DR. KAMMEN: This comes from 48 hours in D.C. with the Obama speech, and a rally on the oval afterwards. 10 11 So I apologize, but I think it's in a good cause.

(Laughter.)

13 DR. KAMMEN: Annmarie, thank you, and, Bart, 14 thank you as well for all the work on this. And thanks to 15 the Board.

16 This is a very exciting event. Even though it's 17 a small pilot, it really highlights a critical set of next 18 steps. What you heard Annmarie say in terms of the 19 savings that households were able to accomplish is really 20 quite dramatic. And it highlights what I suspect, and in fact, am convinced will be one of the next areas for work 21 22 across the State, and that is how can technology, how can 23 policy, and how can partnerships enable behavior?

24 We know we cannot achieve our climate goals without enabling the sorts of innovations that not only 25

the three winning or lead cities accomplished, but all the cities that engaged in the process were able to do.

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In fact, the most interesting part of the story is what you mentioned before about moving into a next round, where we refine the software tools, we refine the data gathering, and we make this information much more rapidly and more easily available to all the participating entities.

9 The ability to save this much carbon by voluntary 10 behaviors is, in fact, one of the hallmarks of 11 California's process, in particular on innovating and 12 energy efficiency, and finding opportunities to link low 13 carbon lifestyles to a growing State and regional economy.

So the main thing I wanted to say with my few words today is how impressed I am, but what the city participants have done. The Davis team, for example, has come color coded for the event, which makes it very easy for me. But it really highlights the degree to which innovations spread from team member to team member.

20 On the longer frame, what it also highlights 21 though is that the process of utilizing IT tools, both the 22 ways to record the data and also the way to test and 23 challenge each other to develop and spread the best 24 practices is, in fact, part of the equation that everyone 25 in D.C. that I talk to from Capitol Hill to The White

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House was most critically interested in, in terms of what
 should they pick up next as the areas to go ahead.

So I can add my -- only add my congratulations to the cities, and look forward to working you -- to working with you as we go forward to a moment where I can actually talk to you about what we're doing.

(Laughter.)

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DR. KAMMEN: So thanks so much.

9 CHAIRPERSON NICHOLS: Thank you, Dan. And I'd just like to add that when this program first started, I 10 11 think there was a sense that, oh, maybe it was a feel good 12 kind of program, because there were cities that, you know, 13 were interested in doing something about carbon, but 14 wasn't likely to really be all that productive. And I 15 think to have not only been able to measure very 16 significant reductions, but to really be at the point now 17 where when the President of the United States announced 18 the National Climate Program, he called out the roles of 19 the cities and the local governments in this area, is a 20 big change in the thinking that everybody really had at 21 the beginning.

This is not just about power plants and cars, although it is about power plants and cars and fuels and all of that, it is about things that people have to agree to do in their own lives, in their own homes. And cities

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1 are uniquely well-positioned to make some of these things 2 happen.

3 So it's very exciting. I know you want to get on 4 with actual doing the presentations. I want to screw up your plan just a little bit. And that is that I know I'm 5 б supposed to come down to the podium and hand out the 7 awards, and have a picture with the people who getting 8 them. I would also like to invite the members who 9 represent the places that these cities are in to join me 10 for that. So you're going to have to tell them who they 11 are, in case they don't already know.

12 You have to announce the cities. So we've got 13 Davis, which obviously is Supervisor Serna.

14 CLIMATE ACTION AND RESEARCH PLANNING SECTION 15 MANAGER RODGERS: Chula Vista.

16 CHAIRPERSON NICHOLS: Chula Vista, Mr. Roberts. 17 CLIMATE ACTION AND RESEARCH PLANNING SECTION 18 MANAGER RODGERS:

19 CHAIRPERSON NICHOLS: And Tracy, which would 20 be -- it would you be.

And Tracy.

(Laughter.)

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22 CHAIRPERSON NICHOLS: San Joaquin. Okay, right. 23 And congratulations too, because these efforts 24 don't happen with any one person obviously, but it would 25 just be nice to have a picture with everybody. So if they

1 want to come down and join me while this happens, that would be great. And then you can go ahead and read the 2 3 citations, right? 4 Is that the deal? CLIMATE ACTION AND RESEARCH PLANNING SECTION 5 MANAGER RODGERS: Well, yeah. So I was going to read the б 7 accomplishments of Davis and then have you come down and 8 do the photo opp and present the award. 9 CHAIRPERSON NICHOLS: After you've done all 10 the -- each of them separately. 11 CLIMATE ACTION AND RESEARCH PLANNING SECTION 12 MANAGER RODGERS: I'll do each of them separately. 13 CHAIRPERSON NICHOLS: Okay. But that means I 14 have to stand down there. 15 CLIMATE ACTION AND RESEARCH PLANNING SECTION 16 MANAGER RODGERS: Well, you can come down after. No, you 17 can sit with them in the chair. 18 (Laughter.) 19 CHAIRPERSON NICHOLS: We're hard to -- this is a 20 group that's hard to orchestrate. CLIMATE ACTION AND RESEARCH PLANNING SECTION 21 22 MANAGER RODGERS: Do you want to do the photo opps after I read then each of them? 23 24 CHAIRPERSON NICHOLS: Yeah, that would be better. CLIMATE ACTION AND RESEARCH PLANNING SECTION 25

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MANAGER RODGERS: Okay.

So our first award goes to the City of Davis. I'd like to introduce Mayor Joe Krovoza who is here on behalf of Davis to accept the award. A number of volunteers from the Cool Davis Foundation and other local Davis participants in the challenge are also here, and we'd like to invite them to take a picture at the end of the presentation.

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CHAIRPERSON NICHOLS: Great. Thank you.

10 CLIMATE ACTION AND RESEARCH PLANNING SECTION 11 MANAGER RODGERS: Davis has long been an environmental 12 pioneer and has set a goal to engage 75 percent of Davis 13 households in voluntary greenhouse gas reduction 14 activities by 2015.

15 Davis' participation in the CoolCalifornia 16 Challenge was a key part of the overall city-wide effort 17 to achieve its community engagement goal, building on a 18 long history of engaging the local community in its environmental efforts. Davis also boasts a 19 20 community-based organization, the Cool Davis Initiative, 21 which is focused on greenhouse gas reduction and improving 22 the quality of life for Davis residents, and was a 23 critical component of Davis' strategy for engaging the 24 community in the Challenge.

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The City and Cool Davis actively engaged Davis

residents through events such as the Cool Davis festival,
 and provided tools to encourage households to take action,
 such as individual household action checklists.

4 Throughout the Challenge, Davis participants 5 demonstrated a strong commitment to tracking and reducing б greenhouse gas emissions from household energy use and 7 travel. Well over 400 Davis households singed up for the 8 challenge and collectively reduced approximately 59 metric 9 tons of CO₂ equivalent emissions. As a result of these 10 accomplishments, Davis is being named the "Coolest 11 California City".

Mayor Krovoza.

(Applause.)

14 DAVIS CITY MAYOR KROVOZA: Do I say something?
 15 CLIMATE ACTION AND RESEARCH PLANNING SECTION
 16 MANAGER RODGERS: Yes.

DAVIS CITY MAYOR KROVOZA: Okay. All right.
CHAIRPERSON NICHOLS: Yes.

(Laughter.)

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DAVIS CITY MAYOR KROVOZA: Chairman Nichols, members of the Board, thank you very much for having Davis here today. We're truly honored to be able to participate in this competition and help it through its first year.

I want to recognize, and they'll come up and take picture, but Cool Davis is our citizen arm for climate

change and GHG reduction. They stepped up on this. They were queued up. They were ready for this when it started, and they really delivered. So Cool Davis thank you all very, very much for being here with us today.

(Applause.)

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DAVIS CITY MAYOR KROVOZA: I would just observe that competition is good, and competition in the name of climate change and GHG reduction is absolutely essential for the State of California. And as we enter a great, great era for the State of California, where we have set in place the technical and the policy innovations that are going to be necessary for carbon reduction, we need to add the social innovations, and that's what ARB is doing here.

So in the technical area now, we have smart meters where people can really access the information. We have dashboards of one sort or another. We're learning all kind of things about user interfaces and how people are learning about how they're using their energy and how they can reduce their energy.

20 People buying electric cars now understand MPG 21 equivalents and they want to know how they can drive their 22 MPG equivalents lower and lower.

In the policy arena, it starts here. And everything that ARB has done with efficient vehicles, low carbon fuels, and the implementation of SB 375 cue up our

1 communities to be able to respond to the challenges that we have before us. 2

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But until we have the social innovations, it is not going to happen. Until every community event and 4 every community group knows that climate change is part of their mission, it's not going to happen. And so with the information technologies that we now have, you know, with Facebook and all of these things cued up to plug into these kinds of competitions, we're going to make a true difference, and that's what you've started here today.

So the first year of a program, right, is the birth. And occasionally that comes with some pain, right? But we learn lots of things from that. And year two is going to be better, year three, year four, year five.

15 I'm a Director with Supervisor Serna on the 16 Sacramento Area Council of Governments. One of the things 17 that SACOG has done for eight years running now is having 18 a May as Bike Month. And once we get into year four, 19 five, and six, the tools are well honed, the communities 20 are expecting it, and we inch better and better. And 21 that's what's going to happen with the CoolCalifornia 22 Challenge, every year it's going to be better.

23 So I want to encourage all of you, as Board members, to find those little extra resources, those extra 24 25 connections, the ways that this can get linked into SB 375

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Sustain Communities Strategies and so on. Let's keep twisting our brains to make the CoolCalifornia Challenge in year one the seed that really built climate change, behavior change, and social innovation across the State of California when we look back five, 10, 15, and 20 years from now.

7 So thank you very much to the Air Resources 8 Board. Davis is honored. Congratulations to Chula Vista 9 and Tracy. One point I do want to make that our staff 10 emphasized to me is that the cities work together in this. 11 This was a competition, but it was also a collaboration, and so we shared with each other what was working in our 12 13 communities, and that will continue to happen as this 14 competition goes forward. That's going to help everybody 15 come along. So thank you all very, very much.

16 CHAIRPERSON NICHOLS: Thank you, and 17 congratulations.

(Applause.)

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19 CLIMATE ACTION AND RESEARCH PLANNING SECTION20 MANAGER RODGERS: Thank you.

Our next award goes to the City of Chula Vista. And I'd like to introduce Deputy Mayor Pamela Bensoussan who is here on behalf of Chula Vista to accept their award.

Chula Vista, the second largest jurisdiction in

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San Diego County, and was one of the first cities in California to develop a climate action plan, which was recently updated to include climate adaptation strategies.

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Chula Vista saw the challenge as an opportunity to connect its multiple sustainability related programs and services into one community-wide campaign.

The city took advantage of its annual holiday lighting exchange, sustainable landscape workshops, farmers markets, street festivals and numerous other events to recruit participants into the challenge, and educate them on the broader impact of climate change and on Chula Vista's quality of life. 12

13 The city also leveraged its already strong local 14 government partnership with San Diego Gas and Electric 15 Company to multiply the local impact of the challenge. 16 Nearly 700 Chula Vista households participated in the 17 challenge and diligently tracked and reduced their carbon 18 footprints throughout the competition, resulting in 19 approximately 60 metric tons of CO₂ equivalent reduced.

20 Chula Vista took a very close second place in the 21 competition and is being recognized as a CoolCalifornia 22 City.

23 Deputy Mayor Pamela Bensoussan. (Applause.) 24 25 CHULA VISTA DEPUTY MAYOR BENSOUSSAN: Thank you

very much. I'm honored to accept, on behalf of the City 1 of Chula Vista, this CoolCalifornia Challenge award from 2 3 the Air Resources Board. In Chula Vista, we are very 4 fortunate to have a high quality of life, great weather 5 that supports a healthy and vibrant community. So it only б makes sense that as elected officials our city council 7 wants to maintain that quality of life, even in the face 8 of climate change. And we embrace all of these kinds of 9 efforts whenever they come available.

This was a call-to-action program. With help from business associations and community volunteers, the 12 city participated and excelled in the CoolCalifornia Challenge. We feel more programs offering voluntary means 14 to promote climate action are necessary and are pleased that CoolCalifornia Challenge will soon be re-launching.

Davis, watch out.

(Laughter.)

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18 CHULA VISTA DEPUTY MAYOR BENSOUSSAN: Largely 19 driven by volunteers, these types of programs are critical 20 to achieving California's climate goals. They can benefit 21 from and hopefully be expanded by the use of cap-and-trade 22 This particular program with its competitive funds. 23 component, pitting cities against cities, was also 24 community building, fostering local pride in our 25 accomplishments towards sustainability.

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I also want to knowledge some great partners that
 have helped support our staff and efforts in this program,
 including the Air Resources Board, UC Berkeley, and
 Renewable and Appropriate Energy Laboratory, as well as
 San Diego Gas and Electric Company.

Thank you again for recognizing the City of Chula Vista's efforts. Congratulations to all the winners today, and thanks to your Board for recognizing and supporting local efforts.

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Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

(Applause.)

13 CLIMATE ACTION AND RESEARCH PLANNING SECTION 14 MANAGER RODGERS: And the final award goes to the City of 15 Tracy. I'd like to introduce Planning Commission Chair 16 Rhodesia Ransom who is here on behalf of Tracy to accept 17 their award.

18 The City of Tracy is located at the edge of the 19 San Joaquin County, and has the distinction of being the 20 first city in the county to have an approved comprehensive 21 sustainability action plan. Tracy competed in the 22 challenge in partnership with PG&E as a means to engage 23 local residents in the City's sustainability efforts. The 24 City and PG&E engaged households in the competition 25 through a variety of events, including city-sponsored

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1 block parties, the weekly farmer's market, movies in the plaza, the Dry Bean Festival and many more events 2 3 throughout the year. 4 Nearly 400 Tracy households participated in the 5 challenge. And their commitment to tracking and reducing б their greenhouse gas emissions led to an estimated 35 7 metric tons of CO2 equivalent reduced. 8 Tracy's accomplishments led to its third place 9 ranking in the Challenge, and Tracy is being recognized 10 also as CoolCalifornia city. CHAIRPERSON NICHOLS: Great. 11 Commissioner. 12 13 (Applause.) 14 TRACY PLANNING COMMISSIONER RANSOM: Good 15 morning, to the Chair Mary Nichols and to the Board. 16 First of all, I want to say that we, at the City of Tracy, 17 are proud and honored to be receiving this award and receiving the distinction of being one of three 18 CoolCalifornia cities. With the help of UC Berkeley, the 19 20 help of the Air Resources Board, and our local residents, 21 we were able to continue our long-standing tradition of 22 being stewards of our environment and working towards 23 reducing our carbon footprint. 24 It's really part of the fiber of what our 25 community is. It goes right down to everything that we've

1 been working on as a community, even the design of our communities with walkable and bikeable neighborhoods. 2 So 3 we're very happy to have participated in this Challenge.

The seed money was very useful and really helped 4 5 us, enabled us to outreach to over 20,000 residences -б residents, where we created many challenges and worked 7 with the community and really increased their awareness 8 and involvement, and really helped us to have joint values and joint accountability for what happens in our 10 community. So we really appreciated the opportunity to 11 get out there with the community and let them see how they 12 can really make a difference in the way we sustain our 13 community.

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14 We'd like to publicly thank our staff who was 15 very helpful in this initiative; our planner, Kimberly 16 Matlock, who worked very closely with PG&E, with UC 17 Berkeley, as well as other partners, because it was really 18 important that we have someone to lead the outreach 19 initiative, because that's really what this was about is 20 creating an awareness where people were not aware. Now, 21 they're not only aware, but they are accountable and involved. 22

23 We want to thank our partners like PG&E, individual residents who advocated for the challenge and 24 25 validated our community stewardship values. And we're

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just proud and honored to know that Tracy is one of the CoolCalifornia cities. It's an honor and achievement. And we want to say that next year we plan to be cooler, so thank you very much.

(Laughter.)

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CHAIRPERSON NICHOLS: Excellent.

(Applause.)

8 CHAIRPERSON NICHOLS: All right. Rather than 9 taking a break in the proceedings, when we go down to have 10 the photos taken, I know there's several Board members who 11 have comments on this whole program and process. So I'm 12 going to first call up upon Mayor Mitchell and then we'll 13 just move down there. And, Barbara, if you want to call 14 on anybody else who wishes to be recognized, I'd 15 appreciate it.

Thanks.

BOARD MEMBER MITCHELL: First of all, I want to congratulate all the cities who have won this award. As a representative of local government, I understand the challenges that all of you have in accomplishing what you have accomplished.

22 Most of us as cities have already been working on 23 the reduction of greenhouse gas emissions on -- in the 24 public facility arena, where we're required to look at our 25 public facilities, our city halls, our recreation

1 facilities and that sort of thing to reduce greenhouse gas 2 emissions.

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But the challenge has been reaching out to your community, to your households to get them to engage in this as well. That has been a real challenge for anybody who's in government. So what you have done sets a really good model for the rest of us to look at and to work on and to try to achieve.

9 I want to say also that the mention of Council of 10 Governments is noteworthy. Lots of Councils of 11 Governments are working on this issue, and reaching out to 12 the cities in that particular COG. So that's happening in 13 my area, where we have some pretty strong environmental 14 programs, where we reach out to the households in the 15 community through Council of Governments.

And you mentioned that PG&E has been a partner. I want to mention that in southern California, Southern California Edison has been working with local governments. They have installed a lot of smart meters around the community, and are implementing software that connects with those smart meters so that households can begin to track their energy usage.

And I've always felt northern California is a few steps ahead of southern California, but we're going to race and try to keep up with you here in northern

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California. So thank you for this challenge and you can count on me bringing some outreach to this program to my area to see if we can't catch up with northern California. So congratulations to all of our cities. BOARD MEMBER RIORDAN: Thank you Mayor, Mitchell. Other comments. Yes.

7 BOARD MEMBER GIOIA: I just want to ask the folks 8 from Davis, if we can borrow your, "Do Your Part Tree"? 9 This is amazing. This is great. If we can just like 10 change it around and put our own jurisdiction on it. Are 11 you okay with that?

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DAVIS CITY MAYOR KROVOZA: Yes.

13 BOARD MEMBER GIOIA: Good all. All right. It's 14 I mean, the leadership of all these three cities great. 15 is amazing. And I think as the Mayor said, it's really 16 about your land-use policies, your transportation 17 policies, the policies on a regional scale, you know, the 18 citizen outreach. All of this is amazing. And really 19 it's not -- I really -- what I really think is important 20 on your chart, Davis, is the speak-up part of it, because 21 you not only talk about all the practical sort of steps 22 that need to be taken, but you talk about the advocacy 23 steps. And I think that's really important, because, you know, it's that advocacy at the local level which changes 24 25 policies at the regional and State level, which is so

1 important, and I really appreciate that. DAVIS CITY MAYOR KROVOZA: Thank you, Supervisor. 2 3 We waive all rights to that graphic. And Professor 4 Sperling may disagree, plagiarism is encouraged in this 5 instance. б (Laughter.) 7 BOARD MEMBER GIOIA: I mean we would say it's 8 created by Cool Davis, but we would just sort of change it 9 around. 10 BOARD MEMBER RIORDAN: That's very nice and nice 11 to share. Other comments from the Board members? 12 We certainly congratulate all of you. And when 13 our Chairman returns -- but this is a great useful tool, 14 and hopefully we will share that with other cities and 15 counties. There's a lot of unincorporated areas. Ι 16 happen to represent a lot of area that is unincorporated. 17 And so it's going to be the county that's going to take on 18 that responsibility. And this is a wonderful tool that 19 we're going to share. 20 DR. KAMMEN: In fact, just adding a quick point 21 after Mayor Mitchell's comment about PG&E, they were, in 22 fact, the founding platinum sponsor. So I would encourage 23 all of our IOUs to take platinum sponsor roles and have a 24 little bit more competition at the utility level as well.

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So we'd love to talk to SDG&E and SCE as well on this.

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BOARD MEMBER SPERLING: And I'd like to, you know, give extra thanks to Professor Kammen, because for this program to happen and more importantly to continue, it's going to be his leadership that's going to keep it going. So we are very appreciative of your commitment and your efforts.

BOARD MEMBER RIORDAN: So you've been given achallenge by Professor Sperling. Good.

(Laughter.)

10 BOARD MEMBER SERNA: And through the Chair, if I 11 I just want to issue my congratulations to Mayor could. Krovoza and the Davis team. And while my home City of 12 13 Sacramento was not one of the three finalists, it's no 14 secrete in our region that Davis is often seen as the 15 vanguard on initiatives like this. And I just want to 16 publicly invite the other cities within our six-county 17 region to follow suit. And it would be nice to see in the 18 future other cities from the region that I represent down 19 at the podium receiving the same awards.

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Congratulations.

21 DR. KAMMEN: If I could add the one other line, 22 and that is that this did start out as a very unusual 23 thing to do. It was unclear where it fits in. I think 24 Dan's comments are really key. And the Air Resources 25 Board really enabled something that looked in the beginning like an unusual approach. But as the competition that Chris highlighted, the conferences on behavior, this has really become the nexus of where we are going to get the next big set of innovations.

And so the next competition begins September 1st, and we're ready for Davis, and my hometown of Oakland, and others to tee up as well to challenge Tracy.

> CHAIRPERSON NICHOLS: Well, it is a challenge. Yes, Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: My congratulations too. Wonderful. You know, I'm thinking about the valley and I'm thinking about all the small communities. And each one is not such a big contribution, but all together makes a big difference. And it's important to bring the valley along in terms of this effort for greenhouse gas reductions.

And, boy, the valley loves competition, football.You know, that's what Friday is all about.

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(Laughter.)

BOARD MEMBER SHERRIFFS: And the valley loves voluntary. And I think we really need to think about how to engage smaller communities in the valley in this. In some ways I think it would be a very easy sell, but we need to put some effort into that. So I don't know if that's round three. But it can be done, and I think it

can succeed handily. And, again, very important in terms
 about getting the message out and SB 375 and so on.

But the other thing is I'm thinking about other competitions that I'm familiar with, Van Cliburn Piano Competition and Tchaikovsky. Part of the award -- part of the award is a concert tour for the next year.

(Laughter.)

BOARD MEMBER SHERRIFFS: So I would like us to think about a way to -- well, the winners get some extra money, but the expectation is they hit the road.

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CHAIRPERSON NICHOLS: They go on road.

BOARD MEMBER SHERRIFFS: They go on the road and they go to these other communities to show folks how it can be done, to identify a local champion, and, as has been mentioned, there was a lot of collaboration in this competition, and to maintain that connection in pulling people along. I think it's very doable.

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CHAIRPERSON NICHOLS: That's a great idea.

Just being a winner of one of those competitions entitles you to have that title forever. And I hope that the Cool Communities that are recognized here today will be able to, in some way or another, take advantage of how cool they are, being in the first round in particular. This is just a great beginning.

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So thank you all so much for having participated.

1 Professor Kammen, Chris Jones, thank you for your incredible support and help, staff, Annmarie and others. 3 And, yeah, this is onward and upward. This program is 4 definitely going places.

5 So thanks to you all. And I think that unless б there's anybody else who was any testimony from the 7 audience on this one?

Seeing none.

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9 We will simply thank you once again and move on 10 then. Thank you.

(Applause.)

12 CHAIRPERSON NICHOLS: Okay. Our next item is an 13 update related issue, which is the work of local 14 governments in the direction of implementing AB 357. This 15 morning, we're hearing an update. We've done several of 16 these, but this is the first time we've heard from the San 17 Francisco Bay Area. This is the first Sustainable 18 Communities Strategy that this region has worked on. And 19 so it's exciting that we're able to hear from them today, 20 when we also have a new representative from the Bay Area. 21 And I am going to call on him, since I knows he's been 22 very active in regional government in the Bay Area, 23 serving on the Bay Area Air Quality Management District's 24 Board, as well as the Association of Bay Area Governments, 25 and the Bay Area's Joint Policy Committee.

When he spoke about all the voluntary activities, he wasn't kidding. It's unclear if he ever sleeps, but I guess we'll find out later.

4 Meantime, what we really would like to hear is an 5 update from him about how this program is looking from the б perspective of somebody who's been very active in the whole area of visioning, and the visioning process, which 7 8 is one of those words that sort of come upon the horizon. 9 And I suppose it could mean something different to 10 different people, but clearly what it is helping to do is 11 to bring disparate groups together that have different 12 agendas and different interests and help them to develop 13 some kind of a common vision for a sustainable and vibrant 14 community.

15 This is something that I think the Bay Area has a 16 history of doing. At least in my experience, the Bay Area 17 has been a leader in regional programs, regional efforts to deal with a variety of different air quality and other 18 19 goals of the region. And so this is just another 20 accomplishment in terms of adding transportation to 21 housing, to land use, to the environment, and social 22 equity as part of the overall approach to finding mutual 23 benefits from individual steps that need to be taken to 24 solve individual problems.

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So before we turn to the presentation, I wanted

1 to invite Supervisor Gioia to say a few words about this. BOARD MEMBER GIOIA: Thank you, Chair Nichols. 2 3 And it has been a very long process. And you're going to 4 hear some, I know, thorough presentations by folks from 5 the Metropolitan Transportation Commission and Association б of Bay Area Governments. I do serve on the ABAG Executive 7 Board, so I have attended many of these meetings and 8 participated in many of those discussions. And again, 9 we'll hear more.

I think it's important to note a few things. One is that the Bay Area already starts from a place where the per capita GHG emissions are 15 percent below other metropolitan areas in the State. And so we're starting in the Bay Area from a point where our emissions level per capita is less, and therefore, you know, squeezing out that additional amount is always harder.

We're also in an area where there are two regional government organizations involved in making this decision, both Association of Bay Area Governments and the Metropolitan Transportation Commission. So that, I'm not going to say, complicates it, but it just makes it a longer process.

The Bay Area has been very thorough in involving stakeholder from across the region from the business community, the labor community, the environmental

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1 community, the social justice environmental justice community. We've had many debates about how do we 2 3 encourage more infill without displacement, which is, I 4 think, exactly why that research project that CARB is 5 funding is a very important one.

б And there have been many community meetings 7 around the Bay Area. It's my understanding that this 8 discussion in the Bay Area is probably the most controversial discussion on an SCS plan around the State, 10 that, I mean -- I know other regions have adopts -- a few 11 other regions have adopted their sustainable community 12 strategy, but our has been particularly contentious, but I 13 think we're doing a very good job at trying to reach 14 consensus.

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15 And I think the Board members of MTC and ABAG 16 understand that, and they've -- and hopefully I think 17 we're going to hear also from some of the advocacy groups. 18 Some of the advocacy groups have been very instrumental in 19 helping move us toward consensus as well, and we really 20 appreciate that.

21 One of the things also to note is that we are, I 22 think in the Bay Area, really focused on a lot of the more 23 progressive sort of initiatives like we are a leader in 24 electronic vehicle adoption. And the San Francisco Bay 25 Area is number one in the country for hybrid sales. And

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1 almost 10 percent of all the sales in the Bay Area are 2 hybrid. That's a pretty amazing number. The U.S. average 3 is a little under three percent, and we're almost 10 4 percent in the Bay Area.

5 There's also been a lot of polling done, and you 6 may hear more about that, because we tried to get a sense 7 of where residents were going to be, because what often 8 happens at many of these meetings, and many of you 9 appreciate this, is that the folks who show up at the 10 meetings are the ones who are against something, not the 11 ones who are for something.

> CHAIRPERSON NICHOLS: I'm shocked. (Laughter.) BOARD MEMBER GIOIA: You're shocked, right? (Laughter.)

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BOARD MEMBER GIOIA: So usually the people in the room don't represent necessarily the general public. And so we have to step back and say, you know, what's the right thing to do to reduce greenhouse gas emissions, and achieve sensible land use and transportation investment policies, and how far can we push this knowing where our public stands?

And the polling that we've done in the Bay Area really finds that people are willing to change their behaviors, in so many ways, including their transportation

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1 related behaviors to achieve these larger objectives. And 2 when the folks in the audience who may be against that 3 hear that, they don't agree with the polling methods, but 4 you know, we know where the residents stand. So it's 5 been, I think, a very good process.

б So I just wanted to make those sort of 7 preliminary comments to sort of set the stage for what 8 you're going to hear I know from the region, and obviously 9 there will be some more discussion after that. We're 10 looking forward to the adoption of this plan in July. We 11 just had a meeting about a week or two ago of the 12 Association of Bay Area Governments including a joint 13 meeting with the Committee of Metropolitan Transportation 14 Commission, where we gave some initial -- some additional 15 direction, because, again, we are trying to fine-tune this 16 and hopefully get this done in July.

17 CHAIRPERSON NICHOLS: Great. All right. I think 18 at this point, I'll turn it over then for the staff 19 presentation.

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Mr. Corey.

(Thereupon an overhead presentation was presented as follows.)

23 EXECUTIVE OFFICER COREY: Yes. Thank you,
24 Chairman Nichols.

Since the Board adopted the regional greenhouse

gas reduction targets in 2010, Sustainable Communities Strategies have been completed for San Diego, southern California and Sacramento regions. Each of these plans 4 have met the Board's targets. And we're pleased to report that the Bay Area's draft plan shows how it would meet and slightly exceed the Board's targets for 2020 and 2035.

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7 As we've done with the other major Sustainable 8 Communities Strategies, staff will brief the Board on how 9 the plan would meet the targets. And as Supervisor Gioia 10 mentioned, on July 18th, Metropolitan Planning Commission 11 and the Association of Bay Area Governments will consider 12 approval of the plan, including a determination that it 13 meets ARB's greenhouse gas reduction targets.

14 ARB staff has closely followed the development of 15 the plan and is reviewing it using the approach outlined 16 in the 2011 technical methodology document. The focus of 17 the review is the quantification of greenhouse gas 18 reductions.

19 We appreciate the extra effort that MTC staff has 20 made to provide data for our review, while also trying to 21 wrap up the final plan. The Bay Area's approach to 22 meeting the ARB's targets builds on its regional 23 transportation and land-use strategies, with the addition of several climate policy initiatives. 24 This includes 25 actions that will complement ARB's Advanced Clean Cars

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We strongly support these efforts to expand the electrical vehicle infrastructure that Supervisor Gioia mentioned and encourage the purchase and use of cleaner vehicles.

Here today, are Mr. Steve Heminger, Executive Director of MTC and Mr. Ezra Rapport, executive director of ABAG, Napa County Supervisor, ABAG President, and MTC Commissioner Mark Luce. And finally, Orinda Councilwoman Amy Rein Worth, Chair of MTC, to speak after the staff presentation.

I'll now turn the presentation over to Jennifer Gray in our Transportation Planning Branch, who will give the staff presentation.

Jennifer.

16 AIR POLLUTION SPECIALIST GRAY: Thank you, Mr.17 Corey, Chairman Nichols, and members of the Board.

To begin this presentation, I'll provide a brief overview of the status of SB 375 implementation, followed by an overview of the Bay Area region and the planning that has been ongoing in the region.

I will then highlight key elements of the Bay Area's Draft Sustainable Communities Strategy, or SCS, and describe some of the strategies that the region proposes to use to meet the greenhouse gas emission reduction

1 targets set by this Board.

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I will also show you some of the results of ARB staff's technical review of the Draft SCS, mention some of the public comments that MTC and ABAG are working to address, and then describe the next steps in the process of plan review adoption.

7 First a brief refresher on where we are in the 8 implementation of SB 375, the Sustainable Communities and 9 Climate Protection Act of 2008. In September 2010, the 10 Board set regional greenhouse gas emission reduction targets for each of the 18 MPOs. These targets are for 11 2020 and 2035 from a base year of 2005. The metric for 12 13 the target is a per capita reduction.

14 In 2011, ARB staff published a document explaining how we would conduct our technical review of an SCS focusing on the regions modeling systems that are used 17 to estimate passenger vehicle greenhouse gas emissions. We've applied that methodology to five SCSs so far, starting with San Diego, next with southern California and Sacramento, and then the Butte and Tahoe regions.

21 The Bay Area is the last large MPO to release 22 their SCS, giving them the benefit of watching the 23 processes of the others before them. We are now in the 24 process of reviewing the Bay Area's Draft SCS, which is 25 scheduled for consideration and adoption by MTC and a ABAG 1 2

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next month.

The Bay Area is a geographic compact region surrounding the San Francisco Bay. Currently, the region has a population of just over seven million people and is expected to grow by over two million people between now and 2040, nearly a 30 percent increase.

7 It is made up of nine counties and 101 cities and The Bay Area has a rich and diverse transportation 8 towns. infrastructure with a highly developed system of public transportation, including commuter rails, such as BART and 10 11 Caltrain, a robust transit network with some 9,000 miles of routes, street cars, ferries, and over 1,000 miles of 12 13 bicycle paths and routes, including 330-mile San Francisco 14 Bay Trail.

15 A little over five percent of all trips in the 16 region are made by transit. This is more than double the 17 percent of all transit trips in any of the other three 18 large MPO regions in the State. In addition, even with 19 the hilly terrain Bay Area, over 11 percent of all trips 20 in the region are made by bicycle or walking.

21 The diversity of the region is characterized by 22 its varied communities and landscapes. San Francisco, 23 Oakland, and San Jose are examples of highly urbanized 24 communities. But the region also has many suburban 25 communities, such Walnut Creek, Novato and Palo Alto, and

1 rural, predominantly agricultural areas, such as much of Sonoma and Napa Counties. 2

The region is well known for its Silicon Valley, the heart of the State's high tech industry. But it is also rich in parks, open space, farms, vineyards, wetlands and wildlife areas, think Golden Gate Park, the Marin Headlands, and the Napa Valley.

The concept of sustainability in land use and transportation planning are not new to the Bay Area. The 10 region's Transportation for Livable Communities Program, 11 or TLC, provides funding for community based 12 transportation projects that provide for a range of 13 transportation choices, and support connectivity between 14 transportation investments and land uses.

15 Since the program was launched in 1998, MTC has 16 awarded over \$200 million in TLC funds. To further 17 encourage development patterns that support higher transit 18 usage, MTC adopted a transit oriented development policy 19 in 2005, which promotes the development of mixed use 20 neighborhoods around new transit stations. This policy 21 requires minimum levels of development around transit 22 stations and along corridors. And MTC helps to fund the 23 preparation of station area plans to meet that 24 requirement.

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The FOCUS initiative is a regional development

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and conservation strategy that promotes a more compact land use pattern for the Bay Area. This voluntary incentive based regional blueprint plan encourages local governments to identify priority development areas, where more compact, transit-accessible land uses can be accommodated, and priority conservation areas where significant resource lands are in need of protection.

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All of these regional programs are consistent with the broad goals of SB 375, and there are many examples of projects either in the pipeline or on the ground that demonstrate the region's commitment to sustainable planning. A few of these are shown on the next two slides.

The Bay Area Rapid Transit, or BART, system is 14 15 one of the better know features of the Bay Area's 16 transportation network. Currently, it includes 140 miles 17 of rail with 44 stations stretching from Richmond and 18 Pittsburg in the north to Millbrae and Fremont in the south. A new BART extension from Fremont to San Jose 19 20 shown in the upper right will add 10 miles of track and is 21 expected to be up and running by 2018.

Bus Rapid Transit infrastructure can be built in phases, providing almost immediate congestion relief and offering cost-effective future expansion options. It also attracts transit-oriented development.

The East Bay Bus Rapid Transit project will be run between Oakland and San Leandro and is projected to increase this corridor's transit ridership from 25,000 to 36,000 daily. The picture in the lower left shows that BRT buses travel on dedicated lanes not available for other auto traffic.

7 The Contra Costa Center Transit Village 8 surrounding the Pleasant Hill BART Station includes 9 office, commercial, and residential uses. Studies have 10 shown that 40 percent of the village residents use BART to 11 commute to work. Businesses contribute to an employee 12 transportation demand management program to minimize the 13 use of single occupancy vehicles. This project has 14 received many awards including the 2012 National Planning, 15 Excellence, Achievement, and Leadership award.

16 The Emeryville Bay Street development is an urban 17 village developed on a former industrial brownfield site 18 near the Emeryville train station. This is also an 19 award-winning development, which includes a retail center, 20 nearly 100 townhomes, and 284 rental apartments, with 56 low-income units. The retail area features more than 60 21 22 shops and restaurants along three city blocks surrounding 23 a main street. Two to four stories of residential units sit atop the retail stores. 24

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The process for setting regional greenhouse gas

emission reduction targets goes back to 2009 with input from the Regional Targets Advisory Committee. The final report of the RTAC recommended a collaborative bottom-up process with MPOs and stakeholders and a target metric of per capita reduction.

As authorized by SB 375, the MPOs also recommended to ARB what their goal -- what their targets should be based on modeling of alternative planning scenarios.

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10 MTC went through a similar technical exercise as 11 the other MPOs to recommend targets, but the MTC Board 12 wanted more aggressive targets for the Bay Area based on 13 the use of innovative strategies, not just the results of 14 scenario modeling.

MTC staff recommended to its Board, that the Bay Area targets should be seven percent in 2020 and 10 percent in 2035. The MTC Board decided to recommend targets of seven and 15 percent to ARB. And those were the greenhouse gas emission reduction targets set for the Bay Area by the ARB Board in 2010.

The Bay Area's Draft Plan states that the region would meet those targets and do even better with reductions of 10 and 16 percent per capita. The draft plan also estimates the per capita greenhouse gas reduction in the horizon hear year, 2040, at 18 percent,

which indicates continued greenhouse gas emissions 1 reduction beyond 2035. 2

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The Bay Area's Regional Transportation Plan and Sustainable Communities Strategy are integrated into one 4 document called the Plan Bay Area. The SCS is not a separate component or chapter of the plan. It is an integral part of the overall vision and strategy.

8 Plan Bay Area is a long-range transportation, 9 land-use, and housing plan intended to support a growing 10 economy, provide more housing and transportation choices, 11 and reduce transportation related pollution in the Bay 12 It is the product, as Supervisor Gioia said, of a Area. 13 multi-agency collaboration involving the four regional 14 agencies responsible for planning and management in the 15 region, the Metropolitan Transportation Commission, or 16 MTC, the Association of Bay Area Governments, or ABAG, the 17 Bay Conservation and Development Commission, or BCDC, and 18 the Bay Area Air Quality Management District or Air District. 19

20 In 2010, these four agencies signed on to the One Bay Area initiative, which takes a holistic approach to 21 22 the sustainability through interagency cooperation 23 efforts.

24 The plan itself was developed by MTC, the 25 regional MPO and transportation planning and financing

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agency, and ABAG, the council of governments, and regional planning agency for the region's nine counties and 101 cities. The Air District, which protects air quality, and BCDC, which manages the health of the Bay, were important collaborators in developing the vision for the plan. In addition, the county Congestion Management Agencies, local governments, local transit agencies, and community organizations were also partners in the creation of the Plan Bay Area.

10 The plan puts forth a regional vision that 11 accommodates growth through efficient use of available 12 infrastructure, and makes strategic transportation 13 investments to support and complement the region's housing 14 and employment growth.

All of the projected regional growth would be accommodated within existing urban growth boundaries and urban limit lines, thereby relieving pressure to convert open space, agricultural lands, and wildlife habitat and retaining the character of existing communities.

It preserves and maximizes the efficiency of the established transportation system by investing in both the roadway and transit infrastructure. This is important to meet the mobility needs of its growing population.

The plan seeks to achieve multiple regional goals of economic, social, and environmental improvement,

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including greenhouse gas reduction through the integration of urban development strategies transportation investments.

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4 Development of the plan started three years ago 5 with a regional visioning and planning process. The б public process involved over 250 public meetings, 7 including workshops, advisory committee meetings, public 8 hearings, and focus group meetings. Public interest in 9 the plan is strong, as evidenced by active participation 10 at public meetings, and hundreds of comment letters 11 submitted on the plan.

Several advisory committees and working groups were established early in the process and met regularly over the three years. The Equity Working Group was convened to ensure thorough consideration of the social equity and environmental justice issues. This community engagement resulted in preparation equity analyses at early stages of the decision-making process.

In early 2011, MTC and ABAG adopted a broad set of performance targets to clearly identify the plan's policy objectives, and as metrics to measure the region's progress over time and reaching its land-use, housing, transportation, and other goals.

24 While the performance targets include the 25 greenhouse gas targets established by ARB, they also cover

the additional broad themes of adequate housing, health and safety, open space and ag land, equitable access, economic vitality, and transportation system 3 4 effectiveness.

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Unique to the Bay Area was a project level performance assessment for individual transportation projects. This involved not only a cost benefit analysis, but also screening of projects using the regional performance targets as criteria prior to including in the projects in the plan.

11 Five alternative planning scenarios were developed in June 2011. From these five alternative 12 13 scenarios, one was selected by the ABAG and MTC Board 14 members as the preferred plan as it built on and leveraged 15 the previous regional initiatives, addressed the region's 16 long-term needs, and was developed with extensive 17 coordination with local jurisdictions, all while meeting 18 as many of the performance targets as possible. The Draft 19 Plan Bay Area was released in March for public comment.

20 So, how will the proposed plan achieve the stated vision? 21

The next set of slides will cover how some of 22 23 the -- cover some of the key strategies that the region 24 plans to employ.

The plan seeks to minimize sprawl by encouraging

future development within existing urban boundaries, where infrastructure, including transportation is available.
Priority Development Areas, or PDAs, are those areas local governments have identified as appropriate for denser new growth and where the region encourages new jobs and housing growth.

7 Focusing growth in these areas is the foundation 8 of the region's land-use strategy. The region has also 9 designated Priority Conservation Areas, or PCAs, for the 10 purpose of protecting important natural lands with the 11 cooperation of willing property owners. The PCAs 12 complement the growth strategy by identifying areas in 13 need of long-term protection from near-term development 14 pressures.

All PDAs within the existing urban boundaries are within the existing urban boundaries, and can accommodate 80 percent of the projected new housing, and 66 percent of the projected job growth.

This is a map of the Priority Development Areas nominated by local governments. For the development of the current draft plan, the concept of PDAs has been expanded to focus on employment growth as well. Both previously designated and currently proposed PDAs are reflected in the map. PDAs can be large or small in urban or suburban communities, but all must have an existing or

planned transit station or stop. Furthermore, as a result of the regional programs I described earlier, and the strategies in the Plan Bay Area, more transit funding would be available for investment the PDAs.

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As you can see from the map, the footprint of these growth areas is limited. The population growth of two million more people by 2040 would occupy only five percent of the region's total land area.

9 Priority Conservation Areas, or PCAs, are 10 identified in partnership with land trusts, open space 11 districts, park and recreation departments, local 12 jurisdictions, and property owners to preserve the 13 region's diverse farming, recreational, and resource lands 14 for future generations through purchase or conservation 15 easements with willing property owners.

By focusing growth into the more urban areas, the PDAs, pressure to develop in the PCAs can be reduced. Plan Bay Area dedicates \$10 million in One Bay Area grant funding for PCA planning, farm-to-market projects, and for the purchase of lands in the conservation areas.

Plan Bay Area focuses on preserving the existing transportation system roads, bridges, and various transit options to ensure that the investments already made in their transportation network continue to provide multi-modal options. The Bay Area's transportation system is among the oldest in our State, and therefore requires more funding to maintain, renovate, and replace the newer systems.

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As such, Plan Bay Area focuses 87 percent on its -- of its funding on operating and maintaining the existing transportation assets. This also supports focused growth in the areas served by these assets. The balance of the 13 percent of funding is dedicated to transit and road expansion projects.

Because the region relies more on rail services, such as Caltrain and BART than do other regions in the State, these capital intensive aging rail fleets are targeted for replacement and also for extensions and upgrades.

15 The BART extension under construction from 16 Fremont to San Jose is projected to open to new passengers 17 in 2018. Plan Bay Area also includes funding for extending Caltrain to downtown San Francisco, and for 18 19 frequency improvements that will result from 20 electrification of the existing Caltrain line. This 21 modernization is necessary to accommodate California's 22 high-speed rail service.

Other transportation strategies in Plan Bay Area include specific funding for planning efforts, and for transportation infrastructure, for a transit-oriented

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1 development in PDAs, and improvements to bicycle and 2 pedestrian facilities with the creation of more complete 3 streets.

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In addition, the plan includes a variety of measures to boost freeway and transit efficiency, such as adding a regional express lane network or toll lanes, and congestion pricing in downtown San Francisco and Treasure Island.

The plan directs 62 percent of its total funding for \$180 billion to transit operations, maintenance, and expansion, with \$48 billion more in funding for operations and maintenance as compared to the previous RTP.

Consistent with the Bay Area's innovative spirit, they have included some cutting-edge strategies we haven't seen in other SCSs, some of which support our own Advanced Clean Cars regulation. We looked at these strategies as part of staff's evaluation of the Bay Area's SCS.

The region plans to invest in technology advancements and provide incentives for travel options to help meet the greenhouse gas targets. MTC proposes several climate policy initiatives to complement the proposed multi-modal transportation network and focused land-use patterns in the Bay Area.

These initiatives involve public education and incentives from more fuel efficient driving habits, as

well as incentives for more rapid turnover to a cleaner vehicle fleet. We are very interested in the rapid deployment of clean vehicles and hope to learn from MTC's experience in implementing these strategies.

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Plan Bay Area's climate initiatives invests \$630 million in seven programs that rely on technology and education to enable people to make cleaner transportation choices. Three of them are directly supportive of ARB's advanced clean car technology goals. These are the regional electric vehicle chargers, the vehicle buyback and plug-in electric vehicle incentives, and the clean vehicle feebates.

The regional EV chargers initiative provides financial incentives to establish a regional public network of electric vehicle charging equipment at commuter hubs, workplaces and other destinations, to increase the number of miles driven in electric mode rather than in gasoline mode.

The vehicle buyback initiative accelerates fleet turnover to more advanced and efficient plug-in hybrid electric or Battery Electric Vehicles through cash incentives to consumers who are willing to trade in older vehicles.

By 2020, MTC proposes to establish a regional clean vehicle feebate program to encourage purchase of

cleaner vehicles by rewarding consumers with a rebate when they purchase a car meeting a per mile greenhouse gas emission standard and charging a fee on purchasing vehicles that exceed the standard.

MTC proposes expansion of car sharing membership in the region with support for these short-term auto rental programs. Car sharing provides a flexible transportation alternative to owning a car, which can result in reduced in VMT, reduced auto ownership, and shifts towards more trips made by walking, bicycle, and public transit.

The Smart Driving Initiative is a public education campaign to encourage change in motorists driving techniques, like accelerating and decelerating smoothly, not speeding, and keeping up with regular car maintenance to reduce emissions. It would provide rebates for in-vehicle, real-time fuel efficiency gauges.

Commuter Benefit Ordinance would require employers with 50 or more full-time Bay Area employees to offer incentives for their employees to use a mode other than driving alone while commuting to and from work. MTC and the Bay Area Air District have the legislative authorization to implement such an ordinance.

The Vanpool Initiative would provide a \$400 per month subsidy per van, reducing the average vanpool rental

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and operations costs by about 30 percent.

With the Bay Area testing out these strategies, 2 3 we have the opportunity to add to the existing body of 4 knowledge about their effectiveness on a regional scale. Therefore, ARB staff plans to work closely with MTC as 5 б they implement the strategies. The feedback MTC will be 7 able to provide on the performance of the strategies in 8 region should be very useful to ARB's work and to that of 9 the other MPOs.

Plan Bay Area shows that by 2035, the SCS would achieve a 16 percent reduction in per capita greenhouse gas emissions. That's 9.8 percent from their land-use and transportation strategies, and 6.2 percent from their climate initiatives. Therefore, ABAG and MTC project that they would exceed their 2035 target by one percent with implementation Plan Bay Area.

We continue to work with the technical staff on the completion of their sensitivity tests. And ARB staff looks forward to receiving from MTC modeling staff the remainder of the data needed to complete staff's review of Plan Bay Area's greenhouse gas quantification. This portion of ARB staff's review will be included in the final staff report on the Bay Area's SCS.

24 Moving on with our technical review of the SCS, 25 we have focused on the accounting of greenhouse gas

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emission reductions as described in our July 2011 technical methodology paper, which has been useful in our review of the five other SCSs so far.

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The methodology outlines our general approach, but the staff's evaluation is tailored to each region, give the unique characteristics and strategies of each MPO and plan. We look at four key components of an MPOs travel demand modeling system. These components include the technical schools and methodologies, data inputs and assumptions, model sensitivity analysis, and performance indicators. Each is critical to understanding how the MPO quantified the greenhouse gas reductions in the SCS.

13 ARB staff reviewed changes in key metrics that 14 support the MPO's greenhouse gas quantification. This is 15 the part of our technical methodology that looks at trends 16 and performance indicators to see if the SCS moves in the 17 region -- moves the region in the right direction. The 18 next slides show a few examples of the performance indicators we examined. 19

Plan Bay Are would result in the share of multi-family households increasing from about 37 percent in 2010 to about 43 percent in 2035. This is a 16 percent change from the base year to 2035, which is significant, considering that 65 percent of all housing construction in the 1990s was single-family housing.

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As this graph shows, by 2035, 35 percent of all housing units, existing and future, would be located in Priority Development Areas, a result of the region's support from more infill development in urban areas. This would account for a 33 percent increase in total housing in the Priority Development Areas.

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7 By 2035, MTC and ABAG project that there will be 8 fewer drive-alone trips and an increase in the number of trips made by walking, biking and transit. This graph 10 shows that between 2005 and 2040, there would be a 46 11 percent increase in the number of trips made by public transit, and a 16 percent increase in the number of trips 12 13 by biking or walking as a result of Plan Bay Area.

14 Per capita vehicle miles traveled decreases over 15 time through 2035. In 2005, per capita VMT was 22.6 16 miles, and in 2035 would be 20.7 miles. This represents 17 an eight percent change.

As mentioned earlier, MTC and ABAG have received 18 19 hundreds of comment letters on the draft plan. Many have 20 recognized the plan as an important step forward in the 21 comprehensive regional planning process to address the 22 complexities of transportation, land use, and housing.

23 Many were encouraged by the prioritization of system and maintenance and preservation, which is critical 24 25 for continued efficient operation of mature

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infrastructure, and commenters generally applaud the inclusion of public health-related performance targets.

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There were many public comments concerning housing affordability and related issues of transit investment and displacement. A number of commenters requested that the plan accommodate more affordable housing, including measure to avoid an unintended effect of displacement of lower-income residents, and increase the amount of transit investments for communities of concern.

11 ARB staff review is substantially complete with the exception of some additional data that we still need 12 13 from MTC modeling staff. While we have made publicly 14 available our draft staff report, because of our 15 obligation under SB 375 to review each MPO's 16 quantification of greenhouse gas gases, we are looking to 17 MTC modeling staff to provide the additional needed data 18 to help us complete our evaluation and finalize our staff 19 report.

20 Meanwhile, the bay area staff is preparing a 21 final SCS to present to its Board and Commissioners to --22 for adoption on July 18th. Recognizing that there are 23 extensive public comments on the draft plan and Draft EIR, 24 we recognize -- we realize that there could be potentially 25 some modifications to the plan before it is adopted.

Once ABAG and MTC submit the final SCS with GHG quantification to ARB staff, we will review any changes, since the Draft SCS, and determine if those changes have any bearing on our technical evaluation.

Once the MPO has demonstrated that its final SCS, if implemented, would meet the 2020 and 2035 regional targets, ARB staff will issue a determination in writing through an Executive Order. Staff will transmit to you our final acceptance or rejection of the MPO's greenhouse gas quantification.

11 That concludes my presentation. I'm happy to 12 answer any questions. And we have a number of 13 representatives from the Bay Area here as well, who would 14 like to speak with us all today.

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CHAIRPERSON NICHOLS: Yes.

16 BOARD MEMBER GIOIA: I just wanted to make one 17 additional comment. On the slide that you showed showing the involvement of all four regional agencies in the 18 19 development of this plan, I wanted to add that the four 20 regional agencies, which include the Bay Area Air Quality 21 Management District and the Bay Conservation and 22 Development Commission, in addition to MTC and ABAG, are 23 working through the Joint Policy Committee with Senator 24 DeSaulnier on a bill that would, in the next iteration of the SCS, have all four agencies actually approving it, 25

1 because I think, as we all appreciate, the air quality 2 issues are important.

So while they've been involved in integral parts 4 of this, they will be more involved. I serve on these other two regional agencies and we've had this discussion, that it is really important for all of them to be involved in the development of the SCS the next time around. So that is the discussion that's going on with regard to a bill.

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CHAIRPERSON NICHOLS: Thank you.

11 Let's bring up the representation --12 representatives of the agencies that are working on this 13 and hear from them next, and then we'll turn to other 14 stakeholders -- speakers.

Welcome.

16 I have kind of a generic question. I'm not sure 17 who it's addressed to. Anybody can probably answer it. 18 And that is the extent to which people are thinking 19 through what the effect of this plan is going to be on 20 projects that come along after the plan is adopted, and 21 how exactly they will either receive approval or receive 22 further review based on the plan itself that -- how that 23 actually works.

24 BOARD MEMBER GIOIA: And I think we're going to 25 hear that. I think, Steve, you're going to address some

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of that in your comments, and I can add after, but I'll leave it to them to start.

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CHAIRPERSON NICHOLS: Okay. Great.

4 ORINDA CITY MAYOR WORTH: Good morning, Chair 5 Nichols and members of the Board. My name is Amy Worth б and as Chair of the Metropolitan Transportation Commission 7 it is my great pleasure and honor to be here today with 8 you to join with my colleagues in presenting an update on 9 the Bay Area's efforts regarding Senate Bill 375. And I 10 just wanted to say too what a pleasure it is personally to 11 be able to here presenting at Supervisor Gioia's first meeting on the Air Board on CARB. John and I have had the 12 13 pleasure of working together for nearly 20 years on 14 regional issues. And we are, in the Bay Area, very happy 15 to share him with the State of California, knowing that 16 you all --

BOARD MEMBER GIOIA: Thank you, Amy. Thank you.
It's great to work with you. You've been great. You've
been great.

ORINDA CITY MAYOR WORTH: -- and knowing that you all will enjoy working with him. And so, you know, last week I was at my youngest daughter's graduation from UC Riverside, and I was looking up at the those beautiful mountains. And the fact that I could see those beautiful mountains gave me incredible pride in the work that all of

you, and everybody in California, has done for the last really half a century and more to improve the air quality and environmental quality in California. I moved to southern California in 1969, and it was really staggering to see that.

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At the same time, I looked around the audience at the graduates, the thousands of UC graduates that are going to be leading California in the future, and realized that our challenge and our responsibility is, in fact, to plan for the future of our -- in our State for those, our children and our grandchildren.

And as we in the region, the bay region, have been reflecting on Plan Bay Area for the last several years, and doing a lot of speaking to community groups, to our cities, our residents, stakeholder groups, this is really what's emerged, that this is the most important effort that we, in California, can be engaged in now for the future.

In the Bay Area, we have been engaged in regional planning for the last 50 years, and -- but the genius of Senate Bill 375, is it fundamentally brings together land use, housing production, and transportation planning and investment.

And the Plan Bay Area that you've seen today, and I want to thank your staff for their excellent

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presentation and summary of our efforts, reflects over 250 public meetings. And it reflects a plan that has the three elements at its basis, which are environment, equity, and economy. We start this plan with a strong regional transportation transit network. This balances a history of environmental protection. Many of it is voter approved along with providing homes for our communities.

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And as Chair Nichols indicated at the beginning of this meeting, as we honored the CoolCalifornia cities challenge. It really spoke to the fact that what we are looking at is providing the opportunity, the infrastructure, the community foundations for residents to be able to do what they want to do in terms of preserving the environment and having a sustainable economy.

When we did our polling recently, we found that although there's been a lot of discussion as we've moved through this planning process, there's overwhelming support from the Bay Area Residents for the efforts that we are undertaking through Plan Bay Area, and I think that's very significant.

And finally, as the Mayor of Orinda, I have the opportunity to meet with young people all the time. And I recently went to Brownie Girl Scout meeting, and the first question out of the first Girl Scout, she raised her hands and she said what are you going to do about global

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(Laughter.)

ORINDA CITY MAYOR WORTH: And I -- we started talking about our bike and pedestrian plan. We talked about the school buses. We talked about all the initiatives both locally and regionally that we are doing, so that these young people who care so deeply about the issues that we're talking about today are unable to live in communities where they can achieve those goals.

10 So thank you very much for your help and support 11 as we work -- look forward and work together in these 12 efforts. And now it's my great pleasure to introduce my 13 colleague, Mark Luce who's president of the Association of 14 Bay Area Governments.

15 NAPA COUNTY SUPERVISOR LUCE: Hi. Good morning 16 Chair Nichols and esteemed members of the Board. It's my 17 great pleasure to address you today. Thank you for the 18 opportunity.

I think one of the questions perhaps you're asking is okay we do a great job of visioning. We have a great plan, but how is it going to work? Is it really going to work?

And I think that's a really important question, and I think -- I'm particularly excited about this plan, because I think it has the opportunity to work well. And

the primary reason for that is it involves collaboration -- it has involved collaboration with local governments.

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Imagine the idea, a sustainable community strategy that has the community involved in setting the strategy. And that's what we have here. These Priority Development Areas are areas that are nominated by local governments to say this is where we think you can meet your goals of having housing near jobs, near transit. And as a result, 80 percent of our housing allocation is in areas where cities have said we welcome housing in this area.

In order for this plan to succeed, it has to address certain realities. One of the realities is that every project is eventually going to need a city council or a board of supervisors approval of that project before it proceeds. We can zone for it, but until that vote happens, those projects don't happen.

With this project, this approach, we believe those cities are going to be on board. They're going to be advocates for those projects, and therefore there's a much higher likelihood that this plan is going to succeed than past regional housing needs, allocation processes, which enforce zoning in areas where communities haven't welcomed them.

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1 I think you'll hear from our staff about some of the other incentives that we hope to offer, in terms of 2 3 perhaps streamlined CEQA, some other issues that will 4 address the needs of developers, because the second step 5 in the process is no developer is going to bring a project that they can't sell, that they can't make pencil out. б 7 There has to be a willing buyer. They have to see that 8 and then there has to be a process that they can get 9 through.

And so those are the kinds of things that I think we're going to focus on in future years to make sure that that does happen, that we have a community that welcomes this type of development, and two, we can now facilitate that so these things actually happen.

In that way, I think we have more than just a plan. We have a set of actions that will result in the goals that we've set.

So without further ado, I guess I'll introduce our Executive Director of the Association of Bay Area Governments, Ezra Rapport.

21 MR. RAPPORT: Thank you very much for the 22 opportunity to explain our plan. Although I do agree that 23 the staff did a wonderful job. And there are many 24 different strategies that we incorporated into this 25 program.

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Do we have a PowerPoint?

(Thereupon an overhead presentation was presented as follows.)

MR. RAPPORT: Thank you.

So the Bay Area does have a history of progressive thinking regarding how to get communities to work and how to collaborate on a number different issues related to our robust economy and our beautiful environment.

And there's been a lot of success in the Bay Area with respect to regional planning, including the creation of these agencies that most of them were the first. Like ABAG is the first council of government in the United States, and MTC is closely following as the first transportation planning agency.

These two agencies are separate, but that allows ABAG to have more relationship with its members, and it does take time. So we are a little slower, but we are in deep collaboration with cities. And without that, we really can't get to implementation.

So the purpose, as has been mentioned many times, is to engage in neighborhood planning with the cities for -- in their Priority Development Areas. The fact that they're -- all the Priority Development Areas were 100 percent self-nominated by the cities was an extraordinary

achievement, and there's 170 of them in the Bay Area,
 including 70 jurisdictions.

What we've accomplished is a commitment to neighborhood planning, so that we're not looking for individual projects coming in, but a city commitment to do the advanced planning, to create a high quality neighborhood that incorporates the environment and the economy and the equity issues that may come up.

9 MTC, as part of a transportation demand management program, has funded many of these planning 10 11 efforts. Cities really can't afford to do that. When we had the financial crisis, advanced planning was probably 12 13 their first cut. Maybe not their first cut, but it was an 14 So this money that we provided to cities was early cut. 15 crucial for -- in incorporation of their neighborhood 16 planning.

17 And the next steps is to have these Priority 18 Development Areas receive additional incentives, so that 19 we can get to Programmatic EIRs that will allow projects 20 to come in and not have to face political will challenges, 21 or entitlement challenges, because we've used the SB 375 22 implementation CEQA benefits through good programmatic 23 planning that we reduces all environmental impacts to a 24 level of insignificance.

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Now, that's another level of investment that's

1 going to take place after the plan is adopted. But that's really the primary reason why we think we can achieve the 2 3 development targets, because we've got the entitlement process going and the political will issue resolved, which 4 5 have been the two biggest barriers for cities and б developers -- the small infill developers who really just 7 can't afford to invest the predevelopment costs without 8 the knowledge that they can get the entitlement and that 9 they have the political will of the community and the city 10 council. So that's really the strategy behind Priority 11 Development Areas.

And with regard to the rural areas, because we have four northern counties that are primarily rural, we have programs now for agricultural protection, and farm land sustainability, so that all the counties are participating in this plan.

17 Regional Measure 2, one of my favorites, raised 18 the bridge toll by a \$1. And that was part of an 19 extensive regional transit plan that allowed for 20 additional fundings to fill gaps in that system. One of 21 the biggest problems we've had in the Bay Area is our cost 22 of housing. And the businesses which are really important 23 for the State of California and the nation, have to pay a very substantial wage premium because the price of housing 24 25 is so high, or the level of time it takes for

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transportation to other housing is too long.

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So as a result, we need a lot more housing in the Bay Area in the right places. And that's why the PDAs are such an important structure, because they were vetted to be close to these employment centers and have access to transit. So over time, we're hoping that that will make it easier for the workforce to be aggregated to support these critical industries for the Bay Area and the State.

9 And this process started well before SB 375. It's taken us literally five years to get that kind of 10 11 buy-in from local government. And, as I said, it's an effort that we can do best, because we -- these cities are 12 13 our members, and they understand that we're attempting to 14 facilitate what they want rather than a top-down plan. We 15 did top-down plans in the past, and noticed that they did 16 not have the buy-in and did not achieve much. So we 17 stopped that, and we went to a bottoms-up plan. So this 18 is really more of a local government plan than it is a 19 regional plan -- I mean, a plan developed by regional 20 government.

21 We started with a good planning process, throwing 22 out visions in very high numbers to assess feasibility. 23 We got a lot of feedback. And what we did with the 24 Priority Development Areas, as a result, was we provided 25 each one with nomenclature, whether it was going to be a

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suburban town center, a transit center, or a regional center, and get the buy-in from the local government, that 3 that was the right nomenclature for that Priority Development Area. 4

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That allowed us to create densities within those Almost all of these Priority Development Areas are areas. going to require reuse of land. So that puts -- and add another extra burden without having redevelopment as a tool to have these PDAs grow.

10 So we're clearly needing a more structured 11 affordable housing revenue that should come from the 12 State, like many, many other states do. It's a critical 13 element in the plan to make sure that the residents of the 14 PDAs are not displaced, and other tools that we could use 15 to make sure that we retain the community buy-in that we 16 have today.

17 The second element is the loss of redevelopment 18 and the loss of the power to assemble land, and the 19 ability to uses increment to facilitate certain 20 infrastructure investment, which has a positive fiscal 21 benefit to the State. And ultimately, when this fiscal 22 crisis has receded, we hope to have a conversation about 23 the benefits to the State of reinvesting some money to make sure that we have our growth managed properly. 24 25

So the final plan I guess we've crossed 252

1 public meeting barrier, is in July 2013. There's been a very strong level of support from many stakeholders and 2 3 from the local government, because of the way we handled 4 this, but there's also been some really hard core 5 opposition from people who are thinking that regional б government is somehow an oppressive concept and really 7 Misunderstand that the Priority Development Areas are 8 local control.

9 So the plan was set to also meet a variety of 10 performance measures. And from this slide, I'm going to 11 give the mic to Steve Heminger.

Thank you.

13 MR. HEMINGER: Thank you, Ezra. Madam Chair, 14 Board members, good to see you again. We're the caboose 15 here bringing the rear of the large MPOs in California. 16 And we have learned a lot, not only from our colleagues 17 around the State but from your staff, especially on our 18 climate protection initiatives. We probably should have 19 thought twice about delving into an area where you have so 20 many much expertise, but we are a region that likes to 21 innovate. And so we don't mind being on the bleeding edge 22 a little bit, as long as you bring the tourniquets and 23 keep the bleeding to a minimum.

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(Laughter.)

MR. HEMINGER: This has been a performance-based

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plan from start to finish. And as you look up on the screen at it -- your screens at the dais, you'll have a 3 hard time finding the transportation performance measures. They're there on the top right, but most of the rest 4 5 relate to other matters, and that's the way in which this б plan has become much more integrative and much more 7 comprehensive than your grandfather's regional 8 transportation plan.

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9 We have a lot of growth coming to the region. Ι 10 know there's been some controversy on this as well about 11 just how much. We think our numbers are reasonable. And 12 I think the important thing is you need to plan for the 13 growth, and we'll figure out in 2035 who was right or not.

14 But the fact is we have a growing region, and we 15 have very constrained land base resource base, so we need 16 the grow smarter. The housing trends that we are already 17 seeing in our region, the numbers on this page do not reflect the impact of this plan. 18 This is what the market 19 is doing anyway. Show you that there is a significant 20 shift underway in our region. I think you've seen similar 21 numbers from the other large metros in California, that 22 single family used to have a commanding market share, and 23 that share is now being reduced. And, in fact, I think in 24 the future, it will be the minority fraction, not the majority fraction, of what is constructed. 25

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The employment trends in our region. Obviously, 1 Silicon Valley looms large in a region like, ours but it's 2 3 not just Silicon Valley. And I think a lot of people tend 4 to think Silicon Valley is just in Santa Clara county, and 5 it's not. It's in three counties, at least now, and we б wouldn't mind it taking over most of the Bay Area, because 7 it's a very effective job-producing machine. And we, in 8 fact, see part of our future, that those kind of 9 technology clusters will not be only located in the south 10 bay.

11 The growth strategy we have, that we are showing 12 you here is that we really want to try to grow within the 13 footprint we have. And that footprint has, over the 14 years, expanded considerably, especially along the 15 corridor that you drive to get from our region to this 16 region, along I-80. And that's an example of, I think, 17 where we want to try to grow differently, where we want to 18 try to grow as much as possible within our region, grow 19 around existing infrastructure.

And, as you can see, the PDAs are designed to do just that, eighty percent of the new housing, 60 percent of the new jobs. That is quite aggressive. And I think you may hear from people today who think it's too aggressive. Again, I think that's one of those questions where let's see how aggressive we can be, let's see what

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we can pull off. And if we don't quite meet up to this standard, then we adopt new strategies we adapt to those circumstances and try something different. That's what innovation to me means.

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The transportation investments in a way are a lesser part of the story, I think, because the major innovation here, from a policy point of view, is to bring the transportation plan and the land-use and housing strategy together. Our transportation investment portfolio has looked fairly similar to this in the last couple of plans, but I'm sure to many of you it looks somewhat startling. 12

13 First of all, that it's over 60 percent going to 14 public transit. This is a plan that an Air Board ought to 15 love. And I think, even more telling though, is that 16 nearly 90 percent of the investment -- this is every 17 dollar we're going to spend for the next 30 years is going 18 to rehabilitate and maintain and operate the existing 19 transportation network.

20 Now, on its face, that sounds sort of climate 21 neutral. And I suppose it is, you know, because filling 22 potholes doesn't make people change their travel behavior. 23 But I think, in terms of the land-use linkage, this is probably the biggest single thing we can do to support 24 25 infill development in our region, because the vast

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majority of this maintenance expenditure is going to be reinvested in the urban core of our region That's where the old stuff is that we need to maintain, whether it's 4 BART or roads or bridges, and that we think is what this transportation strategy really does.

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I often say that we've had an infill transportation plan for years. We've been looking for an infill housing strategy to go with it, and lo, and behold, ABAG brought one along.

The discretionary investments are a subset of that. And I'd really like to talk about one of them in 12 particular that I think you've heard a bit about already, and that's the One Bay Area grant program. And I think 14 this is a case where we are innovating guite substantially, not only in California but nationally.

16 What we did is amalgamated a series of funding 17 programs that used to focus on particular things, like 18 transportation from livable communities, or bikes, or 19 local road repair. We realized that over time those 20 things were starting to be spent on very similar things. 21 And so we decided to package them into more of a block 22 grant to local government in our region through the 23 county-wide congestion management agencies.

24 And what we decided to do is try to achieve more 25 of a policy impact through those expenditures. The money

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will still be spent on those kinds of projects, but the policy impact at the upper right there, I think is pretty significant. First of all, in order to get the money, a local jurisdiction has to have a certified housing element. HCD, we ought to be there star pupil, because there have been a lot of these housing elements approved in the last few months, as a result of the enactment of this program.

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9 There is also a string attached that each 10 jurisdiction has to adopt a Complete Streets policy for 11 pedestrian and bicycle safety. There's also a 12 requirement, depending upon how big your county is, that 13 you either have to spend 70 percent in the five southern 14 counties or 50 percent in the five northern counties in 15 the PDAs

16 And finally, as you can see, the formula for 17 distributing the funds is not your average transportation funding formula, because there's not a transportation 18 19 element in it. It's half population and half housing 20 production. And so this, we think, really does represent 21 the most physical manifestation of this linkage between 22 transportation and housing policy that we're trying to 23 pull off.

This program, in fact, is free-standing from the plan. It's already adopted. The money is already

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starting through the chute. And the plan is simply going to formalize it, and institutionalize it over the life of the plan.

Your staff showed you some projects already, so 4 5 here are some more.

(Laughter.)

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7 MR. HEMINGER: I think the more important thing is this slide, which is -- as your staff mentioned, this 8 is our second plan, where we have subjected every major capital expenditure to a benefit-cost analysis, as well as 10 11 an analysis of how those projects measure up against our 12 performance targets.

13 And what you will see in these, these are the top 14 performers out of that analysis. What you will see is a 15 lot of strategies that relate to infill, a lot of 16 strategies that relate to squeezing more capacity out of 17 our existing system. When you're spending 90 percent of 18 your money on O&M, you've got to be pretty darn smart 19 about how you spend the remaining 10, because you have so 20 little of it, and we still have a growing region. It's 21 not as if we can just stand pat.

22 The climate initiatives you've heard quite a bit 23 from your staff. And here we have learned a lot from them 24 in terms of our attempt to invest, roundabout \$600 million in a series of initiatives. The one point I would make 25

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here, because I know in the staff report there's quite a 1 bit of commentary about well, you know, the literature 3 here isn't all that great, and, you know, we don't have a lot of experience with this or that. 4

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One thing I would note, just a couple of factoids, the Bay Area is home to 13 percent of all EV owners in the United States. Eight percent of all car-sharing people in the country are in the Bay Area. Those numbers are four and six times our population share. We are a region of early adopters.

11 And in a region like that, you don't need a whole lot of incentive to go a long way, because a lot of people 12 13 want to try this stuff out. We've got waiting lines for 14 Priuses. So that does give us some optimism, some 15 confidence that these strategies are going to work just 16 fine.

17 But if they don't, we're going to figure out other things. One thing that's not on this list, that 18 19 we're going to be implementing in the next few months, is 20 1,000 bike share program, just like New York just 21 launched. That will be starting in a few months in the 22 Bay Area. So we're doing a lot. We're throwing a lot of 23 spaghetti at the wall to see what sticks in this area.

And finally, the tail of the tape, where we 24 25 started this whole process, which, again, I agree with my

Chair, Amy Worth, is very health. It's a 1 performance-based process. It's not checking each little 2 3 box. It's saying here is your target. You go innovate. 4 You go try to do this. Sacramento you do it differently 5 from Los Angeles. San Diego you do it differently from б the Bay Area. Just meet your target. And we have done 7 that. As you can see in 2020, we're exceeding the get 8 you've. Set we're also exceeding the target you set in 9 2035. In fact, we're meeting Sacramento's target in 2035, 10 while we were at it. And you can see the downward slope that continues from the horizon year that you've 11 established. 12

And finally, I will conclude on this point. There is a lot of work we need to do. And I will say there's a lot of work the State of California needs to do on this question of making these plans a reality.

17 As you know, the same legislature that passed SB 18 375 obliterated redevelopment financing, which was 19 probably the single most effective strategy we had to 20 implement Senate Bill 375. So we are going to need to find something, call it by a different name, have it 21 22 operated under a different set of rules that replaces 23 those kinds of funding sources. OBAG, in our region, is just a little itty-bitty attempt to head down that path. 24 25 And in terms of transportation, I'll mention one

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thing that we think is clearly a necessary part of our strategy to succeed, and that is in light of the fact that we're not seeing a whole lot of new investment in 4 transportation coming from either Washington or Sacramento, we thought we might get a little cap and trade money this year, and the football got pulled away from the kicker at the last minute.

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8 We do think we need a new standard for voting on 9 local ballot measures. And we think that standard ought 10 to be maybe the one we had for 200 years, which is 11 majority rules. And so we are supporting efforts in 12 Sacramento to put something on the ballot that would make sure that when our local elected officials want to put a 13 tax on the ballot, want to stick their neck out, and try 14 15 to get some additional revenue for transportation or other 16 purposes, that a majority of the voters can say that's 17 okay and we can move ahead on that basis.

18 So I think that concludes our presentation, and 19 we would be happy to try to address any of your questions. 20 And we appreciate, again, all the work that your staff has 21 done with us to make this a better plan.

22 CHAIRPERSON NICHOLS: Thank you. I'm sure that 23 Board members do have a few questions. I just want to 24 actually make a comment on your last item, because I 25 invited you to comment on the -- how we make these plans a

reality. And I think there was a lot of disappointment around the State and here too when we realized that the 3 money from the cap and trade program wasn't going to be 4 available this year for spending.

5 However, I want to be very clear that we have a б commitment, I think, from the Governor and the Legislature that it was a one-year loan, that the money will be there, 7 8 and I want to invite you and others who are here who are 9 stakeholders to work with us in the coming months to put 10 together really solid spending plans, because I don't 11 think we can wait for the normal budget process to just 12 sort of develop those things. I think we're going to have 13 to come in with some well thought through proposals. And 14 I really want to be part of it.

15 MR. HEMINGER: And I do think, Madam Chair, the 16 value that your process has had, you've now got all four 17 major metropolitan areas of the State, 80 percent of the 18 population, we have identified for you where we want to 19 invest that money.

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CHAIRPERSON NICHOLS: Yes.

21 MR. HEMINGER: We know exactly what we want to 22 do, so just start sending the checks.

(Laughter.)

24 CHAIRPERSON NICHOLS: We may need a little more 25 detail like the account number, but, you know, we're

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Thank you.

All right. Dr. Balmes.

BOARD MEMBER BALMES: Yes. Mr. Heminger, first of all, as a Bay Area resident, I appreciate all the efforts that you and your agency and the other agencies involved in this plan have made. And I really agree with you that the integration of transportation policy with land-use policy is a, if you can really pull it off, incredibly important thing.

I have a specific question though. And it follows your comments about -- oh, here's my phone going off. Let me just turn it Off.

14 It follows your transportation funding concern, 15 and I have a specific question about that. So from 16 Supervisor Roberts I've learned how important State funds 17 for public transportation have been over the years, and 18 how those funds are no longer really there due to the 19 fiscal crisis the last few years. And I also learned from 20 Mr. Gioia's predecessor -- Supervisor Gioia's predecessor, Supervisor Yeager, about Caltrans funding and 21 22 sustainability of that.

And I think it's great that there's electric -there's money now for electrification of Caltrain. But on the other hand, I'm not sure that Caltrain is on a

sustainable path in terms of just maintaining its funding. So it would be great -- it's great if we electrify the service, but if the service isn't there, it's a problem.

And just, I think, last month, there was an article in the chronicle about how there's still not a sustainable funding path for Caltrain, so I wanted to hear you comment about that.

8 MR. HEMINGER: You're putting your finger on a 9 big one, which is the fact that we've got both aging pains 10 and growing pains at the same time. And, you know, we 11 want to make investments like electrifying Caltrain, 12 because it's really to me not so much a transportation 13 investment. It's a public health benefit, and it's a 14 community vitality project.

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BOARD MEMBER BALMES: I Agree.

16 MR. HEMINGER: But we've got to keep the train 17 running or, you know, we'll have catenary wires and 18 nothing underneath them. The Bay Area does have a history 19 of solving those problems, I will say. You know, the BART 20 system is supported by a dedicated sales and property tax. 21 The Muni in San Francisco is supported by dedicated 22 parking revenue. We have an enormous volume of local 23 funding in the operation of our public transit network. 24 That's one reason that we actually rely less on a 25 percentage basis on State funding than perhaps some of the

1 other areas of California do.

So I have no doubt that we're going to solve the 2 3 Caltrain problem as well. I think a lot of it, as you 4 probably know, has to do with the fact that it's governed 5 by three -- a three-county agency. And each of those б three counties, San Francisco, San Mateo, and Santa Clara 7 has its own transit system. So their own transit system 8 comes first and Caltrain is number two for all three. And 9 that's not a good position to be in.

So they, like the other major systems in our region, need a dedicated funding source. And I would ask 12 you to stay tuned, because you're probably going to see something on the ballot in the Bay Area some time soon on 14 that very question.

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CHAIRPERSON NICHOLS: Dr. Sperling.

16 BOARD MEMBER SPERLING: I want to say this has 17 been one of the most inspiring set of presentations I've 18 heard in a very long time. I was -- I'm very impressed. 19 And I observed two things about these sets of 20 presentations.

One is the tremendous amount of collaboration and 21 22 engagement that's taking place with the local governments. 23 And Mr. Rapport talked about this is really a local 24 government plan. And that is probably the most important 25 observation or attribute of all of this. I remember when

this 375 law was first being put together. And when the MPOs were going to be designated, I was very skeptical that that was the right way to go. That I did think the cities should have been the regulator -- you know, the regulated parties.

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And to see what you've, you know, done in the Bay Area and what SCAG has done also, and, you know, your leadership Steve and the political leaders there is just -- it's just mind blowing, you know, how successful it's been. And the same thing with what saw Hasan Ikhrata did down in SCAG, and Sacramento, of course, as a leader in that. So that was number one.

13 Number two is the innovation here that we 14 haven't -- and I like what you said that each of these 15 plans is building on the previous one. And the amount of 16 innovation that you have in here is really impressive, 17 adding -- you know, I like some of them, in particular, 18 you know, we're you're looking at feebates -- including 19 feebates, looking at the eco-driving, the housing 20 integration, Complete Streets, and so on.

I mean, this is all fabulous stuff. This is exactly what we mean. When the Cool Cities presentations were going on, I mean, these are the kinds of things we need the cities to be doing, and so the leadership here is great.

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Now, it all -- actually, I have one other little 1 innovation idea for you that hasn't been discussed, and 2 3 that is natural -- so, you know, part of what's going on 4 here, you're going beyond -- you know, your plan goes 5 beyond what the conception of these plans were going to be б with your climate initiatives. And I think that's great. 7 Although I'm going to have a little comment on that in a 8 minute, but I like that innovation. 9 But, you know, another example of that could be 10 what we're seeing with natural gas systems is there's a 11 tremendous amount of leakage from the systems. There was 12 a study in Boston where as much as 10 percent of all the 13 natural gas was leaking, because they had these old pipes. 14 In fact, they weren't even pipes anymore. They were holes 15 in the -- you know, through the ground. 16 And that could be one of the biggest payoffs of 17 And having the local governments engaged in this, all. working with the utilities, is the kind of thing -- and so 18 19 that's why this engagement, working with the different 20 organizations is so critical. 21 And so I tie it -- and to bring this to a kind of 22 a -- bring this back to ARB. Madam Chairman, I didn't 23 clear this with you previously, but --24 (Laughter.) 25 BOARD MEMBER SPERLING: -- it points to me that

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we really need to build up our capability here a little more in the transportation, land use, local government area. Not in the way of being a regulator, but in terms of facilitating, information dissemination, what we see with Cool Cities idea, is these cities are doing something. What Steve talked about, what they're doing in -- and, you know, they've learned from others. And I know, you know, Gary Gallegos and Hasan and Mike McKeever are all here.

And those are the big -- but there's so much learning that's taking place. And there's so much -- and at the same time, some kind of monitoring, so the methods -- I mean, you did a lot of it. You referred to the scientific literature as being pretty weak in a lot of these areas where you're making claims for benefits, car sharing and some of the others.

And I think we really need ARB perhaps, not by itself, but certainly ARB needs to really strengthen its capabilities in this area to help out. So I know budgets are limited, et cetera, et cetera.

21 CHAIRPERSON NICHOLS: You know I'm going to be 22 shocked and unhappy at that comment, right so --

(Laughter.)

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24 CHAIRPERSON NICHOLS: No. It's terrific, of25 course. I'm going to let the staff talk about a little

bit what they are doing to build on what they've been learning, but I think we've got a number of other Board members who wanted to comment, so I think we'll just take those comments first.

I'm going to sort of proceed down the row. So, I'll go to Mr. Serna and Ms. Mitchell and then turn to the other side. And I promise I'll switch next time.

BOARD MEMBER SERNA: Thank you, Madam Chair.

9 BOARD MEMBER ROBERTS: Thank you, Madam10 Chairwoman.

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BOARD MEMBER SERNA: I certainly want to start by Echoing Dr. Sperling's comments. I think the presentation, the information is very encouraging. I also want to echo Supervisor Gioia's opening statements.

Before I was on the Board of Supervisors, I was a San Ramon Planning Commissioner and actually sat on the ABAG Regional Planning Committee some 13 years ago. And even back then, I can tell you that the region was cutting edge with its adoption of the blueprint long before Sacramento did the same thing.

I do want to say that I think one of the most important questions to be asked and answered today and probably in other settings is the one that was asked earlier by our Chair. And that is what is this SCS, what are all the SCSs by all the MPOs in our State, how are

1 they going to affect projects? I mean, what is the real world impact? 2

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And the reason I think it's so important is we 4 had -- and this is my opinion. We had an unfortunate experience in Sacramento County, quite frankly recently, where, you know, the Board of Supervisors voted to approve a project that was not in the SCS. And it came, you know, not too long on the heels of the adoption of our region's SCS. So I guess the question is more for Ezra, how would you measure the commitment by all the multitude of jurisdictions that are investing in this SCS? I think 12 it's a critical question to ask.

MR. RAPPORT: Well, as I said, we were using 13 14 these Priority Development Areas as the proxy for where 15 growth would be managed. And each Priority Development 16 Area needed to be brought before the city council for 17 resolution of adoption.

18 So that, at least within the confines of what we 19 were discussing, shows that -- is a demonstration of 20 political will, which in the Bay Area is one of the most 21 important factors. The Bay Area typically has been 22 anti-growth anti-development, mostly because there was 23 concern about how traffic was growing rapidly.

24 But when we use the Priority Development Areas as 25 a mechanism for neighborhood planning and the amenities

that come with it and the commitment to have good transit service, we were able to witness change in the attitudes of both the cities and the planning directors. So I think the profession of the planning directors has caught up to the challenges that we're facing. All of us want to sustain the economy of the Bay Area, and do it in an environmentally sensitive way and make sure the equity issues are handled.

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9 All of that came before each city council for a 10 resolution of adoption. And from there, ABAG used that to 11 generate density calculations and investments from MTC to 12 make sure that we were continuing down that path.

13 The next step, as I said before, is to develop 14 the entitlement process, which has been severely broken in 15 the State. But from my experience in the Bay Area, it has 16 excluded small developers because they cannot take the 17 upfront risk of the entitlement process. So if we can't 18 fix that, we are stuck with just really big projects and 19 major developers. And that would be a big mistake for the 20 State to be relying on that.

We need to bring another industry in, which is the small infill builder, but not -- but remove these barriers that make it impossible to know whether or not your project is going to be approved.

So the neighborhood plans get very specific. Of

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course, there's flexibility, so you can change things as the market requires, but you would not have to do a 3 Supplemental EIR, because the Programmatic EIR would cover 4 those issues and there'd be enough investment in that EIR, 5 so that you can reduce all of the significant issues, б which is what SB 375 implementation is about. And you can see that in the bill.

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We may need some tweaking of that, because there's some requirements there that may be excessive. 10 For example, there are Priority Development Areas that are in areas that have a lot of affordable housing. So to ask 11 12 each project to contribute another 20 percent, you know, 13 may be unreasonable in that market area. That's just an 14 example.

15 In the wealthy PDAs, this is an appropriate 16 requirement. But in those that are not so wealthy, they 17 already have a certain percentage of affordable housing within their -- within the PDA, it's a show stopper for 18 19 many projects. So that's the kind of analysis we're going 20 to continue doing in our assessment of how to get to 21 marketability.

22 And we think there's demand. As you know, the 23 senior population is growing rapidly. A lot of the 24 millennial generation wants to be able to live in areas with amenities in safe areas. We have a complete 25

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1 community standard for how we look at PDAs, so it's not 2 just housing numbers and just transit. It's about the 3 quality of life.

And we need to make sure that all the special districts are participating in this, because we have 500 special districts in the Bay Area. So it's not just cities alone, it's the infrastructure, it's public works, it's the police department, it's the schools. It's a whole variety of different activities that comprise a complete community.

So that's our intent. We've defined the geographic area. We have established political will. We have certain amount of entitlement streamlining that needs to improve, and now we need to look at other investments by special districts to buy-in to this plan.

CHAIRPERSON NICHOLS: Thank you.

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17 BOARD MEMBER SERNA: I appreciate that response, 18 and I would respectfully say to our Chair and to my 19 colleagues and to our staff that because implementation of 20 SCSs is still relatively new territory for all the MPOs 21 across the State, we should be cognizant of how each MPO 22 is learning about really its commitment by its member 23 jurisdiction to implementing the SCS at local levels. 24 It's something that I think, if it's not something added to our list of things to do, so to speak, that we -- you 25

1 know, we very quickly begin to move into the realm of 2 making plans that collect dust and that don't get 3 implemented. And so that's the whole point in my 4 estimation.

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So I do appreciate the response. Thank you.

CHAIRPERSON NICHOLS: Thank you.

8 MR. HEMINGER: Supervisor, if I could just 9 quickly add too. On the investment side, we've taken 10 another step with a program we call TOAH, which is 11 Transit-Oriented Affordable Housing fund. And that's a 12 case where we're trying to reduce developer risk. We've 13 put \$20 million in of our transportation money. We have leveraged another \$70 million of stuff -- money from 14 15 foundations and banks. So we've got \$90 million fund 16 that's going to help a lot of those projects pencil out by 17 doing land-backing, all sorts of other things, and it's 18 going to be a revolving fund. So they pay it back, we can 19 loan it out again.

That's another instance where I think putting these two subjects together has led to a kind of conversation about investment that we wouldn't have had on our own.

> BOARD MEMBER SERNA: Thank you. CHAIRPERSON NICHOLS: That's great.

BOARD MEMBER SHERRIFFS: Can I ask a follow-up? CHAIRPERSON NICHOLS: Okay. You can piggy-back on.

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BOARD MEMBER SHERRIFFS: Well, you spoke very well to the commitment of the cities. I'm wondering, can you speak a little bit about the commitment of the counties, the county governments?

8 BOARD MEMBER GIOIA: Some of us up here can talk9 about that too.

10 CHAIRPERSON NICHOLS: You've got a county right
11 here.

MR. RAPPORT: Yeah. We have had a lot of county leadership. A couple of counties have had some political issues that are based really in misunderstanding and fear mongering about this plan. But, in general, the counties have all submitted Priority Development Areas as well, so they understand the process.

And when this plan comes for adoption, I think we'll see the counties approving the plan, along with the cities, since our executive board is comprised of county supervisors and city council members and mayors.

22 CHAIRPERSON NICHOLS: Okay. Ms. Mitchell 23 BOARD MEMBER MITCHELL: Thank you. And I also 24 want to commend you on your SCS -- sorry. I forgot to 25 turn it on.

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Can you hear me?

I want to start by commending you on your SCS. I think you've done a very fine job. And I want to say that when SB 375 was first enacted, we saw tremendous push-back from cities, from counties, from any local entity that was in charge of land-use planning. And I think what we are seeing now is that this can be done successfully, and it has great promise.

9 What's interesting to me is -- and I am from 10 southern California, the SCAG region, for those of you who 11 don't know where I hail from. And we did our SCS, and 12 it's different from yours and for legitimate reasons. I 13 mean, you already have a pretty well-defined transit and 14 transportation system. In California we're building one.

So you also have revenue streams that will help you in that maintenance. And we in southern California are really struggling with where are we going to get the money to do what has to be done? What has to -- and what has to be done is the maintenance of existing streets and roads, but also the building of new transit systems.

21 So it's interesting that -- to me that there are 22 different challenges in different areas. And what you 23 have presented shows the challenges that you have in your 24 area.

The other thing that we all are struggling with

is with the demise of redevelopment, that was our tool for doing some of the things that we thought we would be doing with SB 375. So I think we all need to work together to find a new tool for us to do that.

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The other thing I think we need to be careful of as we are doing housing development, and meeting the requirements of low income housing, is that we are careful not to build low income housing projects that turn out to be failures. And we have seen a lot of criticism of what we call, "The projects", that then end up being places where there is high crime and a low quality of life.

12 And so I urge you in moving forward with your 13 housing plans to think about that. One way I think that 14 that can be done is to integrate your low income housing 15 units in a larger facility that has a mix of different 16 incomes, so that we're not putting all low income in one 17 place. And that's kind of a sort of idealistic, personal 18 But I want to put it out there, because I viewpoint. 19 think it's important that we look at that aspect of 20 developing low income housing.

And you have in your area that issue of displacement. And so I think that, you know, an approach that is cognizant of avoiding the development of all low income in one area where you can have a quick sort of decline in the quality of life is an important thing to

1 consider. 2 Overall, I think you have a very fine plan and 3 urge you to move forward with it. 4 Amy, nice to see you again. I'll comment Amy's 5 brother is on the planning commission in my city. б (Laughter.) 7 BOARD MEMBER MITCHELL: It's really a small 8 world. So I've gotten to know Amy over the years through 9 that connection. 10 Thank you. 11 CHAIRPERSON NICHOLS: That's great. Start down at the other end actually, and call on you Supervisor 12 Roberts, unless you -- Hector, you weren't -- you didn't 13 14 have your hand up. Yeah. Okay. Good. 15 BOARD MEMBER ROBERTS: I was looking at the 16 outcast on the end here to see if he was -- he had his 17 hand up first. BOARD MEMBER DE LA TORRE: I'm part of it. 18 19 (Laughter.) 20 BOARD MEMBER ROBERTS: Okay. Be way out on the 21 wing and I didn't know. Let me -- first of all, the plan looks terrific. 22 23 But you made it sound so easy the way it all went 24 together. 25 (Laughter.)

1	MR. HEMINGER: It wasn't so easy.
2	BOARD MEMBER ROBERTS: I'm curious, did you have
3	any area areas in cities that told you, oh, my God. We
4	can't take anymore people. We're built out or where it
5	might look otherwise like a prime a prime area for
б	growth or the most evil world in the vocabulary, at least
7	in our parts of southern California, is "density". Were
8	these issues or did you just everybody just you just
9	parceled out all this stuff? You looked at your transit
10	and said here's where we're going to do it and everybody
11	smiled and said, "Of course".
12	MR. HEMINGER: Sure, we had trouble. You know
13	the old joke in the Bay Area is there are two things
14	people in our region hate, density and sprawl, right?
15	(Laughter.)
16	MR. HEMINGER: And I'm sure that's true in most
17	places.
18	We had plenty of places who thought that growth
19	in a particular part of their city wasn't appropriate, but
20	in another part it was. And I think that's why, as Mark
21	said, relying on their efforts to promote and recommend is
22	really one of the great strengths of this plan, because,
23	you know, it's easy to fall in the trap when you you
24	know, whatever level of government you work at, you tend
25	to think that's the right level of government, right?

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And it's easy to fall into the trap, that we know 1 better, and this is where it ought to be because the 2 3 planner handbook here says that this BART station ought to 4 have this many people. And I think we've been able to 5 reach a very good compromise. As Ezra said, quite a bit б of the upset in our region is from places that are not 7 being asked to grow much at all, but they're just upset 8 with the principle of the whole thing. And I think that's 9 just part of the bargain, in terms of putting together a 10 plan like this, that is -- that is moving toward quite a 11 bit of change. And I'm sure you've had similar 12 conversations in your region as well?

BOARD MEMBER ROBERTS: Very similar. Yeah.
There are places in our most rural area that would love to
have high-rise buildings, but somehow they don't fit.

16 MR. HEMINGER: I think one reason this process 17 has been so successful in all four metropolitan areas is 18 that we were all doing this already. It's not as if we 19 were at a dead stop and the State came along and kicked us 20 in the pants. We were all moving, and SB 375 was just 21 sort of a gust of wind, and it got us going faster. And I 22 think that's been a pretty good partnership. I wish we 23 could do that with a lot of other State policies.

BOARD MEMBER ROBERTS: I hope somebody islistening.

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(Laughter.)

BOARD MEMBER ROBERTS: The next thing, open space, you talked about acquiring -- is there a integrated plan for the whole area? And, if so, how does it get funded?

б MR. HEMINGER: I do think that's an area where we 7 didn't do as much work as we would like. Now, to start 8 with, the Bay Area has one of the greatest systems of open 9 space protection you'd ever want to see. In fact, if you 10 want to look at two issues, open space protection and 11 affordable housing production, we're a lot better at the first one than we are at the second. So I think we put a 12 13 lot of emphasis on the Priority Development Areas, because 14 that, I think, is where the Bay Area needs to do a lot 15 better.

The Priority Conservation Areas, in terms of the investment we made in the OneBayArea Grant Program is much smaller. And I do think that's an area where, in the next version of our Sustainable Communities Strategy, we've got to place more emphasis and more investment.

BOARD MEMBER ROBERTS: Assuming that, at some day, that the money that's coming out of the Greenhouse Gas Program is not going to be loaned but is going to be used for things that are needed within our communities to reduce greenhouse gas, what would be a high priority or 1 maybe top priorities in your area?

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MR. HEMINGER: I think for us, as I mentioned earlier, we think we've got the model. We've got the 4 blueprint of where we want to grow. We've got a very significant shortfall in the kind of subsidies and incentives and other kinds of changes that we need to make to make that growth occur.

8 And so to the extent that we free up money, 9 whether it's in Sacramento or Washington or whether we 10 generate some more in the Bay Area, I think we've got the 11 structure in place to make that investment. So, again, I 12 think the pump is primed, and we've just got to get some 13 water moving through it.

14 BOARD MEMBER ROBERTS: So maybe subsidizing in 15 housing and other areas?

16 MR. HEMINGER: Sure. Absolutely. I mean, to 17 carry out the kind of intensification that all four 18 metropolitan areas are talking about, we need to make 19 those developments pencil out. And often it's just easier 20 to do it far away, where you don't have to deal with all 21 these people, and all these cars, and all these existing 22 schools that are already crowded and all the rest of it.

23 So we need quite a bit of public investment to 24 accompany that private investment to make this infill 25 strategy work.

BOARD MEMBER ROBERTS: And with the lack of redevelopment now, I suspect that that puts --

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MR. HEMINGER: Yeah. 3 I think that's really the 4 big -- that's the big challenge for the SCSs around 5 California is to find someway of replacing in whole, in б part, under whatever name you want to call it, that kind 7 of funding stream. In the Bay Area, it was close to a 8 billion dollars a year. That's a big chunk of change to replace.

10 BOARD MEMBER ROBERTS: Thank you. I like the 11 plan.

12 CHAIRPERSON NICHOLS: Indeed. Yes, Mr. Gioia. 13 BOARD MEMBER GIOIA: I think the first thing that 14 we should all recognize is there's been really a 15 tremendous amount of outreach, leadership, and education 16 around the Bay Area to get to where we are today. This 17 hasn't been easy. And I think Mayor Worth and Supervisor 18 Luce are sort of being very humble in not talking about 19 sort of their own leadership and their colleagues on MTC 20 and ABAG.

21 I mean, these are folks who are advocating for 22 regional policies, and then go back to their own city 23 council or board of supervisors and face a lot of 24 In fact, there's a supervisor in Marin, who's criticism. 25 potentially facing a recall because of her advocacy of a

1 regional plan and affordable housing.

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And I use the term affordable housing, because the housing that we're talking about here is housing for teachers and often folks in law enforcement, who can't live in their own communities where they work.

And, in fact, the Supervisor in Marin who's potentially facing a recall, if you look at affordable housing numbers in Marin, that's -- those are still pretty high numbers, because they're calculated on a county-wide basis.

But the leadership that's occurred has been key to getting it to where it is, because there is still a lot of misunderstanding about this plan. And despite that, folks, you know, the leaders are willing to take the risk and support this because their own constituents have varying levels of knowledge about what this plan really, means, especially the Priority Development Area.

18 I mean, the point we've all made is look it's up 19 to the city and county to decide a Priority Development 20 And if you are one, you're going to be eligible for Area. 21 more incentive -- for more regional dollars. I think 22 that's sort of -- that's the carrot approach, right, that 23 these regional dollars are going to get used for those communities that develop in the Priority Development 24 25 Areas. So I just want to acknowledge that that leadership

1 has been really an important part of this.

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And the other thing I want to say about counties, I think folks often think, well, counties just represent the unincorporated areas. And in my county, that's about 20 percent of the population. But frankly, the counties provide the health and social service infrastructure for everybody in the county, whether they live in a city or the unincorporated area. And that health and social service infrastructure is a really important part -important part of getting -- of supporting development in these PDAs.

12 If you're going to do infill in areas, where 13 there are potential displacement issues, so the county 14 infra -- and I think you're seeing counties very supportive generally of regional planning, because they 15 16 get the importance of regionalism, because in our county 17 we have 19 cities. The Bay Area has got nine counties and 18 101 cities. So the counties play an important role that 19 have been supportive. And I know those in county 20 government and others sort of understand that.

And the last thing I'll say is that I do think that, you know, we all learn from what happens in other parts of the State. So, you know, the fact that we are looking at what other regions have done is helpful to us in the Bay Area. We learn from successes. We learn from

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1 failures. And this is going to be an iterative process, because as we go forward, we're going to be -- there's 2 3 going to be opportunities to change things. I mean, these are not all cast in stone. We're going to learn. 4 We're 5 going to measure our outcomes. And we have to go back to б our own constituents and talk about, you know, what are 7 really achieving? Are we reducing greenhouse gas 8 emissions?

9 And I think this is a case where the public, in 10 general, is pushing the electeds, you know, to do the 11 right thing. They're not always the public that show up 12 at the meetings. But as others have talked about, the 13 polling indicates that Bay Area residents are supportive 14 of this.

So I want to thank also -- and the executive directors of the two -- of all the four agencies, especially these two, who've played a very important leadership role.

19 CHAIRPERSON NICHOLS: Great. We have 11 20 witnesses who have signed up to speak on this item. And 21 each of them is going to get three minutes. And before I 22 call them all up, I would like to just maybe wrap-up this 23 part of the discussion with one additional comment, 24 because I really loved Steve's use of the term of a gust 25 of wind about SB 375. And, of course, it's true that when 1 it passed, there was a lot already going on, as we very quickly learned. 2

3 But speaking from the perspective of the Air 4 Resources Board as one who's followed these issues both here and at my local level in southern California for a 5 б long time, SB 375 did come along at a critical moment. And the fact is that somehow or another greenhouse gases became the metric for success in an area where previously we hadn't ever had a role for ARB. I mean, after years of Clean Air Act work where -- and Clean Water Act and other 11 things that had all tried to push some of these same kinds 12 of concepts of regional planning for housing and land use and transportation, somehow, AB 32 and SB 375 have become 13 14 the tool that has helped to really push all of this 15 wonderful innovation, as Dr. Sperling said.

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16 That did not come with a whole new set of 17 resources for the Air Resources Board. And I'd like to give credit to our staff for having very quickly assembled 18 19 a team of people with technical and planning credentials, 20 as well as considerable skill in working at the local 21 level to, you know, help to move this process forward.

22 But as we -- as we take the next steps in the 23 direction of implementation, we are going to need to up our game here, in terms of how we provide the kind of 24 25 support that you're talking about. And it really does

become a different way of organizing. I think quite a bit of the work that's done at ARB, if we're going to provide 3 the kind of support and technical assistance and mobilize 4 the programs that we are able to mobilize effectively.

5 So this is a discussion that it's great that б we're starting today, but it's going to have to continue, 7 I think, over a period of time. So with that, I'm going to call you up, and I'll just call three names at a time. 8 9 So we'll start with Hasan Ikhrata, and then we'll hear 10 from former Senator Don Perata, who knows a thing or two 11 about the State role in these things. And then Kara 12 Vuicich. I hope I'm pronouncing that right.

Okay. Hasan, welcome.

Thank you, Chairwoman and Board 14 MR. IKHRATA. members. Good afternoon -- well, actually, good morning. CHAIRPERSON NICHOLS: It's still morning.

(Laughter.)

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18 MR. IKHRATA: Good to see all of you. We're here 19 to commend on behalf of the Southern California region our 20 brothers in the Bay Area, specifically in MTC and ABAG, 21 for an excellent job. You know, for somebody from the Los 22 Angeles area, southern California, to come say anything 23 good about the Bay Area --24

(Laughter.)

MR. IKHRATA: -- that tells you something.

But truly it is a great plan. I want to add my support to what Steve said, that we did plans. Eighty percent of the State now has Sustainable Communities Strategies. I believe SB 375 allowed us to have a discussion we should have had probably 20 years ago, and it's a very significant discussion about the future.

7 And the supervisor mentioned that plans are not worth the paper they're written on unless they become 8 reality. And for them to become reality, I think the State needs to help us, in a big way, give us the tools, 11 the mechanisms.

12 You know, Steve mentioned redevelopment. The 13 delay in cap and trade we'll take your word for it, 14 Chairwoman, that this money will be there for us. But I 15 believe the regions are ready to move forward in a 16 significant way. And the Bay Area today showed you a 17 great way of moving forward. So I think the State of 18 California is going to be much better for it.

So I'm here to -- on behalf of the 84 Board 19 20 members, one of them who's sitting right there, to say 21 congratulations to the Bay Area and ask you to accept or approve or whatever the terminology is. And it's good to 22 23 be here.

Thank you.

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CHAIRPERSON NICHOLS: Thank you. One of the

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1 great joys about this whole process is the way that these
2 MPOs have come together as the amigos who travel around
3 the State as pack.

Senator Perata.

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FORMER SENATOR PERATA: Good morning. I'd like to just, before I say what I came to say, is to acknowledge the chair and the guy that used to work for Kip Lipper. There have been a lot of discussion recently this week over the Proclamation of President Obama about reductions in greenhouse gas generated by coal-fired plant -- power plants.

12 And that was Kip's bill in California that was 13 moving simultaneously to AB 32. And I know you 14 collaborated with him on that. And he said at the time, 15 he thought that would be the significant play, and he was 16 right. And I read a lot about that, but I didn't see -- I 17 saw -- heard you -- saw you quoted, but you obviously 18 didn't lavish any praise on yourself. And I just wanted 19 to point that out that sometimes those who serve also are 20 very effective in what they do.

I'm here today representing the California Infill Buildings Association. I like the plan when I first saw it, but I was really impressed when they -- what they had to say here today. I just want to emphasize that we believe that infill is where California's past, present,

1 and future is. And I just told Hasan, I just as soon southern Californians don't come up and praise the Bay 2 3 Area all that often. 4 (Laughter.) 5 SENATOR PERATA: We appreciate them, but -б particularly since the Giants lost three games this 7 weekend. 8 (Laughter.) 9 SENATOR PERATA: But we -- this plan does do exactly what we believe collectively needs to happen. 10 And 11 the emphasis -- there are a couple things that I want to just draw out. I've become, for some reason, very 12 13 interested in senior citizens and the aging process over 14 the last couple of years. 15 (Laughter.) 16 SENATOR PERATA: And we need the kind of 17 flexibility for the empty nesters, and for people who want to continue to live an urban life, but they don't need 18 19 what they had before. And California does not have a 20 housing policy that emphasizes that. We still are looking 21 at three and four bedroom homes, and in many places lot and block. 22 23 Well, this plan, I think, has the flexibility to do that. And I know Steve is right, you know, we hate 24 sprawl and he hate density. But if you've got the 25

1 services that can provide what is necessary, everything else will fall into place. 2

The Chair asked about project implementation. 4 Ezra responded about the little developer, the smaller develop, which is very, very important. But the key thing I believe is that we cannot have CEQA and other very influential laws in this State that are not in concert with what's happening here right now.

9 There are still too many ways to stop a project 10 to completely thwart the intention and all the hard work 11 that's gone into that.

(Thereupon the time went off.)

13 FORMER SENATOR PERATA: We should have had one of 14 these in the Senate.

(Laughter.)

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16 FORMER SENATOR PERATA: So I think as you look at 17 implementation, you also need to look at -- CEQA right now, in my judgment, is out of compliance with the concept 18 of what's been talked about here. 19

20 So if we don't address that, this is a lot of nice cocktail conversation, but it will have no efficacy 21 22 when it comes down to it. This is all about the 23 environment. And everything else we do ought to be about 24 the environment as well.

And I want to say it's delightful to be here with

1 Steve Heminger when we're not talking about the Bay Bridge. 2 3 (Laughter.) 4 CHAIRPERSON NICHOLS: Thank you. You know you 5 get extra time when you compliment the Chair. б (Laughter.) 7 CHAIRPERSON NICHOLS: So just for future 8 reference. 9 Thank you. 10 (Laughter.) CHAIRPERSON NICHOLS: Ms. Vuicich. 11 MS. VUICICH: Hi, Madam Chair and honorable 12 13 members of the Board. My name is Kara Vuicich. Very 14 good. I know it's a tough name to pronounce. 15 I'm a Senior Transportation Planner for the 16 Alameda County Transportation Commission. And I apologize 17 that our Executive Director, Art Dao nor our Deputy 18 Director of Planning Beth Walukas is able to be here today 19 to speak. We have a Commission meeting early afternoon, 20 and unfortunately there's no way they could travel fast 21 enough between Sacramento and Alameda to make it. 22 That Alameda County Transportation Commission is 23 both the congestion management agency for Alameda County. 24 We're also the sales tax -- the authority for our local 25 transportation sales tax, and so we've had quite a bit of

experience, a long history with -- as a local self-help
 county in that regard.

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We appreciate the opportunity to provide our comments today and support the process by which the draft SCS was developed, the projects and programs it contains and the methodology used by ABAG and MTC to determine whether greenhouse gas reductions targets will be achieved.

9 As many of the speakers have said before, this draft plan represents three years of dialogue and work 10 11 with a diverse number of representative groups, including local jurisdictions, counties, and advocates. And as the 12 13 Bay Area's first SCS, it represents a significant 14 achievement in meeting and exceeding the greenhouse gas 15 reduction targets, while respecting the legislative 16 mandate for local land-use control.

17 The draft plan's project alternative is the one 18 that's most vetted and understood by Bay Area residents 19 and the most consistent with local and county-wide plans, 20 and thus the most implementable, and the most 21 comprehensive in addressing the needs of all 22 transportation modes and users while remaining 23 environmentally sound and beneficial and achieving, if not exceed, our greenhouse gas reduction targets. 24 25 There were five different alternatives that were

analyzed. And overall, it was determined that the project alternative, the plan, was overall the most beneficial, but I think it's particularly important to point out that when it comes to the likelihood that greenhouse gas reduction targets will actually be achieved within the given time frame, the feasibility of implementing a given alternative is critical.

And the plan that you saw before you today is the one that is, in fact -- that our agency believes is the most feasible and most implementable, because it's based on local land-use plans and policies.

12 And lastly, I just want to emphasize that this 13 draft plan has been developed again with significant 14 public and stakeholder input, and is based on -- it 15 incorporates the projects and programs from the Alameda 16 County Transportation Commission's county-wide 17 transportation plan and our transportation expenditure 18 plan, and it's also the most consistent with local 19 land-use plans.

And we're looking forward to working with -continuing to work with MTC and ABAG on moving forward with implementation and addressing a lot of the critical and important issues that remain in our region.

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Thank you very much. CHAIRPERSON NICHOLS: Thank you.

Jenny Bard, David Schonbrunn, and Gary Gallegos. 1 MS. BARD: Good afternoon, Chairman Nichols and 2 3 members of the Board. As a Santa Rosa resident, I'm a 4 regional director for programs and advocacy for the 5 American Lung Association. And as a Santa Rosa resident б I'm really happy to be here today support Plan Bay Area. 7 And also as an electric vehicle driver, in my second year, 8 I actually can drive here from Santa Rosa with a great 9 fast charging station in Vacaville. And it's exciting to 10 see the bank of electric charging stations on the top of 11 the parking garage. So it addresses destination anxiety 12 as much as range anxiety.

The American Lung Association commends the metropolitan transportation commission and the Association of Bay Area Governments, the excellent work on the Plan Bay Area to focus on infill development, and for the first time, incorporating critical public health goals through the regional planning process.

19 The plan was the first to develop project 20 performance assessments, and to analyze the impacts of 21 transportation projects. And you'll be hearing more about 22 this from TransForm, and we will be supporting those 23 comments.

This plan was the first to set specific health performance targets for the scenario assessments,

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including 11 percent reduction in premature deaths from exposure to fine particulate matter, a 50 percent reduction in the number of injuries and fatalities from all collisions, and an increase of 50 percent, the average walking time or biking per person per day from 2000 levels.

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This was the first time a target had been established to reduce health impacts from emissions from motor vehicles, and the first time the benefits of physical activity were analyzed and measured in a regional transportation plan. We hope explicit health outcomes can be included in all SCS scenario planning efforts going forward.

14 While some of these targets were met, others fell 15 short. For instance, injuries from bicycle and pedestrian 16 crashes are predicted to rise 35 percent under the plan 17 before you today due to higher vehicle densities in 18 Priority Development Areas. So there is much more we must 19 do to advance health outcomes, and hopefully we can figure 20 out how to incorporate explicit health outcomes in the 21 next planning process.

Because of the many health benefits identified in the equity environment and jobs alternative, the American Lung Association in California urges CARB to support the elements of the alternative that will get us closer to our

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1 health and equity goals. And to use these as a model for other plans as they are developed and updated, greater 2 3 investments in transit and increasing transit ridership, and away from highway expansion projects, greater options 4 5 for safe walking and bicycling to schools, work, and б recreation and essential services, more affordable housing 7 near jobs, public transit, parks, schools, and services. 8 Thank you very much for your time. 9 CHAIRPERSON NICHOLS: Thank you. 10 Mr. Schonbrunn. MR. SCHONBRUNN: I'm David Schonbrunn with 11 12 Transdef, the Transportation Solutions Defense and 13 Education Fund. I'd like to start by welcoming Supervisor 14 Gioia to the ARB and to congratulate Dr. Sperling for his 15 award of the 2013 Blue Planet Prize, which is known as the 16 Nobel Prize of the environmental sciences. 17 The week that the --18 BOARD MEMBER SPERLING: Thank you. 19 MR. SCHONBRUNN: -- Draft Environmental Impact 20 Report comments were do on this Sustainable Communities 21 Strategy was the very week when the world reached the 400 22 parts per million mark in atmospheric CO₂. Given that 23 context, I'm the environmental advocate here to brief you 24 on something you haven't heard today. 25 This SCS fails at the climate level. This is

1 because of the unfortunate 2010 decision of this Board to 2 adopt the regional emissions reduction targets proposed by 3 the MPOs.

4 Your staff has just given MTC a pass. You would 5 never know from today's presentations that contrary to the б purposes of SB 375 and the scoping plan, the SCS would 7 result in an actual increase in greenhouse gases. This 8 outcome is only possible because MTC proposed a lowball 9 per capita emissions reduction target that didn't require 10 breaking a sweat to attain. And your Board accepted that 11 proposal despite my testimony and that of others at that 12 time.

This SCS will result in an overall 18 percent increase in regional transportation GHG emissions and a 28 percent increase in regional land-use emissions. While the SCS complies with your per capita targets, the 30 percent projected growth in population completely overwhelms its emission reductions.

19 It's only because of claiming reductions from 20 scoping plan measures that the SCS is able to trumpet 21 lower 2035 emissions. That framing is an explicit 22 rejection of the SB 375 goal of achieving additional 23 emissions reduction from regional land use and 24 transportation, above and beyond other scoping plan 25 measures.

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For me, the take-home message is that the SCS will lower 2050 emissions, GHG emissions, by 20.5 percent when the executive order calls for 80 percent. That's pathetic.

5 The DEIR violates CEQA by not disclosing and 6 mitigating that impact on 2050 goals. I'm here today to 7 make the point that the current regional emissions 8 reductions targets are a farce. The value of the SB 375 9 program is gravely diminished by having per capita targets 10 that are substantially below population projections. That 11 makes this process here sadly irrelevant.

12 CHAIRPERSON NICHOLS: Sir, your time is up. I13 think you've made your point.

MR. SCHONBRUNN: Can I give you two sentences? CHAIRPERSON NICHOLS: Yeah, why not.

MR. SCHONBRUNN: California and the world need ARB to do more to truly lead on behalf of the climate. Please use the scoping plan update process to revise these regional targets and put our State firmly on track to achieve 2050 goals.

Thank you.

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CHAIRPERSON NICHOLS: Thank you.

23 We did hear you when you were here before, so.24 Okay. Mr. Gallegos.

MR. GALLEGOS: Good morning. I guess it's right

at good morning or good afternoon here, Madam Chair and members of the CARB Board. Thank you for allowing us to speak. I'm here on behalf of the SANDAG. And, Madam 4 Chair, you called us the Four Amigos, so, you know, we either blame you or give you credit for the fact that, you know, we worked pretty closely. And we're here in support of either the MTC/ABAG plan. They put together a good plan.

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9 And I think one of the really positive outcomes that we're seeing here is the collaboration that's 10 11 happening, I think, not only amongst the four MPOs, but 12 all the MPOs throughout the State of California. That 13 there's, in my opinion, a lot of learning and a lot of 14 positive things going on as we -- this is a marathon, not 15 a sprint. I think we're all learning from each other, 16 whether it's in areas of pricing or how we protect open 17 space, how we might administer grants, how we may improve 18 our models, so that there's hopefully, you know, better 19 tools for us as we forecast into the future.

20 And so all those are positive things. I think the Bay Area has done a great job in putting their plan 21 22 together. A couple of things that I would emphasize, and 23 I think they've highlighted is, I think, the importance and the reality of these plans is can we get local 24 25 governments to buy into them, because that's, you know,

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the people that actually make the decisions. And to the extent that we as MPOs are kind of the link between local government and what happens here at the State, that I think having all our cities on board and our counties on board are extremely critical to the success of these plans, if they're really, truly going to make a difference.

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Secondly, I think implementation is key. I mean a plan is a plan, but can we implement it? And I think as 10 Steve and Ezra and others have highlighted, I think one of 11 the challenges in terms of implementation in an area that 12 at least, from a SANDAG perspective, we look forward to 13 working with CARB, is how do we put the tools together, 14 the financial tools, to make this happen, whether it's at 15 the federal level, State level, or local level really 16 doesn't make any difference. But I think we do need 17 financial tools to match the plans that we're bringing 18 forward here.

19 And last, but not least, let me close that, you 20 know, Steve and Ezra as they're wrapping up here, you 21 know, we're getting started on the next cycle. And I 22 think one of the things that we've learned from your staff 23 in working with CARB, an opportunity to recognize the CARB staff here, is that we're also learning from you guys. 24 25 And I think one of the areas you guys have done a great

job -- and Supervisor Roberts continues to remind us of this on a regular basis back home -- is how you guys deal with technology.

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4 And I think the one area as we look forward in 5 the transportation area that, you know, when we're б forecasting 20 or 30 years into the future, I don't know 7 that we've accounted for the technology changes and 8 hopefully the improvements that we're going to see in the 9 next 20 or 30 years. And so, in many cases, we're using 10 today's technology to sort of figure out what's going to 11 happen 20 or 30 years in the future. And one of the 12 focuses that we hope to bring in this next plan is to, you 13 know, try to look at that and see how we might be able to 14 do better.

But let me close with again congratulations to the Bay Area, and we encourage that you approve or adopt their SCS as a plan that conforms and meets your targets. Thank you.

CHAIRPERSON NICHOLS: Thank you.

20 Andrew Chelsey, Justin Horner, Stuart Cohen. 21 MR. CHELSEY: Chair Nichols, members of the 22 Board. My name is Andrew Chesley. I'm the Executive 23 Director of the San Joaquin Council of Governments in 24 Stockton.

And I want to take a little moment just to say

congratulations and a pat on the back to our inter-regional partners just to the west of us in the Bay Area.

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We are the last of the group that will be coming to you to talk about our Sustainable Communities Strategies. Among the five regions, the San Joaquin Valley is the last of the group. And those eight MPOs will be before you to talk about this. We've learned a lot from the process that's been followed by our friends at SANDAG, SCAG, SACOG and now MTC and ABAG through this process.

12 Besides the range of things that have been talked 13 about here, one of the things that I think has been 14 important for us looking at what MTC and ABAG have done is 15 the integrity they've used in terms of wrestling. And I 16 think wrestling may be the appropriate word with the issue 17 of trying to match jobs and housing and affordable housing, in particular, in the Bay Area. 18 This is not a 19 new issue for them, and one that they have had struggles, 20 in terms of addressing in the past. And I think through 21 the SB 375 process and this particular plan, they have 22 done an effort that they should be applauded for in regard 23 to this.

But I think also maybe Ezra and Steve alsomentioned that they're not really done in this area yet.

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1 And that kind of brings me to my second and last point I think it's recognized that the Bay Area is well 2 here. 3 known as the gateway to the San Joaquin Valley. And that 4 interconnectedness between us is one that we've recognized 5 for a long time. As a matter of fact, Mayor Worth and б Senator DeSaulnier, in the past, have been very strong 7 advocates and leaders of this kind of communication 8 between our regions.

9 We need to continue that particular effort. And 10 the Bay Area has reached out to us and we have reached out 11 I think maybe one of the least articulate, but to them. 12 maybe one of the more important aspects of SB 375 and the 13 process that we've been going through here is that sharp 14 line that we have on maps between our regions is starting 15 to be blurred a little bit. And maybe that's a good thing 16 for all of us in terms of planning for the benefit of the 17 State of California.

So congratulations to the Bay Area and wholeheartedly can endorse the product they have brought before you.

CHAIRPERSON NICHOLS: Thank you.

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22 MR. HORNER: Good afternoon, Chair and members of 23 the Board. My name is Justin Horner. I'm from the 24 Natural Resources Defense Council. We're here to praise 25 MTC and ABAG for the Draft Plan Bay Area. With the

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issuance of the plan, the Bay Area once again has shown itself to be a leader in sustainable development and good regional planning.

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Already a region committed to preserving open space, promoting public transit, and encouraging compact development, the Draft Plan Bay Area reveals a vision that really continues this legacy.

Concentrating all new development in the existing urban footprint is among the signature accomplishments of the Draft Plan Bay Area. The Draft Plan Bay Area also expands transit accessibility and meets and even is 12 projected to exceed the targets that you've set for the regional.

14 Despite a rather aggressive timeline for issuance the Draft Plan Bay Area and the EIR, NRDC found staff to be open, approachable, and straightforward, both with 17 respect to their land-use and transportation models, and as well as the assumptions behind the climate initiatives.

19 We are particularly interested in the climate 20 initiatives. The Bay Area is the natural place for these 21 type of innovations to be pushed forward, and we commend 22 the plan for its ambition in this regard. It's essential 23 that these new and promising transportation strategies be 24 brought to scale, analyzed, and explored. And it's really 25 one of the strong parts of the Draft Plan Bay Area.

The climate initiatives, however, play a vital role in ensuring that the Bay Area meets its targets under SB 375. And so we look forward to continuing our -continuing our work with staff to ensure that the program promotes important innovations while also making sure that we can be confident that we're going to make the plan's targets.

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We do believe the plan can be even better. We've joined a number of community groups who have called for the inclusion and consideration of some of the stronger elements of the equity, environment, and jobs alternative in the EIR, and also have made some recommendations regarding affordable housing anti-displacement policies, and transit operations.

15 But, in total really, our comments have been 16 offered in the spirit of helpfulness and really wanting to 17 improve what is already a quality effort. We are happy to 18 hear from the Board and also from staff, you know, a 19 realization of the importance also of implementation, 20 particularly with respect to CEQA and ensuring that those 21 benefits that accrue to projects that are consistent with 22 the SCSs really make sure that these projects can happen 23 on the ground.

24 So thank you for your oversight of this important 25 process.

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CHAIRPERSON NICHOLS: Thank you.

Mr. Cohen.

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3 MR. COHEN: Good afternoon. Stuart Cohen. I am 4 the founder and Executive Director of TransForm. We're 5 the State's largest nonprofit focused on sustainable б communities in developing world class transit. And we've 7 been -- we started in the Bay Area, and, in fact, our 8 first campaign in 1997 and '98 was to get MTC to do a 9 smart growth scenario which they weren't doing until that 10 pointed. And so it's really great to get to this place 11 where, you know, they are continuing to blaze new paths 12 for regions around the State.

A few things that they did really well and then a couple of areas of concern that I'd like you to note, and maybe act on. They started the process with really great public participation, set excellent goals, and then used those goals, as Steve described, all along the way to try to guide investments and policies.

19 The OBAG program definitely very innovative. We 20 always had that problem of we're setting these regional 21 targets since 2003 of a compact growth scenario, but 22 really didn't have a fundamental way to link it to 23 reviving urban core areas that needed the investment. And 24 this is the biggest attempt in the country to do that. So 25 very strong kudos for the OBAG campaign.

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The climate program, the TOAH Fund, which we've done in partnership with MTC and other groups, and then finally they have this environmental -- an environmental justice alternative, part of which came from our comments and some other groups.

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And that leads to what I'd like to see a little bit changed. We'd like them to see -- we'd like them to adopt some additional components of that alternative. One of them is to invest additional funds in transit system. And we believe this could be done by looking at their express lane proposal. This would allow solo drivers in for a fee into the network of HOV lanes. They're going to 12 use the first billions in revenue, 2.8 billion in total, 14 to help build out the rest of the system with new lanes.

15 We'd like to see a proportion of that money, 16 ideally at least 50 percent, add to the transportation 17 choices on the existing system, where they're doing those 18 conversions instead of really going out to build new 19 lanes. It's the second largest proposal and it's 20 basically a large highway expansion proposal that was a 21 little glossed over in the presentations.

22 The second thing I would like you to note is that 23 they did an excellent job with the project performance 24 assessments. I was part of that technical advisory 25 committee. But kind of to no fault of their own, it was

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1 unavoidable, due to limitations in the models and the 2 methodology, it overestimates the benefits of highway 3 projects that are in there.

And so, for example -- and this will just be my closing comment -- a new road expansion proposed from Tracy to Brentwood comes out looking very good -- it actually should have been on that chart of high scoring projects -- because the model doesn't allow for it to show any new trips happening, because you have to kind of constrain the model to do the analysis.

11 So even though it would generate a huge number of 12 new trips, cause lots of traffic on Highway 4 for all 13 those trips coming in, it shows this big GHG benefit and 14 time-savings benefit. And we'd like to -- if we go and 15 replicate and disseminate, as Professor Sperling correctly 16 notes, we need to make sure that these weaknesses in 17 methodology also travel along as it makes its way to other 18 regions.

Thank you.

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CHAIRPERSON NICHOLS: Thank you.

Justin Fanslau, Mike McKeever and MichaelQuigley.

MR. FANSLAU: Good afternoon, Madam Chair and
Board members. Justin Fanslau here on behalf of the
California State Association of Electrical Workers.

We're really here today to congratulate ABAG and 1 MTC on their hard work. And I was -- as I was watching 2 3 the presentation, I was remembering the debates during SB 4 375, where the argument was made that these new laws would 5 hurt our economy, drive business out, and people wouldn't б be going to work. 7 Well, we're really proud to be here to look at a 8 plan that actually says, no, that's not the case. 9 Actually, here's a way that the economy and the 10 environment can work together to allow for the new growth 11 that's going to happen and provide good quality jobs for 12 people in the Bay Area. And so we're very happy to be 13 here in support of their project. 14 Thank you. 15 CHAIRPERSON NICHOLS: Thank you. Thanks for your 16 participation. 17 Mr. McKeever, I think I saw you come back in. 18 Yes, there you go. 19 MR. McKEEVER: Thank you, Chair Nichols and 20 members of the Board, particularly --21 CHAIRPERSON NICHOLS: You need your mic a little 22 closer. 23 MR. McKEEVER: Chair Nichols, members of the 24 Board, Supervisor Serna, one of my many bosses. Good to 25 see you up there.

I'm going to make a couple of sort of global comments related to Senate Bill 375 and the whole RTAC process and then some things I particularly am impressed with in the draft plan.

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375 set in place and empowerment of this Board, gave you broad discretion in terms of how you set the targets for all the MPOs and gave you discretion to modify those as you go forward. I think, for this first round of targets, you did a great job at meeting your stated goal of pushing us to realize the most ambitiously achievable.

11 It's irony given a phrase that a prior speaker 12 used, because I was going to use it myself. We all had to 13 break a sweat to meet these targets. Anybody who thinks 14 that Ezra and Steve have not been sweating the last couple 15 of years have not been following what's going on very 16 closely. And I'm not just talking about the political 17 situation, I'm just talking about technically.

18 The per capita target, I think for this part of 19 your portfolio, in the scoping plan is absolutely the 20 right way to go. Had you set an absolute tonnage 21 reduction target for us based on the fast-growing economy, 22 which we had when Senate Bill 375 was passed, we all and 23 almost undoubtedly would have been able to meet that 24 target simply because of slow growth, and not because of 25 changed land-use patterns.

You cannot possibly look at the MTC/ABAG plan and the plans of the other three major regions in the State, just on the land-use variable alone, and not say that this statute and this first round of plans has not produced major land-use change throughout this State. The fact that they have their entire land-use forecast with no green field development included in it, and meeting their federal regulations and whatnot in doing that, is amazing to me.

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10 It's a similar sorry, not quite that much in 11 Hasan's region in southern California, and in Gary's 12 region, and we're completely turning the growth pattern in 13 terms of housing product mix on its head in the Sacramento 14 region as well.

15 So I feel really good about this first phase of 16 implementation. It has not been perfect in all respects. 17 You know, that's not how -- the world is messier than 18 that. But it has made huge strides forward in I think 19 what your Board's mission is and the overarching intent of 20 AB 32 and Senate Bill 375.

21 May I say just a couple of more things about the 22 MTC/ABAG plan?

23 CHAIRPERSON NICHOLS: I think we have a little 24 time here, so, yeah, quickly.

MR. McKEEVER: Okay. Thank you.

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That region has been a leader for a long time in this area. They were the first out of the gate to do a big regional growth vision over 10 years ago. The Bay Area Footprint, I think it was called, Livability Footprint. And certainly in the performance measurement area they have -- they've been leaders in that for a long time, and they're going even farther with this plan.

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Driving that down to the individual project level, there are all kinds of technical challenges of that. And I'm sure there's going to be continued evolution of that science, but they've gone much further than we have at SACOG. And we're -- I'm sure that we will be doing more in our next plan because of the ground that they broke here.

And also the topic area breadth of their performance indicators, where they went into what, you know, you referred to as co-benefits during the 375 target setting process. They went there in a number of areas, and again are setting standards for the rest of the State, and I suspect for some of the country as well in the work that they're doing.

And the last thing I want to say is we -- you've heard from the other amigos, I have a hunch, about the comradery that has been built through this process. It's very real. We've gotten smarter. We've gotten more

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1 collegial. There's definitely a friendly competition 2 going on too. And I know that Ezra and Steve are sitting 3 here feeling pretty good that their draft plan - draft 4 plan, I emphasize - has a higher greenhouse gas reduction 5 in 2035 than any of the rest of us by a nose. But I just 6 want them to know that the other three amigos are already 7 starting on our next plan, and the game is still on.

(Laughter.)

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CHAIRPERSON NICHOLS: That's great. Thank you. And last we hear from Michael Quigley.

MR. QUIGLEY: Madam Chair, members of the Board, my name is Michael Quigley. I'm the director of government affairs with California Alliance For Jobs. We represent 2,500 union construction contractors, and over 80,000 union construction workers from the basic crafts of operating engineers, carpenters' and laborers' unions.

I'm here today in support of MTC's draft SCS.
Today, this would be, as of my calculation, the 253rd
meeting on this. And I would -- being the last speaker,
I'll be brief.

21 We are, as I said, in support of the proposal. 22 It has several important infrastructure 23 transportation-related elements, including the expansion 24 of the HOT lane network, and capital expansions for the 25 BART service down to Santa Clara, and other regions

throughout the Bay. We think these are important infrastructure investments that will be required to meet the goals of SB 375.

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Additionally, I'll just have a couple of quick points concerning implementation. It was mentioned by several speakers, and we concur, that there needs to be some measure of CEQA reform, especially as it relates to implementation of these greenhouse gas plans.

9 There's too many opportunities to derail what has 10 been developed over such a long and lengthy process, as 11 the best course forward by interests that are more local 12 rather than looking at this greenhouse gas reduction as a 13 regional issue. So we think that your body here has an 14 important voice in that discussion.

15 And finally, I would like to also bring up the 16 fact that we are looking at a serious transportation 17 funding cliff coming at the end of this year. The California Alliance For Jobs, along with the California 18 Transit Association are chairs of a very important 19 20 transportation coalition for livable communities that is 21 looking to make very broad and targeted investments in 22 reducing greenhouse gases from the transportation sector 23 using cap and trade monies.

And we believe that, as you move forward in this process, having the revenue stream to implement these SCSs

across the State is an important and critical issue to
 make this whole thing work.

So thank you.

CHAIRPERSON NICHOLS: Thank you very much.

That concludes the list of witnesses that I had. I think everyone knows that this is an informational item. We're not taking any action today, but I would ask perhaps Lynn Terry to just say a few words about the process from here on out.

DEPUTY EXECUTIVE OFFICER TERRY: Yes. As you've heard this is the last of the major MPOs for this first round. And it's quite an accomplishment and wonderful to have all our new Board members here today.

So as we have done with the other plans is once the locals have finished their process and a final plan is done, we will review our preliminary technical analysis that was out and available today to the public, and see if there's been any change to the greenhouse gas guantification.

If there has not, we will complete an Executive Order that makes the determination that we're required to do under State law, which is, quite simply, either we accept or reject the local's determination that they have met the Board's target.

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So, at this point, our preliminary draft says,

1 based on this plan, it does meet the target.

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CHAIRPERSON NICHOLS: Okay. Thank you. Any additional questions or comments before we end this item? Dan.

5 BOARD MEMBER SPERLING: Yeah, just one small one. б I think a discussion is needed about what are the 7 boundaries of these plans that we're talking about. And, you know, the Bay Area really expanded those boundaries on us, and that's great. But if we're going to have a credible process going forward, I think we've got to, you 10 11 know, address that question, what's included -- you know, 12 I came up with, you know, my new idea about the leakage, 13 which is a great idea, but it's a legitimate question. 14 Can that be counted?

15 And if we start counting more things, we should 16 go back to this question of the targets - and that was 17 kind of subtly raised a moment ago - going forward.

CHAIRPERSON NICHOLS: Yeah, I was going to say a 18 19 word about targets, because I just, as a number of the 20 Board members know, just came back from China where I was 21 helping with the launch of the first greenhouse gas 22 emissions exchange program trading system in Shenzhen, 23 China, the first of seven pilot programs that are being 24 launched this year in China under the direction of their 25 Central Development Authorities.

And there's, you know, all kinds of excitement and interesting things going on. But I was very mindful of the fact that the cap and trade program that's being adopted there is a per capita, or per unit of production actually cap, not a hard cap, because China is not about to adopt a cap that would have a negative impact on their ability to grow. They're definitely in the business of growing their economy.

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9 And we have a different kind of cap under AB 32. But with SB 375, as a result of a very intense process 10 11 that we went through with our technical advisory 12 committee, we chose to use a per capita cap in order to 13 recognize that, particularly when we were putting our toe 14 in the water in an area that we really had never been 15 before, as a Board, as a regulatory agency, that we should 16 be careful about learning before we started to impose the 17 kind of caps that might well lead to regions just 18 rebelling. I mean, just feeling like they couldn't do 19 what was being asked of them.

And it's good to hear that that process worked so well, and that everyone of the big areas has come back with something that they are excited about, not resting on their laurels in any way, shape, or form. I think it's clear this has not been an easy process for them, but they are definitely making accomplishments.

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1 But it is also true that in the big scheme of things, we can't really say that we've achieved 2 3 perfection, because we are going to be growing in 4 emissions if we continue along this path, unless 5 technology saves us. б But the fact is that to even make a serious, 7 credible, measurable effort at improving the overall efficiency of our land use and transportation systems in 8 9 this way is a remarkable achievement for the State of 10 California, when no one would have thought we could have 11 done anything like this a few years ago. 12 So I think we just have to kind of keep adjusting 13 and keep on being ambitious, as we say, but at the same 14 time, to mark steps of progress. I didn't hear anybody 15 saying that this was the end, that they wouldn't be 16 continuing to try to make improvements. 17 So hopefully we'll be -- we'll all be spending 18 more time on these issues as we go forward. 19 And any other closing comments? 20 Yes. 21 BOARD MEMBER ROBERTS: Yeah, I feel compelled to 22 respond to something. 23 CHAIRPERSON NICHOLS: Yes. Okay. 24 BOARD MEMBER ROBERTS: And Professor Sperling 25 brought up his concern for natural gas. I would just say

if we've got major leakages in natural gas in our system, we've got a more immediate problem than global warming that somebody is going to have to face up with.

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But I think we're -- you know, there's something 4 5 that we frequently miss when we ask other people to do б planning, and we're asking them to do something that we 7 don't do. When we plan, and the success that we've had 8 over many years that I've been part of this, is that we've 9 kept the goals in sight. We didn't have specific 10 solutions of how we're going to get there. Okay. We're 11 asking them in their planning, they better show us 12 specific solutions now to the year 2050. That's kind of nuts, okay? 13

14 We don't do it, but we're asking you to do it. 15 We keep, what we call, a black box and we try to shrink it 16 each year by bringing new solutions forward. We don't 17 know what those are going to be. We know technologically 18 things sometimes work and sometimes they don't. And we 19 saw what the electric car, when we first tried to launch 20 it, it was a disaster. Okay.

It didn't work. It didn't have the range. All the -- everything that scientists had predicted, none of it was there in terms of the batteries we were going to have within two or three years. None of it happened.

So the result of that was we changed. We

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switched gears and went to allowed hybrids. And what are we seeing an incredible success story. And what has --3 we've achieved, in terms of the goal, we didn't get to the goal the way we thought we were, but we're asking all of 4 5 these organizations you got to tell us exactly how you're б going to get there.

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7 We don't allow them that sort of black box and 8 say let's pull some solutions out. Technologically, we 9 don't have to look far ahead. None of them are taking 10 into account the things that are going to happen with 11 vehicle-to-vehicle systems and perhaps driverless cars. 12 And I think that will happen well before 2050. And all 13 the things -- the dramatic changes that are going to 14 occur, and I think largely beneficial the things that came 15 out of that. Maybe some negatives.

16 But we hold them to a different standard. And we 17 have people that sue over -- we're not doing a good job of -- by the year 2050, like the crystal ball is so clear, 18 19 we know exactly what's going to happen.

20 It was mentioned, and Gary mentioned it, you know, for me, the technological stuff, which we can't 21 22 predict, has had such an incredible influence on whether 23 we have it. It seems that there should be a way to have some flexibility in this planning process, instead of 24 25 imagining that -- we go through the cycles and, you know,

1 we're in our second iteration now as we're examining the 2 Bay Area Plan. The Bay Area has a good plan, but it's not 3 just that you're going to update them periodically. The 4 fact is that any given point when you're projecting out 20 5 and 30 and 40 years away, you're really -- you're doing б that out on a such a limb and trying to imagine what the 7 impacts are, that it seems to me we overplan. And to do 8 that and to force major expenditures as though we could 9 see so clearly, it gets me very concerned.

I think they're doing a great job. I think they have a good plan. They seemed to have covered all of the areas. And, you know, they have to keep on top of it. But I wish we would allow them to have a black box, that says, you know, you don't have all the solutions, and you don't know all the technologies that are going to be available to you.

And you know what, at the end of the day, I'd be willing to bet that everyone of these groups is going to do significantly better than what they're committing to now.

21 CHAIRPERSON NICHOLS: Well, I intend to be around 22 to see how that works out --

(Laughter.)

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CHAIRPERSON NICHOLS: -- in 2050. Yes, we'll
give you the last word, Mr. Gioia.

BOARD MEMBER GIOIA: I felt sort of -- I felt optimistic this week. I was at -- I had a chance -- you know, the national -- sort of Nation Air and Waste Management Conference was in Chicago. And I had a chance on Monday to visit two of the major U.S. Department of Energy sponsored energy labs, Argonne Laboratory and the Fermilab.

And I didn't realize that the Argonne Lab, that's where the lithium ion battery for the Volt was developed. 10 And I guess they said they still owned the patent to it. 11 But that they have been designated as sort of the major 12 lab to do research on battery development. What's the 13 good of solar and wind if you can't store it somewhere?

14 And so it's really heartening to see the progress 15 that's been made, from a technology standpoint, and know 16 that there is some really focused research going on out 17 there that's going to clearly complement all the policy 18 work we're doing, and just wondered what type of support 19 has the Air Resources Board provided for that type of 20 research, whether it's research in California or research 21 elsewhere on things like that, like battery development, 22 for example, which is sort of again a large part of the 23 technology that's needed to advance the policies that 24 we're putting forward?

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CHAIRPERSON NICHOLS: I'll take just a moment and

1 ask Dr. Ayala who's the head of our mobile source program
2 to address that.

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DEPUTY EXECUTIVE OFFICER AYALA: We are, like you, following those developments. And we're also encouraged, because we're lucky that the Department of Energy has invested so heavily and so consistently in the area of energy storage, because it's so critical.

8 What we do with our research plan is try to 9 support and leverage the small amount of funding that we 10 can dedicate to those very large programs. And as you can 11 see, we obviously look for opportunities to partner with 12 them, and to make sure that whatever we can do, which is 13 in a scale much smaller than what the Department of Energy 14 can do, is complementary to those efforts, because, as you 15 said --

BOARD MEMBER GIOIA: That's on such a large scale.

DEPUTY EXECUTIVE OFFICER AYALA: -- that technology is such a critical aspect of what we're trying to do.

21 CHAIRPERSON NICHOLS: But we have a pretty good 22 record of having not only used our funds well, but also 23 inventing things ourselves in our very own laboratory, 24 which I hope you'll get to visit soon, if you haven't yet. 25 BOARD MEMBER GIOIA: But this was heartening to

1 see that there is clearly great research going on that complements all the policy. 2

> CHAIRPERSON NICHOLS: Absolutely.

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4 I think we will close out this item with Okay. 5 thanks to everybody who traveled to get here. It was б great to see you. And now we know that there's this back-door connection between SCAG and the MTC will be 8 watching for that. But we will look forward to hearing more as this goes forward.

10 And I think I'm going to suggest that we have a -- we do have a lunch break scheduled today. We were 11 going to have a brief update on litigation, so we will do 12 it in executive session and hear from our counsel about 13 14 the status of litigation that the Board is involved in.

And we'll just adjourn now then, and be back in 15 16 an hour.

17 Thanks, everybody. 18 (Off record: 12:31 PM) 19 (Thereupon a lunch break was taken.) 20 21 22 23 24 25

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AFTERNOON SESSION (On record: 1:43 PM)

CHAIRPERSON NICHOLS: All right. We're going to get back to work here.

We have two informational items this afternoon. And both of them are interesting and important. So we don't mean to give them short shrift, but on the other hand, I know people just have only so much patience for just sitting and being briefed.

10 So why don't we just ask the staff to get right 11 started with the presentations without much further ado. 12 We wanted an update on indoor air quality, both our 13 research and what we've been doing from a policy 14 perspective. And the person who leads that effort is 15 going to do the presentation, but Richard if you want to 16 introduce her, please go ahead.

EXECUTIVE OFFICER COREY: We're going to have
Peggy Jenkins with the Research division give the
presentation. And with that, Peggy.

CHAIRPERSON NICHOLS: Great. Welcome, Peggy. (Laughter.)

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER JENKINS: Thank you, Mr. Corey and good morning Chairman Nichols -- or, I'm sorry, you're right. Good afternoon, Chairman Nichols and members of the Board. 2

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(Thereupon an overhead presentation was presented as follows.)

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER JENKINS: My presentation today will provide highlights on our research and regulatory actions related to indoor air quality.

So, first, I'll begin with some background. Air quality in the indoor environment reflects air pollution generated both indoors and outdoors. Outdoor pollutant levels contribute to indoor levels, because there's a constant exchange of indoor and outdoor air through open windows and doors, leakage points, and for those buildings that have them, ventilation systems.

As a result, California's effort to meet outdoor ambient air quality standards is improving our indoor air quality. However, indoor sources alone can cause poor indoor air quality. Indoor emissions can be quite high, and the building shell partially traps the pollutants, especially when doors and windows are closed.

ARB's indoor air quality program includes both research and mitigation efforts. However, our authority is limited and indoor air quality authority is spread across many other State and federal agencies.

24 Unlike outdoor air pollution, there is no 25 well-defined governmental structure to comprehensively

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address indoor air pollution. No federal or State agency has direct or full authority over indoor air quality or indoor sources of pollution. Instead, a number of agencies have authority over one or more sources or conditions that can affect indoor air quality.

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For example, the federal Consumer Product Safety Commission has authority to regulate a variety of consumer products for health and safety. And our State Energy Commission has authority to set minimum building ventilation rates, which can have a significant impact on indoor pollutant levels.

12 ARB's authority to address indoor pollution is 13 also limited and is primarily focused on research. 14 However, State law does give us specific authority to 15 limit ozone emissions from indoor air cleaners. And we 16 have used our outdoor authority under the Toxic Air 17 Contaminants Program to reduce formaldehyde emissions from 18 composite wood products, since these emissions impact both 19 indoor and outdoor levels of pollution.

ARB'S Consumer Products Program also provides indoor benefits, since these emissions are largely released indoors. Our consumer products regulations are designed to reduce emissions of volatile organic chemicals, or VOCs, that contribute to violations of ozone air quality standards. However, ARB's regulations have

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resulted in reformulations of consumer products that are also reducing indoor exposures to some toxic air contaminants, including some carcinogens.

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Prohibitions on use of several chlorinated solvents and over 80 different product categories have reduced emissions of these carcinogens by over 13 tons per day, much of it indoors. Specific examples include degreasers, spot removers, lubricants, and adhesives. The increasing use of water-based formulations to comply with VOC limits is also generally reducing chemical exposures in the indoor environment.

Today, general cleaning, floor cleaning, degreasing and glass cleaning products are all predominantly water-based surfactant technologies.

ARB's indoor air quality program began in 1986 when funding for research on indoor air quality was first 17 included in ARB's budget and a new State law directed ARB to assess indoor exposures to toxic air contaminants.

19 Over the years, we have funded and conducted 20 pioneering studies on a wide variety of indoor air quality 21 and personal exposure Topics. Much of the research has 22 focused on children, homes, and schools, because children 23 are especially vulnerable to the impacts of air pollution. 24 This timeline illustrates some of our key research 25 projects that have supported regulations and educational

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efforts by ARB and other agencies.

Before discussing some highlights of our indoor program, I'd like to briefly review some key indoor information.

People's daily exposure to air pollution occurs in a variety of indoor and outdoor settings, including time spent in our vehicles. Our activity pattern studies showed that on average, Californians spend about 87 percent of their time indoors, making the indoor environment a major determinant of overall exposure and health risk.

Other studies have shown that there are many sources of pollutants indoors, including building materials, paints and coatings, furnishings, cleaning products, personal care products, and gas and wood burning appliances.

Another aspect of indoor air pollution is that people's indoor activities, such as the use of a gas stove or aerosol products, puts them in very close proximity to the source. This increases the probability of exposure and exposure concentration.

While the average adult spends a majority of their time in indoor environments, they spend relatively less time at home children. For children, the home is the key environment in determining overall exposure to air

pollutants. ARB's children's activity pattern study showed that the youngest Californians spend the most time indoors at home. As the bar graph shows, children under the age of two spend an average of about 85 percent of their time indoors in a home, thus they are more likely to experience exposures to any contaminants the are present in the home.

As children grow up, they spend less of their time indoors at home, but the home is still the major exposure environment for them.

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11 Studies indicate that indoor air pollution can 12 pose significant health risks. The primary health issues 13 associated with indoor pollution include exacerbation of 14 asthma, exposure to cancer-causing pollutants, and impacts 15 of particulate pollution.

A National Academy of Sciences report published in 2000 found that there is a greater variety of asthma triggers indoors than outdoors, including environmental tobacco smoke, high levels of nitrogen dioxide, house dust mites, cockroaches, and pet dander. More recent studies have implicated cleaning products and some VOCs as possible asthma triggers.

Hire exposures to known human carcinogens, such as formaldehyde, environmental tobacco smoke, and asbestos occur indoors, and increase cancer risk when these

pollutants are present. And lastly, particulate pollutants generated indoors from gas appliances, cooking, vacuuming, smoking, and burning candles and incense can increase risk respiratory and cardiovascular symptoms and cause irritant effects.

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As with outdoor air pollution, the primary б 7 approach to improving indoor air quality is to reduce 8 emissions. Key emission reduction strategies for indoor pollution are the use of low-emitting building materials, 10 reformulation of consumer products, limiting ozone 11 emissions from air cleaners, and reducing wood burning and 12 smoking.

13 In addition, increasing ventilation and air 14 filtration will reduce people's exposure to pollutants 15 once the pollutants are emitted. Ventilation is a 16 mitigation strategy that can reduce exposure for most 17 pollutants because it dilutes and exhausts indoor air 18 pollutants. Venting gas goes with an effective range hood 19 is one example of effective local ventilation.

20 And finally, high efficiency air filtration can 21 be an effective mitigation strategy for particle removal.

22 Next I will focus on two examples where ARB 23 research has led to regulations that reduce exposures to key indoor pollutants, the air cleaner regulation and the 24 Air Toxic Control Measure for composite wood products. 25 Ι

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will then discuss current ARB funded high efficiency filtration studies focused on reducing indoor exposures to outdoor pollutants.

So, first, I'll discuss ARB's actions on ozone-generating indoor air cleaners.

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ARB staff conducted air cleaner studies that documented the high ozone levels produced by some air cleaner models that generate ozone and show the need for regulation. The ozone levels observed in these studies significantly exceeded the levels of State and federal ozone air quality standards.

One device, the Prozone Whole House model, produced levels over 400 parts per billion. This is more than twice the Stage 1 Smog Alert level.

15 The finding that some air cleaners were 16 generating high ozone levels was especially a concern, 17 because an ARB-funded survey found that most owners of air 18 cleaners purchased them to address asthma, allergies, or 19 some other health issue of one of their family members. 20 These individuals are often among those who are most 21 susceptible to the effects of ozone.

In 2006, Assembly Bill 2276 was enacted which gave ARB authority to regulate ozone emissions from indoor air cleaners. In 2007, the Board adopted a regulation that established an ozone concentration limit of 50 parts

per billion, or ppb, for indoor air-cleaning devices manufactured, distributed, or sold in California. This level was chosen because it was well below the eight-hour ambient air quality standard level of 70 parts per billion for ozone, and, as directed by AB 2276, was consistent with the Federal Drug Administration's 50 part per billion maximum ozone standard for medical devices.

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The compliance test method used for the regulation measures ozone as it is released from the air 10 cleaner. But because the ozone disperses and reacts 11 quickly, the exposure level in the room with an ARB 12 certified air cleaner is typically less than three parts 13 per billion.

14 The regulation requires ARB certification, and 15 includes specific labeling requirements for indoor air 16 cleaners and the product packaging. In-duct air cleaners 17 and those for certain industrial uses are exempt from the regulation. And we have funded a study of induct air 18 cleaners that emit ozone to determine whether those 19 20 in-duct devices also need to be regulated, and results are 21 due out later this year from that study.

22 ARB implements the air cleaner regulation through 23 a certification program. To date, ARB has certified over 24 900 air cleaner models for sale within California. The 25 market for air cleaners is still very strong, and

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consumers have a wide variety of effective, safe air cleaning technologies to choose from. The certification program is generally successful and there is good compliance in retail stores in California.

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However, ozone generators are still readily available for sale to Californians via the Internet from noncompliant suppliers and overseas companies. This is an area where a national approach would be more effective.

9 Federal action by the United States Consumer 10 Product Safety Commission and the Federal Trade Commission 11 is needed to effectively reduce internet sales of ozone 12 generators.

Federal action also is needed to assure the validity of the effectiveness claims made by some manufacturers, particularly of ozone generators, regarding the removal of various pollutants by their air-cleaning devices.

Moving on to formaldehyde. In 1992, ARB identified formaldehyde as a toxic air contaminant based on its carcinogenicity. ARB's research has led to several actions that reduce unhealthful indoor levels.

In 1996, we funded a study that measured formaldehyde emissions from a variety of building materials and consumer products. The investigators found that the highest formaldehyde emissions by far were those

from composite wood products made using urea-formaldehyde resins, or UF resins, as shown by the bar on the left.

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Urea-formaldehyde composite would products, such 4 as plywood and particle board, are often used for interior construction for walls, cabinetry, and flooring. These materials are responsible for the very high levels of formaldehyde reported in new homes and in manufactured homes, which are constructed using substantial amounts of pressed wood products.

10 This study prompted ARB's action to develop the 11 composite wood products regulation.

Several ARB field studies have confirmed the need 12 13 to reduce formaldehyde levels indoors. In 2004, ARB and 14 the Department of Health Services completed a statewide 15 study that assessed the environmental conditions, 16 including indoor air quality, in California's portable and 17 traditional classrooms. We found that formaldehyde levels 18 in all of the classrooms exceeded health benchmarks 19 averaging 13 parts per billion.

20 In 2009, a study co-funded by ARB and the Energy 21 Commission on ventilation and indoor air quality in 108 22 new single-family homes found that new California homes 23 also had high levels of formaldehyde with an average of 35 24 parts per billion.

And in 2012, an ARB-funded study of contaminant

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levels in 40 daycare centers in northern California found that some had formaldehyde levels again above health benchmarks, averaging 15 parts per billion.

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So in all of these studies, indoor formaldehyde levels typically exceeded the health benchmark for long-term exposures set by the Office of Environmental Health Hazard Assess, which is currently set at seven parts per billion. A small percent of buildings in each study also exceeded guideline levels for higher short-term exposures.

11 Although, their formaldehyde results are highlighted here, each of these studies had other 12 13 important findings as well. For example, the first two 14 studies found inadequate ventilation in many classrooms 15 and homes, and the daycare center study found levels of 16 other contaminants above health standards or guidelines in 17 portions of the centers, including PM10, PM2.5, benzene, 18 chloroform and two brominated flame retardants.

The results from ARB's formaldehyde emissions study and the classroom study prompted ARB to adopt a regulation to reduce formaldehyde exposure from composite wood products. The regulation was adopted as part of our toxic air contaminant program, and limits formaldehyde emissions from hardwood plywood, particle board, an medium density fiberboard, as well as from furniture and other

1 finished goods made with these materials.

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Manufacturers must have their products tested and certified through third-party verifiers. Acceptable emission levels for each type of material were specified under a two-phase schedule for compliance.

At the time the regulation was adopted, staff estimated that when fully implemented, the Phase 2 requirements could result in a maximum reduction of 58 percent in indoor formaldehyde concentrations. Phase 2 standards are now in effect, but because of sell-through provision, some Phase 1 products may still be offered for sale. We are encouraging consumers to purchase the products labeled Phase 2 compliant to achieve the maximum protection.

15 The impact of our regulation will be far 16 reaching. As required by Congress, the U.S. Environmental 17 Protection Agency recently proposed a federal regulation 18 similar to ours that will extend these protections to all 19 Americans and to facilitate implementation and enforcement 20 of the regulation.

Another positive aspect of ARB's regulation has been the incorporation of our formaldehyde limits into the California Green Building Standards Code, also known as CalGreen. ARB staff worked with the California Building Standards Commission and the California Department of

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Housing and Community Development to add the formaldehyde limits for composite wood products, as well as limits for emissions of formaldehyde and other chemicals from carpets, vinyl flooring, insulation, and other building materials in both residential and commercial buildings.

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In addition, many of these measures have been incorporated into the first International Green Construction Code as well.

9 Incorporating the limits into the building code 10 complements ARB's composite wood regulation, which 11 requires manufacturers to certify their products. As 12 compliant building materials are used, indoor formaldehyde 13 levels will decline. We will continue to work with other 14 agencies to identify ways to further reduce emissions 15 through educational efforts and regulatory actions.

And finally, I'll discuss two major research projects now underway that focus on high efficiency filtration to reduce indoor exposures. Both studies have broad applicability, but results will be a special value for homes that in close proximity to traffic emissions.

The relative contribution of indoor and outdoor generated pollutants to indoor air quality is complex. Ventilation that brings outdoor air indoors is important for reducing the build-up of indoor pollutants. In the 25 2009 study of new homes I mentioned earlier, the

1 investigators found that air exchange rates were 2 unacceptably low.

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This led to new Title 24 requirements. So the State Energy Code now requires mechanical ventilation in new homes in order to increase the air exchange rate. The most common type of system used in California homes to comply with this requirement is a continuous exhaust system in the bathroom or utility room.

9 Such systems bring in unfiltered outdoor air 10 through leakage points in the building, and improved 11 filtration is not required by the Energy Code. If the 12 outdoor air has a high concentration of outdoor 13 pollutants, such as traffic emissions, filtering the 14 outdoor air entering a home would help ensure that the 15 benefit of ventilation is not diminished or overwhelmed.

16 And ARB has funded two key projects to address 17 these issues.

18 The goal of the two filtration studies underway 19 is to assess how well high efficiency filtration may 20 reduce indoor exposures. Limited studies have shown that 21 up to a 96 percent reduction in indoor PM2.5, ultrafine particles, and black carbon levels can be achieved with 22 23 high efficiency particle filtration. California field 24 studies are needed though to document the real world 25 exposure reductions that can be expected from using high

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efficiency filtration in California homes.

The first study, a study of filtration with mechanical ventilation, is expected to be completed in 2015 Lawrence Berkeley National Laboratory. The second, a study of asthma and exposure reduction, is expected to be completed in 2016 by the University of California at Davis.

8 In the first study, high efficiency filtration 9 systems will be tested in combination with different 10 mechanical ventilation systems with the goal of 11 identifying the combinations that best reduce indoor concentrations of outdoor pollutants while being energy 12 efficient. Each combination of systems will be tested in 13 a home during both summer and winter seasons. 14 The 15 investigators will compare pollutant concentrations 16 indoors and outdoors in order to assess the effectiveness 17 of high efficiency filtration.

18 The Lawrence Berkeley National Laboratory will 19 provide data for use in -- excuse me, the Lawrence 20 Berkeley National Laboratory study will provide data for 21 use in reviewing the State energy and building codes.

A demonstration of the effectiveness of high efficiency filtration would support Title 24 amendments to require appropriate types of high efficiency filtration in new homes with mechanical ventilation for greater

protection of health.

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Secondly, the results of this study are expected to provide information to the Energy Commission, the Department of Housing and Community Development, and the Building Standards Commission for use in State building codes for residential retrofits.

The second ARB-funded study currently underway will help us understand how much high efficiency filtration reduces indoor exposures to outdoor PM and asthma symptoms in children with asthma.

For this study, homes of 200 children ages six to 11 12, diagnosed with moderate to severe asthma will be 12 13 equipped with high efficiency filtration. The high 14 efficiency filtration will be installed in each home, 15 either in the central heating and air conditioning or as 16 portable air cleaners for a one-year intervention period. 17 The UC Davis investigators will measure pollutant concentrations indoors and outdoors and obtain asthma 18 19 measurements and symptoms diaries for two years to compare 20 the effects of one year with filtration to one year without filtration. 21

The results of this study are expected to provide guidance on filtration improvements for existing homes that reduce indoor exposures to particles indoors and reduce asthma symptoms in children with asthma.

The guidance will be useful for homeowners, renovators, and State and local jurisdictions that oversee retrofits and renovation.

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In summary, ARB's research is focused on understanding the nature of indoor air pollution exposures and mitigation strategies. By identifying indoor air quality issues and solutions, ARB and other agencies have had the information necessary to take action to approve indoor air quality.

ARB regulations have reduced indoor formaldehyde, ozone, and a variety of pollutants in consumer products. Through collaborative interagency efforts and public education, we have helped to reduce exposures to indoor pollutants, to improve ventilation, and to support the development of green building code measures.

16 The ARB ventilation studies underway should 17 support the implementation of mitigation strategies to 18 help reduce the impact of exposures to high levels of 19 outdoor air pollution, including asthma symptoms.

20 Thank you for your attention. I'd be happy to 21 answer any questions.

CHAIRPERSON NICHOLS: Okay. Before we turn to any questions from the Board, I made a mistake when we opened this proceeding by not announcing that we were entering back into an open session from having had a

1 closed session, and that we didn't take any action in that session. So I've now done that for the record, and we can 2 3 move on. 4 Do Board members have questions or comments on 5 the indoor air quality report issue more generally? б I'm starting down at this end, because I've been 7 very bad about turning to the right all the time, overcoming my natural tendencies. 8 9 BOARD MEMBER DE LA TORRE: I'm okay. 10 CHAIRPERSON NICHOLS: You're okay, despite being 11 cast away way down at the end of the table there. 12 (Laughter.) 13 CHAIRPERSON NICHOLS: All right. Ms. Berg, did 14 you have your hand up there? 15 BOARD MEMBER BERG: No. 16 CHAIRPERSON NICHOLS: No, you did not. 17 Okay. Well, in that case, I'll turn in this 18 direction. 19 BOARD MEMBER SHERRIFFS: That takes care of the left. 20 21 CHAIRPERSON NICHOLS: Did you have something? 22 I apologize. 23 BOARD MEMBER GIOIA: I was just going to ask, I 24 appreciate getting this presentation about the range of 25 indoor air quality activities that districts and other

1 Boards are involved with. It would be useful to get a list of the specific types of regulations and actions 2 3 we've taken that are -- whether they're on the website or 4 not to provide. I know this has been a subject of interest and concern with the local air districts, as well 5 б as how best to increase their authority to work on indoor 7 air quality issues. And I realize that this Board will 8 have different authority than the local air boards, but it 9 would be useful to see the full range of projects 10 specifically. 11 CHAIRPERSON NICHOLS: Is this -- Richard, is this something that CAPCOA has talked about lately, the air 12 13 officers? 14 EXECUTIVE OFFICER COREY: No. I'm thinking about 15 the range of CAPCOA committees and the areas we focus on. 16 It's not something I recall having a focused discussion 17 with them on, but we'll pull the information together you 18 requested. 19 CHAIRPERSON NICHOLS: Okay. Well, maybe we could 20 put a one-pager of some kind together. EXECUTIVE OFFICER COREY: Yes. 21 22 CHAIRPERSON NICHOLS: Okay. Great. All right. 23 Now, in this direction. 24 Dr. Sherriffs. 25 BOARD MEMBER SHERRIFFS: Great. Thank you. Ι

wish this regulation -- these formaldehyde regulations had been in force when I got my new bed several years ago. My bedroom stank for six months, and I wondered what is this? And I finally figured it out.

The problem of the energy efficiency and mechanical ventilation, how is that being looked at, because clearly these things may --

8 INDOOR EXPOSURE ASSESSMENT SECTION MANAGER 9 JENKINS: Right. Well, the Energy Commission approved, 10 about three years ago now, the mechanical ventilation 11 requirement. It had been brewing even before our studies 12 showed, you know, the very low levels of air exchange and 13 the high levels of formaldehyde.

So it is, you know, a tradeoff. But, then again, to protect health, the mechanical systems you can get some good air exchange with a fairly low energy system. And the study that I discussed will be looking particularly at a number of ventilation systems that do not require a lot of energy. There are some that do and some that don't. So there is some give and take there.

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CHAIRPERSON NICHOLS: Okay. John.

BOARD MEMBER BALMES: Well, Peggy, thank you very much for that presentation. I was aware of most of what you presented, because I've worked with your program over the years, but it was a nice summary.

I have a specific question on slide five, which was the amount of time that Californians spend indoors. And are those data recent? Is this updated? Because I know we had data from several decades ago. And I was just curious if these are new data?

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER JENKINS: Right. What we have are the older data, but they're generally accurate still because there hasn't been a big change across the entire adult and teen population.

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BOARD MEMBER BALMES: Well, I was actually thinking of kids. Yeah, it was the teens I was thinking about, and kids spending more time indoors on computer screens and cell phones.

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER
JENKINS: I mean the pie chart here is for adults and
teens, so that's -- that hasn't changed. With children, I
think some of it has. However, you know, the younger
kids, the little ones, are still basically in the home.
If they're at day care, a majority of those are in homes
as well. Although, some are public daycare centers.

21 BOARD MEMBER BALMES: So the next slide is that 22 more recent data?

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER
JENKINS: We did look at -- that's -- again, it's from our
original study. We looked at -- there are smaller

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1 studies. And, as you know, some epidemiology type studies do obtain like activity pattern data. So looking across 3 those current studies, it's still in the same ballpark. We wish that, you know, it weren't, but -- actually, we 4 5 wish they were outdoors more, but --

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BOARD MEMBER BALMES: And then my last question would be, in terms of challenges for your program going forward, you know, what's -- what's an emerging problem that you're paying attention to that you haven't talked about in this presentation, which was mostly about what you've done in the past and then the new mitigation studies?

13 INDOOR EXPOSURE ASSESSMENT SECTION MANAGER JENKINS: Right. I think -- well, of course, we would 14 15 like to have some federal assistance with the ozone 16 generators and the internet as we mentioned.

17 I think a big area that we still need to address 18 is indoor combustion. And that's probably the main one 19 we'd like to focus on next. Unfortunately, we don't have, 20 you know, the authority we'd like to have --

BOARD MEMBER BALMES: Right.

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER 22 23 JENKINS: -- but I think ARB is an excellent facilitator. 24 You know, we've helped to fund some of the research that's 25 identified, some of the indoor combustion issues. We work

closely with the Energy Commission staff. They funded some work. There's some new research showing that range hoods show some promise with some design tweaks and 3 4 improvements to take care of the issue.

So we are working with those folks, so that's probably a big one. I think we could do a little more for in-vehicle exposure reduction as well. We have a study that's going on right now with an investigator from UCLA looking at high efficiency filtration in cars and school buses. And I think that shows promise for more exposure reduction. So those are probably the two I would 12 highlight.

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BOARD MEMBER BALMES: Thanks.

14 CHAIRPERSON NICHOLS: I think this is an area 15 where, particularly with interest and support from the 16 districts, we might be able to pull together some quite 17 interesting, you know, day or two kind of conference and 18 look at what an agenda would look like for how to proceed 19 on this issue. I think that would be a great project for And I know the staff is interested. And you're 20 ARB. 21 right, people have been wanting to do this for a long 22 time.

23 So it's good to have you here to push this issue, because I know people have, over the years, kind of felt 24 25 that they were hitting a wall. Now, we can maybe find a

1 way to get through it. So great. Thank you. 2 Do we have any comment on this issue? Did 3 anybody come to talk about this one? 4 Seeing none. 5 Let's move to our final item of the day then. б EXECUTIVE OFFICER COREY: All right, Chairman 7 Nichols, while they're transitioning, very briefly, AB 8 1900 was authored by Assemblyman Mike Gatto and chaptered 9 into the law on September 2012. It supports Governor 10 Brown's desire for expanding the use of bioenergy sources 11 in California by removing some of the barriers to using 12 biomethane in gas pipelines. 13 Staff will be presenting a presentation on work 14 that they've done with the Office of Environmental Health 15 Hazard Assessment that supports a PUC rule-making. And 16 Paul Milkey with our Stationary source Division will be 17 giving the presentation. 18 (Thereupon an overhead presentation was 19 presented as follows.) 20 CHAIRPERSON NICHOLS: As soon as he can get into his chair. 21 22 Hi. 23 AIR POLLUTION SPECIALIST MILKEY: Hi. 24 CHAIRPERSON NICHOLS: Welcome. 25 AIR POLLUTION SPECIALIST MILKEY: Thank you, Mr.

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Corey, and good afternoon, Chairman Nichols and members of 1 the Board. 2

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As Mr. Corey said, I'll be presenting an update on recommendations Air Resources Board and the Office of Environmental Health Hazard Assessment staff have provided to the California Public Utilities Commission to assist in their development of standards for injection of biomethane into natural gas pipelines.

Before I get to our work on AB 1900, I'd like to 10 begin with a short review of biogas and biomethane.

Biogas is produced when organic matter decays in 12 a low oxygen, or anaerobic environment. This can happen in a landfill, sewage treatment plant or a digester 14 containing dairy manure, green waste, food scraps, or other organic matter.

16 Untreated biogas contains mostly methane and 17 carbon dioxide with lesser amounts of other gases and 18 trace contaminants. Biogas needs to be treated or 19 upgraded to produce pipeline quality gas that meets 20 utility standards, so that it can be injected into the 21 natural gas pipeline system. This is done in numerous 22 projects throughout the United States, including one 23 project in California.

24 There are many advantages to using biomethane as 25 It's a renewable source of energy. an energy source. Ιt

supports energy diversity. It has the potential to reduce 1 greenhouse gas emissions by replacing conventional fossil 2 3 based natural gas. It promotes sustainable waste 4 The facilities that process and management practices. 5 utilize biomethane create in-state jobs. It's an б important component of the waste management sector plan 7 being developed to meet our State's waste and greenhouse 8 gas reduction goals. And finally, it's a component of 9 California's Bioenergy Action Plan.

As a renewable source of energy biomethane can be used to fuel transportation, on site for production of power -- of electric power and it can be used to inject into the natural gas pipeline system, where it's used by homes and businesses.

15 The initial restrictions on the use of biogas 16 began in the 1980s over concern of vinyl chloride in 17 Legislation was enacted that essentially landfill gas. 18 prohibited the injection of landfill biogas into the 19 common carrier pipeline. In recognition of the many 20 benefits of biomethane, Assembly Bill 1900, which was 21 strongly supported by the Brown Administration, was passed 22 to remove barriers to its safe use.

AB 1900 assigned specific tasks to the CPUC, ARB, and OEHHA. The bill requires the CPUC to adopt standards by the end of this year that both protect public health

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and ensure pipeline integrity and safety.

In support of this effort, ARB and OEHHA were tasked with developing recommendations for health-based standards for constituents of concern in biomethane. We did not address the pipeline integrity issues as these will be investigated by the CPUC.

As specified in AB 1900, the ARB and OEHHA provided recommendations for health-based standards on May 15th of this year. These recommendations were developed in consultation with CalEPA, Cal Recycle, and the Department of Toxic Substances Control.

Under AB 1900, the CPUC is to give due deference to the ARB recommendations for health-based standards. And AB 1900 requires that ARB and OEHHA update recommendations at least every five years and more often, if needed.

17 18 And we'll skip. And one more.

18 So this is a brief summary of the approach we 19 used to develop the recommended concentration limits for 20 each of the constituents of concern. We identified the 21 compounds in biogas or biomethane, their highest 22 identified concentration found in a gas sample, and their 23 associated health risk value. Concentrations were 24 adjusted to reflect dilution and actual exposure to end 25 users.

The exposure-adjusted concentrations were compared to the public health values identified by OEHHA to determine the compounds of concern, and the appropriate health-protective concentration limits for each of the constituents.

Finally, a risk management approach was developed to ensure that the biomethane used would not exceed health protective-values.

9 To identify what constituents are present in 10 biogas, we reviewed readily available data and were able 11 to find more than 300 individual constituents likely to be 12 present in landfill, dairy, or POTW biogas, representing a 13 broad range of chemical groups.

As required by AB 1900, we focused on compounds found in significantly greater concentrations in biogas compared to natural gas. OEHHA was able to identify health-risk values for over 200 of these compounds.

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Yeah, we'll skip.

So this table shows the 12 constituents of concern identified through our analysis of the available data. The compounds with an asterisk next to them were identified due to their carcinogenicity and the others due to their non-cancer chronic risk. The columns to the right indicate the biogas source for each of the constituents of concern were found. And as you can see,

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12 of the constituents were found in landfills, six in POTWs and five in dairies.

Benzene would qualify as a constituent of concern, except that it was found to be a natural gas at higher concentrations than in biogas and is thus not on the list.

7 In crafting our risk management approach, we 8 relied on OEHHA's health protective values and risk management guidelines approved by the ARB in 1993. 9 We 10 recommend trigger levels for each constituent of concern 11 at the health protective concentration levels identified by OEHHA. We also recommend a lower action level that 12 13 would trigger more frequent testing and shut off if more 14 than two exceedances occur in a 12-month period. There 15 are also upper action levels that if exceeded would 16 require that the biomethane flow to the pipeline be 17 immediately shut off.

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Skip ahead.

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And one more time.

Our analysis of the available data and exposure modeling indicates that from a public health perspective, biomethane can be safely injected into the natural gas pipeline system. Most of the constituents of concern in biomethane were found to be below trigger levels, and all were found to be below the lower action levels.

Based on this information, injection of biomethane presents no additional health risk compared to natural gas. These recommendations were provided in a report sent to the CPUC on May 15th of this year.

5 The next step in the process is for the CPUC to б complete their rule-making to adopt standards for 7 biomethane by the end of this year. We intend to continue 8 to work with the CPUC staff during their regulatory process to see if the risk management and other 10 requirements that we recommend can be integrated with a 11 pipeline integrity requirements that they'll be working on 12 and to look at identifying an appropriate process for 13 potentially adding biogas from additional sources.

14 Based on the work we've done to date, it appears 15 there is growing interest on the part of biogas producers 16 to pursue pipeline injection projects. We're optimistic 17 that completion of the CPUC rule-making process will 18 provide more certainty regarding the requirements for 19 biomethane injection into the common carrier pipeline, 20 which in turn will help facilitate increased use of 21 biomethane a renewable energy source.

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Thank you.

23 CHAIRPERSON NICHOLS: Remind me again, I think you said this at the beginning of your presentation, how 24 25 long ago it was that California essentially banned the

1 injection of landfill gas in the pipelines?

AIR POLLUTION SPECIALIST MILKEY: This was back 3 in the 1980s.

4 CHAIRPERSON NICHOLS: 1980s, yeah. Okay. Thank 5 you.

We have one witness who signed up to testify on this item also. And that is Howard Levelson(sic).

8 MR. LEVENSON: Thank you, Madam Chair and good 9 afternoon, Board members. I'm Howard Levenson. I'm 10 Deputy Director at Cal Recycle. And I'm here to provide 11 our appreciation for the efforts of ARB, OEHHA, and the CPUC in working on this issue. 12

13 In preparing this report to the CPUC, your staff 14 worked with us to identify a number of key issues of 15 concern to Cal Recycle. And the main issue that remains 16 for us is whether biomethane produced at anaerobic 17 digestion facilities that used food waste and other 18 components of the solid waste stream will eventually be 19 eligible for pipeline injection?

20 Right now, as Paul indicated, there is sufficient 21 testing data for biomethane from three sources, landfills, 22 dairies, and POTWs, but there's not sufficient data from 23 the anaerobic digestion facilities that might be using 24 food waste in the future.

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And this is a very key priority for Cal Recycle

as we begin moving towards our 75 percent statewide recycling goal. And, as Paul mentioned, it's a key component in the waste sector portion of the scoping plan 3 4 update because of the implications for avoiding methane emissions at landfills. 5

б So we appreciate that the report identifies this priority as well as the need to continue working with CPUC on getting testing data and addressing some of the cost 8 issues associated with that. And really as a result of 10 this report plus a recent meeting at the Governor's office 11 of the Bioenergy Interagency Working Group, CPUC has 12 already reached out to Cal Recycle, and we'll be meeting 13 with them in July to continue discussions on this issue.

14 So I just wanted to provide our support and our 15 appreciation for the work that you and your staff have 16 done and we look forward to continued coordination on this 17 with all the agencies involved.

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Thank you.

19 CHAIRPERSON NICHOLS: Thank you very much. It's 20 been, I know, a great partnership between these agencies. 21 This is a really important example of how difficult it is 22 to do something that seems to make sense on all fronts, 23 but where you've got health concerns that are raised, you 24 just have to be extraordinary careful. And sometimes it 25 takes a very long time. But I know the PUC was eagerly

1 awaiting our report. And now that they've got it, they're 2 getting ready to go to work to try to develop some 3 standards.

Yes, Dr. Sherriffs. I'm sorry, you're pointing
me in the other direction. Sorry.

б BOARD MEMBER DE LA TORRE: On a related matter --7 it's not this specifically, but it's similar, I read 8 recently about methane dairy digesters where they burn it 9 and turn it into electricity on site. And in the nineties 10 a lot of folks went out and built these systems on these 11 farms, and then over time the regulatory environment got 12 such that they had to shut them down and apparently are 13 just starting up again.

Do we have a role in that regulatory process? And what's changed from the nineties to today to allow these facilities to function today and not back then?

17 Clearly, the methane -- getting rid of the 18 methane is a good thing, if they're doing it the right 19 way.

20 EXECUTIVE OFFICER COREY: Mr. De La Torre, I'll 21 take that. With respect to dairy digesters, you're 22 correct in terms of the potential opportunity with respect 23 to methane generation.

And you're also correct, historically, there were some issues with older engines and the maintenance of

those engines and NOx implications going, you know, back many years. But going forward, in terms of where things stand, one recognizing there's a significant opportunity in terms of harnessing the GHG emissions, methane emissions from dairy digesters.

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There's a number of pilot projects that are moving forward with ARB, CalEPA, and CDFA focusing on really what has been a key issue, which is there's an economic barrier. That the basic costs of the -- putting the infrastructure. And there's a few approaches. One approach is if there's access to a pipeline, the issue has 12 been the economics aren't necessarily there to pipe in one dairy digester, but if you can connect a network of 14 digesters. It's been work looking at that.

15 It's also been work with respect to the pilots of 16 cleaner generation. There's actually some fuel cell 17 applications going on, as well as other work. And 18 honestly, some efforts to look at what it would take from 19 an incentive standpoint, understanding basic economics of 20 different applications.

21 So the point has been -- a key barrier really has 22 been the bottom-line economics that is still an issue. There's no doubt about that. 23

24 The pilot work that's going on is intended to 25 help inform that and also intended to help inform what

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might be an incremental role that incentives can play to
 move these things forward.

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CHAIRPERSON NICHOLS: Actually, the Energy Commission put money and had grants available for some of these projects to begin with. But the problem is that it's a cost to the dairy owner, and it's not recouped through any value that they can get out of selling this stuff. And there's not enough of a disincentive from the regulatory perspective, even with all the water quality issues, or the CO₂ issues to really get them to do it involuntarily.

12 So the next step I think -- and there was 13 actually quite a bit of an article about this. I think 14 it's probably the same one you saw in the LA Times, which 15 suggested, and this is it what I've heard also, that 16 they're beginning to emerge third-party businesses who 17 will come in and own the digester. They'll basically rent 18 the land and/or buy the manure from the dairy owner, and 19 that's the feed stock to then create the gas, which then 20 they can -- this third party can then sell into the 21 pipeline system.

And if we can overcome all the barriers along the way, there is a way for somebody to make money on it, but it is -- it just isn't necessarily the case that somebody who's in the dairy business really wants to be in the fuel

1 2 supply business also.

EXECUTIVE OFFICER COREY: That's right. In fact, those third parties are also looking at the integration that I mentioned, where the economics for an individual dairy may not be there, but to basically connect through a network of pipelines, the economies may actually become more economically viable.

8 BOARD MEMBER DE LA TORRE: And taking tons of 9 manure from a bunch of places and taking them to one 10 central place is not the most efficient way of doing this 11 either.

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CHAIRPERSON NICHOLS: Right.

13 BOARD MEMBER RIORDAN: In looking, as you drive 14 up the I-5 now, you have a group of, what I would call, 15 the largest of the dairies all somewhat co-located. So 16 that may make some sense to begin there and to try to 17 incorporate the efforts on -- I don't know how many 18 dairies are there, but there's got to be at least from the 19 visual point of view at least four major dairies right there on the 5. 20

21 CHAIRPERSON LLOYD: In answer to the question, we
22 have a lot of staff time invested in this issue. A lot.
23 EXECUTIVE OFFICER COREY: We have, that's right.
24 CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER MITCHELL: I wanted to just comment

about an experience I had a couple of months ago. 1 And this dealt with the use of fuel cell and distributed 2 3 generation at the Honda plant in Torrance. And I visited 4 that plant. They are actually piping in methane from 5 Texas to operate this fuel cell. And they use it only in б the summer months, so they're only using it half the year. 7 And then they're using it only for peak generation. And 8 they are saving themselves a ton of money just using it on 9 that limited -- in that limited time period, and using 10 methane piped in from Texas. So there certainly is viable 11 use.

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CHAIRPERSON NICHOLS: Room for improvement.

BOARD MEMBER MITCHELL: Yeah, there's good use for this.

15 What I have heard in discussions with the South 16 Coast Air Quality Management District on the use of 17 methane is the difficulties in cleaning it, in removing 18 the siloxanes out of the methane, so that it can be used 19 safely. And I assume that's part of the big hurdle here 20 in getting to the next step. So I hope we're working on 21 that, because we need to start converting our waste to 22 energy. We can't keep filling up our lands full --23 CHAIRPERSON NICHOLS: Mr. Donahoue. 24 EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: Just 25 a brief comment on that. We have looked in detail at the

clean-up technologies with respect to this. And it does appear that we have good clean-up technologies, that they are capable of achieving very low levels in cleaning this gas up to being cleaner than natural gas.

The issue is it does cost to do that and 5 б that's -- so that's part of the economic hurdle. And then 7 the other thing that we're still working through with the 8 CPUC is the testing frequency associated with that, 9 because the testing costs actually for doing the speciated 10 analysis that you need to do is very expensive. And so 11 that's the thing we're also looking at. It helps that we've identified some key compounds that you need to focus 12 13 on versus a broader suite of compounds. But we do still 14 need to work with CPUC on the end analysis and how much 15 testing needs to be done.

16 BOARD MEMBER MITCHELL: Well, I'm encouraged to 17 see us working on this. I think it's an important issue.

18 CHAIRPERSON NICHOLS: Yeah. Again, if any Board 19 members want additional information from the staff, this 20 is an area we do have quite a lot of in-depth expertise.

So other comments, questions?

Mr. Sperling.

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BOARD MEMBER SPERLING: And one reason we have in-depth expertise, if my mind doesn't fail me is, it's one of our major offset programs, isn't it?

1 CHAIRPERSON NICHOLS: Dairy digesters, yes. EXECUTIVE OFFICER COREY: That's correct. 2 3 BOARD MEMBER SPERLING: So why aren't -- I mean, 4 we have a lot invested in this, you know, in terms of the 5 success of it. CHAIRPERSON NICHOLS: б Correct. 7 EXECUTIVE OFFICER COREY: That's right that's an 8 important category, you bet. 9 CHAIRPERSON NICHOLS: But if nobody wants to take 10 advantage of the protocol, then we can't make them do it. 11 We have to try to find a way to get people to use it. 12 All right. If there are no additional comments, then I think we've come to the end. We had no general 13 14 members of the public wanting to come speak to us. 15 We did not. So I think we could be adjourned. 16 Lets do it. All right. Thanks, everybody. 17 (Thereupon the California Air Resources Board 18 meeting adjourned at 2:34 p.m.) 19 20 21 22 23 24 25

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