MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

JOE SERNA, JR. BUILDING

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

BYRON SHER AUDITORIUM, SECOND FLOOR

1001 I STREET

SACRAMENTO, CALIFORNIA

THURSDAY, JUNE 25, 2009

9:07 A.M.

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

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

APPEARANCES

BOARD MEMBERS

Ms. Mary Nichols, Chairperson

Dr. John R. Balmes

Ms. Sandra Berg

Ms. Dorene D'Adamo

Ms. Lydia Kennard

Mrs. Barbara Riordan

Mr. Ron Roberts

Dr. Daniel Sperling

Dr. John Telles

Mr. Ken Yeager

STAFF

Mr. Tom Cackette, Chief Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Mr. Mike Scheible, Deputy Executive Officer

Ms. Lynn Terry, Deputy Executive Officer

Ms. Brieanne Aguila, Program Operation Section, Office of Climate Change

Dr. Marijke Bekken, Emission Research Section

Ms. Jeanni Blakeslee, Office of Climate Change

Mr. Richard Boyd, Process Evaluation Section

Mr. Michael Carter, Chief, Emission Research and Regulatory Development Branch

APPEARANCES CONTINUED

STAFF

Ms. Edie Chang, Chief, Program Planning and Management Branch

Mr. Steven Cliff, Program Development Section

Mr. Jon Costantino, Climate Change Planning Section

Mr. Bart Croes, Chief, Research Division

Mr. Renaldo Crooks, Process Evaluation Section

Mr. Bob Cross, Chief, Mobile Source Control Division

Mr. Dan Donohue, Chief, Emissions Assessment Branch

Mr. Robert Fletcher, Chief Stationary Source Division

Dr. Susan Gilbreath, Health and Exposure Assessment Branch

Mr. Robert Jenne, Assistant Chief Counsel

Mr. Kevin Kennedy, Assistant Executive Officer, Office of Climate Change

Ms. Sharon Lemieux, Emission Research Section

Mr. Aron Livingston, Senior Staff Counsel

Dr. Linda Smith, Chief Health and Exposure Assessment Branch

Mr. Holly Geneva Stout, Staff Counsel

Ms. Lucille van Ommering, Program Operation Section

Dr. Barbara Weller, Population Studies Section

ALSO PRESENT

Mr. Dan Adsit, Ford Vehicle Recycling Planning

Mr. Razmik Balian, AGC Automotive Americas Company

Mr. Will Barrett, American Lung Association

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Bruce Benda, Bayer Material Association

Ms. Susie Berlin, Northern California Power Agency

Mr. Andy Brown, Pacificorp

Ms. Lisa Brown, Toyota

Mr. John Cabaniss, Association of International Automobile Manufacturers

Mr. Frank Caponi, Sanitation Districts L.A.

Mr. Tim Carmichael, Coalition for Clean Air

Mr. Matthew Coda, Southwall Technologies

Mr. Peter Dishart, EPGAA

Mr. Steven Douglas, Alliance of Automobile Manufacturers

Mr. Mike Edison, BASF

Ms. Erika Frank, California Chamber of Commerce

Mr. Ari Frink, Planning & Conservation League

Mr. Steven Gasworth, EXATEC

Mr. Ross Good, Chrysler

Ms. Kristin Grenfell, Natural Resources Defense Counsel

Mr. Ted Harris, California Strategies Representing Pilkington

Mr. Charles Helget, Republic Services

Ms. Bonnie Holmes-Gen, American Lung Association of California

Mr. Daniel Karpen, Professional Engineer & Consultant

Ms. Lili Kokkinakos, Toyota

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Nick Lapis, Californians Against Waste

Mr. Susan Lipper, T Mobile USA

Mr. Gene Livingston, Garmin

Mr. Andy Mabutol, Mitsubishi Motors

Mr. Bill Magavern, Sierra Club

Mr. Justin Malan, Price Consulting

Mr. Chris Marlia, South Coast Air Quality Management District

Ms. Michaeleen Mason, Western States Petroleum Association

Mr. Bruce McLaughlin, California Municipal Utilities Association

Ms. Patricia Monahan, Union of Concerned Scientists

Mr. Jonathon Morrison, California New Car Dealers Association

Mr. Craig Moyer, Manatt, Phelps & Phillips, LLP

Mr. Simon Mui, Natural Resources Defense Counsel

Ms. Rachel Oster, Recology

Mr. David Patterson

Mr. Norman Pedersen, Hanna & Morton

Mr. Norman Plotkin, California Independent Petroleum Association

Mr. David Raney, Honda, Environmental & Energy Affairs

Mr. Tim Reed, Kern County

Ms. Dorothy Rothrock, California Manufacturers and Technology Association

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Mukesh Rustagi, Pittsburg Glass Works

Mr. John Shears, Center for Energy Efficiency and Renewable Technologies

Mr. Stephen Shuler, EXATEC

Mr. Shane Smith, Applied Materials

Mr. Larry Sweetser, Rural Counties ESJPA

Mr. James Tribble, Sekisui

Mr. Robert Vandal, Guardian

Mr. Chuck White, Waste Management

Ms. Jill Whynot, South Coast Air Quality Management District

Ms. Cathy Woollums, Kern River Gas Transmission

INDEX

INDEX CONTINUED

INDEX CONTINUED

PROCEEDINGS

CHAIRPERSON NICHOLS: Welcome to the June 25th Public Meeting of the Air Resources Board.

We will -- is the sound system working?

Okay. Good to go.

We're waiting for our timer. But we don't have any items that meet the timer at the very beginning.

So we will begin this morning with our Pledge of Allegiance to the Flag.

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

CHAIRPERSON NICHOLS: The clerk will please call the roll.

BOARD CLERK VEJAR: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK VEJAR: Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK VEJAR: Ms. D'Adamo?

BOARD MEMBER D'ADAMO: Here.

BOARD CLERK VEJAR: Ms. Kennard?

BOARD MEMBER KENNARD: Here.

BOARD CLERK VEJAR: Mayor Loveridge?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

BOARD CLERK VEJAR: Supervisor Roberts?

Professor Sperling?

BOARD MEMBER SPERLING: Here.

BOARD CLERK VEJAR: Dr. Telles?

BOARD MEMBER TELLES: Present.

BOARD CLERK VEJAR: Supervisor Yeager?

BOARD MEMBER YEAGER: Here.

BOARD CLERK VEJAR: Chairman Nichols?

CHAIRPERSON NICHOLS: Here.

BOARD CLERK VEJAR: Madam Chairman, we have a quorum.

CHAIRPERSON NICHOLS: Thank you very much.

I have a few announcements that I will make before we get started.

First of all, we have removed Agenda Item 09-6-6, which is a briefing on the new drive clean website. It will not be presented today.

Secondly, I wish to announce, in case anybody wonders, that our Executive Officer, James Goldstene, is not here today. He's attending a family wedding in Tennessee. So Chief Deputy Executive Officer Tom Cackette will once again be reprising a role that he has played many times before as the person who will introduce the Board items.

I want to remind anybody who's not familiar with our procedures that if you want to testify on any item on

our agenda, you should sign up with the staff who are located outside the auditorium. And we appreciate it if you give your name on the speaker card.

We will be imposing a three-minute time limit on oral testimony. But of course we will accept any amount of written testimony. And we appreciate it if you summarize your testimony and get straight into your main points. We know that you're happy to be here and that you appreciate the good work of the staff. Even though they like to hear about it, it's more helpful if we just hear, you know, directly what you have to say.

I also want to make sure that everybody knows that there are emergency exits at the rear of this room. In the event of a fire alarm, we'll require to vacate the building, go outside and across the street to the park. It has actually happened. So I want to make sure that people know what we're expected to stay outside until the "all clear" signal is given.

And with that, I think we can move directly into the Board meeting and start with the health update.

Mr. Cackette, will you introduce this item.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Thank you. And good morning, Board members.

Staff is going to present the results of a recent research study that shows highly walkable neighborhoods

are associated with reductions in adverse health effects when compared to other neighborhoods with greater degrees of urban sprawl. The results of this research provide additional support for ARB's continued effort with local governments to implement Senate Bill 375, enacted last year to reduce greenhouse gas emissions by promoting better land use.

Dr. Susan Gilbreath from the Research Division will make the presentation.

Susan.

(Thereupon an overhead presentation was Presented as follows.)

DR. GILBREATH: Thank you, Mr. Cackette.

Good morning, Chairman Nichols and members of the Board.

Senate Bill 375 requires the Air Resources Board to set regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles. The topic of today's health update is the additional health benefit that may accrue from implementation of Senate Bill 375 by providing an urban environment that promotes physical activity and may reduce the risk for obesity. Specifically, this presentation will focus on results from the Portland Neighborhood Environment and Health Study

--o0o--

DR. GILBREATH: Before I discuss the study, I'm going provide some background information. I will define the urban environment, referred to as the built environment, and I will explain some of its components. I am going to discuss the obesity epidemic and how the built environment can impact obesity and overweight by influencing levels of physical activity. I will then focus on results from the Portland Neighborhood Environment and Health Study which links community design with obesity and related health issues.

--o0o--

DR. GILBREATH: The built environment encompasses how human activity relates to the physical environment and contains three main elements:

The first is urban design, which includes the design of the city and the physical elements within it.

Land-use typically refers to the distribution, location, and density of residential, commercial, office, and industrial activities.

As shown on the slide, the transportation system includes components such as roads and bike paths as well as traffic levels and bus frequencies.

--o0o--

DR. GILBREATH: This slide contrasts two extreme types of the built environment, although communities

frequently contain aspects of both. Urban sprawl is the spreading of a city and its suburbs at the fringe of an urban area. Sprawl is characterized by a low population density, so a large amount of land is urbanized in these areas. Residents sprawling neighborhoods tend to live in single-family homes in areas with single use zoning and commute by automobile to work and other activities. The increased reliance on cars is associated with increased emissions of pollutants and decreased physical activity levels, as walking and cycling are not viable transportation options.

The picture on the left demonstrates the difficulties in traveling from point A to point B in an area dominated by sprawl.

Smart fortwo growth is an urban planning and transportation strategy that concentrates growth in the center of a city and preserves open spaces and utilizes existing development. Smart fortwo growth advocates mixed land-use development with compact transit-oriented, walkable, and bicycle-friendly communities with a range of housing choices. Reduced reliance on cars can reduce greenhouse gas emissions.

The picture on the right shows how simple it can be to travel from point A to B.

Smart fortwo growth can promote public health by

encouraging physical activity and facilitating social cohesiveness. As the obesity epidemic rises, questions regarding how the built environment may affect health are becoming an increasingly important research focus.

--o0o--

DR. GILBREATH: Obesity and overweight are defined by the body mass index, which is calculated from one's height and weight. Approximately two-thirds of adults in the United States are either overweight or obese. Research has shown that as weight increases to overweight and obese levels, the risk for conditions such as high blood pressure, stroke, certain cancers, diabetes, and heart disease also increases. In addition, preexisting conditions can be worsened. Body weight is the result of genes, metabolism, culture, socioeconomic status, behavior, and the environment.

Public health officials state that the greatest opportunity for prevention and treatment of the obesity epidemic are by modifying behavior and the environment, which, in turn, should decrease health risks. For example, the Women's Health Initiative Observational Study, a very large study covering several years, found that women who exercise reduce their risk for cardiovascular disease. The relationship between the built environment, physical activity, and health was

recently reported in a series of papers and is the subject of this health update.

--o0o--

DR. GILBREATH: I will be discussing findings from three papers that have come from the Portland Neighborhood Environment and Health Study. The study's geographic area covered the Portland, Oregon, metropolitan region's urban growth boundary. The urban growth boundary, created as part of the statewide land-use program, is a legal boundary to protect areas from urban sprawl and to promote the efficient use of land. The study has followed approximately 1200 residents ages 50 through 75 years of age over a one-year period. The participants have lived at their current residence for an average of eight and a half years. Physiological measurements such as weight, height, and blood pressure are measured annually.

Participants have been surveyed about their demographics, physical activity levels, transportation choices, and dietary habits. Each residence and neighborhood was assessed for its level of walkability, which is based on the land-use mix, street connectivity, open and green paces, and the availability of public transit.

Health outcomes were compared among participants

living in differing areas of walkability.

--o0o--

DR. GILBREATH: When first examining the study participants, the researchers found the prevalence of obesity and overweight was 25 percent lower for every 10 percent increase in mixed land-use compared to residents in areas with less land-use mix and more sprawl.

After one year, participants on average gained four pounds, while the subset of residents living in highly walkable neighborhoods, who increased their activity levels, lost three pounds. Changes in blood pressure after one year followed the same pattern, going up slightly overall but decreasing in residents in highly walkable neighborhoods.

--o0o--

DR. GILBREATH: The research findings indicate that highly walkable neighborhoods positively influence health. This study is important because it is one of the only studies to examine the built environment and changes in health over time. However, questions remains. For example, although the average weight of all participants at baseline was the same, it is not known if the people living in the more walkable neighborhoods chose those areas because they are inclined to be more active. Future research is needed to address this issue.

The study focused on adults. But what is even more important is that the obesity epidemic affects children as well. Over 3 percent of children are at risk for overweight and obesity, so it is vital that we understand how to build our communities to encourage our children to be as healthy as possible

Because the built environment constitutes an important contributor to climate change and health outcomes, alternative practices offer opportunities both for improved health and reduced climate change. This is addressed in Senate Bill 375, a bill enacted last year to assist local governments to reduce greenhouse gases via more efficient land-use and transportation systems.

The built environment, climate change, and public health are closely connected, and strategies that reduce greenhouse gases provide opportunities both to reduce climate change and improve health.

The concludes my presentation. We would be happy to answer any questions you may have.

CHAIRPERSON NICHOLS: Are there any questions or comments from the Board?

Dr. Balmes.

BOARD MEMBER BALMES: Well, I just want to thank the staff for bringing this particular series of studies to the Board's attention with this update. Because to my

knowledge, since I've been on the Board, this is the first time we've talked about the built environment and the public health aspects. And it's timely given, SB 375.

I realize land-use decisions reside at the local level. But I like supplying information that will encourage smart fortwo growth decisions. And the public health impacts of land-use decisions include walkability, increased exercise, which plays an important role in reducing the obesity epidemic we have in this country. And even though these results were for adults, it's likely that they would also impact kids as well.

So I think it's -- I'm really glad that we're talking about this today.

CHAIRPERSON NICHOLS: Thank you.

Any others?

Yes, Dr. Telles.

BOARD MEMBER TELLES: I think it's -- I just make a comment here too, that I think it's very important to bring this to public awareness. About two, three years ago the Fresno Bee did a public opinion poll asking for what people thought were major problems in our area. And air pollution was right at number 1, and urban sprawl was at the bottom of the list at number 10.

In other words, there's a huge mental disconnect between -- you know, urban sprawl is a major cause of air

pollution. And there's a huge disconnect between urban sprawl and air pollution.

And there's also, I think, a huge disconnect with understanding that the environment we live in has a lot to do with our health. If you look at European cities, they're probably much more healthy to live in than our cities, because of the comments made here.

And this seems like a small issue. But one of the major issues facing our country right now is the cost of health care. And we could throw a lot of money at taking care of people with disease. But if we don't create environments which prevent those diseases, then I think it's kind of a sad testimony of our public planning.

One comment on the Women's Health Initiative, since there's a lot of women here on our Board --

(Laughter.)

BOARD MEMBER TELLES: -- that that was a study of about 75,000 women age 50 to 79. And what it showed was something very important, is that just 30 minutes of walking five days a week reduced your cardiovascular risks for new coronary events by about 30 percent. That's better than Lipitor, better than Crestor. If you exercised more vigorously, you could reduce your risk down to about 50 or 60 percent.

So this type of, you know, creating an

environment where people just walk a little bit more has a huge effect on health.

CHAIRPERSON NICHOLS: Thank you for that reminder.

BOARD MEMBER TELLES: And it wasn't meant to be directed at you, Mary.

(Laughter.)

CHAIRPERSON NICHOLS: I didn't take it personally. Directed at the group as a whole.

Yes, Supervisor.

BOARD MEMBER ROBERTS: Yeah, let me, if I can, just comment.

Almost ten years ago now we saw basically a huge increase of obesity in children, to the point where I think in excess of 30 percent of the kids were evaluated to be obese. We brought about 90 different groups together in San Diego and in fact created an action plan. I get a little concerned when I see smart fortwo growth versus I guess stupid growth, because -- you know, I'm not sure that anybody's doing stupid growth in the way you plan cities. All cities are -- sort of have a semi-core, and everything on the edge is sprawl. And it's just not that easy. And that's probably why it's at the local level.

But the fact is an awful lot is being done in

this area, and you are increasingly seeing the planners get together with the health officials, which is at the core of all of these things. The real challenge is going to be -- you know, if you look around the cores, you'll find sort of medium density areas, and to be able to do things there. We have walkable communities that are not safe to walk in, which doesn't do you much good. And we've tried to create things like walking school buses and things like that that are addressed specifically at kids.

But I think we've come a long way beyond where this sort of study is pointing right now.

CHAIRPERSON NICHOLS: I think -- when I first heard about this, I thought, you know, isn't this just demonstrating the obvious? But actually what seems obvious isn't always that easy to prove. And I think the fact that there was such a large number of people and that they followed them over time and then really carefully measured the walking that they were doing, and the ability to walk, is a contribution in terms of the science of this topic.

So I also am glad to see this being brought forward and factored into the thinking that our staff is doing about 375.

BOARD MEMBER BALMES: I was going to say, in addition to the longitudinal nature of the study, the fact

that they had both pretty good neighborhood level data and individual level data made it stronger than any previous study.

CHAIRPERSON NICHOLS: Right.

But I do take Supervisor Roberts' comment, because we are also hearing, as the Board knows, frequently from communities where people would not like to go outside their houses because of the levels of air pollution that, you know, surround their neighborhoods. And so how you balance the design issues along with the management of the vehicles and the pollution is really not that easy to accomplish.

BOARD MEMBER RIORDAN: Madam Chair, If I could just comment.

Slide 4, which is the urban sprawl and the smart fortwo growth. You know, in past a lot of people have supported -- and particularly I come from a county that is land rich. I think it would be interesting to see what a factor might be when you factor in dedicated walking paths and bike paths and riding trails. It might be a very interesting thing. You might achieve still, you know, the curves and the things that people, quote, enjoy when they go through a community, not the grid pattern that is shown in smart fortwo growth.

But if you factor in - and some of the larger

projects in our area have - the dedicated walking paths and bike trails, et cetera -- and they are used. They are really very successful. And they're beautifully maintained, because a homeowners' association has been able to do that. But it would be an interesting element to factor into that and somebody look at that in a more serious way as well.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

I think we could move on then to our next item.

And appreciate the briefing.

And the next one is an update on our progress on AB 32.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Thank you.

This item is another in the ongoing series of updates to the Board on our progress in implementing the landmark climate change bill and Scoping Plan.

When Governor Schwarzenegger signed AB 32 in September of '06, the Air Resources Board received one of the most challenging assignments of our 40-year history - reduce California's greenhouse gas emissions to 1990 levels by the year 2020. The workload is huge and the deadlines are tight.

Today, two years and nine months later, I'm

pleased to report that we're on schedule to meet AB 32's deadlines. For example, in June of 2007, the Board adopted a list of nine discrete early actions. To date, you have adopted regulations to implement eight of the nine, and the last one is coming in front of the Board today.

In December 2007, the Board established the 2020 target of 427 million metric tons of greenhouse gas emissions, which will require a reduction of 169 million metric tons of greenhouse gas emissions from the business-as-usual case. If the greenhouse gas regulations before the Board today are adopted, the Board will have adopted regulations that will achieve over a quarter of the reductions needed to meet this goal.

Given the breadth and depth of topics involved in AB 32 implementation, ARB must work closely with its sister state agencies, other jurisdictions and stakeholders to ensure that it implements the best climate change program possible.

We continue to participate in the Climate Action Team, which in April released its biennial report.

We are participating in the Climate Action Team Public Health subgroup with the Department of Public Health and other agencies, which was formed earlier this year to provide advice and analysis on the public health

impacts of climate change, as well as to evaluate the health impacts of the Scoping Plan's greenhouse gas emission reduction measures.

The Climate Action Team Public Health Team has also convened a workgroup to facilitate public discussion of these issues, and the workgroup held its first meeting just last week.

ARB has also been working closely with the Western Climate Initiative, to which California's Cap-and-Trade Program will be linked to create a regional cap-and-trade system. ARB staff actively participates at every level of the Western Climate Initiative planning and is working diligently to ensure that the WCI program is designed in such a way as to maximize benefits to California while helping to advance effective climate change policies in other states and provinces.

Today staff will provide an update on these and other topics related to Scoping Plan implementation, with special emphasis on the formation of the Economic and Allocation Advisory Committee and the ongoing program to design cap and trade regulations.

Ms. Brieanne Aguila, from our Office of Climate Change, will present the staff presentation.

Brieanne.

(Thereupon an overhead presentation was

Presented as follows.)

CHAIRPERSON NICHOLS: Thanks.

Before you start, let me just say a word about the context that this is taking place in, because I don't want anyone who's listening or the Board members to think that we are operating here in a vacuum, unaware of what's going on at the national level or in our sister states. So I just -- I do want to flag for everyone's attention the fact that we are making major progress I guess, first of all, close the home. The State of Oregon's Legislature has just passed a low carbon fuel standard bill, with some assistance from our staff which they asked for. And so we're very pleased to see that this movement is spreading as it should be.

Also, and obviously even more significance, is the fact that the House of Representatives is moving forward on major legislation that deals not only with cap and trade but with other measures that are part of the California AB 32 program. And I think it's always been a goal of the State, both in the legislation and the Governor's implementation of this program, that our leadership should not be something that excluded others, and, in fact, was really designed to attract others to the cause. And so we've known for some time now that the Obama Administration was determined to get a bill through

and that Chairman Waxman and Markey and Speaker Pelosi were all committed to the cause. But I don't think anyone really expected to see as much progress as has been made so quickly. And it's particularly interesting to see how various blocks of voters of members at least are coming together behind the basic notion that action does need to be taken, that economic measures have got to be a part of it, new market-based program but a mix of different kinds of measures and really very much following the basic pattern that California set out.

There's also some features in the federal bill that we're still concerned about, ways in which we're trying to make it stronger. But the target that they have set in terms of emissions reductions is a very ambitious one, actually slightly more ambitious than AB 32.

And there's also going to be I think some interesting questions about how state programs will be part of and merge into the federal program. Although it's clear that there's an intent that state programs will exist side by side with the federal program that complement and actually can implement some of the federal goals. But particularly in the areas that we're getting into now with cap and trade programs there's going to be some questions about timing and implementation. And we are proceeding on the notion that when and if there's

clarity about the federal program, California will be able to take advantage of it and be part of it. But that for the time being it's extremely important for all concerned that we continue to work on these issues, because we've already seen how much our willingness to get out there and try things has benefited the country as a whole.

So sorry for that brief pause. But we'll turn it over now to Brieanne.

MS. AGUILA: Thank you.

Good morning, Chairman Nichols and members of the Board.

Though only four months have passed since we first gave you a Scoping Plan Implementation Update, the Air Resources Board has made significant progress on this groundbreaking plan and much has occurred at the federal level, in part in response to California's actions to combat climate change.

--o0o--

MS. AGUILA: Today we will be updating you on recent actions by the Obama Administration towards implementing a federal greenhouse gas vehicle standards program and actions by Congress to pass a climate change bill.

We will provide a general update on implementation of Scoping Plan measures and coordination

with our sister agencies. We will also discuss the formation of the Economic and Allocation Advisory Committee. Finally, we will describe progress on the cap-and-trade regulation.

--o0o--

MS. AGUILA: In May, the Obama Administration committed to the first ever national greenhouse gas vehicle standards, which are planned to match California's by 2016. While the federal program would start more slowly than California's, we will still see greater reductions in the earlier years of the federal program because of its national scope. The auto industry is expected to drop all lawsuits against states planning to adopt greenhouse gas vehicle standards.

In addition, California has preserved the right to establish more stringent rules in the future. We are starting to work on the next round of standards that will begin with the 2017 model year. We plan to bring those regulations to the Board for your consideration next year.

We still need the waiver from the U.S. Environmental Protection Agency to enforce the Pavley regulations, but we expect to get that later this month. This waiver will allow us to start enforcing Pavley this year, initiating an earlier adoption of the standards in California.

--o0o--

MS. AGUILA: In May, the House of Representatives' Energy and Commerce Committee passed the American Clean Energy & Security Act of 2009, also known as the Waxman-Markey bill. This legislation would establish a federal renewable portfolio standard of 20 percent. It would also establish a greenhouse gas cap-and-trade program with targets 17 percent below 2005 levels by 2020 and 83 percent below 2005 levels by 2050. Points of regulation for the electricity, transportation, industrial and natural gas sectors would be roughly comparable to that proposed in California's Climate Change Scoping Plan.

The full House is expected to vote on this bill as soon as tomorrow.

--o0o--

MS. AGUILA: As currently drafted, the Waxman-Markey bill would impose a temporary moratorium on State cap-and-trade programs from 2012 through 2017. This moratorium would not apply to intensity-based complementary measures such as the low carbon fuel standard or other elements of our Scoping Plan beyond cap and trade.

The bill also contains a mechanism for distributing funds to states. ARB staff estimates that

California would receive $90 billion in Waxman-Markey funding through 2025.

--o0o--

MS. AGUILA: Now let's turn to what has been happening in California. As you know, in recent months the Board has been busy with the adoption of climate change Scoping Plan measures.

In January, you adopted the AB 32 measure for vehicle -- mobile vehicle air conditioning systems for the reduction of refrigerant emissions from nonprofessional servicing.

In February, you adopted the Sulfur Hexafluoride limits in Non-Utility and Non-Semiconductor Applications regulation and the Reductions in Perfluorocarbons and Semiconductor Manufacturing regulation.

In March, you adopted the Tire Pressure Program.

And in April, you adopted the Low Carbon Fuel Standard, or LCFS. The LCFS will jump start investment in alternative fuels by requiring fuel providers to reduce the carbon intensity of transportation fuels. This first-of-its-kind standard establishes demand for low carbon fuels without favoring one over the other. In 2020, the LCFS will reduce the carbon intensity of California's vehicle fuels by at least 10 percent and reduce emissions by 16 million metric tons of CO2

equivalent.

All five of these measures were included in the list of discrete early actions approved by the Board in June 2007. With action on these measures, the Board has approved eight of the nine discrete early action measures. And later today you will be considering the last of the nine, the Landfill Methane Control Measure.

In today's Board book, you can find the Scoping Plan Measures Implementation Timeline. This timeline, which is updated regularly, provides information on all Scoping Plan measures. The most recent version can be found online at ARB's main climate change web page.

--o0o--

MS. AGUILA: Later today we will present two measures for your consideration: The Landfill Methane Control Measure and the Cool Car Standards and Test Procedures Measure. Together, these measures will reduce emissions by almost 1.9 million metric tons of CO2 equivalent in 2020.

If adopted by the Board today, the total expected reductions from regulations adopted by the Board to date, will be approximately 50 million metric tons of CO2 equivalent in 2020.

And later today, we will present the AB 32 Cost of Implementation Fee Regulation. This rule will

institute a fee to cover the administrative costs of AB 32 implementation. These include ongoing program costs incurred by ARB and other state agencies. The fee will also repay program start-up loans from the previous two fiscal years. The regulation will take effect January 2010, and we anticipate collecting the fee for the 2009-2010 fiscal year.

--o0o--

MS. AGUILA: ARB recently passed the first major deadline of mandatory greenhouse gas emissions reporting. Staff has been busy over the past several months providing training for ARB's online reporting tool. About 800 reporting facilities and power entities are subject to reporting, and about 90 percent of these are registered and using the online reporting tool. ARB staff developed guidance, held workshops and webinars, and provided significant one-on-one assistance on the tool to help facilities meet the June 1st deadline for the reporting of 2008 emissions. As of earlier this week, 82 percent of facilities registered to use the reporting tool have completed reporting. ARB staff is working with the remaining facilities to complete all reporting as soon as possible.

--o0o--

MS. AGUILA: ARB staff continues to work closely

with other agencies and stakeholders on Scoping Plan implementation. We continue to participate in the Climate Action Team, or CAT. In April, the CAT released its draft biennial report. This report synthesizes 40 research papers focused on the impacts of climate change on California. The biennial report will help guide the CAT and ARB develop policies to reduce greenhouse gas emissions, adapt to climate change, and ensure that related decisions are based on sound science.

ARB is also participating in the recently formed CAT Public Health workgroup.

We also continue to work closely with the California Energy Commission and Public Utilities Commission on a number of issues, including improving the quantification of emission reductions from energy efficiency and addressing the treatment of combined heat and power, or CHP, in AB 32 implementation. Staff is also following each agency's renewable portfolio standard assessment activities.

ARB is also a member of the Interagency Forest Working Group, which consists of representatives from seven state and federal agencies. This group has met three times since forming in early 2009 to discuss Scoping Plan implementation and issues related to the forest sector.

ARB has also been involved with the Green Collar Jobs Council, which is a multi-agency council with broad inter-disciplinary representation. Its mission is to coordinate economic development, workforce training, and job creation efforts at the state level. ARB's role has been to keep the council apprised of AB 32-related efforts as they discuss current and economic -- future economic development activities.

Staff is also working with the California Air Pollution Control Officers Association, or CAPCOA, on a joint work plan for AB 32 implementation. ARB and CAPCOA meet monthly to discuss AB 32 coordination, collaboration efforts, and measure-specific implementation issues.

--o0o--

MS. AGUILA: ARB is actively participating in the recently formed Climate Action Team Public Health Workgroup. It is an interagency group that is jointly chaired by ARB and the California Department of Public Health. The CAT subgroup will provide advice and analysis on the public health impacts of climate change and the evaluation of the health impacts of greenhouse gas reduction measures. The subgroup will also focus on other public have health issues such as adaptation and mitigation

The subgroup hosted their first public workgroup

meeting on June 18th. At that meeting, ARB and Department of Public Health staff provided an overview of recent public health climate change activities in California. They also presented a summary of a research project developed to create a method to identify already impacted communities. ARB will discuss our use of this method at the next public meeting, to be held on July 6th.

--o0o--

MS. AGUILA: Now, moving on to the more complex topic of California's cap-and-trade regulation.

We would like to take a moment to review what cap-and-trade is, what its benefits are, and how it works.

--o0o--

MS. AGUILA: Cap-and-trade is a policy mechanism that establishes a cap - or upper limit - on an amount of pollution allowed to be released into the environment. In the case of California's cap-and-trade program, we're referring to greenhouse gas emissions. Each year, a government agency issues permits, also called allowances, for a one-time right to emit greenhouse gases. Capped facilities must hold allowances equal to their greenhouse gas emissions, and periodically submit the allowances to the governmental agency. We expect to allow facilities to use a limited number of high quality offsets for a small part of this obligation.

The number of allowances issued decreases each year, lowering the cap and forcing a decline in greenhouse gas emissions. Those covered by the program must reduce their emissions or compete for increasingly scarce allowances.

--o0o--

MS. AGUILA: One of the advantages of a cap-and-trade program is that it allows capped facilities to find the low cost method of compliance. Facilities that can reduce their greenhouse gas emissions for a relatively low cost will sell their allowances to those facilities that have a relatively high cost of emissions reductions. This trading a of allowances establishes a market price for greenhouse gas emissions.

--o0o--

MS. AGUILA: One of the most critical design aspects of a cap-and-trade program is how allowances are allocated to capped facilities. There are two general options for allowance allocation: 1) at no cost to the capped facilities, otherwise known as free distribution, or 2) at a cost to the capped facilities, for instance, through an auction. Most likely we will start the program with a combination of the two.

Issues related to the allowance allocation will be addressed in the design of the cap-and-trade program.

Some of these issues include emissions leakage due to competitiveness from out-of-state businesses, the potential for windfall profits caused by free distribution, the effect of allowance price on energy prices, as well as distributional equity across various groups, including household types, locations, industries, and businesses.

These are some of the issues that ARB has asked the Economic and Allocation Advisory Committee to address.

--o0o--

MS. AGUILA: The Economic and Allocation Advisory Committee was announced by ARB and the California Environmental Protection Agency last month. This committee will evaluate the implications of different allowance allocation strategies and will help inform ARB's continued economic analysis. We are honored to have such an esteemed group of experts, chaired by Professor Larry Goulder of Stanford University, advising us on these pivotal issues. We look forward to receiving their recommendations in late 2009. This committee will convene for the first time on July 1st.

--o0o--

MS. AGUILA: Before we delve into the update on the cap-and-trade rule-making, we thought you would be interested in learning more about regional and

international efforts to implement greenhouse gas cap-and-trade programs, especially the Western Climate Initiative, an effort in which California is actively participating.

To Regional Greenhouse Gas Initiative, or RGGI, is a collaborative effort by ten northeastern and mid-Atlantic states to establish a cap-and-trade program. Their goal is to reduce CO2 emissions from the power sector by 10 percent by the year 2018. Most RGGI allowances are auctioned, with several states choosing 100 percent auctioning. So far RGGI has held four quarterly auctions.

The Midwest Greenhouse Gas Reduction Accord, composed of six Midwestern states and one Canadian province, was established in late 2007. The goal of this program is to also develop a regional greenhouse gas cap-and-trade program. Draft recommendations released this month suggest reducing greenhouse gas emissions by 20 percent below 2005 levels by 2020 and 80 percent below 2005 levels by 2050.

The European Union Emissions Trading Scheme, or EU ETS, began operating as the largest multi-country, multi-sector greenhouse gas emissions trading system in 2005. Its goal is to reduce electricity generation and industrial emissions by 20 percent below 1990 levels by

2020. Its first phase was a three-year trial period covering emissions in 2005 through 2007. When the first bottom-up emissions inventory data were revealed in April 2006, the program was shown to be over-allocated in the first phase, and the price of allowances for this phase crashed. The program is currently in its second phase.

The European Commission has laid out plans for its third phase. In this phase, beginning in 2013, the EU ETS expects to make much greater use of auctioning, most notably in the electricity sector.

--o0o--

MS. AGUILA: The California cap-and-trade program will be linked to the programs of our partners in the Western Climate Initiative, or W C I. The goal of the WCI is to establish a regional cap-and-trade program to reduce greenhouse gas emissions 15 percent below 2005 levels by 2020. This target is comparable to California's AB 32 goal. The benefits of a regional trading market are many, including lower compliance costs for capped facilities, reduced leakage of emission, and retention of jobs in California.

Here you see a list of WCI committees working on issues related to the design of a cap-and-trade program. In February, the WCI released its 2009-2010 work plan, and its committees are making significant headway in designing

a uniform program.

ARB staff and staff from other State agencies have been actively participating in all WCI activities. And WCI work has been closely coordinated with our efforts on California's cap-and-trade rule-making.

Also of note, last week WCI Partner Quebec passed legislation enabling it to adopt a cap-and-trade program.

--o0o--

MS. AGUILA: The goal of the California cap-and-trade rule-making process is to establish a broad-based California program that provides a fixed limit on greenhouse gas emissions. Establishing a program that covers approximately 85 percent of our emissions is no small task. This requires the input of many of our sister agencies, especially the California Energy Commission, Public Utilities Commission, and Attorney General's Office.

This year our focus is on soliciting stakeholder input on key program design issues. Next year we will expand our focus to performing and soliciting public input on analyses required for the regulation. These include the environmental impacts, public health, and economic analyses. Though we plan to release a preliminary draft of the cap-and-trade regulation later this year, our continuing consultation with stakeholders over the next

year will assist us in refining the regulation

The cap and trade regulation is slated for Board consideration in November 2010. This will allow us to meet the target launch date for the California cap-and-trade program on January 1st, 2012.

--o0o--

MS. AGUILA: The major program design elements that we are addressing this year include:

Setting the cap, or the maximum allowable greenhouse gas emissions, for each year from 2012 to 2020;

The overall strategy for distributing allowances, and the technical methods needed to carry out that strategy;

Emissions reporting requirements, including new methodologies for capped sources that are not yet included in the mandatory greenhouse gas reporting regulation;

Rules and processes for the use of offsets;

A system of market operations and oversight to ensure that the program runs smoothly and fairly; and

An effective enforcement program to ensure compliance with both AB 32 and the cap-and-trade regulation. ARB, the California Environmental Protection Agency, and the Attorney General's Office have met with a number of experts on enforcement-related issues.

--o0o--

MS. AGUILA: So far, ARB has held 12 well-attended public meetings on several topics focused on major program design elements. These meetings offered staff and stakeholders the opportunity to discuss design options for the cap-and-trade regulation.

--o0o--

MS. AGUILA: ARB staff will continue to hold public meetings on the cap-and-trade regulation over the next year. The topics for meetings planned for the summer months include linkage of the California program to other systems, reporting for cogeneration facilities, and defining compliance obligations and emissions data trends to assist in cap setting.

Over the next couple of months, we also plan to release white papers on crediting voluntary early action in the California cap-and-trade program, and the reporting of emissions from biomass.

For the most up-to-date information on upcoming cap-and-trade activities, we have set up a Cap-and-Trade Program website. The URL for this site is shown at the bottom of this slide.

Thank you very much for your attention today.

CHAIRPERSON NICHOLS: Thank you. That's a very comprehensive summary of a lot of material.

Do Board members have any questions at this

point, or comments?

Yes, Dr. Telles.

BOARD MEMBER TELLES: Thank you for the presentation.

When we approved the Scoping Plan, one of the major concerns was from the Environmental Justice community that some of the issues they brought up would be heard. And in your presentation there wasn't really too much mention of that, especially the Environmental Justice Action Committee. I wonder what the status of that is. And in the meetings for the cap and trade, I mean that was one of their major concerns about cap and trade. Is there going to be a meeting in regards to the effective cap and trade on environmental justice?

CHAIRPERSON NICHOLS: Mr. Kennedy, would you like to respond?

And were you at the ETAAC or did you follow the discussion yesterday? I might be able to add to that if --

ASSISTANT EXECUTIVE OFFICER KENNEDY: I actually was not at the ETAAC meeting. So if you have something you --

CHAIRPERSON NICHOLS: I can add then.

Go ahead though.

ASSISTANT EXECUTIVE OFFICER KENNEDY: But one of

the things that we are looking to actually use the Public Health Workgroup for is to use that forum as a mechanism for talking about the appropriate methodologies for evaluating the sort of concerns that the Environmental Justice community had around the cap-and-trade program. We will then be taking -- in the cap-and-trade program over the course of the next several months, you know, taking a look at those methodologies, figuring out how to best address the public health concerns that they were raising and other sort of co-benefit issues.

We will have at least one workshop and probably a series of them starting this fall, looking at what sort of design and other issues -- other considerations we might have for the cap-and-trade program in order to address those concerns. So it is something that we're working into the workplan overall.

CHAIRPERSON NICHOLS: Yeah, there's sort of two separate but obviously related issues that the Environmental Justice Advisory Committee has focused on. One is of course the potential of a cap-and-trade system to exacerbate or at least not help, not get as much benefit as could be obtained for public health if it's not designed properly. And the other is the economic distributional impacts of the cap-and-trade program and whether revenues that might be coming into the State or

realized -- or savings that would be realized by the private sector shouldn't be also directed in a way that would help deal with the problems of communities that are already adversely impacted by pollution.

So, as Mr. Kennedy pointed out, the Public Health Group is working with members of the Environmental Justice Advisory Committee to sort of refine the technical assessment ability that we have to look at the cap-and-trade system in that regard. The other issue is that the Environmental and Technology Advisory Group -- the Technology Advancement Group, which is another statutory advisory committee that parallels the Environmental Justice Advisory Committee, has actually been meeting jointly with -- the two committees are now meeting at least in part jointly. So Jane Williams, who's the co-chair of the EJAC, as we call them, was meeting yesterday with the ETAAC. And the question then came up whether this new committee, the Allocation Advisory Group, would look not just at kind of macro economic issues about cap and trade, but would also be focusing on distributional effects of the cap-and-trade program, who bears the burden and so forth.

And it's very clear that that group has also taken on as part of their charge this question of fairness in the design of the whole program. So we're definitely

moving beyond the theoretical, which is where we were probably at the time of the Scoping Plan, into the practical details of how you actually make something like this work. And, you know, if I hear people say one more time, well, a well-designed cap-and-trade program will do X, Y, and Z, you know, I'm going to bust them, because --

(Laughter.)

CHAIRPERSON NICHOLS: -- I think we now know that it's up to us to make sure that this thing is well designed, and now we really to have figure it out.

So these issues are definitely alive and well. But I can't report yet on any substantive progress, because they're really just getting organized at this point.

So that's about the best I can do in response to the question. But it's a very timely and important question.

Any other?

Yes, Dr. Sperling.

BOARD MEMBER SPERLING: Speaking of well-designed programs and cap and trade, what -- if the Waxman-Markey climate bill is adopted in some form this fall or even after that, you know, with a big cap-and-trade program, what's the thinking about what California's going to do in terms of moving forward with the cap and trade part of our

program?

CHAIRPERSON NICHOLS: Well, good -- take it away.

ASSISTANT EXECUTIVE OFFICER KENNEDY: Yes. Part of what we're doing at this point is we're keeping a very close eye on progress. And as Chairman Nichols mentioned, we're very pleased at how rapid progress has been today. Getting a bill into law this year is still going to be very difficult to do.

So at this stage we're sort of moving forward as if, you know, Waxman-Markey is not going to be adopted. We're designing the cap-and-trade program to get the California program ready to be operational in 2012.

But as we watch the progress on the federal bill -- you know, as we mentioned in the presentation, there is a moratorium in the bill as it's currently written that would prevent us if it was in law from starting our cap-and-trade program in 2012. Obviously that will affect our plans.

Because it's a moving target on what the bill will look like and when it gets adopted and when it goes into force, at this point we're sort of in a watch and wait and be ready to adapt to the situation as it moves forward.

CHAIRPERSON NICHOLS: Yeah. The only thing I would add is that the bill in its current form, that was

released I believe two days ago, is over 1200 pages long. And it still is incomplete. There are many pieces of it that have yet to be filled in. And even when those are filled in, it seems clear that the Administration is going to need to actually figure out how to implement pieces of it, either with regulation or just by administrative action.

And so I think those of us who've been in the trenches on this have come to the conclusion that at least for now it doesn't make sense to suspend our activities, because I think they're going to be needed one way or another at least as input into that process.

BOARD MEMBER SPERLING: And to the extent that's true, you know, with this preemption clause, does that affect also the distribution of the revenues, do you know? In other words are we going to have any control over that revenue distribution?

CHAIRPERSON NICHOLS: The way the plan is currently designed, a significant portion of the revenues are remitted directly to states, either just in whole or through specific programs, like to existing state energy efficiency programs or existing forestry programs, for example.

So I haven't totaled up the percentages that would actually flow through the State or how much

discretion the State would end up having at the end of the day about how those revenues would be used. But my impression is that there's quite a lot, and that people are just beginning to really absorb what that could mean.

For example, the money that goes to the utilities sector is clearly subject to oversight by utility regulatory agencies.

Okay. Thank you very much. Appreciate the update.

And we now move on to the implementation stage with the first of our items this morning that is a regulation under AB 32.

Mr. Cackette.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Thank you, Chair Nichols.

In June 2007, the Board identified a measure to reduce methane emissions from municipal solid waste landfills as a discrete early action item. Municipal solid waste landfills are the second largest anthropogenic source of methane. Methane is a major contributor to climate change, with a global warming potential of 21 times that of carbon dioxide.

The proposed regulation is the last of the early discrete action measures and will result in an emission reduction of about one and a half million metric tons of

carbon dioxide equivalent in 2020.

Staff's proposal is the result of an extensive investigation and consultation with representatives from the solid waste industry, local air districts, and environmental organizations.

Staff also worked closely with the California Integrated Waste Management Board on the proposal and greatly appreciates their assistance and support.

Renaldo Crooks from the Stationary Source Division will provide the presentation.

CHAIRPERSON NICHOLS: Good morning, Mr. Crooks.

MR. CROOKS: Good morning.

(Thereupon an overhead presentation was Presented as follows.)

Thank you, Mr. Cackette, and good morning, Chairman Nichols and members of the Board. Welcome to today's Board hearing to discuss staff's proposed regulation to reduce greenhouse gas emissions from municipal solid waste landfills.

--o0o--

MR. CROOKS: This morning I will provide you with a brief overview of today's proposal covering the topics on this slide.

--o0o--

MR. CROOKS: I would first like to discuss why

today's proposal is important and how it fits into the big picture of reducing greenhouse gases in California.

--o0o--

MR. CROOKS: This proposal is one of nine early -- discrete and early action measures. The proposal was developed in close collaboration with the California Integrated Waste Management Board staff.

Methane is a major contributor to climate change, having a global warming potential of about 21 times that of carbon dioxide.

The proposal requires owners and operators of uncontrolled landfills to install gas collection and control systems. The proposal also includes performance standards for newly installed and existing gas collection control systems

--o0o--

MR. CROOKS: The Landfill Methane Capture is the last early action to be considered by the Board.

Implementation and enforcement of the proposal will result in an estimated total emission reduction of 1.5 million metric tons of carbon dioxide equivalent in 2020, which exceeds the initial emission reduction estimate of 1 million metric tons in the Scoping Plan.

--o0o--

MR. CROOKS: Next, I would like to provide you

with some background information on landfill gas collection and control.

--o0o--

MR. CROOKS: Decomposition of the organic portion of municipal solid waste contained in landfills leads to the production of landfill gas, containing approximately equal amounts of carbon dioxide and methane, along with trace gases.

The control of landfill gas prevents methane and toxic compounds contained in the gas from either being released in the atmosphere as fugitive emissions or migrating underground to cause groundwater contamination.

--o0o--

MR. CROOKS: Most landfills are currently regulated by local air districts.

During the 1990s, many landfills were required to install gas collection and control systems to comply with district rules designed to reduce non-methane organic compounds, a precursor to the formation of ozone.

These district rules implement federal landfill gas control requirements which focus primarily on achieving reductions of non-methane organic compounds and not methane emissions.

--o0o--

MR. CROOKS: Landfilling is basically a

three-step process consisting of spreading the waste into thin layers, compacting the waste, and covering the waste with soil.

At a later date, typically within two to five years, gas collection wells are installed in the buried waste and connected to a gas collection system. They are installed at a later date to coincide with the initiation of substantial gas generation, or when a fill area reaches final grade.

--o0o--

MR. CROOKS: Gas collection systems can be categorized into two basic types - active and passive systems.

Active systems consist of landfill gas moving equipment which routes the landfill gas to a control system for combustion, treatment, or conversion.

Passive systems rely on the natural pressure gradient to typically vent methane into the atmosphere.

--o0o--

MR. CROOKS: This slide provides examples of gas collection wells connected to passive and active systems.

Examples of two types of vent pipes that release methane directly into the atmosphere are shown at the top of the slide.

The picture at the bottom of the slide is an

example of a vertical gas collection well that is connected to an active gas collection system.

--o0o--

MR. CROOKS: The collected gas is usually combusted. If the landfill does not produce enough methane to economically support energy recovery or conversion techniques, a flare may be the most suitable control method. Flares can either be open or enclosed.

Combustion devices that recover energy include reciprocating engines, turbines, microturbines, and boilers. For some of these devices, the landfill gas must be pretreated to remove contaminants to ensure their proper operation.

--o0o--

MR. CROOKS: Open flares are the most inexpensive and represent the simplest flaring technology.

Open flares also emit more light, noise, and heat and are more difficult to source test.

--o0o--

MR. CROOKS: This is an example of an enclosed flare, which is the most common control device used at landfills.

The enclosure reduces light, noise, and heat and allows the flare to be located at ground level.

Unlike open flares, the amount of gas and air

entering can be controlled, making combustion more reliable and efficient.

Enclosed flares can be easily source tested to measure destruction efficiency.

--o0o--

MR. CROOKS: Other technologies used to convert landfill gas into a product or energy are landfill gas to vehicle fuel, pipeline quality natural gas, or using landfill gas to produce electricity. For electricity generation, we support the cleanest technologies, for example: Microturbines, gas turbines or fuel cells.

--o0o--

MR. CROOKS: There are about 367 landfills currently in ARB's landfill inventory that have the potential to generate methane emissions.

In California, landfills are the second largest man-made source of methane, behind livestock emissions, and represent about 1 percent of the statewide greenhouse gas inventory.

--o0o--

MR. CROOKS: Greenhouse gas emissions from landfills were estimated to be about 6.3 million metric tons of carbon dioxide equivalent in 1990, and in 2000 the greenhouse gas emission level dropped to 5.8.

During this time period, several landfill gas

control measures were adopted such as ARB's suggested control measure for landfill gas emissions, and local air district and federal landfill gas rules.

Although these measures targeted primarily non-methane organic compounds and volatile organic compounds, it also had the added benefit of reducing greenhouse gas emissions such as methane.

Other factors include the California Integrated Waste Management Board's successful efforts to achieve their 50 percent statewide recycling goal and solid waste industry's commitment to reduce landfill gas emissions.

However, due to population growth and increased waste disposal, greenhouse gas emissions are forecasted to increase to approximately 7.7 million metric tons in 2020. This underscores the need for the proposed regulation.

Factors that may affect this projection include: The implementation of the California Integrated Waste Management Board's best management practices, increased waste diversion, and commercial recycling.

--o0o--

MR. CROOKS: At this time I would like to present the requirements of today's proposal.

--o0o--

MR. CROOKS: The objectives of this proposal are to:

Realize significant reductions of greenhouse gas emissions quickly;

Ensure early collection and reduction of fugitive methane emissions by requiring controls on uncontrolled landfills;

Ensure that existing and newly installed gas collection and control systems are being maintained and operating the optimally; and

Finally, ensure no relaxation in conventional air pollutant controls.

--o0o--

MR. CROOKS: Staff has made extensive efforts to provide opportunities for participation in the rule-making process.

Our public outreach efforts included meetings with stakeholders through a series of seven technical workgroup meetings and three public workshops.

These groups included representatives from the solid waste industry, local air districts, local enforcement agencies, the United States Environmental Protection Agency, environmental organizations, and other interested parties. Staff also created a website and maintained an Email address list.

In developing the proposed regulations, staff worked closely with California Integrated Waste Management

Board staff who are supportive of our proposal.

--o0o--

MR. CROOKS: This proposal applies to all landfills that received solid waste after January 1st, 1977.

Hazardous waste landfills and landfills containing only construction and demolition waste or non-decomposable solid waste, which is incapable of forming significant amounts of landfill gas, are exempt from the requirements of the proposal.

Smaller, closed and inactive landfills are also exempt from the proposal because they are not expected to generate sufficient amounts of landfill gas.

--o0o--

MR. CROOKS: Smaller, active landfills would be required to comply with limited reporting requirements.

Owners and operators of larger active, closed, and inactive landfills must determine if they are required to install controls based on the landfill's gas heat input capacity.

If the landfill's gas heat input capacity is greater than or equal to 3 million BTUs per hour, the landfill owner or operator must either install controls and comply with the requirements of this proposal or demonstrate that the landfill generates an insufficient

amount of landfill gas.

The proposal requires a design plan for the installation of a properly designed and operated active gas collection and control system that minimizes methane emissions.

Landfill owners and operators are allowed flexibility based on a landfill's site specific conditions. Landfill gas may also be routed to a treatment system that processes the collected gas for subsequent sale or use, or injected into the natural gas pipeline.

If a flare is to be used, it must be an enclosed flare. However, the proposal allows open flares to be used if the gas quality and flow rate is insufficient to support an enclosed flare.

Negative pressure must be maintained at each wellhead and the proposal also contains a component leak standard.

--o0o--

MR. CROOKS: The proposal establishes methane emission limits of 500 parts per million for surface leaks at any location of the landfill, and a 25 part per million average over the surface of the landfill to ensure that the gas collection system is adequately controlling emissions.

Instantaneous or point source monitoring is used to identify fugitive emissions from holes and cracks in the landfill surface. And integrated monitoring averages the point source measurements and is a good indicator of how well the gas collection system is operating overall.

Most landfill operators, however, do not currently conduct integrated surface monitoring, and uncontrolled landfills do not currently monitor for compliance with either surface standard. Therefore, we are proposing that these requirements would become effective January 1st, 2011, to allow landfill owners and operators the necessary time to make system adjustments and train staff in order to comply with the emission standards.

Landfills required to install new controls are required to meet these standards upon commencing operation of the system.

--o0o--

MR. CROOKS: The proposal requires:

Quarterly surface emissions monitoring - to ensure that the gas collection system is adequately controlling emissions. However, the working face of the landfill where waste is being placed is not subject to the monitoring requirements.

Quarterly component leak testing - to ensure that

there are no point source leaks of methane exceeding 500 parts per million along the positive pressure side of the gas transfer path.

Monthly wellhead monitoring - to demonstrate that a negative pressure is being maintained; and

Finally, annual gas control system testing - to ensure that the gas control devices are operating optimally and meeting the destruction efficiency standards.

--o0o--

MR. CROOKS: The proposal contains methane destruction efficiency requirements for gas control devices of 99 percent for enclosed flares and most other devices, except for lean burn engines, which must meet a methane outlet concentration of 3,000 parts per million or less.

--o0o--

MR. CROOKS: Landfill owners and operators are subject to recordkeeping and reporting requirements.

These requirements include, but are not limited to, maintaining records of a landfill's waste acceptance rates, surface sampling measurements, component leak checking, gas flow rates, and control device destruction efficiency testing results.

--o0o--

MR. CROOKS: The proposal provides flexibility, allowing owners and operators to request alternatives to the test methods, and monitoring and operational requirements. For example, safety issues associated with surface monitoring or the need for alternative wind speed requirements for landfills located in high-wind areas.

Owners and operators will need to demonstrate why consideration of an alternative is necessary. They must also demonstrate that requested alternatives provide equivalent levels of emission control and enforceability.

Alternative compliance options are subject to the approval of the Executive Officer.

--o0o--

MR. CROOKS: The compliance schedule for installing controls is as follows:

Landfill owners and operators must determine the need for installing controls and submit a design plan.

Within 18 months of approval of the design plan, owners and operators of active landfills must install controls.

If the landfill is closed or inactive, controls must be installed within 30 months of approval of the design plan.

Landfill owners and operators with existing control systems may need to adjust their systems for

compliance with the proposal and submit an amended design plan.

--o0o--

MR. CROOKS: The proposal provides incentives which allows the walking pattern spacing to be increased from 25-foot to 100-foot intervals and the monitoring frequency to be decreased from quarterly to annually for closed and inactive landfills, if the landfill owner and operator can demonstrate compliance with the point and the integrated surface monitoring limits.

These incentives can continue to be used as long as the landfill remains in compliance with the surface methane emission standards.

--o0o--

MR. CROOKS: As discussed, there are about 367 landfills in the inventory.

Out of these landfills we can anticipate that 218 landfills may be subject to the proposal.

Of these the 218 landfills: 72 are subject to reporting requirements only; 14 are uncontrolled and may require gas collection control systems; and 132 already have gas collection and control systems installed and are subject to the monitoring, recordkeeping, and reporting requirements.

Most of the remaining 149 landfills are likely to

qualify for an exemption because they are below the landfill size and gas heat input capacity thresholds, and are expected to generate insufficient amounts of landfill gas to support a collection and control system.

--o0o--

MR. CROOKS: This diagram shows the locations of the 14 uncontrolled landfills by local air district that may be required to install gas collection and control systems.

The landfills are located in the following local air districts: Three in San Joaquin; two in Mojave Desert; one in the Bay Area; one in San Diego; and the others are located in smaller local air districts. There are no uncontrolled landfills in the South Coast.

--o0o--

MR. CROOKS: As previously mentioned, landfills are regulated under local air district rules that implement federal requirements for landfills.

For this regulation, we are working with the local air districts in developing a delegation agreement which would allow local air districts to implement and enforce the proposed regulation.

Also, we will work with local districts to develop language that can be added to the regulation clarifying that the provision of this regulation shall

serve as the regulatory floor.

Given local air districts' expertise in regulating landfills, staff believes that this approach is appropriate for this proposal.

--o0o--

MR. CROOKS: At this time, I would like to present the environmental and economic impacts of today's proposal.

--o0o--

MR. CROOKS: The staff's proposal requires the installation of gas collection control systems where none currently exist and improves the overall operation and maintenance of the gas collection systems through monitoring and recordkeeping. Therefore, the proposal incrementally increases the collection of methane generated from landfills.

In order to estimate the emission reduction benefits, staff needed to develop a method that provides both an estimate of the baseline emissions and the incremental benefits of the proposal.

The first step in the analysis was to establish a baseline. To that end, we used the current emissions inventory for landfills and established an overall statewide number. We did not conduct a landfill-by-landfill analysis because data are not

currently available for all landfills. The baseline efficiency is not intended to represent the current operating collection efficiency for every landfill in the state, but provides a plausible overall baseline from which to estimate emission reductions.

To estimate the potential emission reductions from the proposal, we analyzed data from a landfill in the South Coast Air Quality Management District that is subject to similar performance requirements as the proposal and provided a robust data set. The analysis was based on using surface methane emission measurements in concert with an air quality model to estimate the mass of emissions coming from the landfill. By comparing this number to the total gas collected at the landfill, we could estimate the overall collection efficiency at the landfill. Using this information, in conjunction with the statewide baseline, we were able to then generate a number for the statewide emission reductions.

Staff acknowledges that this collection efficiency may not be representative of any specific landfill. In fact, the proposal specifically does not call out a specific control efficiency requirement, but rather employs design requirements, monitoring, recordkeeping, and reporting requirements that taken together will result in the increased collection of

methane. The actual collection efficiency for any particular landfill may be less than or greater than the values generated for the analyzed landfill.

--o0o--

MR. CROOKS: The staff acknowledges there is uncertainty associated with the emission reduction estimate. Baseline and controlled emissions will likely vary depending on a number of factors, with a few listed on this slide. These uncertainties may result in emissions reductions for individual landfills that are greater or less than what the staff proposed. Nevertheless, we believe that the approach taken provides a plausible estimate, considering that there is not yet highly refined techniques for assessing emissions or emission reductions from landfills.

We also acknowledge that other approaches may be available, but these techniques are either in the development stage or provide only screening level information. For example, the California Energy Commission is currently conducting an extensive study that may provide robust data that will help improve the emissions inventory, and more advanced techniques using remote sensing offer even more opportunities. Staff is committed to evaluate potential different approaches that will help improve the emissions and emission reduction

estimates.

--o0o--

MR. CROOKS: Using the previously discussed analysis technique, the staff estimated that the statewide implementation and enforcement of the proposal is expected to result in methane emission reductions of about 1.5 million metric tons of carbon dioxide equivalent in 2020, which is greater than the 1 million metric tons estimated in the Scoping Plan.

Installing gas collection and control systems at the estimated 14 uncontrolled landfills would result in a reduction of about 0.4 million metric tons of carbon dioxide.

--o0o--

MR. CROOKS: The total cost of the measure, expressed on an annual basis over the lifetime of the proposal, ranges from 6 to $14 million.

The cost effectiveness is estimated to be $9 per metric ton of carbon equivalent reduced.

And the cost on a per-household basis is approximately ten cents per month.

--o0o--

MR. CROOKS: This slide compares the cost effectiveness of the landfill measure to some of the other discrete early action measures that range from 0.2 to 21

dollars per metric ton of carbon dioxide equivalent reduced. Thus, the landfill measure is consistent with the cost effectiveness estimates from other discrete early action measures.

CHAIRPERSON NICHOLS: Is the cost that you're estimating there for this rule primarily the additional equipment that has to be installed or is it the better recordkeeping and other sort of labor intensive -- more labor intensive pieces of this?

PROCESS EVALUATION SECTION MANAGER BOYD: Yes. This is Rich Boyd. The cost is driven primarily by the additional labor that's needed to conduct the surface monitoring.

CHAIRPERSON NICHOLS: Okay. I'm only raising that point because this is a rule that really doesn't require an awful lot of technology at all. It's really a tightening up of existing rules or programs in a way that in theory ought to have been done when they were first begun, as least in my opinion, to make them actually work the way they were supposed to work.

So I guess we have to take the cost of that on to ourselves for this rule. But I just want to point out that it doesn't seem to me that this is something that really is all that earth shattering when it comes to, you know, just asking people to maintain the systems that they

already have in place.

Sorry for the interruption.

MR. CROOKS: Okay. Thank you, Chairman Nichols.

At this time I'd like to discuss some of the comments that we received from stakeholders.

--o0o--

MR. CROOKS: Industry representatives expressed concern that the majority of landfill operators would be unfamiliar with conducting integrated surface monitoring and suggested that more time would be needed to make the necessary system adjustments and train staff.

In response, the proposal delays compliance with the 25 part per million integrated standard until January 1st, 2011.

A few municipalities have expressed concern over the cost of compliance and the challenges of raising funds.

The proposed regulation provides compliance incentives. For example, less frequent monitoring and an increased surface walking patterns is allowed if landfill owners or operators can demonstrate that their landfill is in compliance with the surface monitoring limits.

In addition, closed or inactive landfills are allowed more time to install their control systems.

Environmental organizations have suggested that a

200 part per million instantaneous surface limit should be met to qualify for the less frequent monitoring and increased walking pattern spacing.

This issue of a 200 part per million standard was discussed in detail during development of the proposal. Our sister agency, the California Integrated Waste Management Board, raised concerns about fires as systems draw more air in to reduce the leaks from 500 part per million to 200 part per million levels. Staff is not recommending a change but will be gathering and evaluating the monitoring data to determine if a lower surface methane limit might be feasible.

--o0o--

MR. CROOKS: Some environmental organizations expressed concerns about uncertainties associated with gas collection efficiencies.

As discussed previously, staff recognizes that there are uncertainties in the estimates. Gas collection efficiency is a subject of intense debate since data are limited and many values in literature can be found ranging from as low as 20 percent to as high as 95 percent or greater.

Consequently, staff acknowledges the need to improve our understanding of landfill emissions and gas collection efficiencies. Staff expects that ongoing and

developing studies will help in this effort and will continue to monitor current and future research, and the impact that research has on collection efficiency estimates.

Some environmental organizations have also expressed concerns that the collection efficiency we used to estimate emission reductions will have the unintended consequence of discouraging other technologies that could further reduce greenhouse gas emissions. This certainly is not our intent. Staff is fully supportive of efforts to divert organics to other alternatives such as anaerobic digesters and composting.

--o0o--

MR. CROOKS: Staff is proposing several minor modifications to the proposal.

First, we are proposing to clarify the administrative requirements for amended design plans.

Second, we are proposing to provide a definition for "inert waste" to better characterize waste types that are unlikely to produce methane.

And, finally, staff have identified several additional minor modifications that are intended to improve the clarity and readability of the proposal, which are identified in Attachment B of the resolution.

And at this time I'd like to advise everyone that

a revised resolution was released at the start of this item and is now available.

--o0o--

MR. CROOKS: Future activities planned by staff include:

Developing a guidance document to assist landfill owners and operators in complying with the proposal?

Establishing an implementation workgroup that meets periodically to discuss implementation issues and promote statewide consistency;

Analyzing instantaneous surface monitoring data. Staff will use this data to determine whether or not fires are likely to become an issue at landfills that consistently report surface methane readings near 200 part per million levels; and

Finally staff recommends that the Board adopt today's proposal with staff's suggested modifications to reduce methane emissions from landfills.

Thank you.

CHAIRPERSON NICHOLS: Okay. Thank you.

Any questions?

Yes, Supervisor Yeager.

BOARD MEMBER YEAGER: Yes, thank you.

Just a couple of questions on the incentives for compliance. And, first, thanks, both you gentlemen, for

conversations you've had with my staff and myself on this. Again, maybe it's just for clarification. I'm certainly in support of the rule. But this is mainly dealing with those landfills that have been doing extensive monitoring for many years and probably are going to be in compliance when they have the additional monitoring.

But here it says -- this is -- I'm not sure the page matters. But it says to qualify for this incentive, the landfill must demonstrate that in the past three years prior to the effective date of the proposed regulation that there were no measured exceedances of the surface methane emission standards by annual or quarterly monitoring.

And I guess the question is, currently, the standard is for 100-foot spacing because of the federal requirements; is that correct?

And so when it says here that they don't exceed the current standards, will the 100-foot spacing qualify or will they to have still go back down to the 25-foot spacing to be able to qualify?

PROCESS EVALUATION SECTION MANAGER BOYD: I made the three-year period in order to qualify. We allow them to come in using 100-foot spacing. They can also come in using annual monitoring, because we recognize that some landfills depending on where they are in complying with

the federal requirements may already be there. So that's why we were looking at three years, so we could make sure that we had sufficient data resolution to make the determination that they're able to continue being good performers.

So they don't have to prior to coming in go up to 25. They could actually already be at 100 feet. And if they meet those surface emission standards, then starting January 1st, 2010, they could continue using 100 feet and annual monitoring for the close and inactive. And the active landfills still have to do quarterly monitoring.

BOARD MEMBER YEAGER: And just right off, would you know whether many landfills would qualify for that? Did you get much report back from local entities that have their own landfills that they might be able to reach that standard?

PROCESS EVALUATION SECTION MANAGER BOYD: They should be able to reach the instantaneous standard. Landfills outside of the South Coast are going to be challenged with the integrated standard because they haven't been using that. So making that demonstration would be challenging for them.

BOARD MEMBER YEAGER: Okay. And, again, I appreciate the flexibility on this. As Chairman Nichols was asking, this can be expensive for local jurisdictions

just because of the additional monitoring and of course that then gets passed on to the users. And certainly for those landfills that aren't even close to compliance, it's very good.

I think the concern was -- and certainly there's one in my district that has been capturing the methane for a number of years and uses it to generate power, have certainly been very good environmentalists on this. And their concern was the additional monitoring was going to be very expensive for them. But I'm hoping that in the end they'll be able to qualify because of the monitoring that they've done in the past.

PROCESS EVALUATION SECTION MANAGER BOYD: Okay.

BOARD MEMBER YEAGER: Thank you.

CHAIRPERSON NICHOLS: Thank you.

Professor Sperling and then Ms. Berg.

BOARD MEMBER SPERLING: I haven't been following this very carefully, so these might be naive questions. But, you know, back in the LCFS discussion, there were various companies that came and talked about the huge potential for using methane as a transportation fuel. And so the question is -- it seems like the numbers they were talking about are a lot larger than the kind of numbers you're talking about in terms of the amount of methane here being released. So I have a couple related questions

on that.

And, that is, one, do these cost numbers take into account revenue from using the gas for power or transportation? Well, why don't we take it one by one.

So that's the first question.

PROCESS EVALUATION SECTION MANAGER BOYD: No, the cost numbers look strictly at the cost of complying with the requirements of the regulation. You know, we don't offset them by the revenue that they might generate by our sales or pipeline sales.

BOARD MEMBER SPERLING: Why is that? I mean isn't that realistic, that they are going to use this gas and for --

PROCESS EVALUATION SECTION MANAGER BOYD: Not for most landfills. Most of the landfills that we're dealing with are going to be looking at using a flare. In order to look at energy recovery you need to have -- you need to be a landfill of some size in order to make sure that you have a sufficient generation rate to support that technology. And that's a limited number of landfills that can take advantage of that. When you're looking at the pipeline, access to that tends to be an issue. And so we did look at that. But most of the landfills are going to comply by using a flare. The regulation doesn't prevent them from looking at those other alternatives, but we

don't expect that to be the main option.

BOARD MEMBER SPERLING: I guess I'm confused, because, you know, like in Europe -- in Sweden and elsewhere I keep hearing about all this biogas that's going to be produced from landfills. I mean are they -- what's going on here?

DEPUTY EXECUTIVE OFFICER SCHEIBLE: No, there's substantial amounts of biogas, especially at the larger landfills, that's now turned into energy - electricity or heat. And under the Low Carbon Fuel Standard what we said is you may have more value as an energy source by turning it into pipeline quality gas or filling a vehicle right there and moving it along. So those are places where actually the economics work for you to collect greater efficiencies.

We're looking at places that typically haven't done that and saying you've got to upgrade your current operations through monitoring. And if the monitoring -- if you can't meet the new monitoring requirements, you're going to have to spend money upgrading your system until you do. So we didn't -- in our assessment - we're conservative - the costs could be lower and there could be benefits to the extent that more product is produced and solved.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: This

is Rob Fletcher. I might just add on that.

I think there are seven projects right now in California that are planned or operating that are using biomethane to produce a transportation fuel. Several of those are planned at landfills. Like Altamont is planning to produce an LNG.

I think the difference between California and Europe at this point is a lot of the European biogas is generated from anaerobic digesters. They don't do as much land filling as the United States does.

Ms. D'Adamo and I were at a biomethane symposium earlier this week, and there were several hundred people there that were looking at innovative ways of generating and using biomethane, both as a transportation fuel as a pipeline gas supplement and a power-producing opportunity.

And it's part of the innovation that we're looking for in the LCFS that people, where they can find economic ways to produce the fuel from biomethane, I think they will do so. But right now it's still a little bit in the development stage, and the economics depend upon whether you have a source of vehicles; for example, the Altamont is going to fuel the vehicles that they have - the waste management vehicles basically.

So I think it's something that we want to see developed. And there's certainly a lot of interest in

that right now.

BOARD MEMBER RIORDAN: I -- excuse me.

Dr. Sperling, are you finished?

BOARD MEMBER SPERLING: Okay, to follow up. Then I guess DeeDee is going to follow up on that. But, you know, the one other thought is, can this land -- does this rule preclude in any way this gas getting credit either through the LCFS or through some kind of offset program?

STATIONARY SOURCE DIVISION CHIEF FLETCHER:

(Shakes head.)

BOARD MEMBER SPERLING: No? Okay.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: No.

BOARD MEMBER D'ADAMO: Just in follow-up.

Would there be anything about the systems that would be implemented that would prevent conversion at some point or could they easily be integrated for fuel dispensing and collection in the event that it becomes economically feasible for these facilities?

PROCESS EVALUATION SECTION MANAGER BOYD: Yes, if a landfill is currently using a flare and the conditions arise where they can consider going to energy recovery, they're able to do that. There's nothing that's restricting them from doing that in the rule.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: And one of the considerations of course is they have to clean

the gas up. So, you know, it's half methane and it's half CO2, or thereabouts. And so in order for it to be used in power production or as a transportation fuel or putting in the pipeline, you have to make significant expenditures to clean that gas up first. That's the only constraint.

CHAIRPERSON NICHOLS: Yes, Ms. Berg.

BOARD MEMBER BERG: Thank you. Good morning.

In looking at the written comments, I'd like to echo Supervisor Yeager's comment on the fact that if a landfill has in fact monitoring and things in place that do meet the spirit of the rule to add this additional cost, I'd like to be very careful about we're not adding additional cost where we don't need to.

For example, the County of Santa Barbara has seemed to have put together a program within their landfill. And I just want to make sure that we're being mindful and reviewing the comments that are being submitted and working with these people in a way that, where we don't need to add extra costs, that we're not going to.

Would that be a fair comment?

PROCESS EVALUATION SECTION MANAGER BOYD: Yes.

BOARD MEMBER BERG: Okay. Great.

Then, secondly, the issue of closed landfills, such as the one in the City of Sunnyvale where they have a

closed landfill for 16 years and seemed to have a program to monitor that particular landfill. And so I was wondering how the rule applies to closed landfills and if there are mechanisms in place in which they have closed a landfill and monitoring it as such and capturing the methane gas. How does that fall into the rule?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, the closed landfills do have to continue to -- if they're generating sufficient landfill gas, do have to do the surface emissions monitoring. I think the issue you're referring to is the option that we provide landfills that are demonstrating good compliance to have reduced sampling periods and a looser walking pattern spacing.

Landfills that are -- right now the way the rule is structured, landfills that are able to demonstrate compliance with the surface emission standards for a period of a year, using four quarterly monitoring periods, have the ability to go to 100-foot spacing. Then if they're closed or inactive, they can also go annual monitoring.

And so that's a provision that the Sunnyvale landfill will be able to -- or any other landfill for that matter will be able to exercise.

We also have a provision in there, as Supervisor Yeager was referring to, for those landfills that have

history of compliance with the surface emission standards. We don't make them do that one-year demonstration. We allow them to come in immediately upon the effective date with the 100-foot spacing and the annual monitoring for the closed and inactive landfills.

BOARD MEMBER BERG: So I can be pretty comfortable in the fact that these landfills are able to come to you, explain to you what they're doing, and if in fact they are meeting the compliance, they don't need to add the additional monitoring costs?

PROCESS EVALUATION SECTION MANAGER BOYD: I think that's something as we move forward that we'll take a closer look at and see if we need to make some adjustments to the regulation to accommodate those situations where the landfills clearly do have a long history of data - and in some cases the landfills do have that - and to find a way to accommodate that.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: This is Dan Donohoue.

The biggest issue for us is that historically a lot of these landfills have the point measurements - they go around and do that - and they haven't done the integrated, which really takes a look at the entire surface is really what's happening; how good of a seal is the entire surface versus the thing? And that's the point

where we do need to have some way of looking at some type of monitoring data historically that would look at that rather than just these large emission points. And that's where we're having, you know, the issue. I think there's a possibility to relook at that some and find some way to look at some of the site-specific data that would require some additional, you know, relook at the reg to see how we might do that.

BOARD MEMBER BERG: Do you feel the regulation as written gives you the flexibility to be able to look at this?

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: No, it doesn't. Because one of the issues we've done here is we've anticipated that this reg would then be implemented and enforced at a local level. And the more flexibility you put in there, the more difficult it is to have consistent things. So if we were to come up with something that we decided that we weren't going to require some level of integrated surface measurements before we allowed people to have a less frequent or smaller grid size, that's going to -- you know, that would require some additional -- probably some additional changes in the regulation.

BOARD MEMBER BERG: I'm probably of the camp that I want it all. I certainly do want -- I certainly do want

the emissions reductions. But I also want to be extremely mindful that the municipalities and even the private landfills who are serving the municipalities are under great budget restraints. And so however we can figure out how to get the emissions, that's without question, and keep that cost of monitoring at a minimum that assures us that we're getting the emissions I think is really critical at this time.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE:

Okay. And you could -- I'm assuming you can and you will direct us to go back and look at that issue a little bit further and see if we think there are some additional changes that might be needed to the regulation to provide that. And that would also include going out and talking specifically to some of these municipalities that have that data to see what's there and see if there's -- if we think that there is sufficient existing data that would allow us to feel pretty comfortable that they in fact are in compliance and likely to continue to be that way.

BOARD MEMBER BERG: Thank you.

And then my final question is in regards to newly -- new landfills or new construction. Is there going to be a mechanism in place that as part of any new landfill under consideration would have to have these

methane control mechanisms as part of a permitting process to allow them to open?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, I'm not sure I'm following the question.

The way the process works, when the landfill goes to the permitting stage we're typically working with the local air districts, and the local air districts do issue permits for various components of the landfill - a gas collection system, the flare, various other devices.

It's our regulation in the agreement that we would have with each district that would require them to meet the surface emission standards and the other requirements in the regulations. So that may or may not, depending on how a district wanted to do it, end up in a specific district permit and they may vary from district to district. It mostly certainly probably would not be in a permit issued by a city or a county.

BOARD MEMBER BERG: Well, I appreciate your clarification. And I think what I was trying to drive at was it would be a condition that you would need to meet our regulation prior to opening. There would have to be.

So I apologize that I got the permitting confused in there. I didn't mean to do that.

So I think you answered my question. Thank you very much.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: But If I could just clarify a little bit. They are not required upon opening under our regulation to install a gas collection system, if I have this understanding correct, and staff can correct me if I'm wrong.

My understanding is is that our requirement kicks in when they generate sufficient amount of gas to support a gas collection system. So it isn't necessarily a condition of a new build, but it's certainly a recognition that when the gas generation rates coincide with the support of a gas collection system, that is what our regulation requires. Is that correct?

BOARD MEMBER BERG: But they would have some reporting right off the bat.

PROCESS EVALUATION SECTION MANAGER BOYD: There's some reporting. But let me just step back just a little bit.

When the collection system is installed and ready to operate, they have to be able to demonstrate compliance with the regulation at that time.

CHAIRPERSON NICHOLS: Are you saying -- now I'm confused. I thought I understood how this would work.

Are you saying somebody would actually begin landfilling somewhere without having planned out a gas collection system as part of doing that?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, the 14 uncontrolled landfills currently don't have active gas collection and control systems.

CHAIRPERSON NICHOLS: But these are relatively new ones? I'm trying to think, brand new landfills. Somebody goes out and starts a landfill in a canyon somewhere.

PROCESS EVALUATION SECTION MANAGER BOYD: Well, a brand new landfill or a new waste cell at an existing landfill, they will have to do a design plan once they reached a point where that portion of the landfill was generating sufficient gas to be collected and controlled. When waste is first added -- let's say it's a brand new landfill and they don't have any waste before. They're going to have very little tons of waste in that particular landfill. And so the amount of gas that they generated is going to be very low and it's going to be challenging to capture and control --

CHAIRPERSON NICHOLS: But does it make sense for a construction perspective to start dumping waste in and then go back in and retrofit?

PROCESS EVALUATION SECTION MANAGER BOYD: Well, they wouldn't do that. There's other requirements from our partners at the Waste Board that really get at the design of a landfill. And so when they're starting to

build those new cells, we're going to have to go in and look -- for example, they're going to have to, you know, put in the liner, they're probably going to be starting doing their planning right away. They're certainly going to know about our regulation. And so a brand new landfill should have a leg up in terms of they know what's coming and so they should be planning from the beginning to make sure that they have --

CHAIRPERSON NICHOLS: I think my question's maybe overly simplistic also.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: I think they have to design and operate it in the initial stages, so that when they get done putting the waste in place, they can then install the gas collection system and it's all part of one big program. They know -- they're going to know in advance that a year or two or three down the line they're going to need a gas collection system when they -- before they close up the area, any work they have to do in advance they'll put in there. And I imagine that'll be part of the complete permitting process, because these things are subject to multiple environmental restrictions and permits.

CHAIRPERSON NICHOLS: Right.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: Our regulations will be -- show us how you're going to not

only protect the water quality but also comply with the local air district permit -- air district regulations and the Air Board regulations.

CHAIRPERSON NICHOLS: I guess I'm just looking for some sign of hope that there is integration going on somewhere.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: I'm sure some of the witnesses can confirm that they are doing that.

CHAIRPERSON NICHOLS: Well, we'll look to them for --

DEPUTY EXECUTIVE OFFICER SCHEIBLE: If not, I'll be shocked.

CHAIRPERSON NICHOLS: Okay. Any other questions or comments? If not, we could go to our witnesses.

All right. We'll start -- and each of you has three minutes. There's a timer, and a light will go on I guess to warn you when you are close to and then when you're out of time.

So we've got eight witnesses starting with Charles Helget, followed by Rachel Oster, then Chuck White.

MR. HELGET: Chair Nichols and members of the Board. I'm Chuck Helget representing the Republic Services, one of the country's largest waste handling and recycling companies.

On behalf of Republic Service I'm offering general support for the regulations to the proposed landfill methane reduction really action regulations with the recommended changes that have been submitted to you and to your staff in written and verbal comments. And I think as we've -- as I understand the staff presentation, many of those recommendations are being included or will be considered during the second phase of these regulations.

But those regulations -- or recommendations briefly include establishing an implementation working group, which we think is integral just judging from the discussion that's gone on already this morning; technical changes that will ensure that the timelines for upgrades to existing gas collection system design plans coincide with the compliance deadlines; and clarifying that facilities that handle only inert waste are exempt from the regulations.

Republic has participated in the extensive work group sessions that helped these regulations, and we stand ready to continue to work with CARB to produce a regulation that will provide real methane reduction in landfills throughout the State.

However, there are still aspects of the proposed regulations that remain of concern. The proposed

regulations will impose a stringent end cost to the new monitoring and reporting requirement on most landfills in California. And in fact I think it was noted by staff that 14 closed sites will be impacted and probably 218 sites will be required to add additional gas collection and control systems to meet these requirements.

Therefore, landfills, local enforcement agencies across the State, and your own staff will be adapting to these new regulations within the next several years. We believe that over these next few years as we begin to implement these regulations, our experience will show that the aggressive requirements of the proposed regulation can have unintended negative impacts such as significant air intrusion in the landfill gas control systems resulting from the enhanced landfill gas capture needed to meet the new integrated surface standard.

This air intrusion could, as has been discussed, have a negative impact on the operations of existing energy facilities, as has been asked by Mr. Sperling, and can also potentially cause underground fires. So we need to discuss those and continue to discuss that.

Finally, the work group sessions on these proposed regulations were often filled with controversy. We believe firmly that the proposed regulations will impose requirements that -- we would argue that they would

impose some requirements that are technically infeasible and economically unjustified. Other stakeholders will argue that they're absolutely necessary. In other words, no one is truly happy with these regulations, and your staff has probably done a pretty good job.

(Laughter.)

CHAIRPERSON NICHOLS: Thank you for that.

(Laughter.)

CHAIRPERSON NICHOLS: Rachel Oster, and then Chuck White and Frank Caponi.

MS. OSTER: Good morning, Madam Chair, members of the Board. My name is Rachel Oster with Recology, formerly NorCal Waste Systems.

I know that, Madam Chair, you said to cut the niceties. But I just wanted to make a comment about working with Renaldo and Richard. It's been a long but good process.

Having said that, there are still some implementation issues that we need to work out, some disconnects in the regulation that will make the implementation of it difficult and confusing. And Richard and Renaldo talked about this in the slides, mostly having to do with design plans, amending current design plans to meet the regulations and be compliant with the regulations. There's really no administrative process in

the regulations right now for amending current design plans. So we look forward to the establishment of an implementation group so we can talk about these minor issues that might make implementation difficult and confusing.

So we look forward to continuing to work with you. And, again, thanks, Richard and Renaldo, for putting together a package that not everyone is happy about.

Thanks.

CHAIRPERSON NICHOLS: Thank you.

Chuck White and then Frank Caponi.

MR. WHITE: Thank you, Madam Chair, members of the Board. Chuck White with Waste Management.

Most of you know Waste Management is the largest waste company in North America. Probably many of you also know we're the largest collector, processor, and marketer of recycled materials.

You may be surprised to know we're one of the fastest growing renewable energy companies in North America. We currently provide enough renewable power from waste and landfill gas to produce power equivalent of a million homes. We hope to double that, to be two million homes by the year 2020.

For this reason, Waste Management's and early and vocal supporter of AB 32. And we certainly support the

ongoing efforts of this Board to address greenhouse gas emissions.

Waste Management already has an extensive program to control methane emissions from our landfills. We're investing millions of dollars right now to put a, as some have referred to, a 13,000 gallon per day liquefied natural gas plant at our Altamont landfill, just about 70 miles southwest of here. We'll be using gas that is currently being flared, and we'll be using power from our engines that are running off of landfill gas to power this refinery. It's going through the final commissioning stages. It's almost fully constructed. We hope to have it up and running in a couple of months.

We're a leader in developing advancing tunable diode laser technology to access greenhouse gas emissions from our landfills working collaboratively with your staff, with the Energy Commission, and with the Integrated Waste Management Board.

The bottom line is we already believe we're exceeding and meeting these standards, all of our landfills, doing everything we can to control greenhouse gas emissions from our landfills. It's a little bit difficult for us to wholeheartedly support these regulations because they are expensive, and they may be in conflict with existing federal and some of the existing

air district regulations that are already in place.

However, that being said, we are prepared to fully meet and exceed these standards that you'll be expected to adopt today.

We fully support the staff's recommendation not to lower the instantaneous emission standard from 500 down to 200 but continue to monitor that issue during the early few years of this process and to see if it makes sense later on to lower it. But for right now we don't think there's enough information. We are concerned about a 200 standard might generate fires in some of our landfills. So we appreciate holding off on that.

We also appreciate in your resolution your commitment to -- during the 15-day comment period to clarify how inert wastes will be regulated under this rule; and also to clarify the administrative process on the development and amendment of design plans for the implementation of the landfill gas control systems.

But most important, your last resolution statement on page 6 of your draft resolution -- proposed resolution is to provide further guidance and to coordination with local air districts and an implementation workgroup. There are over 350 landfills, there's 35 air districts, all of which need to coordinate this process and this complicated rule. And that's going

to be an ongoing process that we really think is important to have a workgroup to do.

And, finally, I want to really appreciate the effort that Richard Boyd and Renaldo Crooks have implemented in this process. It's been a learning process for us all, and we look forward to going forward.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Frank Caponi, then Tim Reed and Nick Lapis.

MR. CAPONI: Good morning, Madam Chair, members of the Board. My name is Frank Caponi with Los Angeles County Sanitation Districts. I'm sure you're aware of the level of waste management that we conduct down in the southland.

Just before I get into my testimony, I will make a comment that we are starting up a landfill from scratch. And integral to the design of that landfill is gas collection, water quality protection, so on and so on. In fact, it's in the desert, and we even have to protect the desert tortoises out there. So everything is integrated and everyone's working together on that.

I also want to -- I'll just up front thank the staff, Richard, Renaldo, Dan. And I don't want to leave out the Integrated Waste Management board staff that worked very closely on this regulation. Everyone I think

took a lot of tough issues and came to a conclusion that we're here today to discuss.

Our support here is -- I'll say, is conditional. We do support the regulation. We're going to do our job. I think the industry will do their job to get this thing done. And we're going to see real methane reduction here in the State of California as a result of this regulation.

But as you've heard, there's issues that we certainly have. Cost is one of the issues. I think there are real costs. Every time you present an average number, it always looks good. In reality if you look at landfill by landfill, you're going to see much higher numbers. But once again, we're all committed to move forward on this.

In terms of gas collection, Chairman Nichols was concerned that is every landfill doing enough. I think -- as Chuck White said, I think the landfills are really doing the best job we can in extracting every bit that's really available. And there's such a thing as over-controlling a landfill, and that's what we really need to watch in this regulation and collect the data.

And so that's why we really need to have this implementation workgroup, because it's going to work as we move along and getting through these issues and looking at the data as we collect it. So this is I think a work in progress as we move along on this regulation.

I think you're also going to hear today from others that this regulation doesn't go far enough. Well, I'm here to tell you as someone that's really been in this business for 25 years that this is an extremely aggressive regulation. It's based upon the South Coast AQMD regulation, which is the most stringent regulation in the State. And then it notches that down further. So a lot of the landfills in the State are going to have a real tough implementation stage of coming into compliance with this. Once again, why we need this implementation workgroup, so we could all work together on these issues and see where we're at on a lot of these things.

Just one comment on collection efficiency that's used in some of the analysis of -- I guess I'm getting close to the end here. We feel that this has been underestimated in the regulation. I think you'll hear others that say it's probably been overestimated. The usual under-and-over-type discussion that you always hear. But our information is really based upon data that we've collected and others that have collected in the industry.

So thank you very much for your time. I appreciate it.

CHAIRPERSON NICHOLS: Thank you Mr. Caponi.

Tim Reed, followed by Nick Lapis and Larry Sweetser.

MR. REED: Good morning, Madam Chairman. This is Tim Reed, Kern County Waste Management Department.

I just have a brief comment on the process. As a county, we have all the fiscal constraints as any other county. And we do appreciate the efforts that the staff has taken in accommodating the concerns that we have. Also, the fact that our county, being in a very dry region, has different circumstances that most northern California or some southern California landfills have. And we appreciate the efforts that the staff has taken to accommodate that, that we believe that we've already met the goals of AB 32 from our landfills, because we don't produce as much landfill gas as most people would expect of a landfill our size.

So some of the efforts that have been made to adjust for those accommodations have been appreciated, and we look forward to complying with those.

Thank you.

CHAIRPERSON NICHOLS: Great. Thank you very much.

Nick Lapis, Larry Sweetser, then Jill Whynot.

MR. LAPIS: Good morning, Chair Nichols and Board members. My name is Nick Lapis. I'm with an environmental group, Californians Against Waste.

We submitted a letter, we submitted it this

morning. But we've been presenting these ideas to staff for a long time. The letter was co-signed by us, Sierra Club, Center for Biological Diversity, City of San Francisco, and the Alameda County Waste Management Authority.

So I'm just going to summarize quickly what we submitted in this letter.

We've been a part of this process from the very beginning. We were one of the groups that was pushing for this early action measure. We've been at every single workgroup meeting.

So, interestingly enough, the bulk of our comment on isn't in the actual rule. It was in the analysis that was done after the rule was adopted. And that had no public workshops, no opportunities for input, and real -- no public analysis of any kind.

And what I'm referring to here is the collection efficiency estimate. In order to quantify the benefits of this rule, the staff analyzed a landfill in South Coast AQMD, and they said that that landfill has an 85 percent collection efficiency. We have a 75 percent collection efficiency statewide as an average. That's an increase of 10 percent.

We think that this is totally unjustified. The 85 percent, first of all, was using a methodology that

we're not familiar with, that hasn't been publicly vetted, and that isn't recommended for this purpose by U.S. EPA.

The other problem is that this is one landfill. This one landfill is completely closed and it's been closed for two decades.

So saying that the emissions from a single landfill that's been closed for two decades are representative of all landfills in California, including ones that are open, that are active, that have uncontrolled working faces, we think is just ridiculous on its face.

So we would ask you to direct staff to go back and look at that collection efficiency. There are other ways to figure out what the emission benefits of this rule are that don't involve a collection efficiency. One way would be to look at gas collected at landfills in the South Coast AQMD and compare that with gas collection across the State and look at a marginal increase. There are other ways as well and we've presented them to staff.

And I think at this point we definitely need to go back and look at how we're counting the collection efficiency. And this seems like an arcane issue, but it really has a big impact on all our organics diversion policies, because most of those policies are based on methane avoidance and quantifying how much methane you're

avoiding at landfills. Well, if wee arbitrarily say that we've reduced a third of the methane at landfills, that's two-thirds -- that's only two-thirds of the same benefit that we're going to provide for organics diversion opportunities.

Now, on the rule as a whole, we do think it's a positive step. It's going to reduce methane emissions. But it's been significantly weakened every step of the way from two years ago. When it was originally introduced it was much stronger. In almost every regard it was stronger. But since then it's been slowly weakened as industry has raised concerns. We think that it could have been a much more aggressive rule. This more or less takes what South Coast was doing and applies it statewide.

At this point we believe that since this industry's not under a cap, it's not subject to mandatory reporting, and these are really the only regulations that are going to apply to it, we really should have done more. And we look forward to fine tuning this and adding more measures once the data starts coming in.

Thank you.

CHAIRPERSON NICHOLS: Thanks.

Larry Sweetser, Jill Whynot, and then Justin Malan.

MR. SWEETSER: Good morning, Board members.

Larry Sweetser on behalf of the Rural Counties Environmental Services Joint Powers Authority. We have twenty-two rural counties in California. Many of those have landfills as well.

We did take a neutral on the card, more so because we have support on some items and concerns on others, and it kind of balanced out that way.

First, I also want to echo appreciation of the staff and their efforts. They were always available for meeting, particularly Renaldo and Richard.

As I said, our members operate many landfills in California. Many of those are very small landfills. In fact, we have a couple that are less than ten tons per day. That's less than a garbage truck for an entire community in one landfill.

And many of those don't generate enough gas to even detect, let alone capture. So we do appreciate greatly the exclusion for the smaller sites that's in the regulations.

We do want to assure you if there are any gas problems at the landfills, if you want monthly inspections, we'll have local enforcement agencies and the Waste Board inspections, that if anything does get detected of any magnitude with gas, that that would be addressed even without this rule.

I do want to mention two issues: The operational implementation and the cost analysis. We did sign on to the industry letter with the public and private sector, and you have those comments.

As far as the operation, it will be difficult in many small sites to comply with some of these regulations. One of the estimates I did on a small hundred-ton-a-day landfill, on a quarterly basis somebody would have to spend all day walking that site in order to meet the grid pattern.

So that's quite a bit of an effort on a site that doesn't have many staff. So it does -- it will be difficult to implement.

We do greatly appreciate the special circumstances exemptions in there. One of the points we made is sometimes our landfills are covered in snow. So it would be very difficult to be walking that site. So regulations do acknowledge that and we appreciate it.

There's also an allowance for wind. We have some sites that have 40, 50 mile an hour winds that pick up and they have close the landfill. The standard in the regulations is pretty stringent, less than 5 miles per hour on the wind, but we would have to request for an exemption and so some of our sites will be doing that.

On the cost analysis we do share the concerns.

We think that is greatly understated of what the cost will be for the sites. The letter mentions remediation costs. There's other costs, particularly for smaller sites. There's one number used for the entire State. We would have preferred a range of cost, particularly on smaller sites. We think the ten cents her household will be a very low number in some of our smaller areas that have to implement the measures.

But with that, the time will tell the true cost of this measure. And that's why we do greatly support having the workgroup as part of the implementation measure to look at this as we go along.

So thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Jill Whynot and then Justin Malan.

MS. WHYNOT: Good morning, Madam Chair and members of the Board. My name is Jill Whynot. I'm Director of Strategic Initiatives at the South Coast Air Quality Management District, and I'm here today very pleased to be able to support from the staff level this regulation.

As people have testified in the staff presentation, also enumerated, there are some differences between the South Coast local rule and the rule that you will adopt today.

Basically our staff will recommend that we update our rule. And we think that will make it a much easier system for our facilities, one stop where they can find all the requirements.

We also very much appreciate the option in the rule provided that local districts can enter into an agreement to become the implementation mechanism. We think this is consistent with AB 32, where the measures are supposed to be developed to minimize administrative burden of implementing and complying with the regulation, it reduces duplication, and it also is a much more cost effective and integrated way to do this.

We think this is an excellent example where we can leverage local district staff and Air Resources Board resources to make this more efficient, better customer Service, and reduce costs.

We will also seek our board's approval for us to enter into this agreement with you.

We've experienced very good collaboration during the rule development process with your staff and we look forward to working with them through the implementation workgroup and other forums to work through a number of detailed implementation issues that will need to be resolved.

We have a comment letter for you today. And we

had two relatively minor suggestions for the rule and provided some draft language should you decide to incorporate those that would help improve the enforcement.

In our experience, when people have had problems with some of their systems and they've needed time to install wells, our rule allows 45 days. The proposal that you have is 120 days. And in our experience we have not had problems with facilities meeting the 45 days. So you could shorten that time period up and make sure that people moved quickly to correct problems.

The second example has to do with just moving some of the language from the exemption from the testing into the alternative compliance section.

So in a situation where you might have a wet or icy slope or a construction site or other unsafe area for monitoring, in our experience we've found it's better to have people come to us and document what specific areas and why. And then we can incorporate that into their permits and their plans, rather than have them just say this is exempt because it falls into this. And then there could be some question about whether the area is or exactly why they made that determination.

So with those two minor suggestions for your consideration, I just want to say thank you very much and we support the rule.

CHAIRPERSON NICHOLS: Thank you.

MS. WHYNOT: You're welcome.

CHAIRPERSON NICHOLS: Our final witness, Justin Malan.

MR. MALAN: Madam Chair, Board members. Justin Malan with Alameda County Waste Management Authority. Thank you for this opportunity.

In general, we believe the rule is very positive. But we do have a number of concerns that we echo with the Sierra Club and Californians Against Waste. And we have submitted them in a joint letter with our comments.

But most specifically, we are concerned that the rule may have some unintended consequences, some negative consequences on the organics diversion policies of the State.

And I know that this has been a hard fight. It's been very difficult to figure out exactly how to come up with the most appropriate collection of efficiency estimates. We know that that's a difficult challenge.

We do support looking at alternative ways of estimating these so that we don't have this negative impact and we don't actually encourage the use of the disposal of organics into these waste landfills.

So with that, thank you again to your staff and to the Board, and we look forward to working with you.

CHAIRPERSON NICHOLS: Thank you.

That concludes the list of witnesses on this item, unless there's anyone else who failed to get their cards in.

If not, I think we should turn back to staff if you have any final comments.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE:

Chairman Nichols, what I wanted to just cover is what we heard as far as, you know, possible direction back to the staff. And just briefly on that, that what we would like to do is to, you know, be directed that we go back into the rule and look at clarifying the definition for the treatment of inert waste and we relook at the administrative process for amendments to the design plan and make sure those flow properly.

An additional, we'd like to look at the South coast AQMD comments and make a decision whether those changes are appropriate those look on the surface as good improvements. We'd like to be directed to re-examine the provisions allowing the use of existing data to streamline the monitoring requirements for sources with demonstrated history of compliance. That's the Berg amendment.

(Laughter.)

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: We'd like to be directed to relook at the collection efficiency

procedure that we used and to look at an alternative approach as identified by the Californians Against Waste, et al. And then the other provision was -- that didn't specifically come up, but we've alluded to it in the resolution, that we want to work with the districts to add language to the regulations to clarify that the requirements of the rule would serve as the regulatory floor.

So those are the -- I think those are six, you know, additional things.

CHAIRPERSON NICHOLS: Okay. I appreciate those comments.

I'm actually going to want to talk to you about number 5, the collection efficiency approach issue, separately. So just so you know, I don't -- I'm not satisfied with the suggestion as it currently exists.

I don't think the others are particularly controversial from anything I've heard.

Yes, a question?

BOARD MEMBER YEAGER: Yes, just going back to the Berg amendment. I just wanted to make sure. So those that their data is only from the instantaneous readings, you'll consider those as you look at the exemptions that might be possible rather than just -- because I know many outside of the South Coast don't have the integrated

readings.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE:

We're going to have to go back and look at what level of the instantaneous readings versus the integrated sampling and see if we think that there -- you know, if there is something that can be done on that.

CHAIRPERSON NICHOLS: Some kind of sufficiency of data in the motion, right.

BOARD MEMBER YEAGER: Yeah, that would be great.

BOARD MEMBER BERG: The data be very clear.

CHAIRPERSON NICHOLS: Yeah.

BOARD MEMBER BERG: I would like to clarify, that I am not suggesting that we compromise on data, but that we do in fact have a workgroup together to implement. And I want to make sure that there is a mechanism that if in fact staff were to learn, discover, realize that there was a way to make the monitoring more efficient, that you have that ability to keep the cost down.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE:

Okay. I understand that.

BOARD MEMBER BERG: That's really where I'm going with that, Chairman.

CHAIRPERSON NICHOLS: Thank you.

Okay. Let's just officially close the record at this point. And make it clear that the record will reopen

when there's a 15-day notice of public availability that is issued, and that there will not be any further comments accepted on this item until that record is reopened. And then people can comment on the proposed changes. So that's how the process works going forward.

Those final comments get considered and responded to in the final statement of reasons for the regulation.

Okay. So here's my concern about this issue about the measurement efficiency. I get it, that we're dealing with estimates here. And this is a discrete, early action measure. It's supposed to be a quick, simple, relatively speaking, way of getting some emissions in the bag, so to speak, that we can count towards our 2020 goal and that will help us move in that direction. And I don't think anybody has challenged the fact that the proposal that's before us today will do that.

The question is, from the perspective of the environmental groups who have spent a lot of time and given thought to this issue, is that they don't think that we're being ambitious enough. And they're worried that the way we're doing it may make the landfills look better and then somehow -- so, therefore, somehow create an inducement to people to use landfilling as a solution for organic materials that have a higher and better purpose if they could be used as fuel directly or converted directly

to fuel.

And I am very sympathetic with that view. I think there's a lot going on around the ARB, as Professor Sperling alluded to earlier, to try to find new ways to use what otherwise would be waste materials for fuel purposes, both to make electricity and for transportation fuel as well. This is a very active area right now, without a doubt.

One of the things that I really want to see us doing I think if we're going to spend time and effort on monitoring the impacts of waste materials is to go beyond landfills and look at other places where wood waste or construction wastes or agricultural wastes are sitting around, you know, out in the open and creating methane, that undoubtedly is contributing to the problem of global warming, as a large state with a lot of land mass, a lot of remaining forests and ground cover, et cetera. We are definitely in a position to help develop more advanced policies in this area.

You know, I'd like to see us using some of our research capacity to come up with better ways to actually monitor what's coming out of these landfills -- or non-landfills, these other sources of methane emissions. You know, I don't know whether there are satellite infrared tools that could be used or whether there's other

forms of measurement, monitoring that could be used, but I think there is a lot of potential out there that we should be really trying to help move forward on and help to lay the groundwork for offsets or other types of regulatory programs that might come forward in the future.

So I didn't hear anybody telling us not to adopt the rule. But I did hear this kind of underlying unease and disappointment that we're -- you know, we're not being ambitious enough, we're not doing enough. And I resonate to that kind of criticism. I'm concerned about that.

But I'd like to see us do it in a way that actually has broader applicability to it, as opposed to just haggling over what the actual percentage efficiency of recovery is from the landfills.

So that's why I flagged that Item No. 5, because I'm just not sure how much additional work needs to be done to try to put a finer point on this percentage efficiency number. But I would welcome a response back from the staff on this issue

Mr. Scheible looks like he's ready.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: Yes. Well, I think the way our estimate was characterized was, one, it's not as bad as it was characterized. There's uncertainty. But I think we've used it in a reasonable way, which is we had to get a reasonable idea of what

types of improvements in emissions -- reductions in emissions would occur if we make people improve their practices. And that was the major purpose. It clearly did not demonstrate that if everyone follows what is in the rule, all the landfills will be 85 percent controlled, and we know that. And it shouldn't be used for that. And if we allow -- if we've used it in the report in a way that states that, we need to go back and modify it as we address the final statement of reasons and we put it out.

Secondly, we need to act to improve to find out how well this rule does work. And if it works really well and we document that, that's great. And that's not to allow more landfilling of waste. It's simply to say, where they've been landfilled, we want to reduce the emissions as much as possible. And where it's not working as well, you know, in terms of total control and we get methods to quantify that, then we need to put those methods in place and improve the rules.

So we want to move ahead and improve it. We're open to the suggestions we've got on other ways to look at it as we go through the 15-day changes and incorporate them into our analysis. And I think we agree that we don't want it overplayed where other parties will say, "Well, because you've done this, it's so" -- "you've got such good control of landfills, we really don't need to

worry about diversion or other things."

And I don't think those things will occur. I think the checks in place are adequate. But obviously some parties will try to use whatever we put out there to argue their case. And we need to be very careful and state that carefully.

CHAIRPERSON NICHOLS: Well, since we're going to be having an ongoing relationship with this industry and with the Integrated Waste Board as a result of this working group, I guess there will be plenty of opportunity to make sure we're communicating our message accurately.

BOARD MEMBER RIORDAN: Madam Chair?

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER RIORDAN: I think that at least in the time that I was seated on a board of supervisors and we operated all the landfills, there was a very clear message from the Integrated Waste Board, which was "You've got to reduce what you're putting in this landfill," and the numbers were pretty substantial. I'm believing today that they are still working in that framework. And the penalty was very stiff. If you didn't meet those percentages of reduction, it was significant.

Now, I don't know whether that is true today. But I think at the time it was at least about $10,000 a day of penalty for not reaching your goal of -- or the

Waste Management's goal of reduction of landfill. So you kind of have a pressure point from another board that's saying, you know, you should not be landfilling anything that you can send somewhere else to be recycled and reused in a better way.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: And to the extent that there's value -- energy value or carbon reduction value in the products, it's not very efficient to put it in a landfill and have to wait 5 to 30 years for it to slowly convert to the carbon form that's useful. You really want to look at methods that you've put it directly in a digester or use another means so that you get the energy value out of it quickly in a much more managed way.

CHAIRPERSON NICHOLS: But obviously there's a cost differential.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: There's a cost difference.

CHAIRPERSON NICHOLS: Supervisor Roberts, did you have a comment?

BOARD MEMBER ROBERTS: I think Ms. Riordan really summed it up very -- there's a lot of things going on that are impacting the quantities and everything else. You know, San Diego may be unusual. There was one offending landfill, it happens to be on a marine base in San Diego.

So, you know, it isn't something we had access to, unless these guys know otherwise, because I checked this out.

So, you know, most of the closed landfills have collection systems in place, if not all. The new ones are being designed with this equipment.

You know, I honestly thought this would be a real quick item, because there's so much being done by others in this area.

CHAIRPERSON NICHOLS: All right. Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Well, I would like to get back to some of the comments that you raised, Madam Chair. And I do -- based on my limited experience in the valley, I don't think there's a lot landfilling going on with agricultural waste, for example, food processing waste. But you do raise an important point and, that is, I think we should get a better handle on what the emissions are. And as I recall when we were reviewing the Scoping Plan, there was some discussion about agricultural emissions and additional research. Are we following up on that in this context regarding agricultural waste and food processing waste?

DEPUTY EXECUTIVE OFFICER SCHEIBLE: I don't think we're following up in the landfill context, because that's not where it goes. We are, for example, with low carbon fuel standard going to go and work with how do you take

that and create a usable fuel. And I'd have to check back with what we're doing on inventory improvement just in general to see how we're looking at that from a global warming standpoint.

BOARD MEMBER D'ADAMO: Yeah, I think that would be helpful, because I think a lot of it's getting applied, you know. It's land application, so it's concentrated but not terribly concentrated. It's being spread out. So I wouldn't have any idea, you know, what those emissions might be and what the potential is for value-added for fuel or energy production.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: Well, I can respond to that a little bit. In terms of when we did the LCFS, one of the exercises that we went through was to look at the resources available for, you know, what we called economically available resources. And in that we looked at forestry waste, we looked at agricultural waste, we looked at landfill waste. We looked at all sorts of renewable fuels. And as part of that, we then looked at what -- you know, how many biorefineries, for example, we thought could be produced that would support the use of these resources. So there is work going on, and that work is continuing to be refined.

The California Biomass Collaborative is all over this issue in terms of looking at available resources and

how you get them out and what the cost is. The issue of the definition of renewable biomass is certainly one that's getting a lot of attention and was one of the amendments that was made in the proposed Waxman-Markey. So it is something that is getting a lot of attention to look at those resources and how can they best be used.

Also in sort of response to Chairman Nichol's broader view, there is a lot of work that is going on looking at digesters that are looking at how you use these resources. In the LCFS, for example, we have -- under the $25 million that we got several years ago we funded three different projects that looked at the conversion of waste into biomethane and the production of fuels from that. And the AB 118 funds from the California Energy Commission have -- in their investment plan has $10 million identified for renewable biomethane projects. So that's like ten projects at a million dollars apiece.

So there is a fair amount of effort looking at this issue globally. The Governor's Office of course is very interested in the issue of digester waste, area digester, food processor, or sewage treatment. So there is a lot of I think effort. I know our division has a group that is dealing heavily with digesters and trying to see what can be done there.

CHAIRPERSON NICHOLS: Sounds like what we're

beginning to need here is a Board briefing, which I realize we don't have a lot of time for. Certainly not next month's meeting and we're off in August. But normally I don't think we're planning to meet in August.

But maybe we could ask for something to be put on a board agenda that would really encompass, you know, what's going on around the organization as well as statewide that might be relevant to having a more coordinated policy here on what we're doing about organics as it relates to air pollution and to methane emissions. That would be very helpful.

All right. I'm guilty of having extended this beyond the time that Supervisor Roberts thought this item was going to take. I'm definitely part of the problem here. But I will attempt to be part of the solution and move us towards a conclusion here.

Are we ready to have a resolution here and move to a vote?

BOARD MEMBER D'ADAMO: So moved with the suggested changes by staff.

BOARD MEMBER RIORDAN: I'll second that, Madam Chairman.

CHAIRPERSON NICHOLS: Thank you. And that's including the six items which we generically described as being additional direction from the Board but which you

are going to have to incorporate into something written for us. But I think we're okay with all of those.

Before we take a vote we're required to disclose any meetings that we've had that are outside the scope of the hearing here today.

We're allowed, and encouraged, in fact, to have those communications. But if you learn anything as a result of them, you're supposed to put it onto the record.

So does anybody have any ex partes that they need to disclose at this time?

Seeing one.

BOARD MEMBER YEAGER: I met with members of the City of San Jose and the City of Sunnyvale

CHAIRPERSON NICHOLS: Okay. Very good. Thank you.

All right. With that, I think we're ready for a vote.

Will all in favor please say aye?

(Ayes.)

CHAIRPERSON NICHOLS: Opposed?

Great. Thank you very much.

I think our court reporter could use a break.

It's 20 of 12. We have two major items coming up.

The question is, when do we want to take a lunch

break?

Do you want to do it early, later?

I see no heads nodding at the moment.

BOARD MEMBER RIORDAN: It's up to you, Madam Chair.

CHAIRPERSON NICHOLS: It's up to me. I have to take responsibility here.

All right. Let's take a ten-minute break then and come back and we'll -- we'll start with the staff report and then take a break. We'll do the staff report and then take a break.

Thank you.

(Thereupon a recess was taken.)

CHAIRPERSON NICHOLS: We have a couple of members who are in the back but are able to listen from where they are.

The next item that we're going to be taking up here is the staff's proposal for new standards that would affect the light- and medium-duty vehicle sector. And they're known collectively as the Cool Car Standards, which establish requirements for the use of solar glass -- solar management glass.

The California Global Warming Solutions Act of 2006 has directed the staff to develop a number of early action measures to reduce greenhouse gas emissions. This

was one of the measures -- Cool Cars was one of the measures that was identified back in June 2007 as an item to be considered for early adoption.

It's gone through some permutations and revisions as the staff has delved into this area and learned more. And today the staff is going to present a summary of their proposed new regulation.

Mr. Cackette, are you ready to present this item?

BOARD MEMBER RIORDAN: Madam Chairman?

Excuse me, Mr. Cackette.

Madam Chairman, before you begin, I do have to make a statement, which is that very late yesterday afternoon I discovered, and it was confirmed by our legal counsel's office, that in this particular item I have an economic conflict of interest. So I have to recuse myself from either the discussion or the vote or any of the presentations. So I'm going to absent myself from the dais and leave.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER RIORDAN: Thank you.

CHAIRPERSON NICHOLS: Okay. We'll miss you.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Okay. Thank you, Chairman Nichols.

The regulation staff is proposing today affects automobile manufacturers who sell light- and medium-duty

vehicles in California. We are proposing standards that would require the use of solar management window glazing or glass in new vehicles beginning with the 2012 model year.

The goal of the regulation is to reduce the interior temperature of vehicles that have been parked in the sun. And lower internal temperatures result in less air conditioning use and allow a smaller air conditioning unit to be equipped on the car, which increases efficiency. Both of these changes would reduce fuel use and, thus, greenhouse gas emissions as well as make the vehicle more comfortable.

So Dr. Marijke Bekken -- oh, I also wanted to say that the fuel savings that go along with this would fully offset the capital costs of the higher costs of the windshields over the life of the vehicle.

So Dr. Marijke Bekken of our Mobile Source Control Division will make the staff's proposal.

(Thereupon an overhead presentation was Presented as follows.)

DR. BEKKEN: Thank you, Tom. Today we are here to present our Cool Cars proposal.

I will be presenting a little background on the proposal, the original cool paint proposal you heard in June 2007, the rule development process we went through

for the Cool Cars proposal, the current proposal, issues that have been identified with the proposal, some 15-day changes we want to propose for the regulation and the staff's recommendations.

--o0o--

DR. BEKKEN: Assembly Bill 32, California's Climate Change Reduction law, requires California to reduce its carbon dioxide emissions to 1990 levels by 2020, about a 25 percent reduction. An Executive Order further requires an additional 80 percent reduction by 2050.

In 2007, staff identified a number of greenhouse gas reduction measures that could be adopted and implemented on a relatively short timetable. One measure identified would reduce motor vehicle air conditioning use by reducing the interior temperature of vehicles soaking in the sun. It was termed the "cool paints" proposal. The cool paints measure was based on the use of solar reflective paints for automobiles.

--o0o--

DR. BEKKEN: The projections and recommendations for the original cool paint proposal were based on work completed by Lawrence Berkeley National Lab and published literature, particularly a Japanese assessment of the reductions in interior temperatures achieved with solar

reflective paint applied to a Toyota.

In addition, staff believed ongoing research with architectural paints would be transferable to the automotive arena. But it turns out that architectural and automotive paint requirements are very different requirements and the transferability of these architectural pigments to the automotive arena was problematic. This led to concerns about the availability of suitable pigments needed to develop a full color palette including the deepest blacks by the proposed 2016 effective date.

Further, some of the available pigments were not compatible with emerging paint processes that reduce emissions during paint application. These issues, together with suggested increases in the original cost projections presented in 2007, and refinement of the benefits assessment, led staff to focus the current Cool Car effort on window glazing.

Therefore, staff decided to hold off on the paint portion of the proposal until more pigment development work has been completed. And the solar management glazing was determined to be another way to reduce vehicle cabin temperatures and air conditioner use.

The remainder of this presentation will focus on window glazing.

--o0o--

DR. BEKKEN: First, a little background. We all know that a car sitting in the sun can quickly get hot on the inside, much hotter than the ambient air around it. This picture shows what happens to the solar energy when it impacts a window. The energy is either reflected off the glazing, transmitted through the glazing, or absorbed by the glazing. If it is absorbed, the energy is ultimately released either out into the environment or into the vehicle, depending on factors such as relative temperatures and wind speed. These approaches will be discussed further over the next few slides.

--o0o--

DR. BEKKEN: The window glazing can be formulated in many ways. Traditional automotive glazing is lightly tinted but does not offer significant solar control. Two common types of solar control glass technology are solar absorb glass and infrared reflective glass. Solar absorbing glass is made by the addition of materials such as iron into the molten glass before the glass is shaped into a window. Solar absorbing technology can be used in laminated glass as you'd see in a windshield, as well as for tempered glass typically used in other glazing positions on a vehicle.

The infrared reflective approach offers increased

solar control, but only works with laminated glass. This is because it relies on the use of very fine particles sputtered onto glass or onto a film sandwiched between two layers of glass. The material could corrode if left exposed to the air. It must be sealed within the two sheets of glass.

Most of the solar reflective glass relies on fine metal particles to reject the sun's energy, although there are non-metallic films available as well.

--o0o--

DR. BEKKEN: This slide shows in graphical form the effect of reflective glass. Much of the solar energy is prevented from entering the vehicle and is reflected outward. The energy that does enter the vehicle is reduced. A small amount of energy that is absorbed by the glass is either re-radiated out or into the vehicle. This re-radiation is represented by the purple arrows at the bottom of the glass. This same concept is used in home and building windows to control heat gain.

--o0o--

DR. BEKKEN: Infrared reflective technology has been used in a variety of vehicles. This list includes some, although not all, of the makes that have used infrared reflective glazing. Most models are luxury units, but it has been offered in a number of mid-price

vehicles as well.

--o0o--

DR. BEKKEN: This slide shows in graphical form the effect of solar absorbing glass. Rather than being reflected, the solar energy's absorbed by the glass. The portion of the absorbed energy that is radiated outward never enters the vehicle. The portion re-radiating inward does result in solar heat gain. Under parked conditions, this type of technology will allow more energy to enter the vehicle than the reflective approach. However, under driving conditions, the reflective and absorbing glass have similar benefits.

--o0o--

DR. BEKKEN: Staff's proposal sets different requirements for windshields than for other glazing positions. The windshield is currently laminated for safety. The laminate technology has two pieces of glass glued together with polyvinyl butyral. Because the windshield is laminated, it is already positioned to use the better infrared reflective technology. The proposed solar control level currently can be met using infrared reflective technology, although technological advances could allow other approaches in the future.

--o0o--

DR. BEKKEN: This slide shows a graphic of the

assembly of a laminated piece of glass. The two pieces of glass can protect a metallic coating from corrosion and other degradation effects.

--o0o--

DR. BEKKEN: Most side and back windows currently use a single layer of tempered glass. Tempered glass is a single piece of glass that has been heat treated to make it stronger. Roof glass is a mix of tempered and laminated technology, depending on the vehicle model.

Staff's proposal is based on the use of less effective solar-absorbing solar technology for the side and back windows. We rejected a more stringent and effective approach that would require the use of solar reflecting technology because it would require side and rear windows to switch to laminated glass. Replacing tempered glass with laminated glass would increase costs and possibly require a redesign of movable window mechanisms. Because the side and back windows tend to be more vertically oriented, they do not allow the transfer of as much solar energy into the vehicle as does the windshield. The additional cost for the all-around approach would be substantial for the limited additional benefits achieved.

--o0o--

DR. BEKKEN: Staff's proposal establishes a

performance standard for glass specified as total transmission of solar energy, or TTS. The windshield has a more stringent standard because it accounts for half of all the vehicle solar heat gain. Because windshields are already laminated, they can use the more effective reflective solar technology.

The proposal will reduce the average vehicle soak temperature by 13 degrees Fahrenheit, 14 degrees for passenger cars and 12 degrees for SUVs. SUVs experience a slightly less temperature benefit since they are assumed to already include privacy glazing which meets the specified standards.

Staff proposes two different standards for the windshield. The first is a 50 percent total solar transmission, which is phased in over two years to allow extra time for validating more difficult windshield shapes or vehicle designs. The second standard is 40 percent TTS, effective in 2014.

Side and rear glass would have to meet a 60 percent TTS, whereas roof windows, better known as sunroofs, would meet 30 percent TTS.

These requirements will also apply to replacement glass for vehicles in the 2012 and subsequent model years.

--o0o--

DR. BEKKEN: This chart shows the relative

performance of solar control glass that's available today and the costs relative to each other. Current technology for the 40 percent level is achieved using the direct coating process, but it is anticipated that films will also be able to achieve this level of solar control in the near future. Solar-absorbing PVB interlayers can currently achieve levels around 55 percent.

--o0o--

DR. BEKKEN: In determining its cost estimates, staff spoke with glass manufacturers, automobile manufacturers, and other interested stakeholders. To comply with the Tier 2 level, the initial increased cost for solar management glazing is expected to be 70 to $80. If this glass breaks and needs to be replaced, the replacement glass will also be a little more expensive. Assuming a windshield is replaced every eight years, and accounting for increased finance and other costs, the total cost per vehicle at the Tier 2 level is projected to be $111.

--o0o--

DR. BEKKEN: Based on the modeling presented in the staff report, the solar management glazing requirements will result in an estimated .7 million metric tons CO2 benefit in 2020 and a 1.2 million metric tons CO2 benefit at full implementation. Reduced fuel use was

estimated at 161 million gallons per year at full implementation. This results in an estimated savings to the consumer of $16 per year per vehicle. This means that the total $111 cost would be paid back to the vehicle owner in about seven years.

--o0o--

DR. BEKKEN: Three broad issues have been raised. They are the rate of implementation, electronic interference with the reflective coating technology, and requests to allow alternate approaches to compliance.

--o0o--

DR. BEKKEN: Staff has proposed a two-year phase-in for the Tier 1 windshield standard of 50 percent TTS, beginning in 2012 at 75 percent compliance.

Auto makers have argumented for more time to phase in the Tier 1 windshield standards, ranging from keeping it at two years but with a lower percentage in 2012, to a five-year phase-in. One glass manufacturer asked for a one-year delay. A few commenters asked that the standard be relaxed to 55 or 60 percent TTS. On the other hand, manufacturers with coating technologies suggest the staff proposal is fine and they can meet any demand.

--o0o--

DR. BEKKEN: Staff proposes that the Tier 2 40

percent TTS windshield standard be fully implemented in 2014. Auto manufacturers have varying views, ranging from this being feasible to not completing the phase-in until 2019. Several glass manufacturers asked for a two-year delay until 2016 to provide more time to develop improved window technology. Again, those glass manufacturers with advanced coating technology suggest 2014 is doable.

The general issue relating to the glass manufacturers is whether more time should be allowed to let those with less advanced technology catch up with those who've invested and have the technology already. And if more time is not given, can those with the technology meet the entire demand of industry. For some car manufacturers, it is the same issue as Tier 1 - more time desired to make sure electronics work and windows meet their specifications. Those asking for a relaxation of the standard basically want to stick with the technology they currently have, such as absorption windshields.

--o0o--

DR. BEKKEN: Several car manufacturers have suggested that because reflective coating windshields can reduce the strength of signals from electronic devices such as GPS and garage door openers, much more time is needed to verify operation or move antennas to outside of

the passenger area. This is an issue of timing or phase-in rather than technical feasibility, because some European cars already use reflective windshields and some use reflective solar control on all glazing, and do so with current electronic devices. The proposed regulation allows areas where the reflective coating can be deleted to improve the signal transmission for devices inside the car. The addition of external antennas also addresses this concern.

--o0o--

DR. BEKKEN: Automakers have suggested that they should be able to suggest alternative ways to meet the goal of the proposed regulation. For example, a less effective glass could be used if other methods of cabin cooling were provided.

Staff is generally supportive of such flexibility if it can assure that the alternative is truly as effective as the regulation is written. What limits the attractiveness of alternatives, especially ones that involve alternate test procedures, is the substantial amount of staff effort needed to assure that the alternative is equally effective. We are not equipped to do this on short notice, and this becomes a especially difficult if multiple manufacturers suggest different alternatives.

Staff believes this is better addressed by the affected industry developing standardized procedures through an organization such as SAE, and then seeking ARB approval. We are willing to participate in any such endeavor.

In addition, the alternate compliance approach has the potential for gaming the system. This is compounded by the lack of a standardized assessment procedure.

--o0o--

DR. BEKKEN: In response to industry comments, staff is proposing several 15-day changes.

A section was reserved in the proposed regulatory language for labeling requirements. The glass manufacturers are generally in agreement that labels can and should be used for the glass. Staff will work with manufacturers to determine appropriate labeling language for including in the final regulation.

--o0o--

DR. BEKKEN: Next, the regulatory language includes the statement -- can we move on?

Okay.

-- that the glazing's performance should be determined referenced to four millimeters thickness. Some automotive manufacturers and glass suppliers have

commented that this language is not clear. Staff is working to clarify the language, and will most likely propose a table or graph specifying required performance at given thicknesses when the 15-day revised regulatory language is released. The stringency of the revised language would be equivalent to that currently proposed.

Secondary manufacturers are those that buy a vehicle from the OEM and modify it before offering it for sale as a new vehicle. Sometimes windows are added as part of these modifications. Staff intends to clarify that these windows must comply with the proposed requirements, and their performance specified in an addendum to the owner's manual.

Finally, some have commented that solar control windshields that do not require deletion areas should be able to increase their TTS percent to account for this. Staff believes that this is a reasonable request and should be added to the list of solar glazing trade-off options.

--o0o--

DR. BEKKEN: Staff's proposal is feasible and cost effective, resulting in fuel savings that exceed the increased capital cost. It is consistent with the Scoping Plan and reduces greenhouse gases by around 1 million metric ton per year.

Staff recommends that the Board adopt the Cool Cars proposal with the 15-day changes suggested today.

CHAIRPERSON NICHOLS: All right. Thank you very much.

Are there any questions from Board members at this time on the staff presentation?

We have a fairly extensive list of witnesses, and we had indicated that we were going to break. But do you want to get started or you want to -- Yeah, all right. Let's get started. I see people ready to go.

All right. We're going to start through the list of witnesses then. But we will take a break at one o'clock for lunch. So we'll just get us far as we can.

We'll begin with Steve Douglas from the Alliance of Automobile Manufacturers.

Good morning.

MR. DOUGLAS: Good morning, Madam Chair.

CHAIRPERSON NICHOLS: Well, it's not quite morning.

Then John Cabaniss, Ross Good.

MR. DOUGLAS: Good afternoon, Madam Chair. And I had a presentation as well.

CHAIRPERSON NICHOLS: Okay.

MR. DOUGLAS: I'll go ahead and get started.

(Thereupon an overhead presentation was

Presented as follows.)

MR. DOUGLAS: I'm Steve Douglas with the Alliance. Those are the member companies of the Alliance.

And I'd like to -- we will recommend today -- if you can go to the next slide.

--o0o--

MR. DOUGLAS: -- a number of things:

First, allow a performance standard alternative. It's in the history of ARB. It's been very successful in the past. We would encourage you to adopt that.

Second, consider adopting an absorbing standard in lieu of a reflective standard. It achieves about 85 percent of the benefit at about 10 percent of the cost, and it doesn't have any of the complications of reflective glazings.

Third, a technology review in 2012. Regardless of what you do, there's a lot of uncertainty about this, from the electromagnetics or the wireless systems to the Tier 2 standards.

If there is a reflective standard, if you do adopt that, we do need more lead time, both with the 2012 and with the Tier 2 standards.

Roof light standards are currently at 30 percent. That yields a sunroof that's effectively black. So there's no light coming through that.

Exemptions. We're looking for exemptions for plastic windows, both polycarbonate and the collapsible that you'd see on convertibles and such. And also vehicles that don't produce CO2, such as electric vehicles.

And, finally, we'd ask that you authorize staff to adopt some technical changes in the 15-day notice.

If you'd go to the next slide.

--o0o--

MR. DOUGLAS: Vehicle performance standard. Again, the goal interior temperature. Mr. Cackette said that in the beginning. That's all we ask. You've been very successful in the past. You didn't specify catalytic converter standards. You specified vehicle exhaust standards. We improved the efficiency of the catalyst as well as the efficiency of the combustion chambers. Fuel injectors are a result of performance standards for the vehicle. It allows innovation.

So all we're asking here is you'll allow the Executive Officer to approve other methods that achieve the same reductions, the same interior temperature.

Next.

--o0o--

MR. DOUGLAS: There are issues with the reflected standards of metal oxide coating. It does reduce wireless

signal strength. Cell phone coverage will be reduced. There'll be more dropped calls. Portable GPS devices will be impacted. Fasttrack electronic toll booths will have problems. Tire pressure monitoring systems, those will have to be validated. Garage door openers, so on and so forth.

The next slide.

--o0o--

MR. DOUGLAS: There has been a discussion about the proposed reflective standard. And I'd just say that you do get -- and this graph is from the ARB staff report. It's the staff's numbers. The benefit of an absorbing is about 85 percent of the benefit of a reflected standard that's proposed. There are no issues with wireless communications. And what's more is there's no difference in the benefit once the vehicle starts moving. We would encourage you to adopt an absorbing standard, at least initially, rather than the reflective.

And next slide.

--o0o--

MR. DOUGLAS: If you do go with the reflective standard, manufacturers have to verify every wireless system on every vehicle and we have about a year to do it. So we do request a longer phase-in for that.

CHAIRPERSON NICHOLS: Thank you, Mr. Douglas.

MR. DOUGLAS: All right. Thank you very much.

CHAIRPERSON NICHOLS: I'm sorry. The three minutes goes by fast. But we do have your written presentation.

MR. DOUGLAS: All right. Thank you.

BOARD MEMBER SPERLING: Could I ask a question?

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER SPERLING: You advocate this idea of performance standards. How do you imagine that -- and as the staff said, a key issue is the test method. How do you imagine these test methods being developed and how soon could that happen?

MR. DOUGLAS: That's an excellent point, Dr. Sperling. I think we can do it in six months. I think we have to do it in six months. If we're going to be building vehicles for 2012 using performance standards, we'd have to get the test procedures put together.

Compared to the other test procedures we have, it's relatively simple. We're looking at temperature in the vehicle. And kind of the variables are the color of the vehicle, the color of the interior, and the material of the interior. We do far more complex test procedures with far more variables, and we've been doing it for decades now. So -- and we could develop through the Alliance with -- or through the auto makers one proposal

that we could bring to the staff for their review and approval.

And also I think that some of my colleagues will have a little more detail on what they had in mind for test procedures.

CHAIRPERSON NICHOLS: Thank you.

MR. DOUGLAS: Thank you.

CHAIRPERSON NICHOLS: Okay. John Cabaniss.

MR. CABANISS: Good morning. I also have some slides, and I suspect you have them already. Thank you.

Go to the next one please.

(Thereupon an overhead presentation was Presented as follows.)

MR. CABANISS: I just wanted to reinforce a few of these thoughts that Steve Douglas brought up - performance standard option, expanded phase-in. And also one new thing that he didn't cover, which is small volume manufacturer provision.

Next please.

--o0o--

MR. CABANISS: The performance standard option would add regulatory provision, the way we view it today at least, because we don't have this test procedure worked out. We simply would ask that you add some regulatory flexibility, a provision to allow this option with the

Executive Officer approval, and then we would work with staff to establish a protocol over the next few months, as Steve mentioned. This would allow manufacturers flexibility to use a systems approach to meet the requirements. And it would also promote innovation, as he mentioned.

Next please.

--o0o--

MR. CABANISS: The expanded phase-in. Of course the benefits of the Cool Car role, as was explained by staff earlier, is really -- has two elements: The glass itself, and then redesigning the air-conditioner to take advantage of the reduced thermal load.

Regardless of when the glass gets imposed in the vehicle, implemented into the vehicle, the air conditioning redesign will not be able to be occurring in the same timeframe just because of all the reengineering that has to be done. And, in fact, when you look at the background of what other things are going on in the air conditioning area, one of the foremost is the introduction of new global warming potential refrigerants, which is being done worldwide on a 2012 to 2017 timeframe. And so the schedule for glass should be considered in this context, because -- not that the glass can't be done somewhat earlier. But the real payoff is going to be when

the air conditioning redesign is done, and that's going to be on a somewhat different schedule.

Next.

--o0o--

MR. CABANISS: And, finally, the small volume manufacturers. There are several independent small volume manufacturers, companies like Ferrari, Aston Martin. They produce a few hundred vehicles each year in California. Those phase-ins -- or the types of phase-ins that are being recommended here are very difficult for companies like that due to their low volume and the very limited models that they have. So, you know, their ability is really to comply or not comply, not to phase-in.

So we would just simply request that a provision be added for these independent small volume manufacturers to comply in the final year of the phase-in, whatever it ends up being, as was done with the AB 1493 regulation.

And that's all I have. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Ross Good, followed by Dave Raney.

MR. GOOD: Good morning Chair Nichols and members of the Board. My name is Ross Good. I'm Senior Manager of Government Relations for Chrysler Corporation -- Chrysler Group LLC. Got to get that right now. I'm asking for your careful consideration to alternative

measures to the cool glazing rule before you today.

As I've worked with my colleagues back at our headquarters in Auburn Hills, Michigan, on this issue over the past several months, I've asked them to keep one thing in their mind, and, that is, how we can help the ARB staff accomplish their goals.

The goal in this case is to reduce the CO2 generated by lowering the resting vehicle cabin temperature and thereby reducing the number of days throughout the year that we Californians need to utilize our air conditioning systems.

As they stand now, the staff recommendations in the proposed rule focus on a single technology offered by a single manufacturer produced at a single plant in the United States. There is hope that at least one other manufacturer will develop the material, develop the process, build a plant in time to fill these needs. But it doesn't really -- that's a lot of hoping, and it's very difficult to build credible business cases on hope.

So Chrysler engineers took the question of how we can help to heart. We recommend that -- the recommended solution is to apply the more relaxed standard of the side and rear windows to all the way around the vehicle, except for the roof. And this according to our estimate can be accomplished very quickly, very effectively, very

inexpensively, and without all the technical difficulties associated with the proposed technology.

By "quickly," I mean Chrysler can launch into the program by the initial 2012 model year.

By "effectively," I mean we can accomplish 70 to 85 percent of the goal -- 75 to 85 percent of the goal.

By "inexpensively," I mean we can do it for about 10 percent of the price, and without all the nagging problems that have been discussed.

There are other issues with the proposed rule as well, including an exemption for plastic windows. This is very important to Chrysler. The very popular Jeep Wrangler fitted with a soft convertible top uses flexible roll-up side windows which are not capable of meeting the side window standard. And outlawing the soft top would require us to use the hard-top vehicle with the hard windows, which would add significant weight to the vehicle and reduce the -- and increase the CO2 every mile the vehicle is driven, not just when the air-conditioner is being used.

And, second, the global electric motor, or GEM car vehicle, which Chrysler produces - I believe Chair Nichols is a proud owner of - uses plastic on side -- rear windows as well.

And switching to conventional glass would reduce

the vehicle's operating range while offering no AC benefit at all. In fact, these vehicles don't even offer AC as an option, so there's no real problem to solve there.

Third, it seems reasonable that an exemption for zero emission vehicles as a class might be a wide consideration. Certainly there are -- issues with how and where the electricity to power and run these vehicles and AC systems is generated is a point. But that's maybe picking at nits, and we should probably be moving the boulders out of the way first.

Finally, I know that you've heard and will hear testimony from a lot of people representing a lot of companies, environmentalists, the ARB staff, and everyone pointing forward. But when it's time to march, we all seem to be headed off in a little bit different direction here. And I think that points out that the rule just isn't quite ready yet. Maybe a little bit more time to align our goals would help us to get to march in the same --

CHAIRPERSON NICHOLS: Okay.

MR. GOOD: Thank you.

CHAIRPERSON NICHOLS: Thanks. Thank you.

David Raney, followed by Dan Adsit.

MR. RANEY: Good afternoon, Madam Chairwoman, ladies and gentlemen of the Board. My name's David Raney.

I'm the Senior Manager of Environmental & Energy Affairs for Honda in the United States.

I would say that we're trying to come to you today with a can-do attitude, and hopefully my comments will reflect that.

What I may say may appear to not be in that vein. But when I conclude, I hope we can both come to agreement that's our case.

We echo what you've heard so far, that a performance-based approach is what we consider the best approach. And that's based on the fact that we believe a performance metric which would require the development of a new standardized test procedure is important; it could be applicable nationwide; and it gets at I think what we're most interested in and what will bring benefit to us, not necessarily focusing on the temperature of the interior compartment but what we believe is most important and, that is, AC system load.

We believe a systems approach to this is important. And we believe getting at load through many mechanisms, not just reducing it through solar flex coming in through the glass, is most important. We're pretty smart fortwo at developing our vehicles today and managing electronic control systems and the inherent fuel injection process based on load, and we'd like to be given the

opportunity to pursue that in this vein as well.

Not abandoning what the staff has proposed. While the performance test procedure is being developed, I can't tell you if it would take six months or three years. But I believe that doing it right would take some time. I think, importantly, going beyond what would happen here in the State of California, it needs to be addressed nationwide. I believe there should be some harmonization, frankly, between the U.S. EPA and California as we look at national greenhouse gas standards.

But while the test procedure's being developed, we're firmly committed to telling the Board and staff today that we could commit as a company to offering 60 percent TTS absorption glass not only in California but nationwide. We can do it soon. And the reason for doing that is because we wouldn't have to perform what has been reported to you so far of reengineering all of our electronic systems.

I must be clear, that we cannot meet the proposal as presented by the staff today. The proposed requirement of TTS 50 percent of 100 percent in 2013 is simply not feasible for my company. The proposed requirement of TTS 40 percent is simply not feasible either. There's two primary reasons for that, one being lead time. We have a staggered phase-in of full model development, full model

change. And we have limited engineering resources. We float engineering teams around individual model developments, and each one of these is focused on reengineering for the new glass.

The second one is a supplier situation. And that is the need to make sure we've got adequate supply.

Thank you for your time. And I hope we can engage with you in this constructively.

CHAIRPERSON NICHOLS: Thank you very much. Next -- we have two witnesses who signed up for Toyota. We don't usually -- oh, I'm sorry, after Dan.

Excuse me, Mr. Adsit. I apologize. I'd already called your name and forgot you hadn't spoken yet.

MR. ADSIT: Thank you, Madam Chair. I represent Ford Motor Company.

Ford supports the goal of reducing interior temperature of vehicles parked in the sun. We do request, however, some changes to the proposed standard.

One is a performance-based compliance alternative. We think that encourages innovation, competition, and cost efficiency. We think performance of alternate cooling technologies could be determined by simple test procedures.

What we envision is taking a few vehicles and heating them, one with standard glazing; one with glazing

as proposed by the standard; one with alternate technologies that cool the interior, measuring the interior temperatures. If the alternate technologies cool the car as well, what we'd like to do is submit our test data to the Executive Officer and request that the alternative technologies be allowed.

We understand too that the alternative technologies must be independent of driver action.

Ford did develop a draft test procedure. We have supplied it to staff. We've shared it with our other automobile companies. And we do think that a test procedure could be developed quickly, within six months.

So what we'd request is that the alternative compliance language that are in the written Alliance comments be added to the standard. And we also request that there be a requirement to develop a test procedure to measure performance.

Additionally, we would like to see more of a phase-in for the reflective windshields. At Ford we're moving to deep bend windshields, which have more curvature. And the issue for us is in 2012 we'll have half of our windshields that are these deep-bend windshields.

There's two ways of doing this reflective windshield. One is coated film. That for us is the

go-fast way of approaching this. We would do that for the 2012 model year.

The problem is with deep-bend windshields there can be wrinkling cling and distortion of this film around the edges. Coating on the glass is a better way to approach it for deep-bend windshields, but it has longer lead time for us. Our suppliers aren't set up to do that.

So we would request more of a phase-in for the windshield portion.

Also, that would give us flexibility for implementing the windshields. We could do it in a more cost effective manner. It wouldn't require us we think to do two windshields within the period of two years for each parked vehicles.

We'd also like to see the addition of a technology review. Presently, as has been mentioned, there's only a few suppliers that may be able to meet the 40 percent TTS requirement in 2014. There are electronic device interference issues.

There are issues with implementing other kinds of glazing such as polycarbonate glazings. And we think with a technology review, there'd be time to discuss those issues and possibly make changes as required.

So we do support the goal, and we would like to see those three changes made to this standard.

Thank you.

CHAIRPERSON NICHOLS: Okay. Thank you very much.

We have two witnesses from Toyota. We don't normally let people double their time by splitting up their presentations. But if one of you is just going to focus on the radio wave issue --

MS. BROWN: Yes.

CHAIRPERSON NICHOLS: Okay. Well, why don't we just -- we'll hear that one separately. And then the other one, don't talk about that at all. You can talk about your other points. You've got a lot of slides here.

(Thereupon an overhead presentation was Presented as follows.)

MS. KOKKINAKOS: Good afternoon. I have a presentation.

Good afternoon. My name is Lili Kokkinakos from the Toyota Technical Center. And I would like to present an overview of Toyota's opinion about the Cool Cars draft rule, concerning in particular the front windshield, roof, and plastic windows.

Lisa Brown from our Electronic Systems Division will discuss some detailed technical issues after this presentation.

We understand and support the intention of this Cool Car regulation.

CHAIRPERSON NICHOLS: Could you speak up a little. We're having a hard time hearing you. Maybe if the mike gets closer to you.

MS. KOKKINAKOS: Before I start, I would like to note that Toyota has direct experience with solar reflective glass windshields and adopted in some vehicles in the 1989 through 1994 timeframe in Japan.

But we moved away from using it largely due to the obstacles with radio wave interference and concern that this might cause inconvenience to our customers as more and more radio wave devices that are being used.

Some examples of problems we had in Japan were with the VICS smart car system, infrared speed detection cameras, et cetera, et cetera, future technology.

Next slide.

--o0o--

MS. KOKKINAKOS: Of the front windshield, adopting a 40 to 50 percent TTS standard as is in the current draft of the Cool Car rule would necessitate using solar reflective glass. Adopting solar reflective glass on our vehicles would be a major change which would require that we would -- we'd have adequate time to perform necessary redesign such as moving antennas, study of deletion areas, performing reliability and performance testing to ensure no unintended consequences due to our

design changes, and guaranty that we have an adequate supply base of mass production glass.

Due to these issues, we propose adopting a 60 percent TTS standard for the windshield, which will allow us to provide solar control without radio wave issues and concerns about glass supply. We are then dedicated to working both internally and with our suppliers to study methods to address our technical concerns and resolve mass production issues so that we would be able to have a technology review in two-years time to consider what would be 15 model year and later standard.

We also have concerns regarding the plastic windows. Due to potential weight savings and fuel economy benefits -- next slide --

--o0o--

MS. KOKKINAKOS: -- we would suggest that plastic windows be exempt from this rule-making so as to promote further research and adoption. At a minimum, ARB should allow some equivalent test procedures to show the fuel economy benefits of a plastic window.

Also, roof lights we're concerned with regarding the standard at 40 percent TTS. This would force very dark roof lights that would be too dark for customer preference and also potential issues with the design because it could be heavier and thicker.

In summary, Toyota supports the goal of the Cool Cars regulation, but we have significant concerns about the unintended impact of the level of stringency in the proposed requirements, particularly for the windshield, plastic glazing, and roof lights.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Ms. Brown.

MS. BROWN: I also have a presentation, if you could pull that up please.

(Thereupon an overhead presentation was Presented as follows.)

MS. BROWN: Good afternoon. My name is Lisa Brown and I'm an electrical engineer from the Toyota Technical Center. I'd like to highlight some technical concerns that Toyota has regarding the current draft of the Cool Car rule.

Increasingly more and more radio wave systems are being adopted on to vehicles. It is essential that we maintain the performance and reliability that our customers expect. So adoption of the current draft means we need to verify all of these systems, in many cases make major design changes.

We know that currently other manufacturers have adopted some solar reflective glass, for example, in

Europe. However, this does not necessarily mean that it could be easily adopted in the U.S. without consequences.

There are many differences in infrastructure such as cell tower density, regulations such as TPMS, and customer usage patterns such as garage door opener and using remote keyless entry as a vehicle finder. We have identified several scenarios through our internal testing where this is a potential difficulty and I will highlight just two of them.

We are also concerned about the impact of our customers' ability to use aftermarket systems and the also potential limiting effect on future radio wave technologies.

Next slide please.

--o0o--

MS. BROWN: Currently all of Toyota's GPS antennas are mounted inside our vehicles. If present technology solar reflective glass is required for the windshield, we must redesign our GPS antennas to mount them on the roof even if deletion areas are allowed.

While this may seem simple, this redesign is actually quite involved, and I'll highlight a few examples of the impact. Rerouting the antenna cable will make it longer, which will thus continuate the signal, reducing performance. We may then need to redesign the receiver to

improve the sensitivity.

Another consequence is that a new or modified hole must be placed through the roof for the cable. This has a major impact on the body structure, which will need to be verified and possibly redesigned. Water intrusion is another potential issue that must undergo thorough testing.

Redesign of the GPS antenna is a major change which requires significant testing and potential redesign of many other areas of the vehicle, and we need adequate time for implementation.

Next slide please.

--o0o--

MS. BROWN: In the U.S. tire pressure monitoring is mandatory for all vehicles, and we are concerned about meeting both TPMS and current draft Cool Car requirements. A dominant path for the radio waves from the front tire to the receiver is through the front windshield, as this figure shows. And using present technology solar reflective glass would greatly reduce the signal strength. Other auto manufacturers who currently use reflective windshield mitigate this problem by adding many extra antennas. This is not a practical solution to implement across a whole vehicle product line because it's cost prohibitive and a major redesign is again required.

A wide area deletion across the bottom of the windshield or other emerging technologies that allow adequate passage of radio waves could be potential solutions for the future, but they're currently not feasible. Using mass deletion across the bottom would violate the current rule threshold. And other options such as the wide area laser deletion and other emerging technologies are not ready for mass production at this time.

Next slide please.

--o0o--

MS. BROWN: In conclusion, there are many technical issues that still exist in implementing the current draft Cool Car rule with technology that is presently available for mass production. And we hope the Air Resources Board will consider Toyota's proposed changes to the rule as presented earlier by Lili Kokkinakos.

In addition to me, we have experts today from Japan, and we'd welcome any questions that you may have.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you.

Jonathon Morrison, followed by Razmik Balian.

MR. MORRISON: Hi. My name is Jonathon Morrison. I'm with the California New Car Dealers Association. We

represent the dealers that buy the cars from the manufacturers and sell them to customers. And we are the face of the auto industry for most customers that are buying cars or having them fixed.

We're in a bit of a strange situation here. We absolutely love the idea of having cars that are cooler when they've been sitting out in the sun. We love the idea of saving our customers four or five gallons of fuel a year. But we have some real concerns if the mandated technology to achieve that could interfere with GPS systems, cell phones through blue tooth, and garage door openers.

We think a perfect solution to this potential problem would be to allow for a performance requirement, to require mandated -- to allow technologies to meet these requirements that may not necessarily be solar reflective glass. Perhaps the absorbing glass would be a good solution to this, or leave it up to the manufacturers that design these vehicles.

That's one big concern.

Another concern we have, actually it's more of a technical issue, is with the record retention requirements. We're also going to be the people that are fixing these cars. And if there's a crack in the windshield needs to be replaced, they may do this at one

of our collision repair centers or they may have this replaced by the automotive dealers service center.

With that regard, we actually have requirements under existing automotive repair law that requires dealers to maintain all these documents. This would be the invoice from the glass company and all other parts invoices. These have to be maintained for three years after the service. The proposed regulation would require that the automotive repair dealer keep these for five years. So not only is there a bit of an overlap and, you know, some inconsistencies with the existing law; we also have some concerns because, as new car dealers, we're covered by federal and state privacy laws. We have to keep confidential consumer information in-house. We can only give this out in certain circumstances, mainly if it's pursuant to a properly executed warrant or subpoena for those documents.

And we would ask that since we already have laws out that there that require these records to be maintained, that those laws be allowed to do their work as intended and that section of the proposed regulation be removed.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Balian.

MR. BALIAN: Good afternoon. My name is Razmik Balian. I represent AGC Automotive. Thanks for this opportunity.

As a brief introduction, AGC Automotive supplies glass components and glazing systems to one out of every three vehicles produced globally, from 21 facilities around 14 countries.

AGC Automotive and our parent company, AGC Group, has supported CARB to create effective regulations and strongly believes that CARB's leadership is of critical importance to reducing greenhouse gas emissions.

We would like to summarize our position as follows:

For 2012 regulation, current available technologies can meet the required specifications for windshields, side lights, and back lights. Sunroof regulations need further revisions to balance weight and cost issues. However, we believe that we may be underestimating the resources required to fully and effectively implement these technologies, especially for reflective windshields.

The numerous models that need to be developed for model year 2012 and 2013 could potentially overwhelm the supply base.

To allow the automotive industry's product

validation procedures and go from design development testing, tooling, validation, and mass production is a great task for one vehicle, let alone for a number of models that are coming up to be redesigned in a short period. And this is a challenge for both suppliers and OEMs.

We strongly recommend an addition -- one-year addition into the phase-in of the 2012 regulation. And we believe that this would provide a more lasting and widespread benefit of CARB's regulation for greenhouse gas reductions.

Now, as for 2014 regulation, we are confident that triple metallic layer coating and other film technologies will satisfy CARB regulation. But as mentioned before, we may be underestimating the time needed to prove the technology through testing and validation before significant resources are dedicated to implementing this technology in a mass scale.

Please note that all windshields are not equal. Each windshield is a unique part, with its own characteristics, and has got to be taken into account separately.

In particular, if not implemented properly, a number of poor technically -- technically poor performing windshields with low manufacturing yields can consume a

substantial portion of the industry's capacity. We need to be very careful for the industry not to fail.

We are recommending for the 2014 model year windshield regulation to be revised to 2016 with a gradual phase-in period.

Thank you for this opportunity.

CHAIRPERSON NICHOLS: Thank you.

Ted Harris, then Daniel Karpen and Ari Frink.

MR. HARRIS: Hello. I'm Ted Harris on behalf of Pilkington Glass. I'm with California Strategies.

I'd like to first thank you for your time today. And, one, I want to come to say we're in support of Tier 1. We fully recognize that there are some manufacturers that have issues. But from a supply side, you know, it currently exists and can be supplied.

We respectfully request that the timeline for Tier 2 be as adjusted.

There are 383 vehicle models that are required by 2014, including 2012, 2013, and 2014. So to back up, the requirement is for all vehicles produced in 2014, and then every replacement windshield for 2012 and 2013. From just a shear vehicle model number, that is an incredible task for the industry.

The benefits to get to that point are mostly accomplished through Tier 1. So 75 percent of the benefit

is accomplished by Tier 1. And in 2014, 2015 all that benefit would continue through. So the idea is to find kind of that sweet spot where we can achieve the benefits but not have a train wreck where the industry cannot supply all 383 vehicles.

We supplied a seven-page letter. And if you have any questions, I'm glad to respond.

Thank you.

CHAIRPERSON NICHOLS: Thank you, Mr. Harris.

Daniel Karpen.

MR. KARPEN: My name is Daniel Karpen K-a-r-p-e-n. I'm an independent inventor. I came here from Huntington, New York, with my own money. I hold the patent to add neodymium oxide to the glass of the windshield to eliminate the glare from the rising and setting sun.

Have all of you seen my letter dated June 1?

Mary, have you seen my letter?

CHAIRPERSON NICHOLS: Yes, I have.

MR. KARPEN: Okay. For those of you, the audience, who haven't seen, basically I will summarize what's in the letter.

Neodymium oxide is a component of glass, selectively absorbs the yellow light. And when you do that, you get rid of the glare from the rising and setting

sun.

Implementation of this regulation would preclude the use of neodymium-built glass for automotive windshields.

I am not opposed to the regulation as it pertains to rear glass, side glass, on sunroofs. I am, however, concerned about what it would do for my invention.

In the end of my letter I did suggest the idea of some sort of automatic device to open windows so it would cool the car. And then after I wrote the letter, I got ahold of my Toyota 2010 Prius book, and it says they have a solar roof. The available solar roof in the third generation Prius is imbedded with solar panels. When Prius is parked in direct sunlight, these solar panels can power a fan which brings in cooler outside air, ventilating the cabin close to the ambient outside temperature.

I wonder why the Toyota representatives didn't tell you about this.

I'd like to give a little demonstration of how neodymium-doped glass cuts out the yellow light. And here we have the rising sun. George Harrison says, "Here comes the sun." And if we put the piece of glass in front of it, you will notice a substantial reduction in glare. I wish I had it on my car.

Actually for the last 30 years, I've never owned a car that had operable air conditioning. I would always lower the windows. And the old Dodge Darts and Plymouth Valiants had side vent windows you could turn and twist and you'd get lots of air flowing through.

Basically I think my invention is viable. But the California Air Resources Board is halting its implementation on vehicles. I made a two-minute presentation to the executives at Ford Motor Company last month.

I'd like to ask every one of you a question, would you like to have a neodymium-doped windshield on your vehicle? Please let me know.

CHAIRPERSON NICHOLS: I'm afraid your time is up, sir. Thank you.

Mr Frink.

MR. FRINK: Good afternoon. My name is Ari Frink. I'm here on behalf of the Planning and Conservation League, just saying that we support the Cool Car standards.

These regulations are the kind of low-hanging fruit to help solve the climate crisis, save consumers at the gas pump, and keep consumers cooler in their cars. So we urge you to support these standards.

CHAIRPERSON NICHOLS: Okay. Thank you.

I have Tim Carmichael next on the list.

MR. CARMICHAEL: Good day, Chairman Nichols, members of the Board. Tim Carmichael with the Coalition for Clean Air.

I find myself in the awkward position of having more confidence in the automakers' ability to develop and implement and integrate new technologies in their vehicles than many of them seem to have.

I have been before this Board criticizing the auto industry on many occasions for not pushing far enough soon enough in implementing technologies. But here we have a situation where the glass industry is telling you the technology is available and they can do it. Many of them are saying they can do all of the regulation and some of them are saying they can do most of the regulation. And you've got the major automakers saying, "It's going to be too complicated for us to integrate this system in a timely way."

This is genuinely low-hanging fruit when it comes to the California climate strategy for reducing greenhouse gases, for improving the operations of our vehicles.

If the industry genuinely can't do this, we're going to have a really tough time. And I think you're going to see more technical testimony from some of my colleagues in the environmental community supporting and

clearly laying out that this is very doable. It's doable on the timeline that your staff has called for. In fact, the environmental community all support incorporating this for every window in the vehicle, not just the windshields. And that's what you should be pushing for.

Thank you.

CHAIRPERSON NICHOLS: Thank you very much. We're not going to let you leave though.

Please turn off the timer there.

Tim, I think we all know that today is your last Board meeting with us. And on behalf of my colleagues - I think I can speak on their behalf. They may wish to add a few words. But we all want to commend and congratulate you on your many years of really distinguished service to the environmental community and to the cause of clean air. I know that the Coalition for Clean Air will go on and will do great work. But you have personally been a fixture at our Board meetings, I think we could almost say. Certainly a regular. And, you know, we haven't always done what you wanted us to do. But we've definitely paid attention to what you asked us to do. You've been a really effective advocate and a leader in environmental policy in this state for many years.

I know you're planning on taking some time off for a sabbatical, which is surely deserved and I'm sure we

all envy you that. But we really want to wish you the very best and to thank you for all that you've done for this Board and for the State of California.

Thank you.

MR. CARMICHAEL: Thank you very much. I really appreciate that.

(Applause.)

CHAIRPERSON NICHOLS: I think maybe that's a good point at which to take a lunch break. We'll be back in an hour.

(Thereupon a lunch break was taken.)

AFTERNOON SESSION

CHAIRPERSON NICHOLS: On our meeting notice, but I didn't announce when we broke that we were going to have an Executive session. We did in fact have an Executive session and were briefed on pending litigation. There were no Board actions taken. But for the record, that occurred while the Board was on break and over our lunch period.

And now we're ready to get back to work on the Cool Car rule as soon as we get everybody assembled.

Oh, people are actually looking at the windshields. That's what's going on. Okay.

While people are making their way back, we can resume the witness list -- make sure I have the right one here.

Okay. I have an updated list. I should get rid of the old one.

So the first witness is going to be Will Barrett, followed by Bruce Benda.

MR. BARRETT: Good afternoon, Chairman Nichols, members of the Board and staff. My name's Will Barrett. I'm representing the American Lung Association California.

We support the goals of the Cool Car standard to reduce greenhouse gas emissions and smog-forming emissions by reducing the demand for mobile air conditioning.

To achieve the greatest greenhouse gas and air quality benefits of this measure, we encourage the Board to adopt the more stringent option identified by staff to require solar-reflective glazing in all windows at the 40 percent solar transmission level as opposed to the windshield alone.

Also, as noted before the break, several manufacturers are ready to meet such a standard, and we would reject proposals to delay or extend the phase-in requirements.

Public health is suffering in California due to fossil fuel consumption. Reducing the drain that mobile air conditioners have on fuel efficiency will reduce both greenhouse gases and the criteria air pollutants that contribute to California's air quality crisis and contribute to tens of thousands of asthma attacks, hospitalizations, and other negative health outcomes each year in California.

In fact, staff's proposal estimates that in 2020, NOx emissions could be reduced by roughly 180 tons per year, while hydrocarbons could be cut by 65 tons annually.

A more stringent option could help to further maximize the air quality co-benefits of this early action measure. We feel that adoption of an expanded reflective glazing requirement will support existing policy and

technological advances to improve vehicle efficiency and encourage other jurisdictions to adopt similar stringent standards.

We believe that the stronger Cool Car standard offers a simple cost-effective way to help consumers further improve their fuel efficiency and therefore maximize reductions in fuel -- fossil fuel consumption and greenhouse gases and criteria air pollutants.

Again, the Lung Association supports the adoption of the more stringent option to require reflective glazing on all windows and rejects policy to delay implementation and extend the phase-in for this measure.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Bruce Benda.

(Thereupon an overhead presentation was Presented as follows.)

MR. BENDA: Hello. My name's Bruce Benda and I'm the head of Automotive Marketing for Bayer Material Science. I'd like to thank you for giving me the opportunity to speak today.

Next slide please.

--o0o--

MR. BENDA: Bayer Material Science is part of the Global Bayer Group. And although we're more recognized

for our aspirin, we happen to also be one of the leading suppliers of high technology innovative materials such as polycarbonate.

Polycarbonate is a clear durable organic polymer and therefore -- it has low density, therefore it is lightweight. And it's processed at relatively low temperatures. It's a material which is very appropriate as a glass replacement for automotive glazing.

We are recognized as a leading supplier in this particular area; and therein lies our interest in this particular standard. We believe that the -- we support, first of all, the goals of AB 32 in reducing greenhouse gas emissions. We believe that the inclusion of polycarbonate would actually enhance the proposal.

Next slide please.

--o0o--

MR. BENDA: Why do we believe this?

Inclusion of polycarbonate would assist CARB in doing more of what you actually want to do and, that is, reduce greenhouse gas emissions. Exclusion of polycarbonate or setting unrealistic targets on polycarbonate does not advance the CARB cause and, in fact, stymies the approach. Polycarbonate glazing offers design flexibility like aerodynamics, which leads to fuel economy; integration of potential cost savings for

manufacturers and consumers; weight savings, which leads to fuel economy, which leads to greenhouse gas emissions facts that will be supported by my industry colleagues from EXATEC.

An independent study from a very renown Vienna-based company indicates also that is a favorable lifecycle analysis that shows that over the life - that means production, use, and waste - polycarbonate has a favorable carbon dioxide footprint as well, which is detailed in the comments that I submitted publicly on behalf of our company.

Next slide please.

--o0o--

MR. BENDA: Polycarbonate is not new to this industry. In fact, the first serious application was back in 1998, the very small car you see there up in the left-hand corner, a small rear quarter window.

There are many other applications such as you see on the right-hand side - three models of Mercedes that are exampled here, plus the very large panel on the smart fortwo. And polycarbonate is recognized by authorities around the world, including professional organizations.

Next slide please.

--o0o--

MR. BENDA: And, in summary, we support again the

AB 32 objectives. We oppose the regulation as written and recommend the inclusion of polycarbonate. We oppose also a delayed implementation of polycarbonate under the levels recommended for glass. And we support the calculations which will be demonstrated by the industry colleagues from EXATEC.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Mr. Shuler from EXATEC.

MR. SHULER: Good afternoon. My name is Stephen Shuler. I'm the Chief Technology Officers for EXATEC.

EXATEC's focus is the development of polycarbonate automotive glazing. We are part of SABIC, which is part of the -- one of the largest five chemical companies in the world.

EXATEC supports the overall goal of AB 32, the reduction of greenhouse gas emissions from automobiles. Polycarbonate glazing, due to its inherent low density and ability to reduce vehicle mass, facilitates the goal of AB 32, to reduce greenhouse gas emissions, by providing a lightweight alternative to a traditional glass technology.

Reducing vehicle mass will result in direct CO2 reduction benefits, as detailed in our comments and those of Bayer Material Science.

The auto makers this morning have presented

support for polycarbonate glazing. Comments submitted by the Auto Alliance and AIAM agree that plastics should be exempt or a higher TTS applied that recognizes the CO2 benefits of weight savings.

We have had extensive discussions with the CARB staff. And these discussions have been focused on how to set an appropriate standard for polycarbonate glazing.

Our objection to the draft regulation, that it is fundamentally based in its conception and its analysis on glass technology. Due to physical and chemical differences, the solar absorption or reflection technology use for glass cannot be used for polycarbonate. While polycarbonate can achieve CO2 reduction by weight savings alone, there is not a current technology path to achieve the levels of TTS stipulated in the regulation. Therefore, the draft regulation will preclude the use of polycarbonate glazing, effectively limiting future vehicles to only glass window options.

AB 32 is intended to contribute to CO2 reductions. Each material should be judged on its own abilities to meet AB 32's goal of reducing CO2 emissions.

The draft regulation is a glass-only focused technology regulation. And, as such, it should be applied only to glass. If similar requirements are to be imposed on a material that was never the subject of the study, the

requirements should recognize polycarbonate's unique properties as compared to glass and its capacity to reduce CO2 emissions by decreasing vehicle mass. Using CARB staff's study EXATEC is to provide alternative regulatory language to the staff to accomplish this result.

We have followed the presentations that have recommended a performance standard. We recognize that this is not what is in the proposed rule. If the Board's preference is to develop such a performance standard, we stand ready to engage with your staff to develop that standard in a way that it deals appropriately polycarbonate glazing.

In conclusion, we urge the Board to set a separate material-appropriate standard for polycarbonate glazing that recognizes the inherent physical and chemical differences between glass and polycarbonate, and that would be consistent with other CARB actions within the overall AB 32.

If the weight reduction benefits of polycarbonate are taken into account, it can achieve the same CO2 reductions as is expected from limiting total solar transmission through glass.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Steven Gasworth, followed by Gene Livingston and

Mike Edison

MR. GASWORTH: I have some slides.

Thank you.

(Thereupon an overhead presentation was Presented as follows.)

MR. GASWORTH: Good afternoon. My name is Steve Gasworth. I am a senior technologist at EXATEC.

My colleague just explained why the draft regulation should be made applicable only to glass. He also explained that if polycarbonate is included in the regulation, then there should be a material-appropriate standard for it.

--o0o--

MR. GASWORTH: At EXATEC we developed an approach based on the proposed regulation to equalizing the CO2 benefits afforded by glass and polycarbonate. We recommended a change to the regulation that recognizes the weight reduction benefits of polycarbonate. I would like to explain the analysis that underlies our recommended change.

We relied on the same national renewable energy laboratory study that is the basis for the draft regulation so that our analysis would be consistent with that of the staff -- the CARB staff.

For the same reason, our analysis is based on the

Cadillac STS used in the NREL study, is the vehicle which CARB's initial statement of reasons accepts as representative so that they can apply to the broad fleet the relationships developed by NREL.

We also relied on an MIT study which shows that for a 10 percent reduction in the weight of a vehicle, there is a 6 to 7 percent improvement in miles per gallon. We independently confirmed this ratio through our own testing under EPA's federal test procedure, FTP 75. Of course this weight reduction benefit from polycarbonate glazing accrues year-round independent of driver behavior.

We consulted on several occasions with NREL to confirm the logic and application of our analysis, and are grateful for their assistance.

Our analysis proceeds in three steps:

First, we used the NREL study to determine the reduction in annual fuel use expected from glass of a given TTS. Here it was necessary to generalize the results of the NREL study, which involved a specific IR glass from PGW.

Second, we calculated the percent reduction in vehicle weight due to the use of polycarbonate in place of glass and determined the associated reduction in annual fuel use according to the ratio in the MIT study.

Finally, with fuel use now linked to both TTS and

weight, we calculated the TTS reduction that would be equivalent to the weight reduction in terms of its beneficial effects on fuel use and, in turn, on CO2 emissions. We refer to this equivalent TTS reduction as a spread.

Next slide please.

--o0o--

MR. GASWORTH: Our analysis yields a simple formula, which is polycarbonate TTS equals glass TTS plus spread. When polycarbonate TTS and a glass TTS are related this way, the CO2 benefits are equalized.

Next slide.

--o0o--

MR. GASWORTH: We took each TTS limit proposed for glass in the draft regulation and added an application-specific spread - 25 in this case - to arrive at an appropriate TTS limit for polycarbonate glazing in the same location.

CHAIRPERSON NICHOLS: I'm sorry. Your time is up.

MR. GASWORTH: Thank you for your attention.

CHAIRPERSON NICHOLS: We do have your written submittal. Thank you.

Okay. Gene Livingston, then Mike Edison.

MR. LIVINGSTON: Madam Chair, members of the

Board. I'm Gene Livingston. I'm with the Law Firm of Greenberg Traurig. And I'm here today on behalf of Garmin International. Garmin produces GPS devices.

Garmin only learned about this regulation this week. As the consequence, Garmin engineers have not had an opportunity to sit down with your engineers and talk about the data about what this regulation would mean to the operation of their devices.

But that data would indicate that as much as 18 decibels could be lost with this glazing that you're proposing in this regulation. That means that it could take as long as 15 minutes for the devices to acquire the satellites and become functioning. It also means that in areas where there are other attenuating circumstances, that the device would not function at all. Those attenuating circumstances could be urban buildings, tall trees, mountains.

The deletion window that is proposed in the regulation does not address these problems either. That window is going to be fixed in the windshield. Satellites move around. The car moves around, changing direction constantly. You have to acquire different satellites in order for that device to work. And so the deletion window is not the answer here.

The other aspect of this that you should be aware

of is that GPS devices are used in emergency vehicles, such as fire, police, and ambulances - situations where every second counts. And if that device is slow to come on line or fails during a trip, that can have really very serious adverse consequences.

Also, I want to just point out that the cell phones have GPS devices to help locate missing people. In addition, cell phones are now synchronized with devices in cars in the event that there is an emergency to send out an automatic signal. That would be adversely impacted by this glazing regulation.

Now, I know that you're proposing this because you want to reduce the use of fuel -- the fuel consumption, and the estimate is something like four and a half gallons per year per vehicle. And when you multiply that, sure, that adds up to a great deal. But how much gas is wasted if a person drives into a traffic jam that they could have avoided with a functioning GPS? How much gas is wasted by a person making a wrong turn because their GPS failed to function at a critical time? I submit that you could very well end up destroying the effectiveness of these devices and achieve nothing in terms of reduction in the emissions.

What I would urge you do is to take no action on this regulation today. I would like the Garmin engineers

to have a chance to sit down with your engineers and talk about these issues, these problems, and talk about some possible solutions.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mike Edison, then James Tribble.

MR. EDISON: Hello, Chairwoman, members of the Board, members of the audience. My name is Mike Edison. I represent BASF Corporation, which is a very large German chemical company.

(Thereupon an overhead presentation was Presented as follows.)

MR. EDISON: My role in that chemical company is very small. I have only a small portion of responsibility. And we in general are suppliers not to the tier suppliers to the automotive industry but possibly the second or third level.

Next slide please.

--o0o--

MR. EDISON: What I'm here for is to publicize potential solutions or using our products or technologies for current or future legislation for cool cars.

BASF strives for sustainable solutions. It's one of our four pillars. And we do this through chemistry. We make products that hopefully reduce CO2 emissions.

Some of these products are used currently in the roofing industry and other industries as well. Mainly they are pigments and functional additives.

Next slide.

--o0o--

MR. EDISON: How can BASF do this? We have three technologies that are important for cool cars:

One is near IR reflecting pigments, which are not unique. There's other companies that have those as well.

We have near IR transparent black pigments, which don't absorb any IR.

And we have near IR absorbing additives for transparent applications these can be used in plastics and they can be used in glass, and they can be used in paints also.

And one thing I want to stress is these can be used in combination or alone to help solve some of these problems. I've heard a lot about things that can and cannot be done. But I think there's some possibilities that may exist that people are not aware of.

Next slide please.

--o0o--

MR. EDISON: We have three examples here.

The top one is a coatings application where we reduce the temperature by about 20 degrees C in comparison

to a carbon black formulation for automotive paints.

The next slide is -- or the next section is a TSR of different pigments versus carbon black. We can increase the total solar reflectance by about 22 percent just by changing pigments.

And the third part is IR absorbence. And you can see the top line is a regular polycarbonate. And then the green line below shows what the transmittance of that polycarbonate is with our additive.

Next slide.

--o0o--

MR. EDISON: This just shows some indication of how we could affect internal soak. We have two black seats, visually black, on the left. And then the right under IR camera you see one is white, indicating IR transparence.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you. And we also have your materials.

James Tribble, and then Susan Lipper.

(Thereupon an overhead presentation was Presented as follows.)

MR. TRIBBLE: Good afternoon, esteemed members of the Board. And my regards to staff, in particular Dr. Bekken and Ms. Lemieux.

My name is James Tribble and I'm representing Sekisui S-LEC.

Sekisui is a leading supplier of solar control absorbing type and other state-of-the-art interlayer films. We'd like to offer our support to the State of California and to the ARB.

I'd like to start just with a couple of performance details. Solar control film does not create a greenhouse effect, which means that the air temperature near the dash and the steering wheel during the hot summer months becomes quite hot and this heat is reabsorbed by a solar-absorbing type and re-radiated outside of the vehicle with the aid of the wind, as you can see in the model.

Number two, SCF does not block or impede the use of electromagnetic wave transmission, which would mean garage door openers, sensors, and GPS, some of the things mentioned today.

Three, needless to say cost, as those before me have already stated. It's considerably less to use a solar control absorbing type.

Four, this technology is already in use worldwide. It's being used in up to four million vehicles worldwide and already contributing to the lower reduction of greenhouse gases, not to mention being used in some

famous hybrid vehicles.

Regarding soak temperature, which seems to be a primary basis for which staff has come up with their suggested standard, the reflective would seem to be better. But we would like to also look at the whole driving cycle, because we feel it could be more important after three minutes -- could you go to the next slide please.

--o0o--

MR. TRIBBLE: -- after three minutes, after driving with the aid of the wind, performance is reversed, as you can see. We have -- it's a faster reduction rate. And we think this warrants attention as well, because when would a person use the air conditioner, you know. It warrants more concrete testing and research.

Also, we think this is a quicker approach to the goal of CO2 reduction. There's a start-up cost of reflective and there's a -- you know, a lower production yield, including material costs, which could delay our goal, not to mention the conduction cooling, which I've already mentioned, better performance while driving.

But to be fair, the reflective type seems to perform better while parking. But we would also like to note that solar control is better while the vehicle's moving. And we would like to have real-world testing and

data on especially -- when the doors are open, when a passenger gets into the car, what is the effect -- what effect does that have on the soak temperature? We'd like to allow the competition to go on and create innovation in the market and to show equivalency through the reduction of CO2 and a performance-based evaluation and request technical -- further technical review after the first stage.

CHAIRPERSON NICHOLS: Okay. Your time is up.

MR. TRIBBLE: Thank you, Ma'am.

CHAIRPERSON NICHOLS: Thank you.

All right. Susan Lipper.

MS. LIPPER: Good afternoon, Madam Chair and members of the Board. I'm here today as the Senior Manager of Government Affairs for T Mobile Wireless.

And we also just learned of this issue this week. Our national trade association, CTIA, along with CMTA and TechAmerica, did send a letter I think just yesterday to the Board. So we apologize for being late to the table.

But we are very concerned that right now we don't have a way to know with certainty whether some of the proposals that have been identified for this fix will in fact take care of wireless signals from cell phones in cars. I mean you can have whatever opinion you want to have about people driving and using their phones in their

car. But if you need to make a 911 call and the material in the window blocks it, that's an issue. And metal oxides and certain coatings can be a barrier to wireless signal strength.

I know that in the staff report, they've indicated that in Europe there are Mercedes that have the ability to work well. We haven't been able to validate that yet, at least our company standing here today, because of just hearing about this. We tried to get to Europe and ask the question but didn't have enough time unfortunately.

I think, you know, we're also concerned whether the deletion area windshield, such as you saw outside, would in fact really be enough to take care of the signal strength. And, you know, we're concerned about our customers getting in cars, not having their phones working, and then the worst-case scenario, get in an accident or have medical emergency and not be able to make a call.

So all we would ask is if you would either build in some additional time to Tier 1 and Tier 2 or ensure that testing that occurs as you're working and implementing the regs fully considers the wireless impact, because we weren't knowledgeable about this previously, couldn't participate in the workshops, haven't had our

engineers talk to your engineers.

And we just think it's a very laudable goal, support the whole AB 32 idea, but just want to make sure we don't create something bad for wireless phone users in the stead.

So thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Andy Mabutol - I'm sorry if I'm mispronouncing your name - from Mitsubishi, followed by David Patterson.

(Thereupon an overhead presentation was Presented as follows.)

MR. MABUTOL: Good afternoon, Madam Chair, Board members, and ARB staff. My name is Andy Mabutol, Senior Engineer of Regulatory Affairs and Certification for Mitsubishi Motors.

These slides present some alternative technologies that can be used to lower the interior temperature of the vehicle and reduce the automotive AC system's greenhouse gas emissions by reducing engine power consumption.

Next slide please.

--o0o--

MR. MABUTOL: One example of an alternative technology is shown on our concept vehicle, the i MiEV Sport with solar panel roof, shown here.

The solar panel roof powers a fan and panels that automatically open and close to vent the vehicle's interior. The fan is underneath the panels.

I have a laser pointer.

They're located behind the panels in the roof.

The interior temperature can only be lowered to the outside ambient temperature. So if the vehicle is parked outside in the San Joaquin Valley in the middle of summer, for example, the fan can only equalize temperature inside and outside the vehicle.

Next slide please.

--o0o--

MR. MABUTOL: This slide describes our new high efficiency automotive AC system. In 2007, Mitsubishi Motors, together with Mitsubishi Heavy Industries, won the U.S. EPA Climate Protection Award for its work in developing a new high efficiency automotive AC system. The system includes a new scroll compressor and operating controls that reduce power consumption by 39 percent and improves cooling performance by 7 percent.

The current Outlander crossover utility vehicle, shown here, utilizes this system.

No technology will reduce the thermal load in all extreme conditions. But there are more alternative technologies than just solar reflective glazing that can

reduce interior temperature in an AC system's greenhouse gas emissions.

But as the regulations are currently written, neither of these technologies that I have presented can be applied.

Next slide please.

--o0o--

MR. MABUTOL: David Patterson, also from Mitsubishi Motors, will have more comments about the current proposal and will present our suggested changes in order to have a successful regulation.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Patterson.

MR. PATTERSON: Hi. I'm Dave Patterson with Mitsubishi Motors. I'm Senior Manager responsible for Regulatory Affairs and Certification.

Next slide please.

--o0o--

MR. PATTERSON: To talk about this a little bit I'm going to follow along with what Andy was talking about here and talk about some of the assumptions that were made in this regulatory package.

One of the assumptions was the assumption of downsized AC units. Now, that cannot be done obviously,

because we look at the extreme temperatures. We look at -- when we take our vehicles and we validate them, we validate them out in Death Valley in July. When you're in the San Joaquin Valley or you're in the Mojave Desert and you get into your car, if it's -- that soak temperature of that car is usually anywhere from 140 to 180 degrees. If the glazing does reduce the interior temperature by 14 degrees, you're still at 120 something degrees. You're still going to run that air conditioning system as fast as possible. And as an OEM, you're going to expect us to make that cooling as fast as possible also.

So we're not going to be able to downsize that air conditioning system. But with technologies like Andy was just talking about, we might be able to make that more efficient.

We have customers that pay for premiums for automatic climate control. It's unlikely they're going to turn that AC condition -- that AC unit off.

Also, talking about shoulder months. If I have a convertible, that's the time that I'm going to drop the top. And I don't need to have solar glass to keep my interior cool.

And also, one of the issues is the compliant sunroofs. It's just going to be too dark and we need to have a different standard there.

Next slide please.

--o0o--

MR. PATTERSON: As Andy talked about, we have some of these innovations that we could put into use. But if we have to focus on this technology, if we are choosing technology winners and losers, we might be choosing a loser here.

Next slide please.

--o0o--

MR. PATTERSON: One question we'd come up on is about the amount of lead time. And this -- you know, I wanted to go through this in a little bit of detail.

If you think this regulation, even if it's passed by the Board today, is enacted fast track six months through OAL, that means that it's going to be enacted by January of 2010. And if you think about it, 2010 model year vehicles are already nearing the end of their production cycle; 2011s are already in their production cycle; 2012s are in design freeze. There is very little probability that we would be able to get into 2012. And even 2013 would be difficult.

Therefore, we ask that 2014 be the implementation of your Tier 1 standard.

And also, one of the things we're talking about, wireless communication. But the other thing that's not

talked about at all is the safety validation. If we change the formulation of this glass, we need to validate it through safety to meet the National Highway Safety Association regulations.

And you have the rest of my comments in writing.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Okay. Matthew Coda, then Robert Vandal.

MR. CODA: Madam Chairwoman and members of the Board. Thank you for giving me the opportunity to speak to you today. My name's Matthew Coda and I'm here representing Southwall Technologies.

Before I move on to my comments, I would like to say how much of a pleasure it's been to work with the ARB staff over the last year. It's been fascinating and very educational. Thank you.

Southwall Technologies is a small publicly traded California company headquartered in Palo Alto, with a 30-year history of developing and marketing products for automotive and architectural glazing to reduce energy use and cut the production of greenhouse gases. Southwall is considered a leader in automotive reflective -- solar reflective glass technology. Our product, which enables all manufacturers to add IR reflective performance to their existing glass products, has been installed on

approximately 20 million vehicles, primarily in Europe, over the last 15 years.

Southwall fully supports the implementation of the Tier 1 performance as outlined in the existing regulation in 2012 and 2013. This level of performance accomplishes the majority of greenhouse gas reduction associated with the regulation in the first phase of implementation. The technologies associated with these levels of performance, not just windshields but side lights and roof lights, are available worldwide today and are already in use extensively.

We believe that this approach offers the biggest bang for the buck in the reduction of greenhouse gases.

Southwall also supports the implementation of a second higher tier performance for windshields with a slight change to the regulation as it's currently written. We respectfully request to shift the implementation of Tier 2 from 2014 to 2016 for the following reasons:

First, implementing a 40 percent TTS regulation in 2014 will result in a limited number of automotive glass suppliers who are able to service the marketplace. We believe this will adversely affect product availability and product cost.

Shifting to 2016 will allow virtually all automotive glass suppliers, if not all, to service the

market.

Second, though not guaranteed, we believe that harmonizing the regulation with the projected changes in cafe standards and the implementation of GHG emission standards at the federal level, both scheduled for 2016, are the likeliest way to have this -- the adoption of this glass roll out nationwide voluntarily.

We think that the end result could be a greenhouse gas reduction emissions of 3 to 10 times greater than California alone as outlined in the staff presentation.

Third, implementing the second tier in 2014 forces a highly accelerated implementation of manufacturing technologies to meet the regulation. This places an onerous financial burden on all companies, but particularly small companies like Southwall who's been trying to navigate this period of economic turmoil.

We hear a lot about jobs leaving California as a result of AB 32 regulations. For Southwall, we believe that the Cool Car regulation will have the exact opposite effect. As business dictates, we will reopen our mothballed California manufacturing facility and bring new green manufacturing jobs to the State of California.

So in summary, we fully support the Tier 1 level of regulation. We also support the second tier, with the

slight modification of its implementation change from 2014 to 2016, and we urge you to consider that during your deliberations.

Thank you.

CHAIRPERSON NICHOLS: Thanks.

We have a question for you.

BOARD MEMBER YEAGER: Mr. Coda, have there been problems with using electronic devices with the glazing on your windshields?

MR. CODA: Well, I'm not a mobile devices expert and I'm not an OEM representative. We do have, as I've said, 20 million vehicles, primarily in Europe, that have our technology in the windshield already. We think that the total market in Europe is something on the order of a hundred million vehicles. They've been able to find a way to get around that. Understand that this was implemented 15 years ago, long before they had any regulations about restricting the use of hand-held mobile devices during driving. So our understanding is that that's certainly a problem that can be overcome.

BOARD MEMBER YEAGER: Thank you.

BOARD MEMBER SPERLING: Can I add.

So most of these cars in Europe that have the reflective technology are from many earlier years, they're not -- they have not been put on recently?

MR. CODA: Oh, no. We're still selling actively in Europe.

BOARD MEMBER SPERLING: Okay. Because I know that there were some U.S. cars that were -- in the nineties, I believe the GM minivans that had it, and then they stopped using it.

MR. CODA: That's correct.

CHAIRPERSON NICHOLS: Okay.

MR. CODA: Thank you.

CHAIRPERSON NICHOLS: Thank you.

Robert Vandal, followed by Shane Smith.

MR. VANDAL: Madam Chair, members of the Board. Thank you for the opportunity to comment on this regulation. My name is Robert Vandal. I'm the Director of Product Development for Guardian Automotive.

Guardian Automotive supports the Cool Cars proposed regulation. Although we feel it does not take advantage of all the commercially available benefits, we agree it constitutes a great start.

We urge the Board to actually apply the 40 percent TTS as far as they can in the vehicle.

Guardian has been manufacturing products like this, solar reflective glazing, of the types specified for the regulation for more than a decade in Europe. And we do supply it to multiple vehicles.

We're prepared to supply the product specified in the regulation as Tier 1 as well the Tier 2 in 2014.

I'd like to take this opportunity to address, with some common sense behind it I hope, some of the concerns we've seen raised in the last few days of commentary.

Firstly regarding manufacture ability and technology. The thin film technology used to achieve solar reflective windshields or other automotive glazing is the same technology that has been used to create Low E glass for residential and commercial applications for in excess of 20 years. This is not a new technology at all.

We process at Guardian coated glass like this in 15 locations around the world, 6 of which are domestic today; so have plenty of capacity to make such products.

The energy savings itself has been justified for use in buildings, commercial and residential, for those numbers of years and to the point that it is specified by many building codes in many states today. So why shouldn't we use this available technology in all glazing apertures?

I've heard the comment today as well that roof lights under the 30 percent TTS requirement will be so dark, there'll be no point having them anymore.

I would actually submit that if the roof lights

do employ solar reflective technology, they'll transmit more light and meet that requirement than they do today as simple privacy monolithic glass.

We hear all the concerns about RF-based devices, cell phones, et cetera. It's true that there's attenuation from the coatings, but its also true that the same attenuation occurs in buildings when this is applied. But we still use our cell phones in buildings. Many vehicles employ this technology today, as we said, in Europe.

Are we to believe that the owners of certain models of BMWs, Audis, Porsches, Mercedes, Bentleys, just to name a few, don't use their cell phones, navigations or toll passes in their cars?

Some of the vehicles already employ solar reflective technology in more apertures than currently stated in the proposed regulation.

The point is, these vehicles provide evidence today that there are reasonable engineering solutions to overcome the RF attenuation issues. The allowance of the 10 percent deletion area in the standard is more than ample to satisfy this.

The standard also does not account for the unrealized benefit of cars in traffic and other situations - a dynamic benefit. We only rely on soak

benefit.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you.

Shane Smith, followed by Peter Dishart.

(Thereupon an overhead presentation was Presented as follows.)

MR. SMITH: Board, thank you for allowing Applied Materials to comment today, and the work that the staff has done. I'm here on behalf of Applied Materials to go over our role and what we played in multiple industries utilizing thin film technology.

Next slide please.

--o0o--

MR. SMITH: One of the things that Applied Materials is noted for is driving down cost. And I know that's been a big concern here today. We've demonstrated this for over 40 years as a company in our semiconductor businesses, our display businesses, and our solar and energy conserving businesses of glass coating technology.

As Applied Materials is a California-based company, we feel that this regulation where it is today should actually be urged to be advanced to the 40 percent TTS level for the entire car set due to the benefits that we've realized already in the building sector.

Next slide please.

--o0o--

MR. SMITH: If you look at the regulations that we've put in place for the residential and commercial energy codes, this here shows that California has continued to show leadership in our buildings. Which, by the way, this building here has Low E technology. And if I check during the break, I could use my cell phone.

As you can also see in a commercial side, California is one of the three states that is driving this in terms of green energy and energy reduction -- cost reductions.

Next slide please.

--o0o--

MR. SMITH: There's been discussions about coaters and not having enough capacity worldwide. We've actually shown right now there's over 400 -- we have over 178 coaters worldwide, 7 new coating lines are being installed this year.

Next slide.

--o0o--

MR. SMITH: The overall worldwide coating capacity - this is for architectural and automotive - is about 450 million square meters today. The actual coater utilization is down globally by about 20 percent due to the construction downturn and also some of the impact from

the automotive sector. So it's actually under-utilized.

In addition to, if you look at the 2006 numbers of 7.6 million auto sales, and assuming the four square meters for the entire car set, that equates to about 30 million square meters of glass, which is dwarfed by what is used in the architectural markets.

Next slide.

--o0o--

MR. SMITH: The other thing that's came up was cost to coat. By going to the full set, this is one of the ways to drive volume. And driving volume is what drives down cost. By going just from a low volume coater of approximately 2 million square meters to a high volume coater of 5 million square meters, you can achieve a 47 percent cost decrease in coating.

Next slide.

--o0o--

MR. SMITH: And the other was, the coating technology is already out there and existing today. If you look at the automotive suppliers today, the top nine that is shown here, out of that seven today serve the architectural markets with coating technology that is similar to what would be used in this regulation of 40 percent TTS. Out of those nine, five are actually serving the EU market today.

And, lastly, one of the reasons for pushing the higher TTS -- thank you.

CHAIRPERSON NICHOLS: Thanks.

MR. DISHART: Chairman Nichols and ladies and gentlemen of the Board. My name is Pete Dishart, and I represent the Enhanced Protective Glass Automotive Association. And the EPGAA is an industry organization for suppliers in the laminated glass supply chain. And that's important, as Dr. Bekken said earlier, is that laminated glass is indeed the vehicle which enables the incorporation of the technologies that allow the glazing to achieve TTS levels below 60 percent. And that's why I'm here and the EPGAA is here, to say that we support the proposed regulation for cool cars and the mandate for enhanced solar performing glass.

Now, with that said, we do have a concern that the proposed regulation doesn't go far enough. And in particular we're concerned about the 60 percent TTS level for side glass and the rear door glass -- or the rear window glass. And the reason is this technology has basically been around since the 1980s; and if you look at that technology and if we haven't put that technology in the vehicles today, you can see the slow pace of technology adoption without continued regulation.

So we believe that in order to get the most

benefits in terms of CO2 reduction, all glass should be affected. And we believe - and in fact our message today to you is - that the technologies that are available today and be presented for use in the windscreens are also available for all glazing locations in the vehicle.

And, in fact, I think again, as Dr. Bekken stated, if you go into the marketplace and look, you will find that these technologies are indeed available today at the 50 percent TTS level on roof glass, on door glass, and on our rear window glass. And the EPGAA recommends that the Board adopt a standard that mandates that level of technology, whether it's achieved through -- that's achieved through laminated glass, whether it's through coatings, inner layers, or films.

And the EPGAA recognizes that this level of technology isn't in the current spec. And we're also concerned that any significant change in the spec could potentially cause a delay in implementation. And we think that's something that should be considered unacceptable.

So what we recommend is if we can't reach the consensus to go forward with a 50 percent TTS across the board, that the Board at least put in place a mandate that says let's put together a time schedule to take a look at this and mandate this type of glazing in the future.

Thank you very much.

CHAIRPERSON NICHOLS: Thanks.

Mukesh Rustagi, and then Patricia Monahan.

MR. RUSTAGI: I have some slides as well.

(Thereupon an overhead presentation was Presented as follows.)

MR. RUSTAGI: Madam Chairwoman and the Board. Thank you very much for this opportunity.

Before I get started with what's on the slides, I do want to talk about the performance standard that's being suggested of that 60 percent TTS. And to echo what Pete Dishart just said, 60 percent TTS glazing is currently available in most of the vehicles. It's been around since 1980s. So to regulate it to that standard would basically be endorsing the status quo.

So we believe there's a lot more opportunity here to improve the performance in the vehicle and that's where the Board should go.

--o0o--

MR. RUSTAGI: Now, let me address the issue of the electronic signal interference.

We took a standard vehicle which we can buy on the market - we didn't buy it, we just rented it - and installed an IR reflective windshield with TTS of 50 with standard deletion areas, and we tested it for the electronic signals that are on this chart.

The green light in the symbol column says that there were no issues with any of those devices. The only device that we had to specifically design on this was the GPS antenna, because that's located in the instrument panel.

And as far as the aftermarket devices are concerned, the staff has already allowed for specific deletion areas for aftermarket devices.

Now, even though the angle of a car may change with respect to the satellites, the angle of the windshield with respect to the attached device does not change if the device is mounted on the windshield. And that's the intent of the Board's -- the staff's recommendation in the regulation.

Next slide please.

--o0o--

MR. RUSTAGI: In terms of manufacturing readiness, I don't know if you've had an opportunity to look at the windshield that's on display outside. That windshield was produced at one of our production facilities using current production equipment, and it meets the Tier 2 level of TTS of 40 percent. So we believe we're ready. We can meet the necessary requirements for volume in the marketplace. We could have met it for 2012, but we are in support of the 2014 if

that's the staff's recommendation.

Next slide please.

--o0o--

MR. RUSTAGI: In terms of the future technologies, this concept of keeping the heat out of the car is going to be just as relevant in the future as it is today. And less heat coming in means less heat has to be removed, which means less energy is going to be used.

Next slide please.

--o0o--

MR. RUSTAGI: One recent study that showed the impact of this reflective glazing -- I'm sorry.

Thank you.

CHAIRPERSON NICHOLS: Okay. Thank you.

BOARD MEMBER BERG: Madam Chair, I just had a quick question.

CHAIRPERSON NICHOLS: You had a quick question? Okay.

BOARD MEMBER BERG: Excuse me, sir.

Did you have an opportunity to test the radio frequencies with the TTS 40 percent -- at 40 percent?

MR. RUSTAGI: We did not test the radio frequencies. But the fundamental concept is the same. The signal does not travel through the coating itself. So whether you have a 50 TTS coating or a 40 TTS coating is

not really going to make any difference on the radio frequency signal.

BOARD MEMBER BERG: Thank you, sir.

MR. RUSTAGI: You're welcome.

CHAIRPERSON NICHOLS: Okay. Patricia Monahan and then Kristin Grenfell.

MS. MONAHAN: Good afternoon, Madam Chair and members of the Board. My name is Patricia Monahan. I'm the Deputy Director for Clean Vehicles at the Union of Concerned Scientists. And I'm here to discuss four points.

My first point is that we strongly support the CARB proposal. California is again in the vanguard on reducing vehicle pollution. And we think this is a no-brainer policy. It's a win for the environment, it's a win for the consumer, it helps in the comfort level of the passengers of the vehicle, and it reduces global warming pollution.

The second point I want to make is that the standard could be stronger. As you've heard, the side and back window standards are pretty much the status quo today. And we can go further than that.

The stronger standards for the side and the back windows don't just help in terms of reducing the load on the air conditioner, but they also provide additional

benefits in terms of crime prevention and safety in accidents.

The third point I want to make is that we agree with Honda, the Alliance for Automobile Manufacturers, and others that a performance standard would be preferable to a technology -- to a standard that requires a particular technology. In general, we think that it's better to go for performance standards that are more comprehensive and will allow for a variety of solutions in terms of better insulation, cool materials, ventilation systems, and how the actual cool air is directed on to the passengers of the vehicles. These are all potential strategies for reducing load on air conditioners, and we think in the future it would be better to have a performance-based standard.

So my fourth and last point, which is actually a recommendation, is that we have a technical review. And ideally this technical review would involve not just California but auto manufacturers that are currently using these technologies in vehicles, as well as U.S. EPA, to review whether stronger standards are possible for the side and back windows, what a performance standard could look like, and also to look at some of these questions about electronics control integration.

But I want to leave you with just our strong

support for the standard; our recommendation that we go and implement this standard; but as we move forward, we have some kind of technical review.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER D'ADAMO: I have a question.

CHAIRPERSON NICHOLS: Yeah, a question.

BOARD MEMBER D'ADAMO: What is your recommendation for the side and back windows?

MS. MONAHAN: Forty percent TTS.

BOARD MEMBER D'ADAMO: Thank you.

CHAIRPERSON NICHOLS: Okay. Thanks.

Kristin Grenfell and then Simon Mui.

MS. GRENFELL: Good afternoon. Kristin Grenfell from NRDC. My colleague Simon will have more detailed comments in a moment, so I'll be brief.

AB 32 required the Board to identify and implement early action measures to reduce greenhouse gas emissions because we needed to get started yesterday. 2020 is just over ten years away, and many of the measures will not be taking effect for several years. So the Cool Car standards are something we can do to get started now, and we need to move forward with it.

In addition, for anybody who has had the experience of coming to one of these Board meetings and

having to park on the top level of the parking garage in the sun and then coming back after the Board meeting and burning your hands on the steering wheel, this can save you that experience and make attending Board meetings that much more pleasant.

(Laughter.)

MS. GRENFELL: So we urge you to move forward.

CHAIRPERSON NICHOLS: That's worth a lot. We'll have to factor that in.

Simon.

MR. MUI: Thanks, Kristin.

Good afternoon, Chairwoman Nichols, members of the Board. Thank you for this opportunity to speak on behalf of NRDC. I'm Simon Mui and I'm a scientist working on clean vehicles and fuels.

I'd like to thank staff for their hard work pursuing this important area.

I looked up this statistic. It's staggering to think that a simple thing like using AC ends up consuming the equivalent of 10 percent of all our imported oil.

NRDC, together with eight other environmental- and health-based organizations, have provided a letter that supports ARB moving forward on a strong Cool Car standard that achieves the 40 percent all around.

Staff estimates that using air conditioning

roughly turns your 25 mpg car into a 21 mpg car, and tomorrow's 80 mile-per-gallon car into a 50 mile-per-gallon car. This is a problem. We've already seen this effect in today's hybrids, with engines that sip fuel which the AC and accessories gulp it down. This regulation will help address this problem by reducing the energy used by your vehicle, and it will help us save money at the pump.

And this makes sense. This is why the State identified cool cars as a discrete early action measure. If we can't figure this out and do the simple things to solve global climate change, then what does it say about meeting our shorter term and longer term 2050 goals?

We've heard from the suppliers. The auto makers and NGOs all testified today. Nearly all of us did agree that the purpose of this regulation makes sense. Now, the question is really how hard and how fast.

NRDC understands that some of the glass companies and auto makers may not be as far along as some of the others. But without the windshield at 40 percent TTS, all we're just talking about is the existing technology that's being used today. We're talking about the status quo.

There is no need to set the bar at the lowest common denominator and have a weakened standard, because there are ways to be reasonable and flexible in a

regulatory context that do not compromise on the environmental benefits. So how can we set the bar high and help everyone get there?

Well, there's three items that would help.

The first one is that we can expand the different compliance options to include other energy efficiency technologies, including the use of things like cool paints, better insulation, automatic ventilation. This would probably go a long way to resolving some auto makers who may be having issues.

The second recommendation is that ARB can move for the post-2014 timeframe towards more of a broader framework to address cabin energy efficiency through a performance-based approach. This would allow other technologies to come in and allow additional emission reductions to be achieved.

And, finally, a technical review can be included to assess the status and availability of current and new technologies so that we can decide whether the regulation could go harder and faster.

CHAIRPERSON NICHOLS: Thank you. Your time is up.

MR. MUI: Thank you very much for your time and consideration.

CHAIRPERSON NICHOLS: Okay. John Shears and then

Bill Magavern.

MR. SHEARS: Good afternoon, Chair Nichols and members of the Board. And for the sake of full disclosure, my grandmother owns NS Class and I'm a T Mobile user.

(Laughter.)

MR. SHEARS: CEERT supports the more stringent options in the proposed regulations for the Cool Car standards as an early action measure under AB 32. We feel that this standard is transparent and direct in its approach to reduce engine loading and associated global warming and air pollution by reducing the cab temperature of vehicles.

While CEERT generally supports regulations that employ performance standards, we think that the staff proposal is the best approach for addressing this issue at this time. That is not to say that we are unwilling to continue exploring issues with all of the parties as they relate to developing associated performance standards, so long as any standards that might be developed can avoid gaming and unnecessary ZEV-like entanglements with credit generation and tracking.

CEERT also supports the idea of conducting the technical review that's been referred to by many parties. And, you know, this obviously could have lots of spinoffs

in terms of discovering other applications such as for medium and heavy-duty vehicles.

We respectfully recommend that the Board adopt this regulation.

And I'll keep it brief because it's a long day.

CHAIRPERSON NICHOLS: Thank you.

Bill Magavern. And then our last witness will be Craig Moyer.

MR. MAGAVERN: Bill Magavern with Sierra Club California in support of the standards.

It's fitting that this is an early action measure today, because in the years before greenhouse effect became household words often the best way to explain it to people was to say, "You know how on a sunny day the inside of your car really heats up when the windows are closed?" And that's how the heat gets trapped. So it's great to see that now we're actually going to do something about that.

I think for the consumer what it will mean is the car won't be as hot on a sunny day, you'll save a little money on gasoline, and also your air conditioning won't need to be serviced as often. So this will be a plus for drivers in California.

It's too bad that the auto companies are opposing. But we know at one time they opposed seat

belts, airbags, catalytic converters, fuel economy standards, and greenhouse gas standards, as you're very familiar with.

So we've seen time and time again that it does require the government, often this Board, to get the auto companies to put the improved technologies on the vehicles. And then those improved technologies become basically status quo and very popular.

We do support the strengthening proposals that have been offered by NRDC and UCS, and also believe that in the future it would good idea to go further with measures to cool the insides of vehicles through better insulation, more reflective paints, and ultimately through a performance standard.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Moyer.

MR. MOYER: Good afternoon. I'm Craig Moyer with Manatt, Phelps & Phillips.

(Thereupon an overhead presentation was Presented as follows.)

MR. MOYER: I have very brief comments, really focused on the legal standard under AB 32.

CHAIRPERSON NICHOLS: And you're representing who here today?

MR. MOYER: Applied Materials.

CHAIRPERSON NICHOLS: Okay. Just want to make sure. Thanks.

MR. MOYER: First of all, we -- as you heard from Shane Smith, we're urging the 40 percent TTS for the entire car set.

Again, I'm going to focus on the legal standard. As you know, AB 32 requires the maximum feasible technology that's cost effective.

As far as maximum feasible technology, whether or not it's maximum, it's certainly feasible. It is available. It's out there in your lobby out here with this.

As far as cost effective, it's a negative cost. It actually pays out and the entire car set pays out. Staff has done a slide, which was up there a minute ago, and shows that there's actually a savings even when the entire car set has the application.

These are staff's numbers. Happy to, you know, defer to them. I actually believe they're quite conservative. But even if you again take those numbers, you'll see that there is a payout. So there's a net negative cost here. If we don't go all the way here, what's going to happen? What kind of precedent are we setting for when we actually do have real costs?

We've also talked a little bit about co-benefits. You've heard about co-benefits today. Clearly there are tremendous co-benefits to this rule, including less toxics, less criteria pollutants. All of these together confirm that this is an easy one.

I have no opinion on the timing. You've heard one of the suppliers say they could do it in 2012. You've heard another one say, "2014 is pushing it. We can do it." And I think you haven't heard anybody say they -- any of the suppliers say it can't be done.

So, again, I would urge your Board on this very important -- disproportionately important regulation to go all the way to the 40 percent for the entire car set.

Thank you very much.

BOARD MEMBER D'ADAMO: Question.

CHAIRPERSON NICHOLS: Question.

BOARD MEMBER D'ADAMO: Could we keep that chart up?

Maybe staff could comment, at what level of TTS on the different proposals?

DR. BEKKEN: All of the proposed glazing on this analysis was assuming a 40 percent TTS glazing. So the proposal is the windshield at 40 percent. Then the windshield's at 40 percent plus the front side lights and going on down to the bottom where all of the glazing was

at 40 percent around the sides. The roof light would still be at 30 percent.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: But the staff proposal, the top one would be 40 for the windows, 60 for everything else, 30 for the roof light.

And then the rest of them is what happens if you add in those other windows at 40 percent? So you can see that it becomes less cost effective. But Mr. Moyer's point was that it still saves money over the lifetime of the vehicle even if you made every window be the 40 percent number.

MR. MOYER: If I can respond on the concept of cost effective, which is also defined in AB 32. It requires that your Board evaluate cost effectiveness, as opposed to other measures, other Scoping Plan measures. Here your Scoping Plan is clearly going to have measures that have -- that do not have a net negative cost, that do not pay back. So compared to those measures, there's no question it's cost effective. Compared to virtually anything your Board does on a daily basis, it is -- it's a cost savings.

CHAIRPERSON NICHOLS: Thank you.

Are there any other issues relative to the windows, the front and back versus side issues, in terms of specifications that they have to meet or difficulties

of fitting them into the car or whatever, that caused you to make the decision to recommend the way you did without putting all the windows in?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes, there is. I mean we did use the idea of low-hanging fruit that so many people have talked about. And one of the things that distinguishes the windshield from everything else is the windshield uses the laminated glass, which you can coat the glass or coat the film. And you don't have to actually change physically the size of the window, the weight, how it mounts.

All the other glass pieces, there is at least some argument that there would be other engineering changes; for example, you would have to go from what you'd call a safety glass to a -- or single-sheet glass to laminated. And then that could be thicker. That means that you have to sometimes change the window mechanisms because the glass might weigh more. Things like that, that seemed like it was another extra step that perhaps would have delayed things and made it more difficult. And these -- together they were worth 50 percent of the heating, but individually they were much less important than the windshield. So that was kind of our logic.

CHAIRPERSON NICHOLS: So it's really based on, in terms of these discrete early action measures, things that

you felt legitimately could be done fast?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right. Although this one's not in the discrete category, it's in the --

CHAIRPERSON NICHOLS: Well, it's just early action.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE:

-- early category. But still we'd basically -- we're pretty close to that schedule. So, yeah. I mean we didn't want to spend three or four years evaluating all of this to the great nth detail and sort of passing up the opportunity to do what was relatively straightforward at least in the staff's view.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Yeah, per staff.

CHAIRPERSON NICHOLS: Okay. Thank you.

All right. That concludes the list of witnesses.

We've also, I'm sure, received all kinds of communications by mail and Email. And we'll put all of our ex partes into the record before we vote on this.

But we've heard a lot of suggestions of various kinds for tweaking this rule in one direction or another, but essentially no opposition to the idea that we should be moving forward and that we can move forward constructively to lower the temperature inside of the

vehicle and reduce air conditioning load with a relatively straightforward technology.

So having said that, I think my preference procedurally would be to put the staff proposal on the table as our working template here. And then if people want to make recommendations for additions, changes or whatever, work off of that.

So could I have a motion to --

BOARD MEMBER SPERLING: So moved.

CHAIRPERSON NICHOLS: All right. A second?

BOARD MEMBER BERG: Second.

CHAIRPERSON NICHOLS: Second. Okay, good.

So now we can move into discussion, which could include more questions for the staff if people have them, I guess.

And we'll start with Ms. D'Adamo, who looks like she's ready.

BOARD MEMBER D'ADAMO: Well, I'm interested in expanding beyond -- first of all, if we could get that chart up. And maybe staff has its own version or an improved version that would include additional information.

But I'm interested in going beyond --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: This is Mr. Moyer's --

BOARD MEMBER D'ADAMO: The last witness.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yeah, those are our numbers.

BOARD MEMBER D'ADAMO: Those are your numbers?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.

BOARD MEMBER D'ADAMO: Okay. But it may not provide all the information that we need as far as the different levels of TTS, as you pointed out, Mr. Cackette. And so I'm interested in doing more on the side and back windows. But I don't feel confident enough to say, you know, at what point. Right now the current proposal is at 60 percent TTS. It sounds like a lot of the environmental advocates are pushing for 40.

The concern that I have is that I do think that there probably needs to be some additional time if we were to provide for some additional requirements for side and back windows, in light of what said as far as thickness of the glass and all that.

So I don't have a specific proposal. I'm curious to hear if other Board members are even inclined in going this direction. But it would be something along the lines of in later years, beyond 2012, perhaps 2014. And I'd be open to suggestions on the TTS amount.

And the question that I have for staff, if you could comment or maybe help guide this discussion, is

there a difference on the safety issue and engineering and thickness of the glass between 40 and 50 TTS? Or at that -- once we go that point you have to reengineer anyway?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: No, when you go from 60 to 50, I think that probably dictates the switch from tempered glass, single layer glass to laminated glass. They're both safe.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: So then you can go to 40 if you want.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: And if you go -- then the question was, if you go to 40, well, that's just -- as one person testified, that's just a different coating or multiple coatings on the windows. So you'd still have laminated glass with a different coating process.

BOARD MEMBER D'ADAMO: Okay.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: I think part of it also is --

BOARD MEMBER BERG: Is there a weight --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Oh, I'm sorry.

We really were thinking first step in all of this, because it -- in other words the windshield was already laminated, the side glass was already tempered.

And we were sort of saying, what's the maximum you can do quickly on both of those parts of the car to kind of get things going? And I think we saw on the side glass that it's not quite as easy to do it. It's still we believe fairly easy to change from tempered to laminated glass. Laminated glass is stronger and quieter, but it costs more. So we felt like the first step was to -- was that, and then keep it moving.

BOARD MEMBER D'ADAMO: I absolutely agree. And that's why I want to give more time.

What I want to try and avoid is having to go through, you know, recalendaring and then -- you know, we hear the same thing from the auto makers that, you know, they've already got their model year in design and, you know, they won't be able to meet it. So I would just like to throw out there for discussion, and then just hear from other Board members, see if others are interested.

And then I imagine others are interested - I know Dr. Sperling is - on the performance standard. I think that we ought to look at a comprehensive performance standard at some point.

CHAIRPERSON NICHOLS: Okay. Actually I had Ms. Kennard next, then Ms. Berg.

BOARD MEMBER KENNARD: Thank you.

I'd like to take us back at least to the

threshold question as to whether or not -- before we get into the details of whether we're going far enough, whether this is the right way to go in the first instance. I think in the first -- I mean I don't think there's any question that this is a no-brainer that we should be doing it. The question I have is whether we are being too prescriptive to the industry and whether we should say, "This is the performance standards in which we're anticipating. And you get there in a method that makes best sense to you." And I was kind of struck by even the Union of Concerned Scientists suggests that that might be a more appropriate strategy in this case. So I'd like to kind of hear from staff on --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Can I jump in for a second, because I feel really strongly about this one?

I think that the -- and then you can -- we considered the staff proposal to be a performance standard on the glass. So essentially what -- in other words there is a test procedure already. There's no doubt technically that lower transmission of heat through glass will cool the interior. And there's no doubt that that will help in terms of AC load and customer comfort and timing of AC.

And we felt that the most - again thinking early action - the most appropriate way to do that was, like I

believe the architectural industry probably does, just set a spec on the glass that dictates what performance it has to meet as a function of time.

And our concern about it in terms of a broader performance spec -- I think we all agree that there are other approaches to it. We're concerned that if you jump too fast into it, we're risking gaming in the sense of having a poorly designed procedure or too much time to develop it, which then sidelines the whole thing.

So I guess we would suggest if you want us to do performance standard, to maybe push it off a little bit and make sure that it's not on the same fast track as the proposal that we have here today.

CHAIRPERSON NICHOLS: Well, I think that it's always more attractive given the history of this Board to think in terms of a performance standard that allows multiple pathways. And although in theory there could be other pathways, as a practical matter I think we know that there is not a lot of technologies that will achieve the results as far as windshields are concerned.

So in that sense, it seems appealing to go with a broader approach. But I didn't hear anybody suggesting a way to do that right now, today. I think the goal would be to get to such an approach as we're phasing in other technologies that are going to get to our overall

greenhouse gas standards. We know that there are going to be changes in the air conditioners in the vehicles as part of both the State and now federal greenhouse gas emissions standards. So we know there's going to be redesigning going on in that realm.

I think moving towards a greenhouse -- a comprehensive greenhouse gas base standard for the cab or the inside of the vehicle would make a lot of sense. But I would not be in favor of deferring action today or delegating it to staff to try to figure that out, because I think it's probably -- that would probably not get us where we need to go. It would just delay any kind of a response to this.

I do think that there's probably a way that we could send the signal that the next time we revisit the Pavley standards, for example, that this might be part of what we would be considering as well. We know we're going to be looking at those soon and that our current standards are going to have to be replaced for the 2016 -- for the 2016 model year vehicles. So that's not far off from the time period that we're talking about in this rule or that people are suggesting. Even those who wanted more time were suggesting 2016 as the year that they'd be willing to go to all 40 percent TTS.

So there's some room in there I think for some

progress.

Yes, Mr. Roberts.

BOARD MEMBER ROBERTS: I didn't know if Dan was first. But I definitely want to make comments here.

CHAIRPERSON NICHOLS: Okay.

BOARD MEMBER ROBERTS: Who's next?

CHAIRPERSON NICHOLS: I thought you --

BOARD MEMBER BERG: You're next.

BOARD MEMBER ROBERTS: Okay. Maybe it's the architect side of me, but I think we're going way in the wrong direction. And I think the standards would have been very easy to develop.

I think -- when I first heard about it, it was because of the controversy of color paint. And it was clear to me we were going the wrong direction then. And what we've done is we've folded that out of it because we didn't know how to deal with it. What we should have done is dealt with the envelope.

Air conditioning in a car is a different thing than an air conditioning in a building. Okay, air conditioning in a building you try to get the air temperature to a -- so you can move around the building. Air conditioning in a car, it's different. You want the air blowing in your face. And that's why you do it. The temperature in a car might be a lot higher. But you get a

sense of comfort out of the fact that the way the air conditioning is used. That's why I have some very strong doubts that the changes that you're suggesting are going to result in the air conditioning load being decreased to the extent you're talking about. I don't have a confidence in that.

But having said that, it seems to me that, you know, the only thing you care about is sort of the cab. And you could take the horizontal area there, and it's made up of solid parts and glass parts and, you know, one's a windshield and this -- I don't care what -- you know, there are side windows. You could have a standard so the automotive manufacturers could give you designs based on your overall standard. And we wouldn't care what kind of glass they're using or what color paint they're into or anything else. You could achieve everything in the same way we did with buildings. Nobody told you you had to use this glass or that glass.

You know, I think from the start you've broken this into components and you've come up with a prescriptive. You're not into a performance; you're into a prescriptive standard. And you're going to end up telling people, "This is the way you've got to do it." And I think there are far greater choices, you'll have far fewer problems than I see coming with this. And I think

those standards could be developed in a reasonably short period of time.

You know, we're talking about greenhouse gas. Okay. All of a sudden we're going to -- this is not going to solve the problem of greenhouse gas overnight. I think it is more incumbent upon us to have a long-term solution that makes sense. And I think this is out of sync with the way we've done things in the past. And I honestly think that if manufacturers want to deal with the whole envelope as a designer, there's other -- there's things you can do. It's not just the glass. But there's things you can do to the roof. There's things that you could do to the side windows. There's design solutions for the rear windows. You're right to be asking those questions because they should all be included in. But the sum -- it's the sum total of all that and the way it works as a system, not as a series of pieces. And we're prescribing a series of pieces. To pick out a windshield is just -- I think is a nonsensical approach to solving the bigger problem here. And it's -- I can tell you as an architect, it just --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: I'm not sure I disagree with you completely. I think the problem is the level --

BOARD MEMBER ROBERTS: Well, I said I disagree

with you completely.

(Laughter.)

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: But it's the level. In other words if you're going to do the envelope, then you have to have a level that specifies the whole envelope. And recognizing that, you would get probably more than you would get just from glass, if you went glass and ventilation and color in the roof and insulation and all that. So you'd have to start looking at the entire envelope in terms of its capability as well.

BOARD MEMBER ROBERTS: Well, the entire envelope is your roof and your window. I mean that's -- it isn't -- you know, I don't think the doors and the -- with your hood color and all that make -- you know, insulation.

Here you've got -- you know, if you look at the horizontal area, that's your cab. Whether it's an SUV or it's a two-door sedan, you've got a certain horizontal area that you could say, "Here, we're going to have a standard and you've got so much heat gain per square foot of that area. Now, you go out" -- you know, "go out and figure it out." We've got a lot of competent engineers. And to get into specifying what the windshield, the color and reflectivity and everything else in a windshield I think is -- we're off on a mission here that I think missed the mark. And I think it's an easy one to correct.

CHAIRPERSON NICHOLS: Okay. I'm going to call on Dan Sperling.

BOARD MEMBER SPERLING: I sympathize with the spirit of what Supervisor Roberts said. Let me try to cast it a little larger. And, that is, you know, what I -- I talked to many engineers from the various supply companies and car companies. And what impressed me is how many ideas there are, how many techno -- so it's how many technologies are available, how many different ways of designing the cabin. I mean the idea of, you know, the cool paints can be brought in here. There's so many ways -- it struck me there's so many ways of improving the efficiency and therefore reducing the greenhouse gases. And that in fact what it made me think is that the kind of reductions we're talking about for 2016, we can probably even do much better than that, not in 2016, but not so far after that.

And so that's what makes me, you know, very sympathetic to this idea, even advocative of this idea of really trying to figure out how to use performance standards as the main mechanism here. And it's partly because it stimulates innovation in a much broader way than just having a specific standard for the glass.

But it's also because what we do here, we want -- we're not doing it just for California in 2016. You know,

we're doing this for the U.S. and for the world. And so, you know, we're going to make a much better contribution, much bigger contribution if we do figure out how to come up with a policy mechanism that can be adopted elsewhere and would be adopted elsewhere.

So I think that we -- I think everyone -- you know, almost everyone here agrees that eventually we should go to a performance standard, a broad performance standard, you know. And so, yeah, there is a distinction. There's a performance standard for the glass, there's a performance standard for the cabin. And even, you know, it should include the air conditioner, because what I've also learned is there are different kinds of air conditioners that -- some of them, like in the Prius, has a variable speed, variable capacity, that actually is quite a bit more efficient than the standard air conditioners. And so there's all this kinds of innovation.

So my first suggestion would be what Chairman Nichols said, is take her kind of vague suggestion about really creating a performance standard for Pavley 2 and make it more than just a vague suggestion, but that it be the, you know, the resolution of the Board or -- I'm not sure of the exact language of it, but it be the intent of the Board that we roll into Pavley 2 a robust performance

standard, you know, for off-cycle, for everything in the cabin that links together the air conditioner and the load on the air conditioner.

So then the question becomes, what do we do until then? And I mean I -- I'm nervous about this reflective technology. Now, we're not, you know, engineer -- we're not the automotive engineers here. We're not designing the cars. And when so many people say there might be problems with, you know, all of the radio waves and, you know, everything from garage door openers to tire sensors, you know, ABS sensors, you know, and so on, it makes me reluctant to mandate a technology that creates that kind of problem.

So I would suggest -- you know, I'm not going to come up with the precise suggestion quite yet. But I think a slight delay is probably in order. You know, 2012 is very soon. I mean I think the analysis to me suggested that at least if you have good solar absorption technology across -- you know, around all the windows, you get some, you know, pretty substantial improvements. And then the question becomes, you know, how do you go beyond that.

So, you know, the TTS seems -- you know, 60 percent, 55 percent seems to be what I keep hearing about.

CHAIRPERSON NICHOLS: But Tier 1 was only 50 percent, the 2012 number, which is what I think a number

of even the OEMs said was doable. Not all of them. But the first part of this thing is kind of -- I'm sorry. You finish your proposal and then I'll -- we'll move on.

(Laughter.)

BOARD MEMBER SPERLING: Well, we should -- that's enough. I mean actually, you know, one way to deal with that might be to say -- instead of saying every vehicle has to meet that 50 percent number, that there maybe be the average for the fleet of that company has to meet whatever number that might be, whether it's 55 percent or 50 percent that -- you know. And that's kind of the intent here with the 75 percent with the phase-in period. And, you know, maybe we can -- I'm not convinced what that number should be. But it's the reflective tech -- I think the real problem here is this reflective technology, that there seems to be serious questions about it that creates potential problems. And if we can figure out some way to provide more flexibility in moving to these advanced technologies and -- so to me that means the alternative -- you know, I come back to this alternative compliance pathway. And, you know, some of the companies said they could do it in six -- you know, they could put together a test procedure in six months. You know, I'm, you know -- Mr. Cackette's shaking his head, and I'm skeptical as well. But, you know, maybe in a year that -- and you put

the burden on them as an industry. Because if they're going to use an alternative compliance method, it's their interest to come up with a test that they can agree on.

So I guess that would be my suggestion, is a full-blown thing for Pavley 2, an alternative compliance path with a performance standard before then. We can argue on an exact number that that -- whether we want to defer the numbers a little bit. And it doesn't have to be -- that test shouldn't be the one that's going to go into Pavley 2. It might be a simpler test and a less robust test.

But I rambled a long time.

CHAIRPERSON NICHOLS: Ms. Berg.

BOARD MEMBER BERG: I am also in agreement with the performance standard for the later years. And also hopefully that performance standard would allow us to have even a stronger result.

I also would like to see for 2012, if it's possible, if we were to throw in an alternative of the solar absorption glass at 55 percent, but require all cars within the U.S., would we get our numbers? So in other words, manufacturers could have a choice of doing 50 percent TTS or the reflective glass in California only and -- or the solar absorption glass at 55 percent, which I understand is doable in absorption glass, which my

understanding would eliminate the radio frequency issue; but nationwide, in order to make up for the going 55 percent instead of 50. And then wouldn't we have our greenhouse gas emissions -- since it's a global issue, wouldn't we take care of the intent?

CHAIRPERSON NICHOLS: So a compliance option that the manufacturer could show that every car that they sold in the U.S. met the 55 level versus the 50 percent for California --

BOARD MEMBER BERG: And it would be absorption.

CHAIRPERSON NICHOLS: -- just to understand.

Well, it doesn't -- you're not going to specify how they do it.

BOARD MEMBER BERG: No, not -- but you're right, 55 percent would include the absorption technology.

CHAIRPERSON NICHOLS: It could. It could.

BOARD MEMBER BERG: So I guess I'm looking at staff to see if --

CHAIRPERSON NICHOLS: That's a question.

BOARD MEMBER BERG: -- if my assumption --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: I wasn't sure whether I wanted to jump in the middle of this.

BOARD MEMBER BERG: -- if my assumption -- sorry -- if the assumption of doing nationwide versus

California, does that have any merit to it?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I don't think we know for sure whether manufacturers at any one standard are going to make one windshield for the nation or make two, one for California and one for the rest of the nation. They've alluded to us that that's what they would do if the standard's too tough or if the timing is not good enough.

So I think there's probably, you know, less chance of them making a California-only one in Tier 1 than 2. But the exception of that would probably be the Japanese manufacturers who seem to be wedded to the absorption technology. And so they might be the ones that would clearly take, you know, take advantage of that.

You know, I think if we knew that they were only going to do it in California, unless we provided this option, then it would be a good deal. The question is of course we don't know if they wouldn't have done it nationally to some degree anyway. So I can't give you a precise number or tell you whether 55 nationwide would truly provide the same benefits, more benefits, or less benefits, cause we just don't know what they're going to do. But --

BOARD MEMBER BERG: I understand that. But we do --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: -- the direction, yeah, it makes sense.

BOARD MEMBER BERG: -- we do -- we do calculations though and we have an emissions calculation -- is my assumption correct, that our emissions calculation is based on the number of California cars?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yeah, our basis would be just California alone, yeah.

BOARD MEMBER BERG: So in trying to protect the emissions savings by giving an alternative compliance option of 55 percent, but then the manufacturer would agree that it was nationwide, has a potential of protecting our emissions savings?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yeah, the calculation would be more tons, yes.

CHAIRPERSON NICHOLS: You know, I -- Okay. I'm going to jump in here now and give my views on this issue.

I don't hear anything that gives me the least bit of qualm whatsoever about Phase 1 of this rule. The only companies that we have heard from who have concerns about it are the Japanese manufacturers who just haven't looked at it and want more time to study it. And I get that they want more time to study it but they don't have to do everything right away. So I don't see it as that big a

deal.

The glass is out there. It's being used. I think this radio frequency issue is a total red herring. I think you guys are being distracted by spaghetti that's being thrown at every wall around us, because there's no evidence that they can't put the stuff into the car and then, you know, figure out a way to use all the radio frequency stuff that everybody wants in their cars and that customers are going to insist on having.

They didn't start out with this stuff on their low-end cars. They started out with it on their highest-end cars where people use the most electronic gizmos. You know, I admit I'm not an electronic gizmo person. I don't have a garage door opener because I don't have a garage. But, you know --

(Laughter.)

CHAIRPERSON NICHOLS: -- it doesn't -- I certainly use my cell phone enough, you know. I just don't think they're going to sell cars that people can't use their cell phones in.

So I'm concerned about, you know, what we heard of the ability of glass manufacturers potentially to supply all the glass that's needed. Because my view about AB 32 is this is not just another car regulation. We're supposed to be in the business of helping to transform

technologies and bring about opportunities for people who make products that are going to be helpful in leading the transformation towards a more energy efficient world. And that includes reflective glass. And we have companies here, including California companies, saying, you know, "We're going to be making glass and, you know, we're going to be helping to save the world by doing it." And I think that's a very good thing, that we would be -- that we would be allowing that to happen.

Yes, Dr. Balmes.

BOARD MEMBER BALMES: Well, I want to make a philosophical comment rather than weigh in on the specifics here.

I feel much more comfortable with performance-based standards where there are alternatives available, because I just think we get into trouble when we try to be too prescriptive about any one specific technology. I understand the staff argument and I'm not at this point saying I'm against certainly meeting the Tier 1 requirement that Chairman Nichols just mentioned. I think it probably is achievable. But I'm very much in favor in general - sort of announcing that for the future, because I think this is going to come up multiple times - that to me flexibility for industry to achieve -- I'd still want to achieve the same ends, but I would like to

have flexibility for industry. I think it makes the most sense, especially in tough economic times. And it probably spurs innovation as well.

CHAIRPERSON NICHOLS: I think that would get unanimous support from the Board.

BOARD MEMBER BALMES: Well, but I think we forget about that a lot of times.

CHAIRPERSON NICHOLS: I think the staff was honest in saying they're looking at the windows and coming up with a performance standard for windows. Maybe that was too narrow an item.

BOARD MEMBER BALMES: That's --

CHAIRPERSON NICHOLS: But it's not a -- but it is a -- they did not specify a technology that the windows had to be.

BOARD MEMBER BALMES: I guess I would be in favor of a broader approach as Supervisor --

CHAIRPERSON NICHOLS: The broader the better to achieve the goal. I agree with that.

BOARD MEMBER SPERLING: Chairman Nichols?

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Part of that is because of the early action that we were trying to do. I mean if we'd had another year or two to work on it, I think we could have pursued a performance standard. I think it's just, you know --

CHAIRPERSON NICHOLS: Well, and the other --

BOARD MEMBER BALMES: And I realize that it is an issue in terms of the speed with which we're trying to move.

CHAIRPERSON NICHOLS: Yeah. And this isn't speed just because we happen to feel like it. It's speed because, you know, every ton that's going out into the atmosphere today is going to stay there for a long, long time.

BOARD MEMBER D'ADAMO: Well, we're required to under AB 32 to adopt early action. I mean obviously we have to have analyze it, but we do have a mandate.

BOARD MEMBER SPERLING: But a couple little clarifications here. First of all, you know, this reflective technology -- you know, the idea of innovation and technology leading, the reflective technology is not this fabulous new technology. It's been known for awhile, and at least two different suppliers said this is not rocket science. They haven't done it very much. But that doesn't mean it's -- none of them said this is hard to do it. It'll take time, you know, to actually do it.

So if we're talking about innovation, and if we're talking about large reductions, having that option at least for a broader performance approach or alternative approaches to do it is likely to stimulate much more

innovation that's going to have a much larger impact in the medium term and the long term and maybe even the near term. So I would think under any circumstance we need -- we should have in this a means for companies to pursue these other innovations and an incentive to do that. Because this reflective technology is not the be-all and end-all and it's not, as I was told, rocket science. So I just want to make sure that we do have that built into whatever we do here.

CHAIRPERSON NICHOLS: I don't hear anybody saying that there's innovations in terms of technology that they were planning on using if they didn't have to use better glass. I heard them saying they might redesign the interior, so they dealt with the air flow differently. I mean I'll grant you that this isn't brand new technology. But then very little that's coming about as a result of having to put a price on carbon or think about carbon right now is brand new technology either. A lot of it's stuff like electric cars, that were around, you know, many years ago but are only now becoming attractive again because of people caring about carbon. So I'm not going to give up on that argument. It's a matter of bringing to the fore good technologies that will actually help but that were deemed too expensive to use before people began to care about greenhouse gas emissions.

Yes.

BOARD MEMBER YEAGER: I need just further clarification on the Tier 2 timeline. I know we've heard a variety of opinions, even from some Board members, on whether that is something that can be reached. I know with the further discussion that we've had, if you have a reaction as far as whether the industry is going to be ready for that 2014 timeline.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I guess on the testimony that suggests that it would. And this is brought largely what we based our recommendation on, was that two, and now I understand it's three, glass manufacturers say they have the technology. And two of them you heard testify today saying they can ramp up production, they have production in many countries, that the amount of glass that's needed is small compared to the total amount of glass they produce with this technology. So they're saying they can do it.

And then we had one car company who didn't testify to it but it's in the record here that basically said 2014 for the 40 percent -- a hundred percent compliance of the 40 percent standard was fine. That was Ford. So I guess that gives you, you know, some balancing sense that some people think it's doable. And then of course on the other side there was a lot of testimony

saying, "Give us more time."

CHAIRPERSON NICHOLS: Others wanted 2016, I think. And there was one 2015 in the bunch.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right.

BOARD MEMBER YEAGER: Yeah, it was just the question of, I mean, particularly from Mitsubishi saying that their 2013 model year are already in final design. Which of course these open 2014. But I just -- I assumed you had looked at all of this. But it --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.

BOARD MEMBER YEAGER: -- I just wanted to make sure as far as what we were talking about was going to be practical enough that the car industry could actually incorporate it into their 2014 design. But it just sounds like --

CHAIRPERSON NICHOLS:

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We think so. But it's a --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS:

Forty percent of the cars today have it.

BOARD MEMBER YEAGER: Thank you.

CHAIRPERSON NICHOLS: Forty percent of the cars today?

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS:

Forty percent of the cars today have solar

absorbing technology.

CHAIRPERSON NICHOLS: Have the absorbing technology.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Which is most of the requirement.

BOARD MEMBER D'ADAMO: At what percent of TTS --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We were talking about 40 percent of -- the 40 percent TTS I think, right? So that's not on cars today.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Yeah, the 40 percent TTS is -- or the 60 percent TTS is on cars right now; 40 percent of them have it. And then the 50 percent is the new requirement, but it's being done to an existing piece, which is --

BOARD MEMBER YEAGER: If you could repeat it, and maybe talk a little louder.

CHAIRPERSON NICHOLS: Say it louder and slower please.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: I get excited about this.

Forty percent of the cars today have 60 percent glass on them already, roughly. And that is the staff proposal for 2012 -- 13? -- 12. This is the glass except the windshield.

The windshield currently -- I'm not sure what the

level is, frankly. But it's -- yeah, it's probably the same. But we would require them to change the technology on the windshield in both tiers, first and second tier. And I think that's what's caused all of the excitement, because they would be going from a coating which is non-metallic to a metallic coating in the windshield.

CHAIRPERSON NICHOLS: All right.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: But the answer is that most of it's done.

CHAIRPERSON NICHOLS: Okay.

Yes.

BOARD MEMBER TELLES: All right. You know, I drive a Mercury Mariner hybrid in the San Joaquin Valley, which is pretty hot. And if I turn the air conditioner on, I get 27 miles per gallon; and if I turn it off, I get 34.8. So it makes a big difference if you run the air-conditioner or not. I understand that. But if our true goal is to reduce greenhouse gases, I think the most important thing we can do is to write a regulation that, as Ms. Berg is suggesting, that is not just used in California but is used throughout the United States. And if we have something that is too prescriptive or whatever, that is not being -- that cannot be incorporated in the rest of the United States, then we -- then we haven't really accomplished our goal. We've just kind of put a

little bit of water in the bucket but didn't fill the bucket.

And, you know, if the cell phone really doesn't work and we don't -- you know, some people says it does, some people says it doesn't in a car that it has this 40 percent glass -- I think we should make sure that it does or does not and have our engineers speak with their engineers and make sure that this is a technology that really does something, especially coming from a -- I'm a cardiologist. And, you know, 70 percent of my patients come to the hospital in an ambulance which was picked up -- which has a GPS device to find the patient. And I don't know if they scared Mary, but they scared me a little bit, that I would want to make sure that those devices work and that they're not so expensive in a redesigned vehicle that they're cut out or whatever, that I think we have to do a little bit more homework on some of these issues.

CHAIRPERSON NICHOLS: Staff want to respond?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I mean we've met with those who are the skeptics and those who believe it's doable. And I think the only issue that we're really hearing from the skeptics on whether this is going to work or not has to do with how much time for them to absolutely verify that it works okay for their vehicle,

that there isn't any, you know, risk at all that there's some loss in cell phone or that the GPS won't work if it's put in a certain place or whatever. And the skepticism comes from -- principally from the Japanese manufacturers who just don't have any experience with the coated glass. They use the absorbing glass.

But if you look at people who do have experience with it, both the glass manufacturers, Europeans, they're not troubled by this. I mean Mercedes gave us comments. And the only thing that they asked for was there like one more year to do the phase-in. So I mean they've done it. They are not worried about this.

Ford apparently is not worried about it. I have to believe that Ford worries about the electronics in their cars and whether it will work or not.

So I think you've got -- you know, it's a matter of what you know and what the risk is. And that's what's causing this spread in the viewpoint here.

BOARD MEMBER TELLES: I hear what you're saying. But, you know, a company like Garmin comes here - and they're probably one of the biggest producers of GPS devices - and said they just heard about it yesterday and they don't know if it will work or not.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: That's just not true. I mean they may have just heard about the

meeting here --

BOARD MEMBER TELLES: Well, I don't think you can question their veracity.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, what I can question is that if you pick up the instruction manual for their Garmin GPS system, it tells you -- inside there it says on some cars they have reflective windows and you might need to put an external antenna, "which we'll give to you," to go on the out -- somewhere else on the car, a spot where it could go through the window or on the external side. They all say that. So they already know they've got this problem, because vehicles use this technology now. And so they've got a solution in place.

And the lasering out of the, you know, we'll call, the masking areas where you would not have the reflective mirroring on this is another way that you can -- you can decide where you're going to put these devices. You know, like an instruction manual for a Garmin would say put it in the middle of windshield or put it on the left -- right side of the windshield because that's where the deletion area is, and then it would work. And so --

CHAIRPERSON NICHOLS: Can I just -- bringing us back to where we are today in June of 2009. We're talking about a rule that's supposed to begin to take effect for

the 2012 model year vehicles. And I have not heard much, other than philosophical dislike for addressing this issue at all, to suggest that we can't do it in 2012. But we can't do it in 2012. You don't want to do a glass rule. You want to do an alternative kind of rule.

BOARD MEMBER ROBERTS: I was going to offer a suggestion to --

CHAIRPERSON NICHOLS: Oh, okay. I'm sorry.

BOARD MEMBER ROBERTS: I've been trying to get your attention, but it's been difficult.

CHAIRPERSON NICHOLS: No, no. I was looking in the wrong direction. I apologize.

BOARD MEMBER ROBERTS: There's a group of us down here.

(Laughter.)

CHAIRPERSON NICHOLS: I know there are. There are several of you. You're the left-hand side though. And I'm left handed, so I naturally turn towards the right.

BOARD MEMBER ROBERTS: Okay.

CHAIRPERSON NICHOLS: I will --

(Laughter.)

CHAIRPERSON NICHOLS: I was going to actually offer a suggestion, but I'll defer to you.

BOARD MEMBER ROBERTS: Can I try something?

CHAIRPERSON NICHOLS: Go ahead.

BOARD MEMBER ROBERTS: Because, you know, I really do think we got -- I think we got off on the wrong track here, and I think its evidenced by the withdrawal of the paint. And it's not just the paint. The paint covers the solid parts of the car, and the solid parts of the car transmit some degree of heat also, which has been recognized. But I still think that -- you know, it may be that you can go ahead with a first step with instructions to staff to come back here with an alternate performance standard that we can put into effect. A performance standard wouldn't have taken any longer than what this has taken. I'm comfortable if I had a small team of engineers, we could put this together for you very quickly. And I think the benefits are going to be a lot -- or significantly better, and I think it's going to ease the staff's workload in the future.

There's a lot of things that are happening to cars. And I think to have the ability to be able to look at the envelope, as opposed to look at the pieces, is a far more practical way. I've noticed there's probably 10 percent of the cars in San Diego they're driving around where people have paid probably 3, $400 to have a film put in there windows, you know.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS:

Supervisor, I agree with you in terms of our --

CHAIRPERSON NICHOLS: Well, excuse me. This isn't a debate. Okay? I'm sorry. This is the Board time.

BOARD MEMBER ROBERTS: Well, if he wants to say he agrees, I'll let him.

(Laughter.)

CHAIRPERSON NICHOLS: Well, I'm beginning to feel like we're having group therapy here --

(Laughter.)

CHAIRPERSON NICHOLS: -- rather than a board dealing with a regulation.

BOARD MEMBER ROBERTS: No, but I -- you know, if we're in agreement, that's -- that's what I'd like to see us do, rather than go down a prescriptive-only path.

CHAIRPERSON NICHOLS: I think that's a good suggestion. And I don't hear the staff disagreeing that that's the approach that they would like to take. I agree with you.

BOARD MEMBER BERG: So could I suggest that we amend the motion to move forward with the 2012 staff proposal, but to grant an additional year for phase-in, and that way giving the car companies three years instead of the two years, with 25 percent in 2012, 50 percent in 2013, and a hundred percent by the 2014? And that way it

gives them the opportunity to do the testing, to get things out on the road. And then for staff to come back to us in a year, that they're going to tell us right here pretty quickly, for a technology review and a performance standard to go forward rather than the Phase 2 of 2014.

CHAIRPERSON NICHOLS: I want to make sure I'm understanding you.

So the 50 percent TTS under your proposal --

BOARD MEMBER BERG: Correct, as staff --

CHAIRPERSON NICHOLS: -- would phase in --

BOARD MEMBER BERG: Correct.

CHAIRPERSON NICHOLS: -- beginning in 2012?

BOARD MEMBER BERG: Correct.

CHAIRPERSON NICHOLS: And it would be carried through to 2014 but ramping up?

BOARD MEMBER BERG: Correct.

CHAIRPERSON NICHOLS: Okay. And we would not go beyond that level until we had heard back from staff about a performance-based approach --

BOARD MEMBER BERG: Correct.

CHAIRPERSON NICHOLS: -- to dealing with the greenhouse gas emissions?

BOARD MEMBER BERG: Correct.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: So to be clear, there would not be a 40 percent TTS standard

then as part of this motion?

CHAIRPERSON NICHOLS: So the 40 percent TTS never gets adopted, or you'd adopt it as a default but ask for the --

BOARD MEMBER BERG: Adopt it as a default.

CHAIRPERSON NICHOLS: The equivalent thereof --

BOARD MEMBER BERG: The equivalent of their --

CHAIRPERSON NICHOLS: The equivalent of a 40 percent. But 40 percent for all the glass equivalent or 40 percent only for the windshield equivalent?

BOARD MEMBER D'ADAMO: Well, you know where I'm on that.

CHAIRPERSON NICHOLS: Yeah. And I'm with you on that too. I think it should be for the whole thing.

BOARD MEMBER D'ADAMO: I mean the challenge with the rest of the car --

CHAIRPERSON NICHOLS: -- yeah, is it's a performance standard.

BOARD MEMBER D'ADAMO: -- is that we need more time, and we here we are getting more time in order to provide --

CHAIRPERSON NICHOLS: Right.

Okay. I'm now going to look down at this end so I'm not guilty of ignoring my colleagues here.

So, Ms. Kennard.

BOARD MEMBER KENNARD: I'm comfortable, I guess. I mean I'm still at the 50,000 square foot level, which is we care about the temperature of the inside of the car and that we ought to be able to find -- let the industry figure out how to reduce that temperature to some kind of standard, whatever -- well, what it is is -- for TTS.

But I will go along with my colleagues to the 2012 provided that beyond that it is a true performance standard, it is not just about the glass, that there could be other mechanisms to allow the industry to meet that standard.

CHAIRPERSON NICHOLS: I think that's what the proposal that Ms. Berg is putting forth is, that the staff would have to develop an alternative proposal that would get the equivalent result in a true performance standard, and then let the industry choose what their method would be for meeting it. But that standard would be -- would be in effect beginning in the 2014 model year under her proposal. So --

BOARD MEMBER KENNARD: In other words not restricted to the glass --

CHAIRPERSON NICHOLS: Correct. No, the glass is -- we're just using the glass as the surrogate, as the measurement technique, I believe.

BOARD MEMBER D'ADAMO: I want to make sure I

understand. Performance standard as an alternative compliance path.

CHAIRPERSON NICHOLS: Well, yes, or -- cause either way you could get it through doing the --

BOARD MEMBER D'ADAMO: Right.

CHAIRPERSON NICHOLS: -- if you wanted to. At least that's the goal.

All right. Further thoughts, suggestions, amendments?

Does this fit with your thinking?

BOARD MEMBER ROBERTS: It does.

CHAIRPERSON NICHOLS: Is it close to where you are?

BOARD MEMBER ROBERTS: I think we might find a time that the performance -- you may want to just allow that to replace what you have, because I honestly think you can do better than you're doing --

CHAIRPERSON NICHOLS: Right, I think you're -- you made your point. But I think you're right.

BOARD MEMBER ROBERTS: -- if you -- but I think -- that's the whole thrust of what I'm saying. I think you can even do better by using a performance standard. But I --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Could I ask -- I'm not clear at least on what you're talking about

for the 20 -- I guess it would be 2015 now. Since we had a three-year phase-in, that would be -- for TTS 50 Tier one, that would be '12, '13, and '14.

And so then in '15, is there a standard or not? And let me make an argument for it just for your consideration.

You know, we want to work on something that's broader that would bring in these extra things, because I think the tons -- the milli -- metric tons per day would go up. The problem is is that I would like to keep the pressure on the industry to come up with the alternative. And one way of doing that is to go ahead and set the 40 percent standard and then say we'll come back with the review, and if everyone chips in and we come up with a good alternative way of doing this, a broader-based standard, then it would -- you know, it would replace the 40. But without that there, I'm afraid we will --

CHAIRPERSON NICHOLS: As it is today, what I'm understanding our proposal to be is 40 percent for the entire vehicle, for all the windows.

BOARD MEMBER SPERLING: For 2016.

CHAIRPERSON NICHOLS: To take effect in 2016, according to you.

Then what happens in 2015?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: What

happens in '15 then?

BOARD MEMBER BERG: Well, I guess I --

BOARD MEMBER SPERLING: Forty-five percent. We'll do 45 percent.

(Laughter.)

CHAIRPERSON NICHOLS: We pause.

(Laughter.)

CHAIRPERSON NICHOLS: We rest.

Would you accept 2015 as the date for that? Because then that accomplishes what Mr. Cackette is suggesting, which is that it allows the staff to go out and start working now on an alternative to bring to us; that people know that if they don't come up with the alternative, that's what they're going to get.

BOARD MEMBER BERG: Yeah. The only reason I chose the 2016 is because that's what we heard from several of the glass manufacturers along with industry. So that's what I had my date. That's all.

CHAIRPERSON NICHOLS: Yeah, fair enough, fair enough. I think the 2015 could -- I think they could make it in 2015.

All right. Is anybody offering any other --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: I'm still not clear. Which is it for 2015? We need to know the number if it goes in for 2015.

CHAIRPERSON NICHOLS: Pardon me? We're going to make it 2015.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: So it's 40 percent vehicle around in 2015, a hundred percent of the cars.

CHAIRPERSON NICHOLS: Right, or an alternative compliance path to be developed.

Yeah, which is really --

BOARD MEMBER SPERLING: I'd feel more --

CHAIRPERSON NICHOLS: -- 2015 model year. So --

BOARD MEMBER SPERLING: I'd feel more comfortable with 2016, because, you know, what we're asking for is a lot of innovation and a lot of rethinking of the interior cabin and the materials and the design. And I mean I think an extra year is not -- I mean what we're trying to do is get it right and not be disruptive.

CHAIRPERSON NICHOLS: But if we do it right, this is not going to happen. I mean if what the staff thinks they're doing is correct, they're going to be coming back to us with a performance-based rule in time to take effect.

BOARD MEMBER SPERLING: Well, when we say 40 percent, we're saying or the equivalent, right? That's what I was interpreting this, 40 percent or the equivalent reduction.

CHAIRPERSON NICHOLS: Right. Do you think that's still too demanding for 2015?

BOARD MEMBER SPERLING: Because we're saying all the way around. So, yeah, I do. I'd feel better -- I mean it's not that much difference in terms of the -- to get greenhouse gas reduction, and yet it provides a little time to really get their engineers engaged in --

BOARD MEMBER KENNARD: Well, let me make the case for the earlier year, believe it or not.

(Laughter.)

BOARD MEMBER KENNARD: And I'll tell you why. One, to Bob's point about keeping -- and Tom's point as well to keeping the pressure on them. And also we're giving them the opportunity to use any number of different alternatives, not just the glass. So this is a huge benefit to them, or at least I hope that they would view this as a benefit to be innovative, and as opposed to being in this narrow band of just the glass. So --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: If we get through the study that we do to develop the performance standard, we learn that they can -- by using all these technologies, they can be 40 percent all the way around, I'm assuming -- or asking the Board if we should pursue going beyond that.

CHAIRPERSON NICHOLS: To be more ambitious.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS:

Yeah, to be more ambitious. Because it may turn out with all these new technologies that they can do better. And I guess if we're going to be told to develop a procedure, then asked for the charge to do that --

BOARD MEMBER SPERLING: I think we should defer that to Pavley 2.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yeah, I -- you know, in terms of timing, remember, Pavley 2 is next summer. So that's actually the shortest timeframe for the reg adoption. And the time to develop this procedure for substituting for a 2015 or 2016 standard would probably not be summer of 2010. It might be at least --

CHAIRPERSON NICHOLS: We're supposed to be hearing back from you guys by the end of this year about your thoughts, and then moving to a rule-making next summer for Pavley 2. So folding this into that time schedule is not such a bad --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I'm just suggesting that that's pretty tight. I just want you to know that's the quickest pathway, is Pavley. It's not like the longest one. Even though the implementation of Pavley wouldn't be till 2017, we're planning on taking it to the Board in less than one year from now. So --

BOARD MEMBER SPERLING: Yeah, but the distinction is the Pavley 2 would be a -- what we're really doing is talking about creating a true robust performance standard. So that while, yes, that in terms of the rule-making it would be quicker. But it would provide a clearer framework for industry to -- you know, to be innovative and to be planning ahead and how to be creative and the rewards.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, the reason I bring it up is because -- I agreed with Supervisor Roberts about, you know, the platform concept. But I can pretty much tell you for certain that when we get into this, it's going to be pretty darn complicated. Because, as you said, sometimes it's the blowing the air on you that feels good. They have cooled seats. They have ventilated seats. You know, temperature isn't the metric necessarily that determines whether you're comfortable. And all of these require procedures, and that's the tough part.

BOARD MEMBER ROBERTS: Temperature isn't necessarily what we're talking about. We're talking about heat gain through the envelope. And that's why it's -- we'll talk after the meeting, because I honestly think it's easier than what you're thinking and it's easier than some of the speakers would like to lead you to believe.

BOARD MEMBER D'ADAMO: Well, we're going to get all kinds of ideas because --

CHAIRPERSON NICHOLS: I'm sure.

BOARD MEMBER D'ADAMO: -- we're on a date, and it's going to force the industry to come back to us with ideas.

CHAIRPERSON NICHOLS: Right.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: So we'll do the best we can on any timeframe you want us to do.

CHAIRPERSON NICHOLS: Well, I mean I think the only live issue here is whether we're going to 2015 or 2016. Otherwise we've agreed that this rule starts as proposed in 2012 and ramps up over a three-year period in terms of the numbers of vehicles, the percent that are covered. Right?

So I don't have a --

BOARD MEMBER TELLES: If we do the 20 -- I mean if we do all the side lights and everything, it's actually a more rigorous rule than what we initially started with, and I think the 2016 makes more sense.

CHAIRPERSON NICHOLS: All right. I can live with that. I can live with that.

BOARD MEMBER BERG: Yeah, let's go with 2016.

CHAIRPERSON NICHOLS: All right. Then we'll go

with 2016.

All right. Everyone is now thoroughly convinced that the correct approach here is --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Would it help if I repeated what I think we --

CHAIRPERSON NICHOLS: Would you please.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: -- for the record?

CHAIRPERSON NICHOLS: Yeah.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Okay. My understanding would be that 25 percent of the cars in 2012 would have to meet a 50 TTS standard for the windshield. And the rest of the proposal, 60 on the other windows and 30 on the skylight as proposed by staff.

CHAIRPERSON NICHOLS: Correct.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: That the percentage of vehicles that have to comply in 2013 would go to 50 percent, in 2014 would go to 100 percent, in 2015 would stay at 100 percent with the 50 TTS, and in 2016 it would drop -- the windshield and everything else, all the side windows and back window would drop to 40 TTS.

And we would do a -- attempt to have a technical review and proposal as part of Pavley 2, which would be in the summer of 2010. And the purpose there would be to see if there are alternative ways to achieve the same

objective and to see whether there are ways to exceed the objective of 40 percent all the way around.

CHAIRPERSON NICHOLS: Okay. Yes, I believe you've accurately stated what we have come to.

BOARD MEMBER BERG: But it is in fact "or equivalent." So it isn't that -- I mean we're going to get -- we're going come up -- we're going to let industry come to us with alternative plans. And if it matches, then they'll be able to do that, correct?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right. Although on our side we might be, you know, trying to beat it.

BOARD MEMBER BERG: Well. That's okay.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: But, yes. There wouldn't be an alternative unless it was as good as 40 percent all the way around. Is that what you're --

BOARD MEMBER BERG: And hopefully it's better.

CHAIRPERSON NICHOLS: And hopefully it's better, right.

Okay. Before we can vote on this item we have to go through the ex parte, which I think are going to be more extensive on this one than they were on the last one, since there weren't any on the last one.

So I'll start with mine. Just going quickly

through this. Beginning on June 9th, meeting with California Strategies; the 23rd with Allied Materials; 23rd with the International Auto Manufactures; the 23rd with Toyota; 24th with Pittsburgh Glass; 24th with Chrysler; the 24th with Alliance of Automotive -- of Auto Manufacturers, the Alliance; and with Ford, all on the 24th. Yeah, it was a big glass day yesterday.

And I believe every one of them used the same written materials that they've used here with us today.

And it was very useful in giving me a preview of what they were going to say, but nothing other than what we've already heard.

And I'll start down on this end.

BOARD MEMBER BALMES: Yes. I had a phone call with Robert Vandal of Guardian Automotive, where basically he made a similar case that he did today. On the same day I had a phone call with Dan Adsit and Rich Bell of Ford Motor Company, basically saying points that were made today. And then on June 23rd was Steven Douglas of the Alliance of Automobile Manufacturers. Again, same points as made today.

BOARD MEMBER ROBERTS: I didn't talk to anybody. But one of my staff members did take a call from Dan Adsit and Rich Bell from Ford. And according to what he told me, it was consistent with the testimony we heard today.

CHAIRPERSON NICHOLS: Great.

BOARD MEMBER ROBERTS: By the way, his name was Jason Farran.

CHAIRPERSON NICHOLS: Okay. Thank you.

None. Alright.

BOARD MEMBER YEAGER: Yes, on June 12th I had a meeting with representatives from California Strategies and Southwall Technologies. And the conversation very closely mirrored what we heard today.

BOARD MEMBER BERG: On June 15th, I had a phone call with members from California Strategies on behalf of Southwall Technology and Pilkington, and a follow-up Email from Ted Harris on June 23rd.

On June 18th, I had a meeting with Mitsubishi's representatives.

On June 19th, I had a meeting with the Glass Coating Products Division of Applied Materials.

On June 22nd, I had a phone call with Honda and Toyota and their representatives. Also on that call was Chrysler.

And then I had a separate phone call from Solutia, a glass company or technology.

And on June 23rd, I had a phone call with Steven Douglas from the Alliance of Automotive Manufacturers.

On June 24th, I got an Email from John Dunlap on

behalf of Nissan.

On June 25th, I got an Email from NRDC and a letter of support from the nine environmental- and health-based organizations.

All of my communication was consistent with the testimony that we've heard today.

CHAIRPERSON NICHOLS: You just reminded me. I got an Email about Nissan as well. Thank you.

BOARD MEMBER TELLES: Last week I talked to Mr. Richards with California Strategies on the phone. And his testimony today was kind of a mirror of what he talked about then.

BOARD MEMBER D'ADAMO: June 18th, a call from Glass Coating Products, Applied Materials, and an associate from Manatt, Phelps & Phillips. Also a call from Steven Douglas at Alliance of Automobile Manufacturers.

June 22nd, a call with California Strategies on behalf of Southwall Technologies. A call with Tony Franois on behalf of EXATEC.

June 23rd, a call with Mr. Kwang with Solutia.

June 24th, received an Email from John Dunlap representing Nissan.

June 25th, call with James Tribble representing Sekisui S-LEC.

And the discussions mirrored the testimony presented today.

I don't believe that Nissan testified though.

CHAIRPERSON NICHOLS: They did not. They --

BOARD MEMBER D'ADAMO: Okay. So their Email requested a delay in the regulation.

CHAIRPERSON NICHOLS: Correct.

BOARD MEMBER SPERLING: June 17th, a call with the Alliance of Automotive Manufacturers.

June 18th, Sekisui, James Tribble.

Also on June 18th, a call with Southwall Technologies, Pilkington, and California Strategies.

Also on June 18th, a call with Applied Materials and their associates, Manatt, Phelps & Phillips.

June 19th, EXATEC and KP Associates, a phone call. Also that day with Chrysler, Ross Good.

June 23rd, Solutia.

June 23rd, also with NRDC. And also a call with Saint-Gorbain Sekurit, Dr. Offermann. Also a meeting with Toyota, several people from Toyota.

June 24th, the Association of International Automobile Manufactures, a meeting. A meeting also with Pittsburgh Glass Works. A call with David Raney. And a couple of those Emails with Nissan and Enviros.

And as best as I can recall, they were consistent

with testimony or not.

CHAIRPERSON NICHOLS: Before we vote - and I think based on our comments, it's clear how the vote is going to go - I'd just like to say that if anybody thinks that the Air Resource Board is a rubber stamp or a one mind on all issues, this discussion today surely proves that the opposite is true, and in a very, very healthy way I think. Because what we've ended up here with is a rule that, although it phases in more slowly than had originally had been proposed, actually ends up with a much more aggressive approach a little bit further out and a directive to staff to bring us something which is consistent with their practice and ours and which we all agree will be a more comprehensive approach to reducing the greenhouse gases from the vehicles.

So while it took a little bit longer than we may have expected at the beginning, I think where we've ended up is in a really good place. And I want to thank everybody for helping to bring us to the conclusion.

So I think we can do this on a voice vote.

Will all in favor of the proposal please say aye.

(Ayes.)

CHAIRPERSON NICHOLS: Opposed?

Very good.

Thank you.

And we will take a break now for approximately ten minutes and then come back.

Thanks.

(Thereupon a recess was taken.)

CHAIRPERSON NICHOLS: Okay. Our next item is a public hearing to consider adoption of a proposed AB 32 cost of implementation fee regulation, and proposed amendment to the existing regulation for the mandatory reporting of greenhouse gas emissions.

And we have a list of 15 people who've signed up to testify. And I think if we move smartly, we may actually be able to get through the list and still get people out at a reasonable hour this evening. So that would be my goal.

And I think we will get started. We have a couple of Board members who are in the back but they can hear.

So why don't we start with the staff presentation.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Okay. Thank you.

As you know, the Board has approved the Climate Change Scoping Plan, which is California's -- well, you know what it is. The plan calls for ARB, in coordination with many other State agencies, to implement over 70

measures to reduce greenhouse gas emissions. The plan stated that the implementation of AB 32 will require a stable and continuing source of funding, which ARB would pursue with an implementation fee. The revenues from the fee also will allow us to meet our obligation to pay back loans that had been used to fund the program to date.

Staff has worked closely with other State agencies and stakeholders to develop this proposed regulation to provide funding for implementation of the AB 32 program. All fee regulations are a challenge, but staff believes we have crafted a fair and equitable proposal that recovers fees from 85 percent of the State's greenhouse gas emissions while minimizing the administrative burden on both the State and the fee payers.

We are also proposing that those covered by the existing mandatory reporting rules be required to use the online reporting tool developed for the mandatory reporting regulation in order to reduce administrative burden and ensure data quality.

Now, I'd like to introduce Jeannie Blakeslee, who will make the staff's presentation.

(Thereupon an overhead presentation was Presented as follows.)

MS. BLAKESLEE: Thank you, Mr. Cackette.

Good afternoon, Chairman Nichols, members of the Board.

Today's proposal consists of two regulatory items: Adoption of a fee regulation to support California's AB 32 program; and an amendment to the existing mandatory reporting regulation.

We are all aware that California's present economic environment is less than favorable, and this is a difficult time to propose a fee. Yet, we do not want to lose sight of our long-term goals. Staff have gone to great lengths to ensure that this fee will be reasonable and will not be overly burdensome to anyone.

--o0o--

MS. BLAKESLEE: ARB staff is proposing to establish a fee schedule to support the implementation of AB 32 by ARB and other State agencies. The fee would be based on California's annual greenhouse gas emissions and the budgeted administrative costs for the State agencies.

Staff also propose to require the use of the Mandatory Reporting Tool, which is currently voluntary, to collect data for both the fee regulation and the Mandatory Reporting Regulation.

Today I will begin with some background and then provide an overview of staff's proposal, followed by discussion of the proposed change to the Mandatory

Reporting Regulation.

--o0o--

MS. BLAKESLEE: Adopted in 2006, AB 32 put California in the forefront of the efforts to address climate change, setting the first comprehensive economy-wide reduction goals. As you've already heard today, we are in the process of implementing the Scoping Plan with 12 regulations adopted and many more regulations and programs to come.

A stable funding source for continued implementation of the program is needed. The first years of this program have been funded with loans from special funds. The Legislature has directed that ARB establish a fee to cover ongoing costs and to repay these loans with interest and with a defined payback period?

--o0o--

MS. BLAKESLEE: AB 32 gave ARB the authority to establish a schedule of fees for its purpose of implementation. This proposal will provide the dedicated revenue needed to support California's climate mitigation program.

This concept was initially discussed in the Draft Scoping Plan one year ago at the June 2008 Board meeting, and was also included in the Scoping Plan approved by the Board.

The last three state budgets anticipated this fee and specified payback of the start-up loans from this revenue.

--o0o--

MS. BLAKESLEE: The fee needs to be broad-based. And today's proposal assesses the fee on 85 percent of California's total greenhouse gas emissions, specifically on the fossil fuels that are combusted in California, including fuels used for transportation and electricity generation by industry, and in residences and commercial buildings.

The fee will cover the major sources of industrial process greenhouse gas emissions. And the fee will cover imported electricity.

In order to minimize the number of entities subject to the fee, we propose to assess the fee upstream, meaning at the earliest point in the California's economy where fuel delivery or production is intended for delivery to consumers.

Where it is not feasible to assess fees upstream, fees would be assessed on entities that consume fuels in California. This approach would reduce the administrative burden of the regulation to both the fee payers and the State.

The proposed regulation was developed over the

last six months through a series of workshops, public review of draft regulatory language, meetings with affected stakeholders, and consultation with the other State agencies.

I should also note that ARB will need to reassess this fee as the State's climate change program matures, especially as the Cap and Trade program develops.

If California establishes an auction under the Cap and Trade program, a portion of that revenue might substitute for some or all of this fee.

--o0o--

MS. BLAKESLEE: Because staff took an upstream approach, this regulation will directly affect only about 250 entities. This slide shows the main categories subject to the fee.

They include large natural gas distributors and some large users of natural gas, refineries and other producers or importers of gasoline and diesel fuel, cement manufacturers, importers of electricity, and other facilities that combust coal.

Staff evaluated assessing the fee at the point of emission. But that would have meant that the fee would have to be collected from over 23 million passenger vehicles, well over 10 million natural gas utility customers, and in excess of 14 million electrical utility

customers, which would make this fee administratively infeasible.

For gasoline and diesel fuel, staff also evaluated moving the point of electric -- the point of regulation for gasoline and diesel fuel to the terminal rack instead of the refiner. Refineries are subject to the fee due to their refinery emissions. So assessing the fee for gasoline and diesel on the refiners minimizes the number of fee payers, simplifying administration of the regulation.

--o0o--

MS. BLAKESLEE: Now that I've discussed who will be affected by the fee, I will discuss how ARB proposes to set the fee.

The fee is based on the cost to implement AB 32, or revenue required, and the total annual greenhouse gas emissions reported to ARB.

--o0o--

MS. BLAKESLEE: The approved AB 32 costs are based on the revenue needed for ARB and other State agencies beginning in the 2009-10 fiscal year. The costs include personnel, contracts, and equipment.

Staff were very restrictive in establishing the eligibility criteria for AB 32 costs. The fee is limited to those expenses included in an approved State budget.

Requiring State budget approval prior to funding eligibility should ensure an open and self-limiting process.

State agency adaptation projects and programs would not be eligible to receive revenue. State agency compliance costs, such as preparation of environmental impact reports, would not be covered.

The costs would also include repayment of the loans used to support ARB and CalEPA implementation of AB 32 over the last two years.

--o0o--

MS. BLAKESLEE: This slide shows the loans ARB and CalEPA have received. For the 2009-2010 fiscal year, the budget includes a loan of $35 million for ARB and CalEPA. If we are able to begin collection in spring 2010, we may not need the entire loan.

The 2009-10 program costs for ARB, CalEPA, the Department of General Services, California Energy Commission, the Integrated Waste Management Board, and the Department of Food and Agriculture are currently estimated at approximately $36.2 million based on the budget approved in February. As you know, that budget is currently being revised.

The program costs will be determined each year based on the approved budget.

I should note that staff furloughs and the Governor's mandated reduction in State contracts will reduce our costs, and this reduction will be reflected when the required revenue is determined.

--o0o--

MS. BLAKESLEE: Fiscal year '09-'10 is the anticipated start year for this fee. For this year, staff estimates that the revenue required is $49.7 million, with 36.2 million of that in program costs and 13.5 million for loan repayment.

A brief note on the initial timing of this regulation. The first year is a bit different than the subsequent years, because the regulation will take effect in the middle of the fiscal year. Entities would report 2008 data to ARB in January 2010. And in February ARB would send a fee notice to affected entities. In spring, entities would remit the fee to ARB.

In subsequent years, reporting will coincide with a mandatory reporting requirement to report data in June.

--o0o--

MS. BLAKESLEE: The fee also relies on the total greenhouse gas emissions. Each year entities would report data to ARB using an expanded electronic Mandatory Reporting Tool. The reported data would include the quantities of fuels consumed or supplied, process

emissions, and imported electricity. Use of the tool will provide quality assurance and ensure consistent data formatting.

--o0o--

MS. BLAKESLEE: The calculation methodology laid out in the regulation is fairly straightforward. There is a two-step process to calculate the fee.

First, ARB calculates the dollars per metric ton of greenhouse gas emitted annually. To do that, we will divide the revenue required, as determined by the State budget, by the total greenhouse gas emissions as reported by the affected entities to calculate what we call a fee rate. For fiscal year '09-'10 we've estimated the fee rate to be 12 cents per metric ton of CO2.

The annual fee for an affected entity is calculated by multiplying the fee rate by the total tons of emissions based on each entity's reported information.

--o0o--

MS. BLAKESLEE: In this economic environment, ARB is very sensitive to this regulation's potential economic impacts on businesses and consumers. In developing the fee regulation, ARB evaluated potential economic impacts on small and large businesses and individual consumers. ARB expects the costs to be small and the impacts on individuals and businesses to be very slight. This slide

provides a breakdown of the incremental costs based on our current estimate of the '09-'10 revenue requirement.

Assuming that the fee is passed through, the fee would result in a very small increase in product price seen by consumers:

Less than a tenth of a cent per gallon of gas;

Five thousandths of a cent per kilowatt-hour of electricity; and

Seven hundredths of a cent per therm of natural gas.

Where we can, we will monitor how this fee is passed through to end users, such as monitoring proceedings of the California Public Utilities Commission.

--o0o--

MS. BLAKESLEE: This slide presents some examples of anticipated costs to businesses like family restaurants, such as Olive Garden or Sizzler; office space; and grocery stores such as Safeway and Von's; as well as an average household.

The cost impacts from the proposed regulatory action are not insignificant, but we believe these costs are reasonable and necessary to implement AB 32.

--o0o--

MS. BLAKESLEE: As mentioned previously, staff are also proposing an amendment to the Mandatory Reporting

Regulation to require the use of the electronic reporting tool. The tool will be changed to accommodate the entities subject to the fee and will allow the reporting of additional information required to determine the fee. For example, gasoline refineries would use the tool to report gallons of gasoline produced, in addition to their emissions. Public utility gas corporations would report therms of gas delivered to all end users. This information is currently not collected.

--o0o--

MS. BLAKESLEE: As we worked with stakeholders since the proposal was released, staff is recommending a few clarifications and modifications. We are continuing to work with our stakeholders.

These include clarifications to the definitions, and clarifications to the imported electricity section to more specifically identify the imported electricity that is subject to the fee, and additions to the severability clause.

We are also proposing a change to the interstate natural gas pipelines portion of the regulation. The current version of the regulation assesses the fee on interstate pipelines based on natural gas they deliver. Because of the regulatory structure, interstate pipelines are unable to pass through the fee. Staff propose to

assess the fee directly on customers that receive gas directly from the interstate pipeline.

Staff believes these modifications improve the proposed regulation.

--o0o--

MS. BLAKESLEE: This concludes my presentation.

Staff understands there are many complex issues surrounding adoption of a fee regulation at this time. However, to continue to support AB 32 implementation, staff recommends that the Board approve the staff proposal with the recommended regulatory changes.

Staff would be pleased to answer any questions you may have.

And I thank you.

CHAIRPERSON NICHOLS: Thanks, Ms. Blakeslee.

Are there any questions before we proceed to hear from the witnesses?

All right. Then let's just go to our list of witnesses.

The first that I have here is Jill Whynot, followed by Chris Marlia.

MS. WHYNOT: Thank you very much. My name is Jill Whynot. I'm with the South Coast Air Quality Management District. And I thank you very much for the opportunity to provide some testimony today.

What I want to talk about is the aspect of the regulation that you heard about that would restrict greenhouse gas reporting only through the online ARB tool.

At South Coast we have developed a voluntary optional component to our web-based emissions reporting system that can take the data that's needed for ARB reports and send it directly, without any ARB intervention, to your agency.

It's actually a very important issue, not just to the staff but also to our governing board, that we can use such consolidated and streamlined approaches. And I hope to be able to convince you in the next minute or two that this represents good government, streamlining significant cost savings and better customer service.

Simply stated, what we're asking today is not for you to approve the tool. What we're asking for is some language changes that would enable us to continue the evaluation of this tool. And if it passes all of the requirements and meets all the needs, and we can overcome some of the concerns your staff has raised, then we may ultimately be able to use this tool.

And why this makes sense is that we have hundreds of facilities in the South Coast that will be doing mandatory greenhouse gas reporting. The combustion-related equipment, there's a very large overlap

in the amount of data that is needed. So we estimate that there's 75 or 80 percent of the data that a facility would enter for our annual emission reports for criteria and toxic pollutants that could then easily be transferred over and be used for the greenhouse gases.

It would save a facility tremendous time if they did not have to then reenter this same data into the online tool for ARB. And that translates into money. And in this economic times, we really should be careful about adding layers or additional costs where there may be ways to get around that.

The analogy also is, in the proposed federal greenhouse gas regulations they're actually requiring use of -- or recommending use of just one online tool for EPA. We've made similar comments to them. Our model -- or our analogy is the federal income tax. We're all required to file taxes. They have to go to the IRS. There is online eFiling directly to IRS. But there's also a long list of preapproved software. And that software gets the right data, puts it in the right places. And there are solutions to the technology and security issues that have been raised.

So our request, which we believe would be consistent with your Board policy and direction to staff to utilize existing infrastructure and try and streamline,

is simply that you add some language to Section 95204(a) in the fee reg and 95104(e) in the Greenhouse Gas Rule - and I believe you have this in front of you -

CHAIRPERSON NICHOLS: We do have your language in front of us.

MS. WHYNOT: -- that would just be an equivalent tool.

And we thank you very much for your consideration.

CHAIRPERSON NICHOLS: Thank you.

Chris.

MR. MARLIA: Madam Chair, Board members. Good evening, I guess it is now, or maybe late afternoon. I want to thank you for the opportunity to testify on this item. It's an important item to the South Coast, as Jill has mentioned.

But I don't want to reiterate what Jill has said. She brought up forward pretty clearly.

What I want to state is that this -- the proposed language is basically precluding the use of any alternative tool, and that we have spent significant resources developing a consolidated tool for reporting criteria emissions and greenhouse gas emissions that we think satisfies the requirements of AB 32.

The Mandatory Reporting Rule as developed allowed

for the possibility of using an ARB-approved district-developed tool. But the current proposed language basically precludes it. And that's our problem, is that we are seeking the opportunity to continue developing this tool to ARB's satisfaction.

We think the technology for doing this is good. We think it is legal, as Jill has mentioned the analogy with the federal income tax. There is off-the-shelf technology to handle all the legal issues. These issues that have been brought up to us, for instance, the data being unaltered, and the data security issues associated with people begin to intercept and change the data after it's been submitted. We think these issues have been addressed for over a decade.

The technologies have been specified in California's digital signature regulations that were adopted in 1998. And they also included -- the technologies are also talked about in EPA's cross-media reporting regulation that was adopted in 2005.

So we don't see the issues associated with -- any of the data concerns associated with doing this. The one in particular is called public encryption or infrastructure, which relies on public key cryptography. And it's been around for 10 or 15 years and is very mature, and can be used for data transfer between our

agencies very securely. And we don't see why it can't be used.

So, in essence, we are proposing the language that Jill has recommended, to leave open the option of pursuing these. We're not asking for ARB to adopt our program as is. We're asking for just the opportunity to continue developing this with the hopes of in the end having a tool that ARB can rely upon.

CHAIRPERSON NICHOLS: Do you have a position on what should happen if a company operates in more than one air district in California as to how they should report? Have you --

MR. MARLIA: Well, I believe the -- I believe the mandatory reporting rule requires the reporting by facility. A parent company can report for that facility. But it's on a facility-by-facility basis, I believe.

CHAIRPERSON NICHOLS: Say, if a parent company homes businesses in both South Coast and elsewhere - I believe South Coast is the only district that has this issue, at least they're the only one we've heard from - the parent company would have to report in two formats then, one through you and one for everything else?

MR. MARLIA: Not the way we see it. Our software is totally voluntary. A facility can choose to use it or choose to use ARB's reporting tool.

CHAIRPERSON NICHOLS: I see. Okay.

MR. MARLIA: So if our tool doesn't meet the requirements of what they need to do, ARB's tool is still there to report.

CHAIRPERSON NICHOLS: Okay. Thank you.

Kristin Grenfell and then Cathy Woollums.

MS. GRENFELL: Good evening. Kristin Grenfell, Legal Director of Western Energy and Climate Projects with NRDC. And I'm speaking to you tonight in support of the AB 32 Cost of Implementation Fee Regulation.

When California passed AB 32, we took a leadership role on confronting global warming. And one of the reasons that we did that was to position our economy to become a leader in a carbon-constrained world.

Right now CARB and other agencies are in the middle of implementing a world-class greenhouse gas emissions reduction program. And the agencies need a sure source of funding to make sure that the staff can continue implementing those programs.

AB 32 recognized the need to have funding for staff, and so it authorized a fee. And the California Legislature in their 2008 budget required CARB to move forward with this fee.

The proposed fee before you today is fair and equitable, covering 85 percent of sources in California.

And it is necessary to ensure that we can continue developing our greenhouse gas emissions reductions programs, which will position California for success in a carbon-constrained world by maintaining our role of leadership in energy efficiency and technological innovation.

At approximately $1 per Californian per year, this fee is a small price to pay for confronting global warming and transforming our energy economy. We urge you to approve it.

CHAIRPERSON NICHOLS: Thank you.

Cathy Woollums, followed by Erika frank.

MS. WOOLLUMS: Thank you, Madam Chair, Board members. My name is Cathy Woollums. I am the Senior Vice President and Chief Environmental Counsel of Mid-American Energy Holdings Company. We have six operating utilities or energy companies under our umbrella. And I'm here to speak on behalf of the Kern River Gas Transmission Company tonight.

When confronted with the issue of the potential fee imposition on interstate natural gas pipelines, we engaged in a very constructive dialogue with staff. I'm pleased to report that, based on the proposed amendments, our issues of concern have been satisfactorily resolved vis-a-vis potential interstate commerce concerns and the

ability to pass on the fee. And our FERC jurisdiction, currently there is no mechanism to be able to pass along such a fee.

So in that regard, we would hope that you will be favorably disposed toward the staff amendments. And we support the rule.

Thank you.

CHAIRPERSON NICHOLS: Thank you very much.

Erika Frank for the Cal Chamber.

MS. FRANK: Good evening, Chairwoman Nichols and the Board. Erika Frank. I'm General Counsel at Cal Chamber. And I am speaking this evening on behalf of 11 trade associations, which include the California Business Property Association, California Chamber of Commerce, California Independent Oil Marketers Association, California League of Food Processors, California Manufacturers and Technology Association, California Small Business Alliance, California Taxpayers Association, the Howard Jarvis Taxpayers Association, the National Federation of Independent Businesses of California, the California Black Chamber of Commerce, and the Western States Petroleum Association.

All of these associations are committed to ensuring that regulations such as that's proposed before us today are adopted in a fair, open, and transparent

process.

To that end, yesterday the associations submitted a joint letter to the Board requesting that it defer action and to hold the comment period open until at least the next scheduled hearing of July 23rd.

Our request is based in part on a number of items, one of which is: Since February, through your Public Records Request, the associations have sought to obtain documentation substantiating the proposed AB 32 fee regulation, with little avail, leaving the associations with no choice but to seek assistance from the court in May.

In addition, details to staff expenditures were not posted until June 1. And last Friday, 5,500 pages of documents were released. And they were released pursuant to the Public Records Request that we made back in February. And the information in these documents and records is important in the formulation of comments on the proposed regulation. And while we've done our best to try and go through all the documents, our review is hardly complete.

Moreover, pending court action related to the public records request may indeed make additional information available that will be important to the formulation of our comments.

Again, transparency on the manner in which regulations are proposed and adopted is what this is all about. And it is for this reason that these associations sought to obtain, and will continue to pursue, documentation to enable them to accurately comment on the proposed rule.

Unfortunately, we have not had a fair amount of time to review, analyze, and fully and effectively comment on the proposed fee.

And just to address the additional 15-day notice of comment period that's been proposed, due to the very limited discretion that's typically available to the Executive Officer in that setting, this would not be an appropriate way of ensuring that the associations have a full and fair opportunity to comment and inform the Board of its decision making.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Susie Berlin.

Ms. Berlin, representing Northern California Power Agency.

Okay. Norman Pedersen.

Oh, I'm sorry. There she is. I didn't see you.

MS. BERLIN: Sorry.

CHAIRPERSON NICHOLS: Oh, that's okay.

CHIEF COUNSEL PETER: Madam Chairman, while she's coming down, I just want to correct a factual error in the -- I would like to make a factual point.

The documents that were produced in response to the Public Record Act request last Friday was in response to Public Record Act requests made in May. The earlier productions were made. There's been thousands of pages produced. So --

CHAIRPERSON NICHOLS: In other words that was not the only set of documents that's been produced?

CHIEF COUNSEL PETER: It's not the whole set. And also it was not -- the information produced last Friday was not in response to the February 13th Public Record Act request.

CHAIRPERSON NICHOLS: That one's already been responded to.

CHIEF COUNSEL PETER: There's been three Public Record Act requests. The last two were in May. And the documents produced on Friday were related to that. I just didn't want to leave a misimpression that months had gone by.

CHAIRPERSON NICHOLS: Thank you. That's helpful. I appreciate that.

Ms. Berlin.

MS. BERLIN: Thank you very much for this

opportunity to speak. I'm speaking on behalf of the Northern California Power Agency and also MSR Public Power.

NCPA is a joint powers agency comprised of publicly owned utilities. NCPA has been an active participant throughout CARB's rule-making or proceeding to form the Cap and Trade program as well as the administrative fee. And we appreciate staff's willingness to work with the stakeholders to address certain issues.

However, with that said, there's still a few issues that we think are -- need to be addressed further. One of them includes the lack of a cap on the total amount of the fee and the treatment of imported electricity that's not actually consumed in California.

The electricity sector, which accounts for about 25 percent of emissions, is going to be called upon to make about 40 percent of the reductions. And the additional burden associated with the imposition of the administrative fee is not a trivial amount.

There are no cost-containment measures in the proposed regulation or the statute. And accordingly there is no limit on the total costs associated with implementation of AB 32 or subject to collection through the fee. Because the fee amount is uncapped and the proposed regulation has no termination provisions, the

total obligation to affected entities can and likely will continue to increase from year to year.

NCPA's concerned that the fee structure is being justified based on the current revenue requirement and that it is deemed to be a de minimis impact on individuals, as NRDC said, "One dollar per individual doesn't seem like much." However, because the fee is based on uncapped amounts and because the proposed regulation does not impose the fee on each individual but on entities that are responsible for paying the entire amount, using a snapshot of the disaggregated impacts cannot be used to justify the structure.

The economic review must look at the potential cumulative impacts of the fee in the long term and on the actual entities responsible for paying the fee, notwithstanding the hope that those costs can be passed through.

NCPA is also concerned with the proposed regulation's imposition of the fee on electricity that is imported but never consumed in California. Failure to recognize and exclude imposition of the fee on what are basically financial transactions adversely impacts the electricity sector and jeopardizes the efficient operation of the entire western electricity grid. Retail providers must be able to procure and schedule electricity using the

most effective and efficient transmission routes, and not be constrained by concerns that excess fees may be imposed on these transactions.

The MSR Public Power Agency is comprised of the cities of Modesto, Santa Clara, and Redding, and have ownership interest in renewable and coal-fire generation out of state. MSR's concerned that there's been insufficient review of the impacts on the fee in imported electricity, which limits the cost effectiveness of entity's ability to use out-of-state resources, risks efficiencies in terms of scheduling electricity, and increase compliance costs.

CHAIRPERSON NICHOLS: I think that's it.

MS. BERLIN: Thank you.

CHAIRPERSON NICHOLS: Thank you very much. Appreciate that point.

Okay. Hi, Norm.

MR. PEDERSEN: Hello, Chairman Nichols. Good evening. I am Norman Pedersen for the Southern California Public Power Authority.

SCAPPA submitted written comments previously. A member of SCAPPA, the Los Angeles Department of Water and Power, submitted written comments to you today.

SCAPPA supports AB 32 and fully supports the Board's implementation efforts. To that end, SCAPPA

supports the implementation of an administrative fee that is well founded in law and policy so as to provide a reliable flow of funds to the Board.

We are concerned, however, about the legality of the extension of the fee to imported electricity. We suggest that you reconsider the extension to imported electricity. If you elect to approve the extension of the fee, we urge you to consider seeking an Attorney General's opinion about the extension and that in FSOR the Board fully explain the legal support for the extension of the fee to imported electricity.

If the extension of the fee to imported electricity is retained, we urge two modifications to the ISOR. First we urge that the regulation be clarified to assure that the fee will not be applied to electricity that is wheeled through California without being consumed in California, regardless of the way in which the wheeling service is performed.

Secondly, when power is imported as the first leg of an economic exchange arrangement, we urge that the fee apply only to one leg of the exchange, not both. In an economic exchange with an import and an export, only one kilowatt-hour is consumed in California, not two. Thus the fee should be charged once, not twice.

And just the last point. SCAPPA joins with

others in urging the Board to consider capping or in some way containing the revenue requirement that would be recovered through the fee.

Thank you very much for your time.

CHAIRPERSON NICHOLS: Thank you for your testimony.

Andy Brown from Pacificorp, followed by Michaeleen Mason.

MR. BROWN: Good evening. My name's Andy Brown from Ellison, Schneider & Harris. I'm here this evening for Pacificorp.

Pacificorp, through its division, Pacific Power, serves about 46,000 customers in the far northern end of California. Pacificorp is a multi-jurisdictional utility. It operates in about six states.

We raised to staff some concerns about the definition of "imported power." As Ms. Blakeslee pointed out, there have been clarifications. Based on a review of that language this morning, it appears our concern has been addressed. We're going to have some of our technical people look at it some more to make sure there aren't any issues and possibly make some comments during the 15-day period.

But other than that, we do appreciate the staff's attention to our specific multi-jurisdictional concerns.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Ms. Mason.

MS. MASON: Good evening. My name is Michaeleen Mason and I am the Director of Regulatory Affairs for Western States Petroleum Association.

WSPA has already submitted a detailed comment letter that delineates our major concerns with the proposed regulation as a whole, such as it not being broad based, not economy-wide, not equitable, not transparent to the ultimate greenhouse gas emitter, to name a few. So I will not go into all of them here.

However, I do want to draw your attention to one of the flaws in the proposed regulation. Section 39600 and Section 39601 of the Health and Safety Code authorizes ARB to adopt a fee regulation to be paid by sources of greenhouse gas emissions. In order to do this, the fee regulation must be levied as directly as possible on those responsible for the greenhouse gas emissions.

Fuels in and of themselves are not sources of greenhouse gas emissions. The source of greenhouse gas emissions related to the use of these fuels is the facility or equipment in which the fuel is combusted.

Combustion clearly does not occur at the producer-importer level as used by CARB in the proposed

rule -- regulation. So fuel producers and importers cannot be considered sources of greenhouse gas emissions.

If CARB reasonably determines that it would be administratively difficult to levy a fee directly on emitters who combust transportation fuels, such as at the pump, CARB must consider other collection methods.

WSPA proposes that CARB adopt a fee structure that parallels current federal and State collection points for motor fuel excise taxes. This proposed structure would reduce compliance costs and avoid the need for expansive and successive new regulations to address the novel point of collection at the refinery gate.

WSPA has been working with staff on this option and respectfully requests the Board consider this. We would like to suggest the Board consider having WSPA continue to work with the CARB staff and Board of Equalization to find the most acceptable solution for all involved.

I have a modification to Section 95204 for the Attachment B to the regulation for your perusal should you decide to have the Board consider this and to have the Executive Officer in his 15-day package address that.

CHAIRPERSON NICHOLS: Well, thank you. If you haven't already, please submit it to the clerk and we'll get it distributed.

MS. MASON: Thank you.

CHAIRPERSON NICHOLS: Ari Frink, followed by Norman Plotkin.

MR. FRINK: Good evening, Madam Chair and members of the Board. My name is Ari Frink and I'm here on behalf of the Planning and Conversation League.

With the State budget in crisis, AB 32 needs all the funding and support it can get to keep up momentum through these tough economic times. The administrative fee is an equitable option to fund AB 32 implementation and would pass on a small cost to California residents in return for climate change solutions. I urge you to support the fee.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Norman Plotkin, followed by Dorothy Rothrock.

MR. PLOTKIN: Thank you, Madam Chair, Honorable Board Members. I'll try and follow that example of brevity. Representing the California Independent Petroleum Association.

CHAIRPERSON NICHOLS: It was very effective.

(Laughter.)

MR. PLOTKIN: Then I'll be very short.

The California Independent Petroleum Association understands that the fee, like the Scoping Plan, must be

done pursuant to AB 32. With that said, we would like to associate ourselves with the comments made by Ms. Frank - not to be confused with the previous witness, Mr. Frink - and the Chamber and the associated associations about the flow of information.

We've submitted comments for your review. In the comments we try and explain the concern about the data release. There's the common carbon cost equation. And it has a numerator and a denominator. The denominator is the emission factors times the quantity of the natural gas plus the quantity, et cetera, which is below the numerator, which is the TRR, the total revenue requirement. We got lots of data on the denominator, not so much data on the numerator. So that's where we're looking for a little help from you.

The regulation has a few problems in our view. We've articulated them in our comments, many of which are probably going to be decided in another jurisdiction.

However, the real problems for us with respect to fee -- let me just point out that we did interact with your staff to a great extent and found them to be very open and cordial in trying to understand how this fee would apply to us.

The problem for us is that we can't pass the cost to this fee on. When we're burning associated gas on-site

in production facilities, it's to generate distributed generation electricity to run our processes.

The unintended consequence that we fear here is that, to escape paying the fee, we may flare the gas and then just put increased demands on conventional electricity.

With that said, the other thing that's out there looming very large for us is the fact that -- we were given some comfort that this would only apply to those who are mandatory reporters and emit at 25,000 tons, and would then therefore spare many of our smaller members. But then we're participating in other proceedings wherein we're talking about conforming to the Western Climate Initiative and reducing 25,000 tons to 10,000 tons. And so there goes our comfort level.

So we just want to put that on your radar screen, to consider holding that at the 25,000 ton mark so that if there is movement to conform with WCI, it doesn't sweep up a whole lot more of our members and therefore require the flaring of more of this gas.

At any rate, we'd like to be able to continue to use it in our production.

And thank you for this opportunity.

CHAIRPERSON NICHOLS: Thank you.

Ms. Rothrock, followed by Bruce McLaughlin.

MS. ROTHROCK: Thank you, Madam Chair and members of the Board. My name's Dorothy Rothrock. I'm with the California Manufacturers and Technology Association.

The California Manufacturers care about the fee regulation because every additional cost burden adds to our already very high cost of doing business in the State.

The Milken Institute's just released a new report about manufacturing in the State. I urge you all to take a look at that. They describe how important it is and how manufacturing employment has declined since the year 2000.

They say, quote, "California's been progressively losing more of its manufacturing employment, particularly high value-added manufacturing, to other states, such as Oregon, Texas, Minnesota, and Washington." Milken cites high taxes and regulatory burdens for an unfavorable manufacturing climate.

So we need to make sure that we're not paying more than it's justified under the law.

And given importance of the fee reg, we're disappointed that we've not been able to understand and verify the underlying data for the fee calculation. We've earnestly attempted to obtain the information we need, both informally and through the public records request.

Based on what we have so far, there are still discrepancies to be resolved. These go to how much should

be raised by the fee, who should be paying the fee, and how much should be paid by each payer. And there are more documents being withheld that we're not sure are justifiably confidential. There's a matter of dispute I believe with whether or not the original request in February has been accurately replied to. And there are 11,981 pages of records from the -- that were requested that have been withheld by CARB. And we're not sure at this point whether that's justifiable that those have been withheld.

So the letter goes into much more detail on these points. But the bottom line is we request a 45-day extension of the comment period so that we can get the materials we need and do some good comments on the rule.

So thank you very much.

CHAIRPERSON NICHOLS: Okay. Bruce McLaughlin, followed by Bonnie Holmes-Gen.

MR. McLAUGHLIN: Bruce McLaughlin for the California Municipal Utilities Association. We represent the public alone electric utilities in the State of California. Our members include both SCAPPA and NCPA, L.A., Redding, Roseville, et cetera, SMUD.

And we filed comments, so I'll just direct you to those. We filed them this morning.

And primarily we support of course SCAPPA and

NCPA's comments. But I want to bring up the issue of energy exchanges. This is a strong policy in California to promote energy exchanges. And the Health and Safety Code 38562 would promote these also because AB 32 is supposed to minimize costs and maximize total benefits to California, also benefit the economy, public health and the environment and achieve overall societal benefits.

Energy exchanges do this by utilizing hydro resources up in the northwest. When they have low load and we have peak loads, we transmit them down here. And vice versa. When we have high energy capability and low load - that's in the winter - and they need our load, we ship it back to them. And so these are energy exchanges. And because of this, we don't have to build certain powerplants. We can defer or offset construction of powerplants. So that obviously improves the public health and also lowers costs.

So there's a strong, strong policy argument to encourage energy exchanges. Right now we believe that the mandatory reporting regs are not discrete enough to identify the proper energy exchange allocations. And entities like Mr. Pedersen mentioned, they're getting double charged for some transactions.

We're also working with staff up until the last minute here to get a good definition of wheeling in the

15-day language. It's not quite out yet, but I think we're getting something good. When we have a definition of wheeling, that might help some of the transactions not have a double charge. But we would like you to direct staff to continue to work with us during this ensuing period before the new language comes out to possibly figure out ways to identify proper energy exchanges and allocate the single charge, or the zero charge if they're zero emissions.

CHAIRPERSON NICHOLS: Thank you.

MR. McLAUGHLIN: Thank you.

CHAIRPERSON NICHOLS: Bonnie Holmes-Gen, followed by Bill Magavern.

MS. HOLMES-GEN: Good evening, Chairman Nichols and Board members. Bonnie Holmes-Gen with the American Lung Association of California.

And we are pleased to be here in strong support of your Board moving forward tonight to adopt this fee regulation. And we do believe this action is long overdue. We believe that it's not only fiscally responsible, but this is necessary, as has been stated by my colleague from NRDC, to support the Board's groundbreaking work on AB 32 and, frankly, to address significant public health challenges that we're facing in the State.

We believe that this regulation is fair and equitable. It's broad based. And we think the staff has done a great job in crafting the regulation. And we completely agree with the importance of placing the cost of AB 32 implementation on these major sources of greenhouse gas emissions. That is certainly the way to go.

And the key message we want to send is that we feel this fee is really tiny compared to the monumental public health impacts of climate change from poor air quality, heat waves, forest fires, and all the other impacts. And the cost that the public health sector will be bearing are huge, in the billions of dollars, to face these impacts, to build out the public health infrastructure that's needed to respond to address the illnesses, hospitalizations, premature deaths and all of those impacts that are going to occur from climate change.

So we urge you to move forward. We're not surprised to hear the protests from industry. I'm sure you're not surprised also. And we urge you to adopt the fee today.

CHAIRPERSON NICHOLS: Thank you.

Mr. Magavern. You are our last witness.

MR. MAGAVERN: Thank you. Bill Magavern with Sierra Club California, in strong support of this rule

because we do support the principle that the polluters should pay for the costs of reducing pollution. And in this case the Legislature actually already made that decision and told you to enact a fee on the polluters. And this is a good proposal to do that. And it's not surprising that your major opposition is coming from those who would have to pay the fee, because they are responsible for most of the emissions.

Some of the major points in favor of this fee:

It covers 85 percent of the greenhouse gas emissions in the State - that's really very impressive - and does it very efficiently by assessing the fee upstream.

It pays back the loans, which is only fair, because those were loans and some of them came from programs that also have important environmental goals like recycling.

And also very important, I think, that it includes imported electricity. AB 32 specifically addresses accounting for electricity imports. And of course since most of our coal-fired electricity, virtually all of it, is imported - and that's the most carbon-intensive form of electricity production - it's very important that we include that.

So with that, I'll wrap up. And I hope to still

have time to go toast Tim Carmichael.

CHAIRPERSON NICHOLS: You're actually filling the Tim Carmichael position here as the last speaker on the item. So I'm glad to know that Tim appointed a successor at least for that job.

Okay. So we are now concluding the public testimony on this item. And we've heard I think a number of interesting comments as well as concerns.

I want to make a couple of comments and then make a suggestion about how to proceed here.

I am concerned by a couple of the comments that I heard that there are some loose ends here that need to be addressed. And I'm particularly interested, because of its relevance to the Cap and Trade program, that we have a proper accounting system for imported electricity and for electricity exchanges. I think this is one of those areas where we're blazing a trail in this regulation, and it is important that our accounting system do it right.

I'm not surprised by the WSPA position about wanting to see purchasers of their product pay directly or have to be taxed directly or fee directly, however you want to call it, have to pay directly rather than having to collect and transmit the money themselves, because that's been their position consistently across the board for many, many years now. It does remind me a little bit

of the old, you know, guns don't kill people, people kill people argument. But actually that's true. I mean it's a true fact. It's just a question of sort of what is the most efficient and cost-effective way to address the harm that's done directly. In this case we're not even trying to address harm. We're not trying to send the public a message that they should use less gasoline through this regulation. I think the Legislature is very clear that we're only trying to collect enough money to actually pay our direct costs of running this program. This is not designed to raise funds to reduce carbon, and I think that's quite clear.

So we have the electricity issues to deal with. And then we have this -- you know, it's cordial here. But when people go the court, it's not cordial. And the Public Records Act litigation, although it's stirred up a lot of dust, really I think is a distraction, because the fact is that there's no secrecy about what it costs to run government programs. Our budgets are extensively made public and can be seen by anybody who wishes to look at, you know, how we spend our money.

On the other hand, we haven't really heard a constructive alternative suggestion coming from the California Chamber or the CMTA, if we have to assess a fee, if we are required to charge for this program, how do

they think we should charge for the program, or is there some way they think we could do it, you know, that would cost their members less money and still accomplish a good result.

If there's going to be more time spent working on this, I think it should be spent in constructive dialogue, which would include some positive role for those who are simply using their time and energy to attack ARB's record-keeping procedures.

So having said all of that, I'm still of the mind that this is a very important regulation that we do want to get right, especially in light of the economic conditions that we're living with at the moment. And I would be in favor of closing the hearing at least at this point, unless there's any new information that's generated in the interval that would lead to a substantial change in the proposal, asking the staff to address the issues that have been raised by the witnesses here today and give us some additional response in writing, and put this item over until our next scheduled Board meeting, which is in Supervisor Roberts' territory in San Diego.

So that would be my recommendation for how to proceed, is to close the record but to not take action tonight.

BOARD MEMBER BERG: Then would we need to move to

table? Would that be the procedure?

CHAIRPERSON NICHOLS: I'm not sure technically if that's required.

The lawyers want to tell us whether we have to do that or just hold the matter over?

ASSISTANT CHIEF COUNSEL JENNE: Yes, you would just hold the matter over until next month. It would be just a -- I forget the name exactly that Roberts Rules of Order uses. But I think the concept is clear, you're just not deciding today, you're going to wait till next month and decide then.

CHAIRPERSON NICHOLS: Okay. Till our next Board meeting, which has a date and place certain. It's in San Diego on July the 23rd.

BOARD MEMBER ROBERTS: Could be appropriate to come to San Diego and have a major fee addition.

(Laughter.)

BOARD MEMBER ROBERTS: I don't want our paper to miss it, you know.

(Laughter.)

CHAIRPERSON NICHOLS: I'm sure they wouldn't miss it anyway. They have a very sharp reporter who spends a lot of time at our meetings.

But at this point, that's my proposal. And without objection, I think we can do it. But if Board

members have questions or issues that they want to raise tonight that they'd like to see the staff invest, this would be a good time to do it in the next few minutes before we adjourn.

Yes

BOARD MEMBER TELLES: The South Coast Air Pollution Control District suggested that you use their protocol or their way of recording greenhouse gases and it would reduce redundancy in the way of doing this. And it makes a whole lot of sense. And I'm sure other air pollution control districts are working on the same type of thing.

Now, one thing they didn't ask is that -- are they asking also for funding for some of that effort? I know we had a resolution when this -- they aren't.

All right. That's all.

(Laughter.)

CHAIRPERSON NICHOLS: They're not asking for funding.

BOARD MEMBER TELLES: Well, what I was referring to, that we had a resolution that I think was approved to involve the air pollution control districts in this process and also to have some funding, if my recollection is right. And in reading the proposal, it sounded like there would be no funding to the air pollution control

districts for doing some of the groundwork, if I'm reading it right.

CHAIRPERSON NICHOLS: Yeah, the data collection issue has been treated in a different way I think in some respects from some of the other regulatory requirements. As you will recall, this morning we passed a regulation dealing with landfills that explicitly gave a role to the districts in implementing that regulation. And to the extent that it's appropriate, you know, and subvention funds can be used for that purpose or there are other funds available, I think it is appropriate that there be funding available to the districts to participate in doing that.

I think there's an important distinction in terms of the comparability and the integrity of the emissions data about carbon that is different here with respect to what ARB is doing, as is evidenced by the fact that, you know, we haven't even adopted the fee regulation and we're already being sued and there are demands being made for our data.

We have to be very, very careful about every aspect from the beginning to the endpoint of how data are generated that are going to be part of this fee regulation.

Having said that, you know, I think we should

always be open to new and better ways of doing things, especially if it's simpler for the reporters.

What interests me is that we haven't heard from any other districts other than South Coast on this particular issue. And we haven't heard from any of the companies that they want to be able to report to the districts as opposed to ARB. And I think frankly the reason for that is that most industries in this state are hoping that we're going to develop a robust cap and trade system and that that will be a statewide program, not something that's done at the local level.

So, I think staff has been open to trying to find a way to work with South Coast District on this issue, because it clearly is something that South Coast cares very deeply about because, you know, they have mentioned it on a number of occasions. And I would encourage them to continue to try to find a way to do that.

But there are both legal and practical reasons why it really is essential that data that we're going to use for AB 32 purposes has to come in a form and -- you know, in a clean form without being touched by any other hands, so to speak, and also in a format that is identical for all of the reporters. I think if those objectives are met, my understanding is that the staff doesn't have any objections to different software, you know, being

employed.

I'm turning to Lynn Terry because this is her area.

DEPUTY EXECUTIVE OFFICER TERRY: Sure. I guess just from a factual standpoint, the reporting is actually done for this year. Ninety percent are registered. Eighty percent have fully completed the reporting, which was due on June 1st. And so what we're really talking about is in the future would there be another system through which reporting could be done a year from now.

And as Chairman Nichols just mentioned, the cap and trade development process will be one opportunity to look at this reporting again. And we fully expect that our reporting regulation will be modified in that process.

So we will be continuing to look at this reporting issue.

But from an efficiency standpoint, since the reporters have already completed it this year, all of the data has been entered into our ARB server. So next year it's very efficient for them to simply go in and update those fields that have changed, for example, their fuel consumption information.

So, we think that it's a very efficient system as it's designed today and being implemented.

And we are -- we've already talked with the

districts about sharing the data, that we could essentially send the data to them once we receive it almost simultaneously. So there would be no need to rekey the data at the district level because we would immediately share it with them.

CHAIRPERSON NICHOLS: So I hope that addresses the --

BOARD MEMBER TELLES: It does. And this came up in our district. And one of the issues that some of us made was that there would be some standardized way of doing this. And that not every district developed their own way of reporting and all that, and it sounds like they're working on that.

CHAIRPERSON NICHOLS: That's what they're trying to do.

Okay. Thank you very much.

Unless there's any public comment in the generic public comment category here this evening - seeing none - we will stand adjourned until tomorrow morning.

Thanks everybody.

(Thereupon the California Air Resources Board meeting recessed at 6:00 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 3rd day of July, 2009.

JAMES F. PETERS, CSR, RPR
Certified Shorthand Reporter
License No. 10063