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
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APPEARANCES

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 Donohoe, 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
APPEARANCES CONTINUED

ALSO PRESENT:

Ms. Kara Vuicich, Alameda County Transportation Commission
Ms. Amy Rein Worth, Mayor, City of Orinda
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CHAIRPERSON NICHOLS: Microphones, for those who are not familiar with this particular set-up, if you want to speak, you have to actually press the base of your microphone so the green light goes on.

And otherwise, if you're not speaking, it's probably better to keep it off, just because then we don't get any feedback from all the other electronics we have up here.

Welcome, everybody. Good morning. The June 27th 2013 public meeting of the Air Resources Board will come to order. And before we begin any of our other business, we will all please rise and say the Pledge of Allegiance to the flag.

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

CHAIRPERSON NICHOLS: The Clerk of the Board will please call the roll.

BOARD CLERk JENSEN: Dr. Balmes?

BOARD MEMBER BalmES: Here.

BOARD CLERk JENSEN: Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERk JENSEN: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Here.

BOARD CLERk JENSEN: Supervisor Gioia?
BOARD MEMBER GIOIA: Here.
BOARD CLERK JENSEN: Mayor Pro Tem Mitchell?
BOARD MEMBER MITCHELL: Here.
BOARD CLERK JENSEN: Mrs. Riordan?
BOARD MEMBER RIORDAN: Here.
BOARD CLERK JENSEN: Supervisor Roberts?
BOARD MEMBER ROBERTS: Here.
BOARD CLERK JENSEN: Supervisor Serna?
BOARD MEMBER SERNA: Here.
BOARD CLERK JENSEN: Dr. Sherriffs?
BOARD MEMBER SHERRIFFS: Here.
BOARD CLERK JENSEN: Professor Sperling?
BOARD MEMBER SPERLING: Here.
BOARD CLERK JENSEN: Chairman Nichols?
CHAIRPERSON NICHOLS: Here.
BOARD CLERK JENSEN: Madam Chairman, we have a quorum.
CHAIRPERSON NICHOLS: Thank you very much. We certainly do. We have almost entirely a full house, which is great. Before we do anything else, I want to introduce our two Board members, one of whom has already been sworn in, and that's Mayor Judy Mitchell, just sitting to my right, and the other, who is about to be sworn in and who's brought a few friends and family along with him for the occasion.
And I would like to invite now a former member of this Board, Senator Mark DeSaulnier, who's gone on to do a few good things since he left us, to come up and do the swearing in, or are we going to do it down at the podium? Where are we actually going to make happen? Has anybody figured that out?

BOARD MEMBER DeSAULNIER: You better not let us up there or we'll --

(Laughter.)

CHAIRPERSON NICHOLS: Oh, and he's also accompanied by another member of the legislature, Loni Hancock. Okay. Why don't you come up here and we can use a mic up here.

SENATOR DeSAULNIER: We haven't rehearsed this, so we'll see how it goes.

(Laughter.)

SENATOR DeSAULNIER: If we do it wrong, you might not be lawfully -- which might be a benefit.

BOARD MEMBER GIOIA: It may not be such a bad thing.

(Laughter.)

SENATOR DeSAULNIER: First off, it's delightful to be back here with a lot of former colleagues and all the great work that this institution does.

And it's a delight to swear in my friend, my
former colleague on the Contra Costa County Board.

So, John, if you'd raise your right harm.

I --

BOARD MEMBER GIOIA: I --

SENATOR DeSAULNIER: -- John Gioia --

BOARD MEMBER GIOIA: -- John Gioia --

SENATOR DeSAULNIER: -- do solemnly swear --

BOARD MEMBER GIOIA: -- do solemnly swear --

SENATOR DeSAULNIER: -- that I will support and defend --

BOARD MEMBER GIOIA: -- that I will support and defend --

SENATOR DeSAULNIER: -- the Constitution of the United States --

BOARD MEMBER GIOIA: -- the Constitution of the United States --

SENATOR DeSAULNIER: -- and the Constitution of the State of California --

BOARD MEMBER GIOIA: -- and the Constitution of the State of California --

SENATOR DeSAULNIER: -- against all enemies foreign and domestic --

BOARD MEMBER GIOIA: -- against all enemies foreign and domestic --

SENATOR DeSAULNIER: -- that will bear true faith
and allegiance --

BOARD MEMBER GIOIA: -- that I will bear true

faith and allegiance --

SENATOR DeSAULNIER: -- to the Constitution of

the United States --

BOARD MEMBER GIOIA: -- to the Constitution of

the United States --

SENATOR DeSAULNIER: -- and the Constitution of

the State of California --

BOARD MEMBER GIOIA: -- and the Constitution of

the State of California --

SENATOR DeSAULNIER: -- that I take this

obligation freely --

BOARD MEMBER GIOIA: -- that I take this

obligation freely --

SENATOR DeSAULNIER: -- without any mental

reservation --

BOARD MEMBER GIOIA: -- without any mental

reservation --

SENATOR DeSAULNIER: -- or purpose of evasion --

BOARD MEMBER GIOIA: -- or purpose of evasion --

SENATOR DeSAULNIER: -- that I will well and

faithfully --

BOARD MEMBER GIOIA: -- that I will well and

faithfully --
SENATOR DeSAULNIER: -- discharge the duties upon which I am about to enter.

BOARD MEMBER GIOIA: -- discharge the duties upon which I am about to enter.

SENATOR DeSAULNIER: Congratulations.

BOARD MEMBER GIOIA: Thank you very much.

Thank you, Loni.

(Appause.)

SENATOR DeSAULNIER: It may be the last time you smile.

(Laughter.)

CHAIRPERSON NICHOLS: Are you suggesting that there are issues here.

(Laughter.)

SENATOR DeSAULNIER: No. We're all one big happy family.

CHAIRPERSON NICHOLS: Great.

Well, I think, as John Gioia knows, he has a very important role to fill here. The Bay Area seat on this Board does have a distinguished history, and so we're looking forward to having you continue that tradition. If you'd like to say a few words.

BOARD MEMBER GIOIA: Well, I don't want to take up much of our time. I know it's a busy day. But I just 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.

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.

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

CHAIRPERSON NICHOLS: Thank you so much. It's great to have you here, and I just want to acknowledge again -- because Judy Mitchell was sworn in at our Haagen-Smit Symposium in Long Beach, gosh, sometime ago now, a few weeks. A few weeks -- the importance that this 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 local districts, most of which actually were created before the State Air Resources Board even came into existence.

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

I need to announce a couple things at the beginning, one of which is that we have speaker cards for anyone who wishes to testify and did not sign up originally on-line. We ask that you fill out a card and give it to the clerk of the Board over here at the desk. If you have signed up on line, you don't have to fill out a card, but we do need you to check in with the clerk just 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 podium to speak, you put your testimony in your own words and not read your written testimony, because we will have it in writing and we can read faster than you can talk.

(Laughter.)

CHAIRPERSON NICHOLS: For safety reasons, we have to point out the exits at the rear of the room and to the side of the dais where we're sitting up here. If there is a fire alarm, and we had one earlier this week actually, we will be told to clear the building and stay -- proceed by stairs outside to the park until we get the all-clear sign and are allowed to come back. Every once in awhile alarms just go off randomly in this building. It seems they vacated several floors earlier this week. So I'm not hoping that that's going to happen but just to be
Okay. With that, I think we can move straight to the agenda. And our first item, which is a consent item is 11 research proposals, which have been bundled together in one item.

So I first need to ask the clerk if any witnesses have signed up to speak on this item?

BOARD CLERK JENSEN: (Shakes head.)

CHAIRPERSON NICHOLS: No.

Are there any Board members who would like to see this item taken off of the consent calendar?

Seeing none.

Okay. Then we close the record officially and I will ask if the Board members have had an opportunity to look at the proposals, if you have any questions you'd like to ask?

If not, then I would like a motion and a second ear

BOARD MEMBER RIORDAN: I'll move, Madam Chairman, that we adopt the staff recommendation to approve these.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER BALMES: Second.

CHAIRPERSON NICHOLS: There's a second from Dr. Balmes.

Okay. All in favor please say?
(Ayes.)

CHAIRPERSON NICHOLS: Any opposed?
Any abstentions?

BOARD MEMBER SPERLING: Chairman Nichols. I'm recusing myself from this vote.

CHAIRPERSON NICHOLS: Dr. Sperling is not voting on this item.

BOARD MEMBER BALMES: Madam Chair, I should do that as well.

CHAIRPERSON NICHOLS: Okay. Both of you. Then you have withdraw your second.

BOARD MEMBER BERG: So I'll do the second.

CHAIRPERSON NICHOLS: All right. Then we'll have a second.

Yes.

BOARD MEMBER GIOIA: Just one want comment. I wanted to make the comment after we approved it. I think it's really appropriate that we're approving the study developing a new methodology for analyzing potential displacement, because we're going to hear this morning a presentation from the Bay Area about its Sustainable Communities Strategy. One of the issues is how to avoid displacement. And the strategy attempts to do that. And this study is going to help inform, I think, the regions as they adopt their Sustainable Communities Strategy. And
it's timely that it's today.

CHAIRPERSON NICHOLS: Thank you for noting that.

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.

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

BOARD CLERK JENSEN: (Shakes head.)

CHAIRPERSON NICHOLS: Okay. Any questions or comments? Any of our representatives from the valley or 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 SHERIFFS: 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?

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 Board in developing the original scoping plan and any other pertinent matter implementing the Global Warming Solutions Act of '06.

And the first Advisory Committee was appointed back in January of '07 to advise the Board on the first scoping plan. Earlier this year, staff solicited nominations to convene the Environmental Justice Advisory Committee to advise the Board on the update to the scoping plan. Two former members plus seven new members were appointed to the Committee at the March Board hearing.

Per the Board's direction, three additional members from underrepresented regions of the State were also appointed to the Committee.
And in early May, staff received multiple nominations for Luis Olmedo from Imperial County to sit on the Advisory Committee. Mr. Olmedo has 12 years of experience addressing environmental justice issues in Imperial County. Staff believes he would be an excellent addition to the Committee. And as a result, staff is recommending that the Board appoint him as an additional member.

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

BOARD MEMBER DE LA TORRE: Absolutely. I wanted to thank my fellow Board members for supporting this effort. It was clear when we came up with the first list that that area, which is a significant area, and has tremendous pollution issues, was not represented. And so to have somebody from the Inland Empire/Imperial Valley is very important to getting the kind of input that we need as we move forward. So thank you all for doing this. Thank staff for doing the extra work. I really appreciate
BOARD MEMBER BALMES: And if I might just chime in. I've worked with Mr. Olmedo with regard to asthma in the Imperial Valley on the California Department of Public Health's California Breathing program and found him to be well-informed, as well as a strong advocate for environmental justice.

CHAIRPERSON NICHOLS: That is great. I'm really looking forward to this new committee beginning its work in helping us with our scoping plan.

Okay. Would you like to move the appointment then or move the item?

BOARD MEMBER DE LA TORRE: So moved.

BOARD MEMBER BALMES: Second.

CHAIRPERSON NICHOLS: Second, Dr. Balmes.

Okay. All in favor please say aye?

(Ayes.)

CHAIRPERSON NICHOLS: Any opposed?

Any abstentions?

Great.

All right. Our next item is the CoolCalifornia Cities Challenge Award. And this is a fun project. We are blazing new trails here, and we're recognizing cities that have been at the forefront of this.

We want to acknowledge the top three cities that
participated in the CoolCalifornia city pilot project. This is one of those situations where everybody who participated actually is a winner, but we did have a competition for those who achieved the most by way of reductions as a result of this program. So I am going to ask staff for a few words on this one as well.

Mr. Corey.

EXECUTIVE OFFICER COREY: Yes, Chairman Nichols. And before I introduce staff and the presentation, I did want to acknowledge a new face at the table here. I'm going to say a new face but an old face, but it doesn't come off quite --

(Laughter.)

CHAIRPERSON NICHOLS: Well, it's getting worse, Richard.

(Laughter.)

EXECUTIVE OFFICER COREY: I'm trying.

(Laughter.)

BOARD MEMBER SPERLING: Familiar.

EXECUTIVE OFFICER COREY: That's the word.

I want to acknowledge Edie Chang as our new Deputy Executive Officer. Edie brings with her over 20 years of experience with ARB in our Mobile Source Group, our Planning Group, our Stationary Group, and our Climate Group, and just extraordinary creativity, drive,
communication skills, and we are just very pleased to have her in this position.

CHAIRPERSON NICHOLS: Yes. We are indeed very 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 years. Was she in elementary school when she started?

(Laughter.)

CHAIRPERSON NICHOLS: Part of our special program.

(Laughter.)

CHAIRPERSON NICHOLS: That's wonderful. Thank you.

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

The cities that we'll acknowledge today are taking a community-oriented approach to climate change by encouraging their residents to reduce greenhouse gases. Through the CoolCalifornia Challenge, these cities have worked to raise the climate awareness of the residents and to exchange them -- or rather engage them into taking action.
The CoolCalifornia City Challenge is part of an ARB-funded research project with UC Berkeley, with the goal of evaluating strategies to encourage voluntary greenhouse gas emission reductions at the household level. The presenters for this item are first Ms. Annmarie Rodgers of the Research Division who will provide some background on both CoolCalifornia.org and the CoolCalifornia City Challenge. Then Professor Daniel Kammen, from UC Berkeley, the principal investigator for the research project, will provide some complementary comments.

After that, we'll ask Chairman Nichols to step down to the podium to present each of the cities with the awards.

And with that, Annmarie.

CLIMATE ACTION AND RESEARCH PLANNING SECTION MANAGER RODGERS: Thank you, Mr. Corey.

(Thereupon an overhead presentation was presented as follows.)

CLIMATE ACTION AND RESEARCH PLANNING SECTION MANAGER RODGERS: And good morning, Chairman Nichols and members of the Board. This morning, I will provide you with some background on the CoolCalifornia.org website and the CoolCalifornia City Challenge Awards Program.

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.

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

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

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

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

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.

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

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

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 less 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.

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 year.

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

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

In the long run, we hope programs like this will
foster meaningful engagement of Californians in the State's effort to tackle climate change.

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
climate goals.

Dr. Kammen.

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

(Laughter.)

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

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

(Laughter.)

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

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

We know we cannot achieve our climate goals without enabling the sorts of innovations that not only
the three winning or lead cities accomplished, but all the
cities that engaged in the process were able to do.

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.

The ability to save this much carbon by voluntary
behaviors is, in fact, one of the hallmarks of
California's process, in particular on innovating and
energy efficiency, and finding opportunities to link low
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.

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

DR. KAMMEN:  So thanks so much.

CHAIRPERSON NICHOLS:  Thank you, Dan.  And I'd
just like to add that when this program first started, I
think there was a sense that, oh, maybe it was a feel good
kind of program, because there were cities that, you know,
were interested in doing something about carbon, but
wasn't likely to really be all that productive.  And I
think to have not only been able to measure very
significant reductions, but to really be at the point now
where when the President of the United States announced
the National Climate Program, he called out the roles of
the cities and the local governments in this area, is a
big change in the thinking that everybody really had at
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
are uniquely well-positioned to make some of these things happen.

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

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

CLIMATE ACTION AND RESEARCH PLANNING SECTION

MANAGER RODGERS: Chula Vista.

CHAIRPERSON NICHOLS: Chula Vista, Mr. Roberts.

CLIMATE ACTION AND RESEARCH PLANNING SECTION

MANAGER RODGERS: And Tracy.

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

(Laughter.)

CHAIRPERSON NICHOLS: San Joaquin. Okay, right. And congratulations too, because these efforts don't happen with any one person obviously, but it would just be nice to have a picture with everybody. So if they
want to come down and join me while this happens, that
would be great. And then you can go ahead and read the
citations, right?

Is that the deal?

CLIMATE ACTION AND RESEARCH PLANNING SECTION
MANAGER RODGERS: Well, yeah. So I was going to read the
accomplishments of Davis and then have you come down and
do the photo opp and present the award.

CHAIRPERSON NICHOLS: After you've done all
the -- each of them separately.

CLIMATE ACTION AND RESEARCH PLANNING SECTION
MANAGER RODGERS: I'll do each of them separately.

CHAIRPERSON NICHOLS: Okay. But that means I
have to stand down there.

CLIMATE ACTION AND RESEARCH PLANNING SECTION
MANAGER RODGERS: Well, you can come down after. No, you
can sit with them in the chair.

(Laughter.)

CHAIRPERSON NICHOLS: We're hard to -- this is a
group that's hard to orchestrate.

CLIMATE ACTION AND RESEARCH PLANNING SECTION
MANAGER RODGERS: Do you want to do the photo opps after I
read then each of them?

CHAIRPERSON NICHOLS: Yeah, that would be better.
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.

CHAIRPERSON NICHOLS: Great. Thank you.

CLIMATE ACTION AND RESEARCH PLANNING SECTION

MANAGER RODGERS: Davis has long been an environmental pioneer and has set a goal to engage 75 percent of Davis households in voluntary greenhouse gas reduction activities by 2015.

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

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.

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

Mayor Krovoza.

(Applause.)

DAVIS CITY MAYOR KROVOZA: Do I say something?

CLIMATE ACTION AND RESEARCH PLANNING SECTION MANAGER RODGERS: Yes.

DAVIS CITY MAYOR KROVOZA: Okay. All right.

CHAIRPERSON NICHOLS: Yes.

(Laughter.)

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.)

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.

People buying electric cars now understand MPG equivalents and they want to know how they can drive their 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
communities to be able to respond to the challenges that we have before us.

But until we have the social innovations, it is not going to happen. Until every community event and 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.

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

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

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

CHAIRPERSON NICHOLS: Thank you, and congratulations.

(Applause.)

CLIMATE ACTION AND RESEARCH PLANNING SECTION 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
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.

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.

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

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

Deputy Mayor Pamela Bensoussan.

(Applause.)

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

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

Davis, watch out.

(Laughter.)

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

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

(Applause.)

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

The City of Tracy is located at the edge of the San Joaquin County, and has the distinction of being the first city in the county to have an approved comprehensive sustainability action plan. Tracy competed in the challenge in partnership with PG&E as a means to engage local residents in the City's sustainability efforts. The City and PG&E engaged households in the competition through a variety of events, including city-sponsored
block parties, the weekly farmer's market, movies in the plaza, the Dry Bean Festival and many more events throughout the year.

Nearly 400 Tracy households participated in the challenge. And their commitment to tracking and reducing their greenhouse gas emissions led to an estimated 35 metric tons of CO\textsubscript{2} equivalent reduced.

Tracy's accomplishments led to its third place ranking in the Challenge, and Tracy is being recognized also as CoolCalifornia city.

CHAIRPERSON NICHOLS: Great.

Commissioner.

(Applause.)

TRACY PLANNING COMMISSIONER RANSOM: Good morning, to the Chair Mary Nichols and to the Board. First of all, I want to say that we, at the City of Tracy, are proud and honored to be receiving this award and receiving the distinction of being one of three CoolCalifornia cities. With the help of UC Berkeley, the help of the Air Resources Board, and our local residents, we were able to continue our long-standing tradition of being stewards of our environment and working towards reducing our carbon footprint.

It's really part of the fiber of what our community is. It goes right down to everything that we've
been working on as a community, even the design of our communities with walkable and bikeable neighborhoods. So we're very happy to have participated in this Challenge.

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

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

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

CHAIRPERSON NICHOLS: Excellent.

(Applause.)

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

Most of us as cities have already been working on the reduction of greenhouse gas emissions on -- in the public facility arena, where we're required to look at our public facilities, our city halls, our recreation...
facilities and that sort of thing to reduce greenhouse gas emissions.

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.

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

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

DAVIS CITY MAYOR KROVOZA: Yes.

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

DAVIS CITY MAYOR KROVOZA: Thank you, Supervisor.

We waive all rights to that graphic. And Professor Sperling may disagree, plagiarism is encouraged in this instance.

(Laughter.)

BOARD MEMBER GIOIA: I mean we would say it's created by Cool Davis, but we would just sort of change it around.

BOARD MEMBER RIORDAN: That's very nice and nice to share. Other comments from the Board members?

We certainly congratulate all of you. And when our Chairman returns -- but this is a great useful tool, and hopefully we will share that with other cities and counties. There's a lot of unincorporated areas. I happen to represent a lot of area that is unincorporated. And so it's going to be the county that's going to take on that responsibility. And this is a wonderful tool that we're going to share.

DR. KAMMEN: In fact, just adding a quick point after Mayor Mitchell's comment about PG&E, they were, in fact, the founding platinum sponsor. So I would encourage all of our IOUs to take platinum sponsor roles and have a little bit more competition at the utility level as well. So we'd love to talk to SDG&E and SCE as well on this.
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 a challenge by Professor Sperling. Good.

(Laughter.)

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

Congratulations.

DR. KAMMEN: If I could add the one other line, and that is that this did start out as a very unusual thing to do. It was unclear where it fits in. I think Dan's comments are really key. And the Air Resources 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.

(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.

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.

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.

So thank you all so much for having participated.
Professor Kammen, Chris Jones, thank you for your incredible support and help, staff, Annmarie and others. And, yeah, this is onward and upward. This program is definitely going places.

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

Seeing none.

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

(Applause.)

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

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

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

So before we turn to the presentation, I wanted
to invite Supervisor Gioia to say a few words about this.

BOARD MEMBER GIOIA: Thank you, Chair Nichols.

And it has been a very long process. And you're going to hear some, I know, thorough presentations by folks from the Metropolitan Transportation Commission and Association of Bay Area Governments. I do serve on the ABAG Executive Board, so I have attended many of these meetings and participated in many of those discussions. And again, 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
community, the social justice environmental justice community. We've had many debates about how do we encourage more infill without displacement, which is, I think, exactly why that research project that CARB is funding is a very important one.

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

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

One of the things also to note is that we are, I think in the Bay Area, really focused on a lot of the more progressive sort of initiatives like we are a leader in electronic vehicle adoption. And the San Francisco Bay Area is number one in the country for hybrid sales. And
almost 10 percent of all the sales in the Bay Area are hybrid. That's a pretty amazing number. The U.S. average is a little under three percent, and we're almost 10 percent in the Bay Area.

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

CHAIRPERSON NICHOLS: I'm shocked.

(Laughter.)

BOARD MEMBER GIOIA: You're shocked, right?

(Laughter.)

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

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

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

Mr. Corey.

(Thereupon an overhead presentation was presented as follows.)

EXECUTIVE OFFICER COREY: Yes. Thank you, 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 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.

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

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

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

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.

AIR POLLUTION SPECIALIST GRAY: Thank you, Mr. 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
targets set by this Board.

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.

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

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 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.

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

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

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

The diversity of the region is characterized by its varied communities and landscapes. San Francisco, Oakland, and San Jose are examples of highly urbanized communities. But the region also has many suburban communities, such as Walnut Creek, Novato and Palo Alto, and
rural, predominantly agricultural areas, such as much of Sonoma and Napa Counties.

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 region's Transportation for Livable Communities Program, or TLC, provides funding for community based transportation projects that provide for a range of transportation choices, and support connectivity between transportation investments and land uses.

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

The FOCUS initiative is a regional development
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.

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 one of the better known features of the Bay Area's transportation network. Currently, it includes 140 miles of rail with 44 stations stretching from Richmond and Pittsburg in the north to Millbrae and Fremont in the south. A new BART extension from Fremont to San Jose shown in the upper right will add 10 miles of track and is 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.

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

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

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.

MTC went through a similar technical exercise as the other MPOs to recommend targets, but the MTC Board wanted more aggressive targets for the Bay Area based on the use of innovative strategies, not just the results of 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 reduction beyond 2035.

The Bay Area's Regional Transportation Plan and Sustainable Communities Strategy are integrated into one 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.

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

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

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

The plan puts forth a regional vision that accommodates growth through efficient use of available infrastructure, and makes strategic transportation investments to support and complement the region's housing 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,
including greenhouse gas reduction through the integration of urban development strategies transportation investments.

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

While the performance targets include the 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 effectiveness.

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.

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

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

The next set of slides will cover how some of the -- cover some of the key strategies that the region 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.

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

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.

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

The BART extension under construction from Fremont to San Jose is projected to open to new passengers in 2018. Plan Bay Area also includes funding for extending Caltrain to downtown San Francisco, and for frequency improvements that will result from electrification of the existing Caltrain line. This modernization is necessary to accommodate California's 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
development in PDAs, and improvements to bicycle and pedestrian facilities with the creation of more complete streets.

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.

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
and operations costs by about 30 percent.

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

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

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 MPO's
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.

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

Plan Bay Area 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.
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.

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

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

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

Many were encouraged by the prioritization of system and maintenance and preservation, which is critical for continued efficient operation of mature
infrastructure, and commenters generally applaud the
inclusion of public health-related performance targets.

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.

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

Meanwhile, the bay area staff is preparing a
final SCS to present to its Board and Commissioners to --
for adoption on July 18th. Recognizing that there are
extensive public comments on the draft plan and Draft EIR,
we recognize -- we realize that there could be potentially
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.

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

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER GIOIA: I just wanted to make one additional comment. On the slide that you showed showing the involvement of all four regional agencies in the development of this plan, I wanted to add that the four regional agencies, which include the Bay Area Air Quality Management District and the Bay Conservation and Development Commission, in addition to MTC and ABAG, are working through the Joint Policy Committee with Senator DeSaulnier on a bill that would, in the next iteration of the SCS, have all four agencies actually approving it,
because I think, as we all appreciate, the air quality issues are important.

So while they've been involved in integral parts 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.

CHAIRPERSON NICHOLS: Thank you.

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

Welcome.

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

BOARD MEMBER GIOIA: And I think we're going to hear that. I think, Steve, you're going to address some
of that in your comments, and I can add after, but I'll leave it to them to start.

CHAIRPERSON NICHOLS: Okay. Great.

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

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
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.

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
warming?

(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.

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

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

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

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

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

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

Now, that's another level of investment that's
going to take place after the plan is adopted. But that's really the primary reason why we think we can achieve the development targets, because we've got the entitlement process going and the political will issue resolved, which have been the two biggest barriers for cities and developers -- the small infill developers who really just can't afford to invest the predevelopment costs without the knowledge that they can get the entitlement and that they have the political will of the community and the city council. So that's really the strategy behind Priority 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.

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

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

We started with a good planning process, throwing out visions in very high numbers to assess feasibility. We got a lot of feedback. And what we did with the Priority Development Areas, as a result, was we provided each one with nomenclature, whether it was going to be a
suburban town center, a transit center, or a regional center, and get the buy-in from the local government, that that was the right nomenclature for that Priority Development Area.

That allowed us to create densities within those areas. Almost all of these Priority Development Areas are 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.

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

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

So the final plan I guess we've crossed 252
public meeting barrier, is in July 2013. There's been a very strong level of support from many stakeholders and from the local government, because of the way we handled this, but there's also been some really hard core opposition from people who are thinking that regional government is somehow an oppressive concept and really misunderstand that the Priority Development Areas are local control.

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

Thank you.

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

(Laughter.)

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

We have a lot of growth coming to the region. I
know there's been some controversy on this as well about
just how much. We think our numbers are reasonable. And
I think the important thing is you need to plan for the
growth, and we'll figure out in 2035 who was right or not.
But the fact is we have a growing region, and we
have very constrained land base resource base, so we need
the grow smarter. The housing trends that we are already
seeing in our region, the numbers on this page do not
reflect the impact of this plan. This is what the market
is doing anyway. Show you that there is a significant
shift underway in our region. I think you've seen similar
numbers from the other large metros in California, that
single family used to have a commanding market share, and
that share is now being reduced. And, in fact, I think in
the future, it will be the minority fraction, not the
majority fraction, of what is constructed.
The employment trends in our region. Obviously, Silicon Valley looms large in a region like, ours but it's not just Silicon Valley. And I think a lot of people tend to think Silicon Valley is just in Santa Clara county, and it's not. It's in three counties, at least now, and we wouldn't mind it taking over most of the Bay Area, because it's a very effective job-producing machine. And we, in fact, see part of our future, that those kind of technology clusters will not be only located in the south bay.

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

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.

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

Now, on its face, that sounds sort of climate neutral. And I suppose it is, you know, because filling potholes doesn't make people change their travel behavior. But I think, in terms of the land-use linkage, this is probably the biggest single thing we can do to support infill development in our region, because the vast
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 BART or roads or bridges, and that we think is what this transportation strategy really does.

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 particular that I think you've heard a bit about already, and that's the One Bay Area grant program. And I think this is a case where we are innovating quite substantially, not only in California but nationally.

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

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

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

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

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

(Laughter.)

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

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

The climate initiatives you've heard quite a bit
from your staff. And here we have learned a lot from them
in terms of our attempt to invest, roundabout $600 million
in a series of initiatives. The one point I would make
here, because I know in the staff report there's quite a bit of commentary about well, you know, the literature here isn't all that great, and, you know, we don't have a lot of experience with this or that.

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.

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 want to try this stuff out. We've got waiting lines for Priuses. So that does give us some optimism, some confidence that these strategies are going to work just fine.

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

And finally, the tail of the tape, where we started this whole process, which, again, I agree with my
Chair, Amy Worth, is very health. It's a performance-based process. It's not checking each little box. It's saying here is your target. You go innovate. You go try to do this. Sacramento you do it differently from Los Angeles. San Diego you do it differently from the Bay Area. Just meet your target. And we have done that. As you can see in 2020, we're exceeding the get you've. Set we're also exceeding the target you set in 2035. In fact, we're meeting Sacramento's target in 2035, while we were at it. And you can see the downward slope that continues from the horizon year that you've established.

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.

As you know, the same legislature that passed SB 375 obliterated redevelopment financing, which was probably the single most effective strategy we had to implement Senate Bill 375. So we are going to need to find something, call it by a different name, have it operated under a different set of rules that replaces those kinds of funding sources. OBAG, in our region, is just a little itty-bitty attempt to head down that path.

And in terms of transportation, I'll mention one
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 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.

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

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

CHAIRPERSON NICHOLS: Thank you. I'm sure that Board members do have a few questions. I just want to actually make a comment on your last item, because I 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 money from the cap and trade program wasn't going to be available this year for spending.

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

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

CHAIRPERSON NICHOLS: Yes.

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

(Laughter.)

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

    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.

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

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

BOARD MEMBER BALMES: I Agree.

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

So I have no doubt that we're going to solve the Caltrain problem as well. I think a lot of it, as you probably know, has to do with the fact that it's governed by three -- a three-county agency. And each of those three counties, San Francisco, San Mateo, and Santa Clara has its own transit system. So their own transit system comes first and Caltrain is number two for all three. And 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 you to stay tuned, because you're probably going to see something on the ballot in the Bay Area some time soon on that very question.

CHAIRPERSON NICHOLS: Dr. Sperling.

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

One is the tremendous amount of collaboration and engagement that's taking place with the local governments. And Mr. Rapport talked about this is really a local government plan. And that is probably the most important 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.

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.

Number two is the innovation here that we
haven't -- and I like what you said that each of these
plans is building on the previous one. And the amount of
innovation that you have in here is really impressive,
adding -- you know, I like some of them, in particular,
you know, we're you're looking at feebates -- including
feebeates, looking at the eco-driving, the housing
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.
Now, it all -- actually, I have one other little innovation idea for you that hasn't been discussed, and that is natural -- so, you know, part of what's going on here, you're going beyond -- you know, your plan goes beyond what the conception of these plans were going to be with your climate initiatives. And I think that's great. Although I'm going to have a little comment on that in a minute, but I like that innovation.

But, you know, another example of that could be what we're seeing with natural gas systems is there's a tremendous amount of leakage from the systems. There was a study in Boston where as much as 10 percent of all the natural gas was leaking, because they had these old pipes. In fact, they weren't even pipes anymore. They were holes in the -- you know, through the ground.

And that could be one of the biggest payoffs of all. And having the local governments engaged in this, working with the utilities, is the kind of thing -- and so that's why this engagement, working with the different organizations is so critical.

And so I tie it -- and to bring this to a kind of a -- bring this back to ARB. Madam Chairman, I didn't clear this with you previously, but --

(Laughter.)

BOARD MEMBER SPERLING: -- it points to me that
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.

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

(Laughter.)

CHAIRPERSON NICHOLS: No. It's terrific, of 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.

BOARD MEMBER ROBERTS: Thank you, Madam Chairwoman.

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

And the reason I think it's so important is we 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 it's a critical question to ask.

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

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

But when we use the Priority Development Areas as 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.

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

The next step, as I said before, is to develop the entitlement process, which has been severely broken in the State. But from my experience in the Bay Area, it has excluded small developers because they cannot take the upfront risk of the entitlement process. So if we can't fix that, we are stuck with just really big projects and major developers. And that would be a big mistake for the 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
course, there's flexibility, so you can change things as the market requires, but you would not have to do a Supplemental EIR, because the Programmatic EIR would cover those issues and there'd be enough investment in that EIR, so that you can reduce all of the significant issues, which is what SB 375 implementation is about. And you can see that in the bill.

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

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

And we think there's demand. As you know, the senior population is growing rapidly. A lot of the millennial generation wants to be able to live in areas with amenities in safe areas. We have a complete
community standard for how we look at PDAs, so it's not just housing numbers and just transit. It's about the 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.

BOARD MEMBER SERNA: I appreciate that response, and I would respectfully say to our Chair and to my colleagues and to our staff that because implementation of SCSs is still relatively new territory for all the MPOs across the State, we should be cognizant of how each MPO is learning about really its commitment by its member jurisdiction to implementing the SCS at local levels. 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
know, we very quickly begin to move into the realm of
making plans that collect dust and that don't get
implemented. And so that's the whole point in my
estimation.

So I do appreciate the response.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

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

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?

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

CHAIRPERSON NICHOLS: You've got a county right 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.

CHAIRPERSON NICHOLS: Okay. Ms. Mitchell

BOARD MEMBER MITCHELL: Thank you. And I also want to commend you on your SCS -- sorry. I forgot to turn it on.
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.

What's interesting to me is -- and I am from southern California, the SCAG region, for those of you who don't know where I hail from. And we did our SCS, and it's different from yours and for legitimate reasons. I mean, you already have a pretty well-defined transit and 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.

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

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.

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

Overall, I think you have a very fine plan and urge you to move forward with it.

Amy, nice to see you again. I'll comment Amy's brother is on the planning commission in my city.

(Laughter.)

BOARD MEMBER MITCHELL: It's really a small world. So I've gotten to know Amy over the years through that connection.

Thank you.

CHAIRPERSON NICHOLS: That's great. Start down at the other end actually, and call on you Supervisor Roberts, unless you -- Hector, you weren't -- you didn't have your hand up. Yeah. Okay. Good.

BOARD MEMBER ROBERTS: I was looking at the outcast on the end here to see if he was -- he had his hand up first.

BOARD MEMBER DE LA TORRE: I'm part of it.

(Laughter.)

BOARD MEMBER ROBERTS: Okay. Be way out on the wing and I didn't know.

Let me -- first of all, the plan looks terrific. But you made it sound so easy the way it all went together.

(Laughter.)
MR. HEMINGER: It wasn't so easy.

BOARD MEMBER ROBERTS: I'm curious, did you have any area areas in cities that told you, oh, my God. We can't take anymore people. We're built out or -- where it might look otherwise like a prime -- a prime area for growth or the most evil world in the vocabulary, at least in our parts of southern California, is "density". Were these issues or did you just -- everybody just -- you just parceled out all this stuff? You looked at your transit and said here's where we're going to do it and everybody smiled and said, "Of course".

MR. HEMINGER: Sure, we had trouble. You know the old joke in the Bay Area is there are two things people in our region hate, density and sprawl, right?

(Laughter.)

MR. HEMINGER: And I'm sure that's true in most places.

We had plenty of places who thought that growth in a particular part of their city wasn't appropriate, but in another part it was. And I think that's why, as Mark said, relying on their efforts to promote and recommend is really one of the great strengths of this plan, because, you know, it's easy to fall in the trap when you -- you know, whatever level of government you work at, you tend to think that's the right level of government, right?
And it's easy to fall into the trap, that we know better, and this is where it ought to be because the planner handbook here says that this BART station ought to have this many people. And I think we've been able to reach a very good compromise. As Ezra said, quite a bit of the upset in our region is from places that are not being asked to grow much at all, but they're just upset with the principle of the whole thing. And I think that's just part of the bargain, in terms of putting together a plan like this, that is -- that is moving toward quite a bit of change. And I'm sure you've had similar 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.

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

BOARD MEMBER ROBERTS: I hope somebody is listening.
(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?

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

MR. HEMINGER: I think for us, as I mentioned earlier, we think we've got the model. We've got the 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.

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

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

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

So we need quite a bit of public investment to accompany that private investment to make this infill strategy work.
BOARD MEMBER ROBERTS: And with the lack of redevelopment now, I suspect that that puts --

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

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

CHAIRPERSON NICHOLS: Indeed. Yes, Mr. Gioia.

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

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

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.

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

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.

If you're going to do infill in areas, where there are potential displacement issues, so the county infra -- and I think you're seeing counties very supportive generally of regional planning, because they get the importance of regionalism, because in our county we have 19 cities. The Bay Area has got nine counties and 101 cities. So the counties play an important role that have been supportive. And I know those in county 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
failures. And this is going to be an iterative process, because as we go forward, we're going to be -- there's going to be opportunities to change things. I mean, these are not all cast in stone. We're going to learn. We're going to measure our outcomes. And we have to go back to our own constituents and talk about, you know, what are really achieving? Are we reducing greenhouse gas emissions?

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

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

But speaking from the perspective of the Air
Resources Board as one who's followed these issues both
here and at my local level in southern California for a
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
things that had all tried to push some of these same kinds
of concepts of regional planning for housing and land use
and transportation, somehow, AB 32 and SB 375 have become
the tool that has helped to really push all of this
wonderful innovation, as Dr. Sperling said.

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

But as we -- as we take the next steps in the
direction of implementation, we are going to need to up
our game here, in terms of how we provide the kind of
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 the kind of support and technical assistance and mobilize the programs that we are able to mobilize effectively.

So this is a discussion that it's great that we're starting today, but it's going to have to continue, 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. So we'll start with Hasan Ikhrata, and then we'll hear from former Senator Don Perata, who knows a thing or two about the State role in these things. And then Kara Vuicich. I hope I'm pronouncing that right.

Okay. Hasan, welcome.

MR. IKHRATA. Thank you, Chairwoman and Board members. Good afternoon -- well, actually, good morning.

CHAIRPERSON NICHOLS: It's still morning.

(Laughter.)

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

(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.

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

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

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

Thank you.

CHAIRPERSON NICHOLS: Thank you. One of the
great joys about this whole process is the way that these MPOs have come together as the amigos who travel around the State as pack.

Senator Perata.

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.

And that was Kip's bill in California that was moving simultaneously to AB 32. And I know you collaborated with him on that. And he said at the time, he thought that would be the significant play, and he was right. And I read a lot about that, but I didn't see -- I saw -- heard you -- saw you quoted, but you obviously didn't lavish any praise on yourself. And I just wanted to point that out that sometimes those who serve also are 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,
and future is. And I just told Hasan, I just as soon
southern Californians don't come up and praise the Bay
Area all that often.

(Laughter.)

SENATOR PERATA: We appreciate them, but --
particularly since the Giants lost three games this
weekend.

(Laughter.)

SENATOR PERATA: But we -- this plan does do
exactly what we believe collectively needs to happen. And
the emphasis -- there are a couple things that I want to
just draw out. I've become, for some reason, very
interested in senior citizens and the aging process over
the last couple of years.

(Laughter.)

SENATOR PERATA: And we need the kind of
flexibility for the empty nesters, and for people who want
to continue to live an urban life, but they don't need
what they had before. And California does not have a
housing policy that emphasizes that. We still are looking
at three and four bedroom homes, and in many places lot
and block.

Well, this plan, I think, has the flexibility to
do that. And I know Steve is right, you know, we hate
sprawl and he hate density. But if you've got the
services that can provide what is necessary, everything else will fall into place.

The Chair asked about project implementation. 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.

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

(Thereupon the time went off.)

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

(Laughter.)

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

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

And I want to say it's delightful to be here with
Steve Heminger when we're not talking about the Bay Bridge.

(Laughter.)

CHAIRPERSON NICHOLS: Thank you. You know you get extra time when you compliment the Chair.

(Laughter.)

CHAIRPERSON NICHOLS: So just for future reference.

Thank you.

(Laughter.)

CHAIRPERSON NICHOLS: Ms. Vuicich.

MS. VUICICH: Hi, Madam Chair and honorable members of the Board. My name is Kara Vuicich. Very good. I know it's a tough name to pronounce.

I'm a Senior Transportation Planner for the Alameda County Transportation Commission. And I apologize that our Executive Director, Art Dao nor our Deputy Director of Planning Beth Walukas is able to be here today to speak. We have a Commission meeting early afternoon, and unfortunately there's no way they could travel fast enough between Sacramento and Alameda to make it.

That Alameda County Transportation Commission is both the congestion management agency for Alameda County. We're also the sales tax -- the authority for our local 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.

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.

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

The draft plan's project alternative is the one that's most vetted and understood by Bay Area residents and the most consistent with local and county-wide plans, and thus the most implementable, and the most comprehensive in addressing the needs of all transportation modes and users while remaining environmentally sound and beneficial and achieving, if not exceed, our greenhouse gas reduction targets.

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.

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

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.
Jenny Bard, David Schonbrunn, and Gary Gallegos.

MS. BARD: Good afternoon, Chairman Nichols and members of the Board. As a Santa Rosa resident, I'm a regional director for programs and advocacy for the American Lung Association. And as a Santa Rosa resident I'm really happy to be here today support Plan Bay Area. And also as an electric vehicle driver, in my second year, I actually can drive here from Santa Rosa with a great fast charging station in Vacaville. And it's exciting to see the bank of electric charging stations on the top of the parking garage. So it addresses destination anxiety 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.

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

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

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.

While some of these targets were met, others fell short. For instance, injuries from bicycle and pedestrian crashes are predicted to rise 35 percent under the plan before you today due to higher vehicle densities in Priority Development Areas. So there is much more we must do to advance health outcomes, and hopefully we can figure out how to incorporate explicit health outcomes in the 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
health and equity goals. And to use these as a model for other plans as they are developed and updated, greater investments in transit and increasing transit ridership, and away from highway expansion projects, greater options for safe walking and bicycling to schools, work, and recreation and essential services, more affordable housing near jobs, public transit, parks, schools, and services.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you.

Mr. Schonbrunn.

MR. SCHONBRUNN: I'm David Schonbrunn with Transdef, the Transportation Solutions Defense and Education Fund. I'd like to start by welcoming Supervisor Gioia to the ARB and to congratulate Dr. Sperling for his award of the 2013 Blue Planet Prize, which is known as the Nobel Prize of the environmental sciences.

The week that the --

BOARD MEMBER SPERLING: Thank you.

MR. SCHONBRUNN: -- Draft Environmental Impact Report comments were do on this Sustainable Communities Strategy was the very week when the world reached the 400 parts per million mark in atmospheric CO₂. Given that context, I'm the environmental advocate here to brief you on something you haven't heard today.

This SCS fails at the climate level. This is
because of the unfortunate 2010 decision of this Board to adopt the regional emissions reduction targets proposed by the MPOs.

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

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

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

CHAIRPERSON NICHOLS: Sir, your time is up. I 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.

CHAIRPERSON NICHOLS: Thank you.

We did hear you when you were here before, so. 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
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.

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

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

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

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

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

Andrew Chelsey, Justin Horner, Stuart Cohen.

MR. CHELSEY: Chair Nichols, members of the Board. My name is Andrew Chesley. I'm the Executive Director of the San Joaquin Council of Governments in 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.

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.

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

But I think also maybe Ezra and Steve also mentioned that they're not really done in this area yet.
And that kind of brings me to my second and last point here. I think it's recognized that the Bay Area is well known as the gateway to the San Joaquin Valley. And that interconnectedness between us is one that we've recognized for a long time. As a matter of fact, Mayor Worth and Senator DeSaulnier, in the past, have been very strong advocates and leaders of this kind of communication between our regions.

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

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

CHAIRPERSON NICHOLS: Thank you.
MR. HORNER: Good afternoon, Chair and members of the Board. My name is Justin Horner. I'm from the Natural Resources Defense Council. We're here to praise MTC and ABAG for the Draft Plan Bay Area. With the
issuance of the plan, the Bay Area once again has shown itself to be a leader in sustainable development and good regional planning.

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 projected to exceed the targets that you've set for the regional.

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 respect to their land-use and transportation models, and as well as the assumptions behind the climate initiatives.

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

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.

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

So thank you for your oversight of this important process.
CHAIRPERSON NICHOLS: Thank you.

Mr. Cohen.

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

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

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 use the first billions in revenue, 2.8 billion in total, to help build out the rest of the system with new lanes.

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

The second thing I would like you to note is that they did an excellent job with the project performance assessments. I was part of that technical advisory committee. But kind of to no fault of their own, it was
unavoidable, due to limitations in the models and the methodology, it overestimates the benefits of highway 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.

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

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Justin Fanslau, Mike McKeever and Michael Quigley.

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 MTC on their hard work. And I was -- as I was watching the presentation, I was remembering the debates during SB 375, where the argument was made that these new laws would hurt our economy, drive business out, and people wouldn't be going to work.

Well, we're really proud to be here to look at a plan that actually says, no, that's not the case. Actually, here's a way that the economy and the environment can work together to allow for the new growth that's going to happen and provide good quality jobs for people in the Bay Area. And so we're very happy to be here in support of their project.

Thank you.

CHAIRPERSON NICHOLS: Thank you. Thanks for your participation.

Mr. McKeever, I think I saw you come back in.

Yes, there you go.

MR. McKEEVER: Thank you, Chair Nichols and members of the Board, particularly --

CHAIRPERSON NICHOLS: You need your mic a little closer.

MR. McKEEVER: Chair Nichols, members of the Board, Supervisor Serna, one of my many bosses. Good to 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.

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.

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

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

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

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

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

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

MR. McKEEVER: Okay. Thank you.
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.

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

(Laughter.)

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.

We are, as I said, in support of the proposal. It has several important infrastructure transportation-related elements, including the expansion of the HOT lane network, and capital expansions for the 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.

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.

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

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

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.

So, at this point, our preliminary draft says,
based on this plan, it does meet the target.

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

BOARD MEMBER SPERLING: Yeah, just one small one. I think a discussion is needed about what are the 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 know, address that question, what's included -- you know, I came up with, you know, my new idea about the leakage, which is a great idea, but it's a legitimate question. Can that be counted?

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

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

And we have a different kind of cap under AB 32. But with SB 375, as a result of a very intense process that we went through with our technical advisory committee, we chose to use a per capita cap in order to recognize that, particularly when we were putting our toe in the water in an area that we really had never been before, as a Board, as a regulatory agency, that we should be careful about learning before we started to impose the kind of caps that might well lead to regions just rebelling. I mean, just feeling like they couldn't do 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.
But it is also true that in the big scheme of things, we can't really say that we've achieved perfection, because we are going to be growing in emissions if we continue along this path, unless technology saves us.

But the fact is that to even make a serious, credible, measurable effort at improving the overall efficiency of our land use and transportation systems in this way is a remarkable achievement for the State of California, when no one would have thought we could have done anything like this a few years ago.

So I think we just have to kind of keep adjusting and keep on being ambitious, as we say, but at the same time, to mark steps of progress. I didn't hear anybody saying that this was the end, that they wouldn't be continuing to try to make improvements.

So hopefully we'll be -- we'll all be spending more time on these issues as we go forward.

And any other closing comments?

Yes.

BOARD MEMBER ROBERTS: Yeah, I feel compelled to respond to something.

CHAIRPERSON NICHOLS: Yes. Okay.

BOARD MEMBER ROBERTS: And Professor Sperling 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.

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

We don't do it, but we're asking you to do it. We keep, what we call, a black box and we try to shrink it each year by bringing new solutions forward. We don't know what those are going to be. We know technologically things sometimes work and sometimes they don't. And we saw what the electric car, when we first tried to launch 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
switched gears and went to allowed hybrids. And what are we seeing an incredible success story. And what has -- 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 these organizations you got to tell us exactly how you're going to get there.

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

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

It was mentioned, and Gary mentioned it, you know, for me, the technological stuff, which we can't predict, has had such an incredible influence on whether we have it. It seems that there should be a way to have some flexibility in this planning process, instead of imagining that -- we go through the cycles and, you know,
we're in our second iteration now as we're examining the Bay Area Plan. The Bay Area has a good plan, but it's not just that you're going to update them periodically. The fact is that any given point when you're projecting out 20 and 30 and 40 years away, you're really -- you're doing that out on a such a limb and trying to imagine what the impacts are, that it seems to me we overplan. And to do that and to force major expenditures as though we could 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.

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

(Laughter.)

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. And I guess they said they still owned the patent to it. But that they have been designated as sort of the major lab to do research on battery development. What's the good of solar and wind if you can't store it somewhere?

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

CHAIRPERSON NICHOLS: I'll take just a moment and
ask Dr. Ayala who's the head of our mobile source program to address that.

    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.

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

    CHAIRPERSON NICHOLS: But we have a pretty good record of having not only used our funds well, but also inventing things ourselves in our very own laboratory, which I hope you'll get to visit soon, if you haven't yet.

    BOARD MEMBER GIOIA: But this was heartening to
see that there is clearly great research going on that complements all the policy.

CHAIRPERSON NICHOLS: Absolutely.

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

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

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

Thanks, everybody.

(Off record: 12:31 PM)

(Thereupon a lunch break was taken.)
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.

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

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

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.

ARB's authority to address indoor pollution is also limited and is primarily focused on research. However, State law does give us specific authority to limit ozone emissions from indoor air cleaners. And we have used our outdoor authority under the Toxic Air Contaminants Program to reduce formaldehyde emissions from composite wood products, since these emissions impact both 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
resulted in reformulations of consumer products that are also reducing indoor exposures to some toxic air contaminants, including some carcinogens.

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 included in ARB's budget and a new State law directed ARB to assess indoor exposures to toxic air contaminants.

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

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

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

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

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

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

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.

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

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

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

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

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.


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. 

Urea-formaldehyde composite wood products, such 
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.

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

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

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

And in 2012, an ARB-funded study of contaminant
levels in 40 daycare centers in northern California found that some had formaldehyde levels again above health benchmarks, averaging 15 parts per billion.

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.

Although, their formaldehyde results are highlighted here, each of these studies had other important findings as well. For example, the first two studies found inadequate ventilation in many classrooms and homes, and the daycare center study found levels of other contaminants above health standards or guidelines in portions of the centers, including PM10, PM2.5, benzene, 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
finished goods made with these materials. 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.

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

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

Incorporating the limits into the building code complements ARB's composite wood regulation, which requires manufacturers to certify their products. As compliant building materials are used, indoor formaldehyde levels will decline. We will continue to work with other agencies to identify ways to further reduce emissions 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 2009 study of new homes I mentioned earlier, the
investigators found that air exchange rates were unacceptably low.

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.

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

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

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

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

The Lawrence Berkeley National Laboratory will provide data for use in -- excuse me, the Lawrence Berkeley National Laboratory study will provide data for 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
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 12, diagnosed with moderate to severe asthma will be equipped with high efficiency filtration. The high efficiency filtration will be installed in each home, either in the central heating and air conditioning or as portable air cleaners for a one-year intervention period. The UC Davis investigators will measure pollutant concentrations indoors and outdoors and obtain asthma measurements and symptoms diaries for two years to compare the effects of one year with filtration to one year without filtration.

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.

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.

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

Thank you for your attention. I'd be happy to 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
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 move on.

Do Board members have questions or comments on the indoor air quality report issue more generally?

I'm starting down at this end, because I've been very bad about turning to the right all the time, overcoming my natural tendencies.

BOARD MEMBER DE LA TORRE: I'm okay.

CHAIRPERSON NICHOLS: You're okay, despite being cast away way down at the end of the table there.

(Laughter.)

CHAIRPERSON NICHOLS: All right. Ms. Berg, did you have your hand up there?

BOARD MEMBER BERG: No.

CHAIRPERSON NICHOLS: No, you did not.

Okay. Well, in that case, I'll turn in this direction.

BOARD MEMBER SHERIFFS: That takes care of the left.

CHAIRPERSON NICHOLS: Did you have something?

I apologize.

BOARD MEMBER GIOIA: I was just going to ask, I appreciate getting this presentation about the range of indoor air quality activities that districts and other
Boards are involved with. It would be useful to get a list of the specific types of regulations and actions we've taken that are -- whether they're on the website or not to provide. I know this has been a subject of interest and concern with the local air districts, as well as how best to increase their authority to work on indoor air quality issues. And I realize that this Board will have different authority than the local air boards, but it would be useful to see the full range of projects specifically.

CHAIRPERSON NICHOLS: Is this -- Richard, is this something that CAPCOA has talked about lately, the air officers?

EXECUTIVE OFFICER COREY: No. I'm thinking about the range of CAPCOA committees and the areas we focus on. It's not something I recall having a focused discussion with them on, but we'll pull the information together you requested.

CHAIRPERSON NICHOLS: Okay. Well, maybe we could put a one-pager of some kind together.

EXECUTIVE OFFICER COREY: Yes.

CHAIRPERSON NICHOLS: Okay. Great. All right. Now, in this direction.

Dr. Sherriffs.

BOARD MEMBER SHERRIFFS: Great. Thank you. I
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 --

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


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.

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.

BOARD MEMBER BALMES: So the next slide is that 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
studies. And, as you know, some epidemiology type studies do obtain like activity pattern data. So looking across those current studies, it's still in the same ballpark. We wish that, you know, it weren't, but -- actually, we wish they were outdoors more, but --

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?

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

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

BOARD MEMBER BALMES: Right.

INDOOR EXPOSURE ASSESSMENT SECTION MANAGER JENKINS: -- but I think ARB is an excellent facilitator. You know, we've helped to fund some of the research that's 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
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
highlight.

BOARD MEMBER Balmes: Thanks.

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

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

Do we have any comment on this issue? Did anybody come to talk about this one?

Seeing none.

Let's move to our final item of the day then.

EXECUTIVE OFFICER COREY: All right, Chairman Nichols, while they're transitioning, very briefly, AB 1900 was authored by Assemblyman Mike Gatto and chaptered into the law on September 2012. It supports Governor Brown's desire for expanding the use of bioenergy sources in California by removing some of the barriers to using biomethane in gas pipelines.

Staff will be presenting a presentation on work that they've done with the Office of Environmental Health Hazard Assessment that supports a PUC rule-making. And Paul Milkey with our Stationary source Division will be giving the presentation.

(Thereupon an overhead presentation was presented as follows.)

CHAIRPERSON NICHOLS: As soon as he can get into his chair.

Hi.

AIR POLLUTION SPECIALIST MILKEY: Hi.

CHAIRPERSON NICHOLS: Welcome.

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

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
begin with a short review of biogas and biomethane.

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

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

There are many advantages to using biomethane as
an energy source. It's a renewable source of energy. It
supports energy diversity. It has the potential to reduce greenhouse gas emissions by replacing conventional fossil based natural gas. It promotes sustainable waste management practices. The facilities that process and utilize biomethane create in-state jobs. It's an important component of the waste management sector plan being developed to meet our State's waste and greenhouse gas reduction goals. And finally, it's a component of 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.

The initial restrictions on the use of biogas began in the 1980s over concern of vinyl chloride in landfill gas. Legislation was enacted that essentially prohibited the injection of landfill biogas into the common carrier pipeline. In recognition of the many benefits of biomethane, Assembly Bill 1900, which was strongly supported by the Brown Administration, was passed 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
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.

And we'll skip. And one more.

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

To identify what constituents are present in biogas, we reviewed readily available data and were able to find more than 300 individual constituents likely to be present in landfill, dairy, or POTW biogas, representing a 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.

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,
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.

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

Skip ahead.

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.

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

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

Thank you.

CHAIRPERSON NICHOLS: Remind me again, I think you said this at the beginning of your presentation, how long ago it was that California essentially banned the
injection of landfill gas in the pipelines?

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

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

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

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

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

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

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 update because of the implications for avoiding methane emissions at landfills.

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 issues associated with that. And really as a result of this report plus a recent meeting at the Governor's office of the Bioenergy Interagency Working Group, CPUC has already reached out to Cal Recycle, and we'll be meeting with them in July to continue discussions on this issue.

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

Thank you.

CHAIRPERSON NICHOLS: Thank you very much. It's been, I know, a great partnership between these agencies. This is a really important example of how difficult it is to do something that seems to make sense on all fronts, but where you've got health concerns that are raised, you just have to be extraordinary careful. And sometimes it takes a very long time. But I know the PUC was eagerly
waiting our report. And now that they've got it, they're getting ready to go to work to try to develop some standards.

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

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

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

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

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
been the economics aren't necessarily there to pipe in one
dairy digester, but if you can connect a network of
digesters. It's been work looking at that.

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

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

The pilot work that's going on is intended to
help inform that and also intended to help inform what
might be an incremental role that incentives can play to move these things forward.

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 CO$_2$ issues to really get them to do it involuntarily.

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

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

CHAIRPERSON NICHOLS: Right.

BOARD MEMBER RIORDAN: In looking, as you drive up the I-5 now, you have a group of, what I would call, the largest of the dairies all somewhat co-located. So that may make some sense to begin there and to try to incorporate the efforts on -- I don't know how many dairies are there, but there's got to be at least from the visual point of view at least four major dairies right there on the 5.

CHAIRPERSON LLOYD: In answer to the question, we have a lot of staff time invested in this issue. A lot.

EXECUTIVE OFFICER COREY: We have, that's right.

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER MITCHELL: I wanted to just comment
about an experience I had a couple of months ago. And this dealt with the use of fuel cell and distributed generation at the Honda plant in Torrance. And I visited that plant. They are actually piping in methane from Texas to operate this fuel cell. And they use it only in the summer months, so they're only using it half the year. And then they're using it only for peak generation. And they are saving themselves a ton of money just using it on that limited -- in that limited time period, and using methane piped in from Texas. So there certainly is viable use.

CHAIRPERSON NICHOLS: Room for improvement.
BOARD MEMBER MITCHELL: Yeah, there's good use for this.

What I have heard in discussions with the South Coast Air Quality Management District on the use of methane is the difficulties in cleaning it, in removing the siloxanes out of the methane, so that it can be used safely. And I assume that's part of the big hurdle here in getting to the next step. So I hope we're working on that, because we need to start converting our waste to energy. We can't keep filling up our lands full --

CHAIRPERSON NICHOLS: Mr. Donahoue.
EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOU: Just 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 that's -- so that's part of the economic hurdle. And then the other thing that we're still working through with the CPUC is the testing frequency associated with that, because the testing costs actually for doing the speciated analysis that you need to do is very expensive. And so that's the thing we're also looking at. It helps that we've identified some key compounds that you need to focus on versus a broader suite of compounds. But we do still need to work with CPUC on the end analysis and how much testing needs to be done.

BOARD MEMBER MITCHELL: Well, I'm encouraged to see us working on this. I think it's an important issue.

CHAIRPERSON NICHOLS: Yeah. Again, if any Board members want additional information from the staff, this is an area we do have quite a lot of in-depth expertise.

So other comments, questions?

Mr. Sperling.

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?
CHAIRPERSON NICHOLS: Dairy digesters, yes.
EXECUTIVE OFFICER COREY: That's correct.
BOARD MEMBER SPERLING: So why aren't -- I mean, we have a lot invested in this, you know, in terms of the success of it.
CHAIRPERSON NICHOLS: Correct.
EXECUTIVE OFFICER COREY: That's right that's an important category, you bet.
CHAIRPERSON NICHOLS: But if nobody wants to take advantage of the protocol, then we can't make them do it. We have to try to find a way to get people to use it.
All right. If there are no additional comments, then I think we've come to the end. We had no general members of the public wanting to come speak to us.
We did not. So I think we could be adjourned.
Lets do it. All right. Thanks, everybody.
(Thereupon the California Air Resources Board meeting adjourned at 2:34 p.m.)
CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California.

That the said proceedings was taken before me, in shorthand writing, and was thereafter transcribed, under my direction, by computer-assisted transcription.

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of July, 2013.

JAMES F. PETERS, CSR, RPR
Certified Shorthand Reporter
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