APPEARANCES

BOARD MEMBERS
Ms. Mary Nichols, Chairperson
Ms. Sandra Berg
Ms. Doreene D'Adamo
Mr. Hector De La Torre
Mr. Ronald Loveridge
Mrs. Barbara Riordan
Mr. Ron Roberts
Dr. Daniel Sperling
Mr. Ken Yeager

STAFF
Mr. James Goldstene, Executive Officer
Mr. Tom Cackette, Chief Deputy Executive Officer
Mr. Bob Fletcher, Deputy Executive Officer
Ms. Lynn Terry, Deputy Executive Officer
Ms. Mary Alice Morency, Board Clerk
Ms. Sarah Carter, Staff Air Pollution Specialist, Low-Emission Vehicle Implementation Section, MSCD
Ms. Leslie Goodbody, Air Resources Engineer, Zero-Emission Vehicle Infrastructure Section, MSCD
Mr. Nic Lutsey, Postdoctoral Researcher, Institute of Transportation Studies, University of California, Davis
Ms. Anna Wong, Air Pollution Specialist, Zero-Emission Vehicle Implementation Section, MSCD
APPEARANCES CONTINUED

ALSO PRESENT

Mr. Mark Abramowitz, California Hydrogen Business Council
Mr. Jake Alarid, American GI Forum
Mr. Don Anair, Union of Concerned Scientists
Ms. Martha Arguello, PSR-LA
Mr. Robert Babik, General Motors
Ms. Shannon Baker-Branstetter, Consumers Union
Mr. Andrew Barrera, LA Metro Hispanic Chamber of Commerce
Mr. Will Barrett, American Lung Association of California
Mr. Max Baumhefner, NRDC
Mr. Robert Bienenfeld, Honda
Mr. John Boesel, Cal Start
Mr. John Cabaniss, Association of Global Automakers
Mr. Julian Canete, CA Hispanic Chambers of Commerce
Mr. Tim Carmichael, CA Natural Gas
Mr. Sean Carroll, Environment CA
Mr. Robert Cassidy, Nissan
Mr. David Chase, Small Business Authority
Mr. Darrell Clark, Sierra Club
Senator De Leon
Mr. Steven Douglas, Alliance of Automotive Manufacturers
Ms. Allis Druffel, CA Interfaith Power & Light
Ms. Catherine Dunwoody, CA Fuel Cell Partnership
APPEARANCES CONTINUED

ALSO PRESENT

Mr. Tyson Eckerly, Energy Independence Now
Mr. Jay Friedland, Plug-In America
Mr. David Friedman, Union of Concerned Scientists
Mr. Andrew Ginsburg, State of Oregon
Mr. Henry Hogo, SCAQMD
Ms. Bonnie Holmes-Gen, ALA
Mr. James Jack, Emission Control Technology Association
Mr. Joseph Jackson, Carson Black Chamber of Commerce
Ms. Wendy James, CA Clean Cars Campaign
Mr. Stuart Johnson, Volkswagen
Ms. Elizabeth Jonasson, Coalition for Clean Air
Mr. Thomas Jordan, San Joaquin Valley APCD
Mr. Andreas Klugescherd, BMW
Dr. Joseph Kubsh, MECA
Mr. Klaus Land, Mercedes-Benz
Dr. Alan Lloyd, ICCT
Mr. Joe Lyou
Ms. Jessica Lopez, SEUI USWW
Mr. Michael Lord, Toyota
Mr. Michael Love, Toyota
Ms. Tara Lynn Gray, Solano Black Chamber of Commerce
APPEARANCES CONTINUED

ALSO PRESENT

Mr. Jay McKeeman, CA Independent Oil Marketers Association
Ms. Karen Messina Schkolnick, BAAQMD
Ms. Judy Mitchell, Rolling Hills Estates
Mr. Reg Modlin, Chrysler
Ms. Erica Morehouse, EDF
Mr. Simon Mui, NRDC
Mr. Matt Myasato, SCAQMD
Ms. Barbara Nocera, Mazda
Mr. Michael O'Brien, Hyundai
Mr. Diarmuid O'Connell, Tesla
Ms. Elaine O'Grady, State of Vermont
Dr. Michael Ong, ALA
Mr. David Patterson, Mitsubishi
Mr. Shankar Prasad, Coalition for Clean Air
Mr. James Provenzano, Clean Air Now
Ms. Cathy Reheis-Boyd, WSPA
Ms. Rebekah Rodriguez-Lynn, Office of Senator Fran Pavley
Ms. Sara Rudy, Ford
Ms. Emily Schneider, Professional Engineers in CA Government
Mr. John Shears, CEERT
Mr. Aaron Sladek
ALSO PRESENT

Mr. Ronald Stein
Mr. Michael Strada, Cal State LA
Mr. Rudy Tapia
Mr. Lance Tunick, Aston Martin, Lotus, McLaren
Ms. Eileen Tutt, CalETC
Mr. Erick Verduzco, South Bay Latino Chamber of Commerce
Dr. Robert Vinetz, Asthma Coalition of LA County
Ms. Tracy Woodard, Nissan
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PROCEEDINGS

CHAIRPERSON NICHOLS: So I'm going to call the meeting to order now and welcome you all here for the January 26th, 2012, our first Board meeting of 2012.

And before we begin and do the roll call, we will rise and face the flag, which is over there, and say the Pledge of Allegiance.

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

CHAIRPERSON NICHOLS: And the Clerk will please call the roll.

BOARD CLERK MORENCY: Dr. Balmes?

Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK MORENCY: Ms. D'Adamo?

BOARD MEMBER D'ADAMO: Here.

BOARD CLERK MORENCY: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Here.

BOARD CLERK MORENCY: Mayor Loveridge?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

BOARD CLERK MORENCY: Supervisor Roberts?

BOARD MEMBER ROBERTS: Here.

BOARD CLERK MORENCY: Dr. Sherriffs?

Professor Sperling?
BOARD MEMBER SPERLING: Here.
BOARD CLERK MORENCY: Supervisor Yeager?
BOARD MEMBER YEAGER: Here.
BOARD CLERK MORENCY: Chairman Nichols?
CHAIRPERSON NICHOLS: Here.
BOARD CLERK MORENCY: Madam Chairman, we have a quorum.
CHAIRPERSON NICHOLS: Thank you.
A couple of remarks before we get started.
First of all, we'll let people know that at the moment we seem to be comfortably sized for this room, but we are expecting a large attendance today. And we do have an overflow room available in Room 102 across the hall, which is available and has audio/visual communication with this room.

The Metropolitan Water District has requested that we not bring food and drink into the room. I see we've already violated that rule here up at the dais. But apparently they said we're okay with coffee, but they'd rather not have food.

There is going to be a closed session at lunch today. The Board members are going to be receiving a briefing on pending litigation. So just so you know, there will be a lunch break. And during that lunch break, we will be going into executive session.
We are, as I think everybody here knows, here to discuss the advanced clean car regulation package and we intend to get to that shortly. And we will continue this meeting through tomorrow beginning at 8:30 a.m. if we haven't completed action today. What we're doing today is considering a package of three rules that include amendments to our current Low-Emission Vehicle, Zero-Emission Vehicle, and Clean Fuels Outlet Programs.

Everybody who has signed up to testify will be able to provide testimony on this entire package or any part of the package at the same time. So in other words, if you are speaking, we ask you to speak on whatever items in the package you wish to speak on at one time because we're not going to be taking the rules up sequentially. This way, I think this will prevent multiple trips to the podium and also make sure that all speakers get a chance to address the Board.

Anyone who wants to testify and who hasn't signed up online should fill out a request to speak card. These are available in the lobby outside the boardroom. And we would really appreciate it if you would turn it into the Clerk of the Board as soon as possible so she can sort these requests and we can get a better sense of the timing here today.

If you already taken advantage of the online
sign-up feature, you don't have to fill out a card, but you do need to check in with the Clerk or your name is going to be removed from the speakers' list. So if you think you signed up already, don't need another card, but please check yourself in with the Clerk.

The Board normally imposes a three-minute time limit. And if it is absolutely necessary, we might even shorten that in order to give everybody time to speak. But I'm quite sure that we will be able to give people three minutes at least.

And we ask people when they come forward to state their name and to summarize their testimony in their own words rather than reading from your prepared testimony. We have received a lot of written testimony. It's been sent out to the Board in advance. I know many of the Board members, if not all, have had multiple meetings with basically anyone who requested to come to the meeting and talk to them. So I think there's been a lot of opportunity for public engagement here. But of course, this is the place where you get to come and give us your final comments. But the written testimony will be entered into the record.

I'm also asked to have you note the emergency exits in this room. In the event of a fire alarm, we're required to evacuate the room immediately and leave the
building until we get the all-clear signal.

So with that, before we turn to the main item of business, we do have one consent item which consists of ten research proposals that are being presented to the Board for funding. And I'd like to ask if there's any witnesses who have signed up to testify on this item.

Madam Clerk, do we have any witnesses who have signed up to testify on the consent item, the research proposal? We do not. Okay.

Then are there any Board members who would like to have this item removed from the consent calendar?

Seeing none, then I believe --

BOARD MEMBER RIORDAN: Madam Chairman, I'd be happy to move the consent item Resolution 12-1 through the final resolution.

CHAIRPERSON NICHOLS: Do I have a second?

BOARD MEMBER D'ADAMO: Second.

CHAIRPERSON NICHOLS: Any objections?

All in favor, please say aye.

(Ayes)

BOARD MEMBER SPERLING: I'd like to recuse myself because of our U.C. Davis proposal.

CHAIRPERSON NICHOLS: Mr. Sperling is recused on this item.

Any other abstentions?
Hearing none, this item is approved.

Okay. So the next item on today's agenda is the advanced clean cars regulatory package.

I'm delighted we have come to this point. As a matter of personal privilege, I'd like to say that putting these three rules together has been a dream of mine since I came to the Board in 2007. And the fact that we are now in a position to really move this proposal really indicates there's just been a tremendous amount of work, not only on the part of our staff, but also of all of the affected parties. So it's just a great opportunity that presents itself to us today.

The Air Resource Board's core business for over 40 years has been regulating emissions of air pollutants from motor vehicles. And we have made huge strides along the way. In fact, I think it's not too much of an exaggeration to say we've made quantum leaps in both technology and in the whole concept of what it means to have a clean vehicle.

I do recall when we first removed lead from gasoline in order to protect the health of people and especially children from exposure to lead. But also because lead was poisoning the catalytic converters that we first pioneered here in the state of California. And I also remember very well when we set the stage for the
introduction of the three-way catalyst. We've developed revolutionary advances in on-board diagnostics in our own laboratories. And we gave the world the famous check engine light.

As a result, as many in this room can attest to personally, not just Board members, over time, our cars have gotten cleaner literally by orders of magnitude and so have our skies. And I know there are many in this room other than myself who are old enough to remember when the smog was so bad that you could barely see a block down the street, let alone see the mountains in the distance. It was really a thrill flying into LAX yesterday to see that you could see Palos Verdes and you could see Catalena. So it's very exciting.

But we continue to face clean air challenges. And, of course, we've also learned that greenhouse gas emissions that endanger the climate are also a part of our concern as well.

And so to address them both, we are here to consider another historic package of emissions regulations that I do believe are going to lead the way for the nation and for the world.

Now, conceptually, what we are doing here is different. We're not just addressing various emissions from a car with a separate sequential set of regulations
dealing with one pollutant at a time. I think we've finally gotten to the point where we're looking at the car as a unit, as a wholistic item, and looking at it as a vehicle that uses fuel, and not just as a vehicle that's separate from the fuel as well. And I think it's an important change in terms of the whole philosophy of what we're doing. And it also puts us on the path, really, to achieve some very ambitious clean air and climate goals.

In getting to this point, of course, we're building on our history of fighting smog by slashing ozone precursors an additional 75 percent beyond 2014 levels which already a small fraction of what they were when we started, less than one percent of what cars were emitting back in the 1970s.

And we build on our first-in-the-nation history of fighting climate change by reducing greenhouse gases an additional 34 percent beyond the levels where the Pavely I regulations brought us in 2016. So 75 percent more reductions of smog and another 34 percent reductions in greenhouse gases.

And these advances will be the product of technologies that already exist. They're on the shelf and they're already found in many cars on the road. When it comes to the zero-emission vehicle mandate, we're working to force technology, to accelerate and improve on the
exiting technologies in electric cars and fuel cell vehicles. So we're not just resting on the effects of the internal combustion engine, as dramatic as those have been and continue to be, but we're also moving forward in a whole new era of electric and fuel cell vehicles. And we intend to put 1.4 million of the cleanest cars on our roads at 2025. This will ensure that the market for these vehicles, which is already launched, will grow and be diverse and robust and that California continue to lead as a hub for cultural and technological innovation.

To support these vehicles, we need the infrastructure. California is a leader in preparing us for electric vehicles. The Plug-In Electric Vehicle Collaborative is ensuring that the state is ready for electric vehicles and doing it in a way that focuses on building the market in collaboration with consumers and with manufacturers. And we're going to continue to lead in low-carbon fuel infrastructure development.

Today, we're also considering an approach to assure that sufficient hydrogen fueling infrastructure gets built to support the tens of thousands of fuel cell cars that manufacturers expect to sell in California after 2017.

Once again, California is leading the nation. And there is a good reason why we're moving so far so
fast. Simply put, the reason for this is that we can't afford to wait. We have to act on these issues now. Our projections show that continued growth in population and vehicle miles traveled will threaten air quality for years to come. Even with today's very clean cars, we have air quality violations in the Bay Area, Los Angeles, and San Joaquin Valley. We clamped down on every other source as well. But only a shift to zero-emission vehicles using renewable fuels will get us to healthy air and reduce our state's contribution to global warming.

We're working with the auto companies, the federal government, and other interested parties the make sure there is a broad array of choices that meet consumers' needs and their pocketbooks.

Our history with the Zero-Emission Vehicle Program is somewhat checkered. The original program had at its time overly ambitious goals perhaps, although they were based on good reasoning. But the fact is there were two hurdles that were not able to be overcome. One, of course, perhaps most important, was the price of gasoline stayed cheap. And the other was the cost of the new technologies remained very high. Improvements in durability and cost of batteries simply took longer than we anticipated, making the early ZEV cars less appealing and more expensive.
But the situation today is very different. Gas hovers at $4 a gallon, while the cost of technology has dropped and durability has improved. Equally important, the auto companies have now embraced the idea that electric drive vehicles, advanced hybrids, battery electric fuels, and fuel cells will play an increasing roll in the near future. And they are competing with each other around the globe to bring out advanced clean cars.

This package of regulations is, therefore, both visionary and absolutely feasible. It's designed to ensure that the very best clean car technologies are incorporated into the cars we buy and drive. The goal here is to accelerate the transition that is already in process and to make sure that it happens first here in California.

So what we are undertaking today is more than a milestone. It marks the beginning of a new chapter in this Air Resources Board and California's decades long love and sometimes hate affair with the automobile. This program will make the cleanest cars and new technologies commonplace, something that we've already seen with the hybrid car. The Advanced Clean Car Program will also continue to help clean our air, help us fight climate change, and perhaps most important for the average citizen, it will save consumers thousands of dollars over
the life of these cleaner, more efficient vehicles. And of course, as Californians, it also gives us the ability to brag that we are once again the clean car advocate of the world.

So with those remarks, which I hope will set the stage for the staff presentation, I'd like to ask Mr. Goldstene to introduce the item and begin the staff report.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

As Chairman Nichols mentioned, the Advanced Clean Cars Program is a coordinated package of regulations that sets a pathway to achieving sustainable transportation in California by assuring the development of environmentally superior cars that will deliver the performance, utility, and safety vehicle owners have come to expect. The Advanced Clean Cars Program consists of three primary elements, combined to achieve significant reductions in criteria and greenhouse gas emissions for the new vehicle fleet. These elements include amendments to the low-emission vehicle, or LEV, program that achieve significant reductions in criteria and greenhouse gas emissions from passenger vehicles, a strengthening of California's zero-emission vehicle, or ZEV, program to help jump-start the commercialization of the cleanest
vehicles, such as those powered by electricity, and amendments to the clean fuels outlet regulations so that clean fuels, such as hydrogen, will be available for the next generation of clean vehicles that need them.

Accordingly, the Advanced Clean Cars Program coordinates the goals of the LEV, ZEV, and clean fuels outlet program laying the foundation for transformation of our personal transportation system to one consisting primarily of ultra clean vehicles.

Today's advanced clean cars presentation will be split into four separate presentations.

The first presenter is Ms. Sarah Carter of the Mobile Source Control Division. Ms. Carter will give an overview of the advanced clean cars proposal and present staff's proposed changes to the criteria pollutant portion of the regulation.

Next, Dr. Nic Lutsey with the Institute of Transportation Studies at U.C. Davis, who's working as a consultant for ARB, will discuss the greenhouse gas portion of the proposal.

Then Ms. Anna Wong of the Mobile Source Control Division will then discuss staff's proposed revisions to the Zero-Emission Vehicle Regulations.

And, finally, Ms. Leslie Goodbody will present staff's proposal for the clean fuels outlet part of the
Advanced Clean Cars Program.

Due to the overall length of these presentations, I'd like to propose that the Board members consider taking a break after the second presentation. Of course, it will be up to all of you.

And with that, I'd like to introduce Ms. Carter to begin the staff presentation.

(Thereupon an overhead presentation was presented as follows.)

STAFF AIR POLLUTION SPECIALIST CARTER: Thank you, James.

Good morning, Chairman Nichols and members of the Board.

I'd like to begin by first providing you with a brief overview of the Advanced Clean Cars Program and its goals.

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STAFF AIR POLLUTION SPECIALIST CARTER: The driving force behind the development of the Advanced Clean Cars Program is two-fold. First is meeting our air quality goals. While California has made remarkable progress towards achieving ozone attainment, more reductions in criteria emissions are needed to meet mandated federal and state ambient air quality standards.

Second is achieving the climate change goals set
forth under AB 1493, the Pavely legislation, and AB 32, the Global Warming Solution Acts of 2006.

Despite the progress that has been made to date to reduce greenhouse gas emissions in California, we have a long way to go to achieve climate stabilization. This program will set us firmly on that path.

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STAFF AIR POLLUTION SPECIALIST CARTER: The Advanced Clean Cars Program is a coordinated approach to meeting California's mid- and long-term goals for light-duty vehicles.

The LEV III element focuses on achieving significant reductions in criteria and greenhouse gas emissions by encouraging the development of advanced conventional vehicle technologies.

The ZEV element will act as the focused technology forcing piece of the Advanced Clean Cars Program by requiring manufacturers to produce increasing numbers of pure ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. This will help to establish a commercial market for these technologies in California.

Finally, amendments to the clean fuels outlet regulation will assure ultra clean fuels such as hydrogen are available to meet vehicle demands brought on by
amendments to the ZEV program.

By combining the control of criteria and greenhouse gas emissions into a single coordinated package of requirements for model years 2015 through 2025, the Advanced Clean Cars Program assures the developments of environmentally superior cars that will continue to deliver the performance, utility, and safety that vehicle owners have come to expect, while saving them money.

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STAFF AIR POLLUTION SPECIALIST CARTER: The California Environmental Quality Act, or CEQA, applies to public agency decisions to carry out or approve projects, which includes approval of regulations. ARB prepared Appendix B in accordance with its certified regulatory program and CEQA. Appendix B is an integrated programmatic environmental analysis that identifies regulated community compliance responses and assesses the potential for the beneficial and adverse environmental impacts associated with the implementation of all the proposed regulatory actions being considered today. The analysis identifies mitigation that, if implemented, could reduce the significance of impacts. The environmental analysis also includes an alternatives analysis.

Responses to comments received during a 45-day public review period will be included in the final
statement of reasons.

--o0o--

STAFF AIR POLLUTION SPECIALIST CARTER: Staff worked very closely with stakeholders on the development of the Advanced Clean Cars Program. Ten public workshops seeking input were held on the Advanced Clean Cars Program, as well as multiple one-on-one meetings with industry on the technologies and costs for meeting the proposed criteria and greenhouse gas emissions standards and ZEV requirements.

Staff also conducted a comprehensive community and stakeholder outreach effort on the Advanced Clean Cars Program.

Staff conducted three community meetings in July 2011 in communities with environmental justice concerns: Fresno, Oakland, and Pacoima in the Los Angeles area. At these meetings, community members heard from a panel of experts as staff presented information about the advanced clean cars regulations and the CEQA scoping process.

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STAFF AIR POLLUTION SPECIALIST CARTER: I'd now like to turn to the first element of the Advanced Clean Cars Program, the Low-Emission Vehicle Program. The Low-Emission Vehicle Program established the emission standards that must be met by all light and medium-duty
vehicles and include both criteria pollutants and greenhouse gases.

The revisions to the low emission vehicle program proposed today will be discussed in two parts:

First, you will hear staff's proposal to reduce criteria emissions from this segment of the vehicle fleet. Criteria pollutants include both hydrocarbons and oxides of nitrogen, which are smog-forming emissions and particulate matter. Then, staff's proposal for reducing greenhouse gas emissions will be discussed.

--o0o--

STAFF AIR POLLUTION SPECIALIST CARTER: I will now discuss the criteria pollutant element of the low-emission vehicle proposal. Changes to this portion of the low-emission vehicle regulations include modifications to exhaust emission requirements, modifications to evaporative emission requirements, minor revisions to California's on-board diagnosis, or OBD II regulations, adoption of new specifications for certification gasoline, and updates to California's environmental performance label requirements.

--o0o--

STAFF AIR POLLUTION SPECIALIST CARTER: California's low-emission vehicle, or LEV, program was first adopted in 1990. This first-of-its-kind program
achieved significant reductions in smog-forming emissions between model years 1994 and 2004 by allowing manufacturers to sell a mix of vehicles that met standards of different stringencies, provided that their overall fleet became cleaner each year. This was accomplished using declining fleet average non-methane organic gas or hydrocarbon standards and more stringent NOx standards.

During the second phase of the Low-Emission Vehicle Program or LEV two, emissions from the new vehicle fleet were further reduced with the 2010 model year after which they leveled off. This slide shows the reductions in emissions from new passenger cars due to the Low-Emission Vehicle Program, based on standards that must be met at 50,000 miles.

The line labeled "HC" is the fleet average non-methane organic gas standard for each year and the line labeled "NOx" is the corresponding reduction in NOx from new automobiles.

Emissions from light-duty trucks not shown here were similarly reduced. As the slide illustrates, significant reductions in vehicle emissions have been achieved as a result of the LEV program.

--o0o--

STAFF AIR POLLUTION SPECIALIST CARTER: Although the LEV program has been a major success and has resulted
in substantial reductions in smog-forming emissions from light- and medium-duty vehicles, California needs further reductions to meet health-based state and federal ambient air quality standards. Therefore, today staff is proposing a second revision to the LEV program which will be phased in between 2015 and 2025 that will continue to drive vehicle emissions to near zero levels.

The basic elements of the program are listed on this slide. In the previous slide, I mentioned that the adoption of a fleet average non-methane organic gas, or NMOG standard, allowed overall fleet emissions to be reduced to significantly lower levels than were possible using a single standard.

The LEV III program expands that approach by setting fleet average standards for ozone-forming emissions which include both NMOG and NOX.

Other important elements of the LEV III program include the increasing the durability requirements to 150,000 miles to ensure that the emission benefits of the program are maintained throughout the life of the vehicle. And it includes a provision that allows manufacturers to pool the vehicles sold in California and those states that have adopted California's Low-Emission Vehicle Program when demonstrating compliance with the LEV III regulations.
STAFF AIR POLLUTION SPECIALIST CARTER: This slide shows fleet average emission requirements for LEV III. Recognizing considerable workload required to comply with the Advanced Clean Cars Program, the proposed revisions provide manufacturers with significant lead time and considerable flexibility to incorporate these technologies into their vehicles.

Phased in beginning in 2015, LEV III will reduce fleet average emissions from light-duty vehicles to super ultra-low-emission vehicle or SU LEV levels by 2025, a reduction of about 75 percent from today's levels.

As mentioned in the previous slide, these are the fleet average emission levels for NMOG plus NOx that must be met at 150,000 miles.

STAFF AIR POLLUTION SPECIALIST CARTER:

Light-duty vehicle PM emissions are less than five percent of the statewide PM2.5 emission inventory but can be a significant source of urban air pollution, especially near roadways. Staff is proposing a 90 percent reduction in PM standard in a two step process for the following reasons:

In response to current and future greenhouse gas requirements, manufacturers are incorporating gasoline direct injection engines, or GDI engines, across the
vehicle models because of their higher efficiency compared to current engine technology. However, first generation GDI engines emit higher PM levels. Further improvements in combustion and fuel injection design are expected to reduce GDI PM emissions.

Manufacturers will be resource-challenged over the next 15 years as they strive to develop and implement technologies ranging from advanced gasoline and diesel vehicles engines to electric and fuel cell vehicles, while at the same time lowering criteria emissions of their combustion engines. Therefore, staff believes sufficient lead time is needed for manufacturers to incorporate improvements to their GDI engines.

A one milligram per mile standard is proposed for 2025. Staff believes this is technically achievable in this time frame and refinement of the test procedures to more accurately measure these low emission levels is ongoing.

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STAFF AIR POLLUTION SPECIALIST CARTER: Another element of the LEV III proposal are modifications to the supplemental federal test procedure, or SFTP, which controls vehicle emissions during real world driving conditions, such as aggressive driving and air conditioner usage. These are conditions that are not represented in
The federal test procedure that is used for certification testing.

The SFTP is primarily a calibration requirement intended to optimize the effectiveness of existing emission control hardware. LEV III increases the stringency and durability requirements for SFTP and for the first time includes medium-duty vehicles. In addition, new PM requirements are proposed for medium-duty vehicles.

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STAFF AIR POLLUTION SPECIALIST CARTER: In the 2010 model year, 28 percent of passenger cars and light-duty trucks were certified as partial zero-emission vehicles, or P ZEVs, to the zero evaporative emission standards, thus demonstrating the feasibility and cost effectiveness of this technology.

However, because P ZEVs will no longer be part of the ZEV program after 2017, no incentives exist to continue certifying vehicles with zero evaporative emissions. To both prevent possible backsliding and further reduce emissions, staff is proposing to extend the zero evaporative emissions requirement to the entire fleet by model year 2022. We are also proposing two other changes as shown in this slide.

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STAFF AIR POLLUTION SPECIALIST CARTER: LEV III provides significant emission benefits far into the future. In the face of continued increases in vehicle population and vehicle miles traveled, the benefits of LEV III continue to increase as ultra clean LEV III vehicles migrate into the fleet. In addition, new LEV III particulate standards will result in a reduction of particulate emissions.

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STAFF AIR POLLUTION SPECIALIST CARTER: Staff is proposing a few amendments to the OBD II regulation to address impending 2013 model year certifications. These adjustments were needed to provide additional latitude for compliance for more advanced diesel and hybrid technology. Staff is also proposing to change the certification gasoline specification to be representative of current commercial gasoline vehicles.

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STAFF AIR POLLUTION SPECIALIST CARTER: Finally, staff is proposing minor changes to the California environmental performance label requirements. Since 1995, California's smog index label has helped consumers assess the relative smog emissions from new cars. Our current label provides consumers with smog and global warming scores, both on a scale from one to
ten, with ten being cleanest.

The federal government updated the well-known fuel economy label in 2011. Through a cooperative process with our federal partners, we were able to ensure key elements of the new label meet California's requirements for informing consumers about emissions. We are, therefore, proposing to allow OEMs to use the federal label to comply with California's environmental performance label requirements.

This concludes the criteria pollutant portion of the LEV III Program. Nic Lutsey will now present the greenhouse gas part of the LEV III proposal.

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MR. LUTSEY: Thank you, Sarah.

Chairman and Board members, it is my privilege to present to you the second portion of the advanced clean cars package, the proposed greenhouse gas standards of the LEV III regulation.

First, I'll provide some background to bring us from the original Pavely legislation to today. Then I'll describe the proposed new greenhouse gas standard major features, including stringency, provisions, and technology involved.

I'll highlight the staff's projected costs and benefits from the regulation. And I'll finish with a
discussion of the coordination with the federal greenhouse
gas regulation.

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MR. LUTSEY: So how did we get here. The
original Pavely legislation in 2002 first tasked ARB staff
with drafting maximum feasible cost effective greenhouse
gas standards. In 2004, this Board approved the first
greenhouse gas standards, which regulated vehicles through
2016.

In 2010, U.S. EPA adopted similar federal
2012-2016 standards that California deems as sufficient to
demonstrate compliance.

Since that time, the last two years have involved
the comprehensive technical coordination between ARB and
federal agency staff to ensure that the U.S. EPA and ARB
greenhouse gas standards were consistent in terms of their
technical underpinnings, stringency, and provisions.

U.S. EPA jointly with NHTSA proposed 2017 to 2025
standards in November of 2011. ARB staff proposed
harmonized greenhouse gas standards in December of 2011,
which you are considering here today.

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MR. LUTSEY: Before presenting the proposed new
standard, I would like to review the great progress made
toward adopting 2016 standards. Since Board's approval of
the 2016 standards in 2004, great strides have already been made across new car, cross-over, and pickup truck models to lower greenhouse gas emissions.

After a little greenhouse gas change for the previous 20 years, car and light trucks are seeing major deployments of exciting new engine, transmission, and aerodynamic technologies in the marketplace. In 2010, the new fleet was already 40 percent of the way towards 2016 compliance.

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MR. LUTSEY: And this proposal for the new greenhouse gas standards would continue this great progress through 2025, incrementally pushing the vehicles's greenhouse gas emissions downward by about 4.6 percent per year for the following nine years. This would bring the certified new vehicle fleet from about 250 grams of carbon dioxide equivalent per mile in 2016 to 166 grams per mile in 2025.

The proposed standards, as shown by the two categories in the figure, would continue to separate car and truck categories where trucks include pickups, vans, and sport utility vehicles that meet given four-wheel drive weight and clearance provisions.

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MR. LUTSEY: One important feature of the
proposed standards is that they're indexed to the vehicle footprint, which is defined as the area between the wheels. This differs from the current California standards that are not indexed to vehicle size. The footprint design is consistent with the U.S. EPA 2016 and proposed 2025 standards and it has a number of advantages. I mentioned the projected outcome of 166 grams CO2 per mile on the previous slide. With a greater mix of smaller cars, the emission level would be lower than that. With a greater mix of larger light trucks, the emission level would be higher. This helps address manufacturer competitiveness issues, and it ensures the full diversity of vehicle types in the marketplace.

As a result, the precise greenhouse gas emission outcome can vary depending on the ultimate mix of vehicles sold from year to year. As shown on the slide, the existing vehicle models across all vehicle sizes, the cloud of data points in the top of the figure, will have to achieve lower and lower emissions to meet lower greenhouse gas targets in each subsequent year.

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MR. LUTSEY: I would also like to spell out a few more of the detailed provisions of the proposed standards. The standards allow for company sales weighting to allow flexibility. The footprint indexed standards push
technologies across all vehicles, while protecting fleet diversity.

The existing car and truck categories are maintained. For year to year averaging flexibility, excess credits for overcompliance can be carried forward five years, while debits must be covered within three years.

There are also a number of crediting opportunities to help spur new technologies. As in the 2016 regulation, air conditioning technologies receive credits for improvements in air conditioning efficiency, low leak refrigerants, and global warming potential refrigerants.

In addition, technologies that this Board previously considered in the Cool Cars Program will be allowed credits within the off cycle credit provisions. Special credits are allowed for large pickup trucks that utilize hybrid technology or exhibit very low greenhouse gas emission levels.

Finally, two other greenhouse gas pollutants, nitrous oxide, or N2O, and methane, CH4, continue to be regulated within these greenhouse gas standards. All of these provisions by design are identical to those of U.S. EPA's proposed 2025 greenhouse gas standards.
MR. LUTSEY: From a technology perspective, the proposed standard will push many exciting off-the-shelf and emerging internal combustion technologies into the mainstream. As Chrysler and Fiat Chief Executive Sergio Marchionne put it, due to the new greenhouse gas standards, if you are an engineer, you will get to walk into a toy shore and have any toy off the shelf that you want.

These new low greenhouse gas technologies include many sophisticated valvetrains, gasoline direct injection, turbocharging, transmissions with more gears and optimized dual-clutch controls, low-rolling resistance tires, sleeker aerodynamics, and greatly improved accessories. These cleaner gasoline technologies are shown in blue.

In addition, as will be presented in greater detail in the following presentation on the ZEV regulation, the rulemaking period will also usher in the initial ramp up of ultra low greenhouse gas plug-in electric and fuel cell vehicles that are critical to California's climate goals beyond 2025.

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MR. LUTSEY: On a grander scale, the regulation will have a profound effect on reducing climate change emission and putting California on a path that is closer to its long-term climate stabilization goals as presented
in introductory slides.

As shown in the figure, as new, ever lower greenhouse gas emission vehicles enter the fleet due to 2017 to 2025 regulations, the overall vehicle greenhouse gas emissions see increasing reductions from 2025 on.

By 2035, greenhouse gas emissions from light-duty vehicles are cut by 27 percent. After that, as the fleet fully turns over, the emissions are cut by a third. Cumulatively, the difference between the base line and regulatory paths shown in this figure represent hundreds of millions of tons of less greenhouse gas emissions entering the atmosphere.

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MR. LUTSEY: As discussed previously, we have coordinated with the federal agencies on technical and economic areas and we have moved in parallel with the federal rulemaking.

We would like to emphasize one major point related to federal regulatory coordination. As did for the original Pavely regulation, it is our intention to deem auto maker compliance with the U.S. EPA greenhouse gas regulation as sufficient for California greenhouse gas compliance, provided that the standards are substantially similar. This means that we would come back to the Board to adopt this provision later this year.
Also, ARB intends to participate in the federal agency's mid-term review regarding the 2022 to 2025 greenhouse gas standards with the review set to be finished in 2018.

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MR. LUTSEY: Based on state-of-the-art research and extensive input from automotive engineers and suppliers, the associated increase in vehicle technology costs from the LEV III regulation to consumers is shown in this chart. The two LEV regulatory components as criteria pollutant and greenhouse gas emissions together would increase the new vehicle price by about $1400, an increase of about 6 percent in year 2025. However, the resulting consumer fuel savings shown in green in this figure, from each new low greenhouse gas vehicle would greatly outweigh the initial technology costs by a margin of at least three to one.

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MR. LUTSEY: In conclusion, the proposed revisions to the LEV regulation are intended to achieve the maximum feasible and cost effective reduction of criteria and greenhouse gas emissions from new motor vehicles. The nearly 15 year lead time and built in flexibility provide long-term targets to manufacturers. The proposed standards offer the lead time and regulatory
certainty needed to develop and deploy advanced low
greenhouse gas emission engine and drivetrains, while at
the same time drastically lowering criteria pollutant
emissions. The proposed greenhouse gas regulation
continues one national program, while saving vehicle
consumers money for each new low emission vehicle that is
sold.

Staff recommends that the Board adopt the LEV II
regulation as proposed. This concludes the presentation
of the proposal for the LEV III regulation.

CHAIRPERSON NICHOLS: Mr. Goldstene, do you want
to take a brief break at this time?

EXECUTIVE OFFICER GOLDSTENE: It's up to the
Board. We're ready to continue with Ms. Wong.

CHAIRPERSON NICHOLS: I don't feel the need to at
this stage. I think we should just continue.

EXECUTIVE OFFICER GOLDSTENE: Okay.

AIR POLLUTION SPECIALIST WONG: You heard the
ambitious criteria and greenhouse gas standards being
proposed through model year 2015. I'm here to present the
technology-forcing piece of the advanced clean cars
package, the Zero-Emission Vehicle Regulation.

In 1990, the Board adopted this ambitious program
to significantly reduce the environmental impact of cars
and trucks through the introduction of zero-emission
vehicles to California's fleet.

Time and time again, the Board has reaffirmed its commitment to zero-emission vehicle technology. And staff is here today to further strengthen this groundbreaking regulation. I will briefly review the background of the zero-emission vehicle or ZEV regulation, walk through substantive changes, review the cost of the proposed changes, and present additional staff recommended modifications.

Overall, our proposed amendments focus the regulation on technologies needed to meet long-term 2050 greenhouse gas goals, simplify the regulation where possible, and increase the requirement for 2018 and subsequent model years.

At the 2008 hearing, you, the Board, asked staff to consider what role the ZEV regulation could play in helping the light-duty vehicle sector meet long-term greenhouse gas reductions. So staff undertook a year-long analysis of the light-duty vehicle sector, what was needed to meet California's 2050 greenhouse gas goals and presented its analysis to you in 2009.

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AIR POLLUTION SPECIALIST WONG: This slide shows one scenario staff developed during our review in which 87 percent of the on-road vehicle fleet would need to be
zero-emission vehicles, meaning battery electric vehicles or hydrogen fuel cell vehicles. This would mean nearly every car sold in California in 2040 would need to be a pure ZEV with commercialization beginning in the 2020 time frame. This analysis became the basis of the proposal I will present to you today.

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AIR POLLUTION SPECIALIST WONG: To reinforce that ZEVs are necessary in the long-term light-duty vehicle fleet, these two graphs show on-road battery electric vehicles, fuel cell vehicles, and plug-in hybrid vehicles compared to on-road gasoline vehicles meeting the criteria and greenhouse gas standards presented to you earlier.

Even on a life cycle basis, plug-in hybrids, battery electrics, and fuel cell vehicles as shown in these two red boxes are significantly lower emitting in both criteria pollutants and greenhouse gas emissions. Additionally, these advanced vehicles utilize fuels that are moving towards more renewable sources, further securing California's sustainable energy future.

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AIR POLLUTION SPECIALIST WONG: Before I give the staff's proposed amendments, let me first explain a bit about the how the current ZEV regulation works. A manufacturer's ZEV obligation is determined by how many
vehicles it sells in California. Each manufacturer's obligation is a credit requirement. Each vehicle produced by a manufacturer is given a credit, where ZEVs typically earn more than near zero-emission vehicles.

The largest manufacturers must produce pure ZEVs, meaning battery electric vehicles or hydrogen fuel cell vehicles.

Additionally, manufacturers may produce other near zero emission vehicles, like plug-in hybrids, conventional hybrids, and clean gasoline vehicles in lieu of ZEVs to offset some of the overall requirements.

Ten other states have adopted California ZEV regulation requiring manufacturers to place ZEVs and near zero-emission vehicles in those states.

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AIR POLLUTION SPECIALIST WONG: The ZEV regulation has been successful. The cleanest gasoline vehicles known as partial zero-emission vehicles, or P ZEVs, and conventional hybrids have reached commercialization. Over 1.7 million P ZEVs and nearly 400,000 conventional hybrids have been produced for sale in California.

Additionally, through demonstration programs and limited production, over 30,000 battery electric vehicles which includes full function battery electric vehicles
like the Nissan Leaf and neighborhood electric vehicles
like the Gem have been placed, as well as 350 hydrogen
fuel cell vehicles.

Because P ZEVs and conventioned hybrids have
reached commercialization, staff is proposing to graduate
those vehicles to help meet the LEV III criteria pollutant
and LEV III greenhouse gas fleet programs presented to you
earlier. This change will leave the following types of
low carbon vehicles in the ZEV regulation: Battery
electric vehicles, including plug-in hybrids, and hydrogen
fuel cell vehicles.

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AIR POLLUTION SPECIALIST WONG: This slide shows
a number of examples of each technology remaining in the
ZEV regulation. Some of these vehicles like the Nissan
Leaf and Honda Clarity are currently available for lease
or sale. All other vehicles featured on this slide in
addition to others not pictured have been announced by
manufacturers to be available to consumers in the next few
years.

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AIR POLLUTION SPECIALIST WONG: Today, I will
present to you staff's propose to increase manufacturers
requirements -- 2018 through 2025 ZEV requirements,
including more manufacturers into the ZEV mandate, modify
how to determine ZEV credits and plug-in hybrid credits, and add flexibility for manufacturers faced with increased requirements.

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AIR POLLUTION SPECIALIST WONG: Based on the vehicles that remain in the ZEV program, let me quickly review the current regulation requirements.

On this graph, the green dashed line represents the expected number of plug-in hybrids that is likely to result from the current requirements. The orange dashed line represents the expected number of pure ZEVs, which is a mix of both battery electric vehicles and hydrogen fuel cell vehicles. Overall, this would result in 4 percent of annual sales in 2025 being ZEVs and plug-in hybrids.

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AIR POLLUTION SPECIALIST WONG: Staff is proposing to increase manufacturers' ZEV obligation each year, starting in model year 2018 through model year 2025 to achieve cost reductions needed for commercialization and to put us on the path to achieving 2050 greenhouse gas reductions.

Based on the likely compliance scenario we developed, this increased requirement could result in 15.4 percent of annual sales in 2025 being ZEVs or plug-in hybrids.
AIR POLLUTION SPECIALIST WONG: This graph shows an example of how increased production that would result from the increased proposal brings down the cost of technology.

Currently, at such low volumes, it would take considerable amount of time to reach the low costs needed for ZEVs to reach commercialization. As volumes are increased and technology advances, staff expects costs for ZEVs to be reduced 30 to 60 percent over the period of ZEV regulation. During a recent interview at the Detroit Auto Show, Mr. Carlos Ghosn, CEO of Nissan, shared some insight on the dramatic reductions he expects for these advanced vehicles as production is increased.

(Whereupon a video presentation was made.)

AIR POLLUTION SPECIALIST WONG: Thank you, Mr. Ghosn.

Nissan, as well as the other five manufacturers in the blue box on this screen, are currently required to make ZEVs, because these manufacturers produce more than 60,000 vehicles annually for sale in California.

The ten manufacturers in the green box are smaller by California sales volume than those in the blue box, but are still required to comply with the ZEV regulation. The only difference is the manufacturers in
the green box are allowed full flexibility to meet their requirements with P ZEVs, the cleanest gasoline vehicles. You'll notice that you do not see some manufacturers on either list, like Maserati or Suzuki. This is because those manufacturers produce less than 4500 vehicles for California and do not have a ZEV requirement.

In response to the Board as direction to treat manufacturers equitable under the ZEV requirement and ensure widespread commercialization in the fleet, staff is proposing to re-define these two boxes so that the cut point is 20,000 vehicles produced for sale annually rather than 60,000. This means starting in 2018 six manufacturers will move from the green box to the blue box. And, therefore, it will be required to produce ZEVs which will account for manufacturers responsible for the vast majority of cars sold in California.

The four manufacturers left in the green box will be offered more flexibility and will be allowed to comply with plug-in hybrids. Staff believes re-defining these two-sized categories appropriately places similar requirements on manufacturers with similar California and world-wide sales volumes.

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AIR POLLUTION SPECIALIST WONG: Another way staff is proposing to simplify the overall ZEV regulation is by
modifying how we award ZEV credits. Currently, credits are based on range and fast refueling capability. The credits system is tiered, so it encourages manufacturers to produce a vehicle meeting the range threshold rather than rewarding the actual range of the vehicle. For example, in the current system, a 100 mile range BEV would earn the same amount of credit as a 150 mile range BEV due to the tiered nature of the crediting.

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AIR POLLUTION SPECIALIST WONG: Staff is proposing to change this to a linear system based on the vehicle's zero-emission vehicle mile range. Under the proposed credit system, a ZEV would earn between one and four credits, with a minimum range requirement of 50 miles. ZEVs with greater than 350 miles range would earn no greater than four credits each.

To give a couple of examples, a 100-mile BEV like the current Nissan Leaf, would earn 1.5 credits under the proposed system, and a 300-mile fuel cell vehicle would earn 3.5 credits.

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AIR POLLUTION SPECIALIST WONG: Staff is proposing to base credits for plug-in hybrids using a similar linear credit system. You can see on the bottom left of the screen where plug-in hybrid credits would
fall. This ensures that a 60-mile plug-in hybrid would earn no greater credit than a 60 mile BEV.

AIR POLLUTION SPECIALIST WONG: Here, I have extended the blue box from the previous slide that showed the plug-in hybrid credits. For the proposed plug-in hybrid credits, you can see there are two credit lines. The purple line shows credits awarded to plug Prius like plug-in hybrids where the engine is supporting the vehicle's operation, even when the battery has not been fully defeated.

These vehicles would get point two credits less than Volt-like plug-in hybrids, which are vehicles where the engine does not turn on until the battery has reached charge sustaining mode. These Volt-like plug-in hybrids are on the same orange linear credit line as ZEVs.

Staff believes Volt-like plug-in hybrids will promote maximum zero-emission vehicle miles driven and should be awarded more than their plug Prius like counterparts.

AIR POLLUTION SPECIALIST WONG: Staff proposed numbers to aggressively advance California towards ZEV commercialization. However, staff believes it is appropriate to offer regulatory flexibility to
manufacturers facing such aggressive numbers. These proposed flexibilities allow manufacturers greater control over introduction rates for ZEVs and awards over-compliance.

I've listed six of these provisions on this slide, three of which I will discuss in more detail, including staff's new proposed vehicle category, greenhouse gas ZEV over-compliance provision, and the travel provision.

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AIR POLLUTION SPECIALIST WONG: Staff is adding a new vehicle category: Range extended battery electric vehicles, or BEVx. This is a battery electric vehicle equipped with small engine for a limited range extension. This is different from a plug-in hybrid because the gasoline range of a BEVx will be equal to or less than the zero-emission vehicle range with the intention of the backup engine to return the driver home or to the nearest charging station.

Manufacturers who have approached staff with this idea acknowledge that the BEVx will likely be more expensive than the BEV, but believe such a vehicle could potentially expand the market. This is because most BEV drivers plan their trips with some degree of reserve range left in the battery, and therefore are not likely to
utilize all of the battery capacity.

Potentially, a BEVx driver could drive more zero-emission vehicle miles because running out of battery would not an issue.

Staff proposes to treat BEVx's the same as traditional battery electric vehicles, basing credit for the vehicle on its zero emission range. However, the vehicle must still meet the lowest SU LEV tailpipe standards, zero evaporative emissions, and must carry the same extended warranty required of plug-in hybrids.

Staff is proposing to limit a manufacturer's use of these credits, only allowing up to half of pure ZEV requirements to be met with credits from BEVx's and until we determine how these vehicles are operated.

The proposed vehicle has the potential to expand the BEV market beyond current market estimates by giving interested consumers an extra measure of confidence about the vehicle's range.

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AIR POLLUTION SPECIALIST WONG: Another flexibility proposal awards manufacturers who over comply on their greenhouse gas fleet average with credits that can be used to meet a portion of their ZEV requirement. This proposal was included in California's July 28 commitment letter to the National Program.
Staff proposes to offer this provision for a limited time from model year 2018 through 2021. During that time, manufacturers who overcomply with their greenhouse gas fleet average by at least two grams per mile each year for all four model years will be allowed to offset a portion of their ZEV requirement up to half in 2018 and 2019, 40 percent in 2020, and 30 percent in 2021.

Additionally, manufacturers must actually overcomply with their greenhouse gas fleet average, meaning no banked greenhouse gas credits may be used, nor any incentive multipliers to determine how much they have over-complied with the greenhouse gas fleet average.

Let me present the possible impacts of this proposal to the overall program.

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AIR POLLUTION SPECIALIST WONG: The light and dark gray areas on this graph show staff's ZEV proposal with no manufacturers using this provision. Cumulatively, we are expecting 1.4 million ZEVs and plug-in hybrids under staff's proposal between model year 2018 and 2025.

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AIR POLLUTION SPECIALIST WONG: We expect manufacturers responsible for somewhere between 20 and 50 percent of California sales will be able to take advantage of this provision. If two manufacturers
representing 20 percent of the vehicles sold in California took this option as we anticipate, the red and blue lines and area below represent how many vehicles could be expected to be produced in California. This could result in 38,000 fewer ZEVs and plug-in hybrids cumulatively between 2018 and 2025.

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AIR POLLUTION SPECIALIST WONG: The final provision staff is proposing to change is the travel provision. Section 177 of the Clean Air Act allows other states to adopt California's regulations. We call these the Section 177 ZEV states. Because of other state's adoption of the ZEV regulation, for every 100 vehicles a manufacturer must produce in compliance with the California requirements, the manufacturers must produce 140 additional vehicles in the Section 177 ZEV states to meet its ZEV requirements in those states.

A provision in the ZEV regulation called the travel provision allows manufacturers to count battery electric vehicles and fuel cell vehicles placed in California to count towards compliance in Section 177 ZEV states without actually having to produce vehicles for the Section 177 ZEV states.

When adopted, this provision was meant to allow manufacturers to focus resources on ZEV demonstrations in
the central location. Currently, this provision is scheduled to expire for BEVs after model year 2014 and for fuel cell vehicles after 2017 model year.

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AIR POLLUTION SPECIALIST WONG: Staff is proposing to extend this provision for BEVs through 2017 model year. However, for 2018 and subsequent model years, staff believes the BEVs will be reaching pre-commercial levels and available in most states. Therefore, staff is proposing to sunset travel for BEVs after 2017 model year.

For fuel cell vehicles, staff is proposing that the travel provision continue until there is sufficient infrastructure to support those vehicles in the Section 177 ZEV states.

After the release of staff's Initial Statement of Reasons, the Section 177 states and some manufacturers entered into negotiations to ensure pre-2018 placement of battery electric vehicles in the Section 177 states. Due to these negotiations, staff is proposing that an optional compliance path is added for manufacturers who want to provide BEVs prior to 2018.

In exchange for those early BEVs, manufacturers would get some relief on their plug-in hybrid requirements in Section 177 ZEV states for model years 2015 through 2018 and relief on their ZEV requirement in the Section
177 states from 2018 through 2020. Additionally, manufacturers who took this path would also be allowed to pool amongst the Section 177 states their plug-in hybrids beginning in model year 2013 and their BEVs starting in 2018.

Eight out of ten of those states are in the northeast region, leaving Oregon and New Mexico in western region. Pooling will allow manufacturers to distribute their required plug-in hybrids and ZEVs according to the market demand within each region.

This optional compliance path ensures more BEVs will be placed in Section 77 states prior to 2018 while giving the manufacturers a smoother phase-in of their advanced technology vehicles to markets in those Section 177 states.

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AIR POLLUTION SPECIALIST WONG: In summary, staff proposes to focus the regulation on technologies that help meet long-term air quality improvement, climate change reduction goals, and enhance California's energy security that is battery electric vehicles, hydrogen fuel vehicle vehicles, and plug-in hybrids.

Through staff's proposed increase in numbers of ZEVs and plug-in hybrids, costs will be driven down to help facilitate commercialization. And overall, staff
proposes to simplify the regulation while still offering appropriate flexibility in meeting these more stringent requirements.

Adoption of staff's proposed amendments to the ZEV regulation will begin a transformation of California's light-duty fleet to one that uses a portfolio of fuels, most of which will sustain and exhibit low carbon emissions.

Staff recommends the Board approve staff's suggested amendments as proposed.

Now Leslie Goodbody will present to you the proposed changes to the clean fuels outlet regulation.

EXECUTIVE OFFICER GOLDSTENE: Do you want us to keep going?

CHAIRPERSON NICHOLS: Yes, please.

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AIR RESOURCES ENGINEER GOODBODY: Thank you, Anna.

Staff's proposal to modify the clean fuels outlet regulation stems from the Board's directive to pursue approaches to ensuring hydrogen infrastructure for ZEV commercialization.

After exploring financial and regulatory incentives, staff concluded that an infrastructure mandate is a necessary complementary policy to the ZEV mandate.
In addition to developing amendments to the CFO regulation, staff worked with regulated parties and other stakeholders on a parallel voluntary approach to ensuring that hydrogen stations are built. This parallel process, taking the form of a Memorandum of Agreement, is still being formulated. Staff is presenting both approaches today and has created a bridge between the two approaches for your consideration.

My presentation will cover why an infrastructure mandate is needed, then describe how the regulation works, and who is affected.

From there, I will introduce the proposed modifications, share the results of our impact analysis, and then describe the voluntary MOA.

Upon concluding the CFO presentation, I'll wrap up with the combined economic benefits for all elements of the Advanced Clean Cars Program.

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AIR POLLUTION SPECIALIST WONG: The CFO regulation is not new. It was adopted back in 1990 along with the adoption of the original low emission vehicle regulation. Back then, it was anticipated that alternative fuel infrastructure would be needed to support the introduction of low-emission vehicles in the light- and medium-duty sectors.
Within the regulation, the requirements to build clean fuel outlets is driven by automakers' alternative fuel vehicle projections. Once vehicle projections reach a certain threshold, those who own the most gas stations are required to build the clean fuel outlets. As it turned out, automakers met their low emission vehicle requirements using gasoline engines so the larger number of alternative fueled vehicles did not materialize. As a result, the CFO regulation has never required the construction of alternative fuel outlets.

As we just heard from Ms. Wong, the requirements for ZEVs are increasing. We anticipate significant increases in the number of ZEVs in the next few years and zero emission hydrogen fuel cell vehicles require hydrogen fuel stations to achieve commercialization. The need for CFO is greater than ever.

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AIR POLLUTION SPECIALIST WONG: Automakers are planning to introduce 1400 fuel cell vehicles in California by 2014 and quickly ramp up to 53,000 by 2017. In the early years, most of these vehicles will be placed within the regional cluster in southern California, then expand to parts to northern California later. The 53,000 vehicle projection represents a launching point for fuel cell vehicle commercialization.
needed to achieve the fleet mix of 87 percent by 2050 as described by Ms. Wong.

While the ZEV mandate and long-term greenhouse gas reduction goals provide the impetus for developing fuel cell vehicles, fuel availability is the linchpin to consumer acceptance. By 2014, California will have invested enough funding to build roughly 30 hydrogen stations. These stations could satisfy the needs of up to 9,000 fuel cell vehicles, but then what? To reach fuel cell vehicle numbers of 10,000, 53,000 and beyond, automakers need certainty that fueling infrastructure will continue to develop starting in the target areas of southern California.

Unfortunately, there is not enough state funding for infrastructure beyond 2014. And the early fuel cell vehicles numbers are not high enough to create a business case for stations without government assistance.

While the CFO provides a mechanism for ensuring the necessary infrastructure, changes are needed to meet today's expected growth in ZEVs. First, let's review how the CFO regulation works.

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AIR POLLUTION SPECIALIST WONG: Each year, automakers submit their alternative fuel vehicle projections, which are used to determine if the trigger
will be reached two years into the future. The current trigger for building stations is 20,000 vehicles statewide.

If the trigger is reached, staff estimates fuel demand based on the projected number of vehicles, annual mileage, and fuel economy.

Next, staff calculates the total number of required stations.

At this point, there may be sufficient fueling stations to meet the requirement. If not, new stations are necessary.

The requirement to build new clean fuel outlets is then divided among the regulated parties, who then have 18 months following their first notification to build the outlets.

This brings us to the question of who is responsible for building the outlets.

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AIR POLLUTION SPECIALIST WONG: The current regulation places the responsibility to build CFOs on the larger gasoline station owners, which meant petroleum companies when the regulation was first adopted in 1990. Even in 1997, eight petroleum companies were the owner/lessors of half of the retail gasoline outlets in California.
Since then, the petroleum companies have divested themselves of most of their retail stations. The vast majority of gas stations are now owned by small businesses, supermarkets, and convenience store chains. Because of this, staff believes that it is no longer appropriate to base the CFO requirement on station ownership.

As suppliers of 93 percent of the state's gasoline, staff believes major oil companies have experience needed to introduce the market new fuels into the retail environment.

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AIR POLLUTION SPECIALIST WONG: Under the proposed changes, the regulated parties would be the major petroleum companies shown in this table. They provide 93 percent of California's gasoline in 2010 and each supplies well over 500 million gallons of gasoline to the California market each year. The number of outlets required by each party would be based on their share of the California gasoline market.

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AIR POLLUTION SPECIALIST WONG: Staff is also proposing to narrow the regulation so that it applies only to zero-emission vehicles and ZEV fuels, a change consistent with California's long-term goals to reduce
criteria and greenhouse gas emissions by advanced ZEV technologies.

Initially, the regulation will apply to hydrogen and fuel cell vehicles. However, while electricity is currently excluded, staff is proposing to add a requirement to evaluate electric vehicle charging infrastructure, which I will discuss later in this presentation.

To address automakers' intention to market fuel cell vehicles in clusters, staff is proposing to add a regional trigger that would require construction of outlets within an air basin when 10,000 vehicles are projected to be placed within that basin.

To better ensure stations are constructed and reliably operating in time for fuel cell vehicle deployments, staff is proposing to increase the penalty for non-compliance. Staff is also proposing to add a penalty for automakers if their fuel cell deployment does not match at least 80 percent of their projections for a given year.

Finally, staff is proposing to reduce the total number of required stations by half. Today, there are about 9,700 retail gasoline stations in California. So this would mean that the regulation would sunset once they're at 485 hydrogen stations instead of 970. Staff
believes five percent is consistent with the need for
coverage and encouraging natural market growth.

The next slide presents staff's proposed changes
to the time line for projecting cars and buildings
stations.

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AIR POLLUTION SPECIALIST WONG: Recognizing that
the current regulation may not provide adequate time to
site, permit, and a hydrogen station, staff is proposing
to extend the compliance time frame by first requiring
automakers to project fuel cell vehicle numbers three
years into the future instead of two. This will enable
ARB to project station requirements further into the
future, give automakers the opportunity to adjust their
projections the following year, and provide opportunity to
adjust the required number of stations.

In addition to the providing more time to build
stations, the proposed change gives the regulated parties
more certainty that stations will be utilized.

Next, I will discuss staff's analysis of economic
impacts of the proposal.

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AIR POLLUTION SPECIALIST WONG: In the near term,
it will cost about 1.5 to 2 million to build a hydrogen
station. In the early years when numbers of fuel cell
vehicles and demand for hydrogen is expected to be low, station owners could face a period of loss of up to four years. Since gas station owners are accustomed to seeing return on their investments within one year, their unwillingness to voluntarily add hydrogen to their stations without the help of state funding is understandable.

Staff estimates that with a mandate in place, those required to build the CFOs could lose up to 88 million if the fuel cell vehicles do not materialize.

Next, I will discuss the Memorandum of Agreement that was introduced at the beginning of this presentation.

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AIR POLLUTION SPECIALIST WONG: When staff began developing amendments to the CFO, the oil companies didn't like the idea of being mandated to provide hydrogen stations. So they requested that we explore voluntary methods of ensuring that hydrogen stations are deployed.

Over the last six months, we have worked with stakeholders to develop a collaborative agreement that would be used to ensure stations are available to meet fuel cell vehicle roll out schedules.

The MOA is currently in draft state. However, stakeholder groups have made tremendous progress in establishing the goals, needs, and mechanisms to support
hydrogen station deployments. The basic framework of the agreement is to work together to seek public funding to provide incentives to station providers during the first few years they are not profitable. It is estimated that support of 100 stations could require about $100 million.

Another key elements of the agreement will include well-defined time lines and milestones that must be met for the MOA to remain in effect. If successful, this agreement would establish a well-defined business case for the natural expansion of the hydrogen station market necessary for the whole state. Assuming an agreement can be reached, we anticipate having a signed MOA within a couple of months.

To integrate the MOA approach into the CFO, staff is preparing suggested modifications to today's proposed amendments. These modifications would change the number of hydrogen stations to zero if the MOA is signed and the milestones are met. If at any time the terms of the MOA are not met, the CFO station requirements will be restored.

Finally, if the MOA reaches its goal of establishing 100 stations, the CFO requirements for hydrogen would sunset. With this proposed structure, the CFO amendments are in place as a backstop, providing the necessary certainty to automakers to launch commercial
volumes of fuel cell vehicles.

Now I will present staff's proposal for assessing electric vehicle charging infrastructure.

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AIR POLLUTION SPECIALIST WONG: While infrastructure for fuel cell vehicles will be very similar to the current gasoline model, battery electric vehicles will present a different fueling challenge. The initial deployment of battery electric vehicles is not as dependent on the availability of public fueling stations since the majority of charging is done at home.

Having said that, EV infrastructure is undergoing a transformation in California, thanks to the efforts at the state and federal level to upgrade and install new stations. There are approximately 1200 public charging stations in California. And the California Energy Commission has funding to upgrade 900 of these to the latest plug standard.

The U.S. Department of Energy in conjunction with state, local, and regional agencies, has embarked marked on an ambitious program to install 5,000 home, workplace, and public charging stations, as well as a network of 100 quick chargers in the San Diego, Los Angeles, and Sacramento and San Francisco areas. Once implemented, this program will provide important insight on the
charging station usage patterns and performance, as well as the need for an amount of additional public charging stations.

Because the expected demand for public charging is uncertain, staff is proposing to add a section to the regulation that requires ARB to assess charging infrastructure by the end of 2014.

The studies conducted above will help ARB determine if the CFO or another mandate is needed. Ultimately, staff will work to determine the ideal settings and types of charging stations that will increase electric miles driven by owners of these vehicles. Staff will also evaluate public charging options based on the economic viability and environmental impacts. The assessment will recommend further actions by enhancing EV usage through public charging infrastructure.

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AIR POLLUTION SPECIALIST WONG: In summary, launching a commercial market for zero emission fuel cell vehicles will require public hydrogen stations. With this in mind, staff has re-visited our existing regulation, the clean fuels outlet, to tailor it to today's fueling market realities. The CFO, including these amendments we've presented to you today, are necessary to bridge the gap between the government funded stations and the free market
introduction of hydrogen stations.

In parallel, we continue to work toward a voluntary approach involving the MOA with stakeholders. Our goal with both of these approaches is to ensure automakers have certainty that hydrogen will be readily available for their customers when they are ready to bring these vehicles to market.

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AIR POLLUTION SPECIALIST WONG: Now that you have heard all of staff's proposed changes to the elements of the Advanced Clean Cars Program, I will conclude today's presentation with a description of the combined impacts in terms of the technology costs and impacts to consumers and the economy, recognizing that all three elements relate to each other and compliance with one will affect compliance with the other.

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AIR POLLUTION SPECIALIST WONG: Based on the state-of-art research and extensive input from automotive engineers and suppliers, the associated increase in vehicle technology cost to automakers and consumers when all standards are fully phased in is shown in this chart. Here, the three vehicle components, criteria pollutants, greenhouse gas, and ZEV together would increase the new vehicle prices by an average of about
$1900, or eight percent. And the greenhouse gas
regulation would be responsible for the majority of the
vehicle price increase.

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AIR POLLUTION SPECIALIST WONG: Importantly, the
increased average vehicle price is greatly outweighed by
the consumers savings by a three-to-one margin. The 1900
in up-front costs for the lower greenhouse gas emissions
would deliver about 5900 in lifetime fuel savings - for a
net $4,000 lifetime savings. This would deliver a
three-year payback period for the first consumer and an
additional fuel savings benefits throughout the life of
the vehicle.

For those who use financing for their vehicle
purchase, a new 2025 vehicle will deliver off-the-lot
savings as the average monthly fuel savings would outweigh
the increased monthly payment for the new technology.
Subsequent owners of these vehicle would experience
similar savings.

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AIR POLLUTION SPECIALIST WONG: Along with the
strong positive effects on the environment and consumers,
the entire Advanced Clean Cars Program provides broader
benefits to the California economy. The regulation
directly impacts vehicle prices and reduces overall fuel
expenditures. These fuel savings ripple through the economy, causing a slight increase in purchasing of other consumer goods and service.

Based on California's model of statewide economy, the regulation is projected to have net positive effects on the state.

A summary of high level model outputs on this slide illustrates benefits of $14 million in increased overall economic activity, $6 billion in increased personal income, and employment benefits of 37,000 additional jobs in California in 2030.

This concludes staff's presentation.

EXECUTIVE OFFICER GOLDSTENE: One close. Want to wrap it all up.

So in summary, the adoption as proposed is going to provide substantial benefits to California. It's going to reduce urban pollution and help meet the ambient air quality standard. It's going to reduce greenhouse gas emissions and provide an example of leadership in addressing the global challenge of climate change. It will also pave the way for widespread commercialization of ultra-low emission vehicles fueled by efficient, low carbon, non-petroleum fuels, and a clean fuel outlet regulation, which we view as an essential part of the package will ensure alternative fuels are available, thus
ensuring clean advanced vehicles such as hydrogen fuel
cells are on the street and not remaining in a lab.

Finally, it's reassuring that the technologies to
achieve these goals are available. And increased
efficiency will actually reduce the cost of ownership by
significantly reducing the fuel consumption. Given the
substantial environmental benefits, the technological
benefits and economic benefits, staff recommends adoption
of the proposal.

CHAIRPERSON NICHOLS: Thank you, Mr. Goldstene,
for that summary.

And thanks for staff being flexible. I really
think it was helpful to hear all the presentations
together. They do fit together. The program fits
together, and I think it benefits us and hopefully the
public as well to hear all of the pieces at one time.

I'm going to suggest that we take a break now.
And also ask that we get the assistance of whoever has
been working with us from MWD, if we need to. They've
been very accommodating. I think this arrangement is not
going to be successful for taking testimony. And I'm
going to ask that we move the Board members up to the
upper level of the dais there facing the audience. And if
we encroach on staff's space, maybe you'll want to
distribute yourselves on both sides so we can see you on
either side of us.

Hopefully, that won't take very long because I think the system is completely active. So we ought to be able to just pick up and move ourselves. And then I think it will enable us to hear better each other and the audience.

So why don't we give ourselves a 15-minute break to accommodate that.

(Whereupon a recess was taken.)

CHAIRPERSON NICHOLS: Need to remind you that the Clerk is busily trying to make an orderly witness list. We need people who signed up online and are here planning to testify to check in with the Clerk or your name will be dropped from the witness list. If you're planning to speak and you did sign up before online, you need to get back up with her and double check that you're on the list. Okay.

Before we turn, however, to the people who have come to talk to us, I do want to afford an opportunity for any members of the Board who have any specific questions that they would like to ask of the staff. I know, Supervisor Roberts, you indicated you had one.

BOARD MEMBER ROBERTS: If I might, Madam Chairman, you know, in considering the time line that it takes to bring one of these hydrogen fueling stations
online, I'm wondering -- we're going to have these hopefully all over the state. It seems to me probably the longest lead time item in bringing one of those stations online is the environmental review process ironically that we're going to force them to go through. And here's something we're all in agreement is good for the planet and yet probably the single most expensive and long lasting item getting constructed is going to be the environmental review.

   I'm wondering if there is a way to look at the group of these and perhaps have some statewide consideration since I'm aware the Legislature has exempted others such environmentally sensitive constructions like football stadiums and things like that from the environmental process. I'm wondering if there is a way that we might be able to speed this up to make it easier for those -- whoever ends up footing the bill for these and to bring them online faster. If there is some way that we might approach the State to look at this group and to get some certainty and some speed up in the environmental process.

   CHAIRPERSON NICHOLS: Mr. Cackette, do you want to respond to that?

   CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.

   We are planning -- right now, it takes about 18 months
from the go to get the station in. And the actual
collection time is probably on the order of two or three
months at the most. So that rest of that is in process,
contracting, permits, all that kind of stuff. So we're
working with the Fuel Cell Partnership and all the
stakeholders. We're going to try to get advanced permits
for sites that are yet to be built. And we're going
to when this one needs to be put in, here's a site that's
already qualified. We believe that working with the
permitting people, once one is done, the second one will
be easier. So our approach is more at the local level. I
can't really comment on whether legislation would be good.
But that's --

BOARD MEMBER ROBERTS: I think there's
legislation possible that could help you at the local
level.

Let me just share with you as an architect and a
person very involved in land use, when you think you might
be able to do this in 18 months, you're going to be
surprised that people challenge many of your plans. You
won't even be through the environmental process in 18
months. And I think you're being overly optimistic in
thinking that.

So I'm trying to suggest a different tactic here
that would be very advantageous to all of us who are
interested in seeing this successful program.

CHAIRPERSON NICHOLS: Well, the Governor is here in southern California today talking to the Chamber of Commerce I believe about some of his CEQA streamlining efforts and other things. And I don't think there is any reason why we shouldn't find a way to get this program included in that effort. I think it's a good idea. I don't think there would be any obstacle to getting our friends at OPR to help us smooth whatever paths can be smoothed.

EXECUTIVE OFFICER GOLDSTENE: We'll follow up on that with legislation. That will be easy to be --

BOARD MEMBER ROBERTS: You know, there are other issues like we do siting of cell towers and things like that where there is legislation that causes us to focus and it removes a whole series of obstacles of putting these things in. So I would hope that we might consider putting together a program. To the extent that you need people on the local level to make it work, I'd be happy to work with you on it.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We would greatly appreciate that. I understand how hard it is. And my prescription is only to let you know we're trying at the more bureaucratic staff level it would be of great assistance if we could have higher level support and
legislation or whatever that would make this go smoother.

CHAIRPERSON NICHOLS: Mr. De La Torre and then Mayor Loveridge.

BOARD MEMBER DE LA TORRE: On that same point, there is another issue, which I was not aware of until this last month, which is we don't know how to measure hydrogen in order to be able to charge people for it. It isn't like a gallon of gas. And staff has given me a list of some of the folks at the federal level that are involved, the Department of Food and Agriculture's Division of Measurement. That's in California.

And then we also have certifications for hydrogen sales. That's someone else in California. We've got some other folks in D.C. There are a number of people who are talking to each other and have not come to an agreement about how do you measure hydrogen in order to charge people for it at the pump.

That is a pretty fundamental issue, even before you get to each station and where they're located, et cetera. So I think there is a lot of work to be done and I think staff can give us a set of these hurdles that are out there, then you can work together, whether it's legislation or pushing some of these other agencies to get some of these issues resolved so that we can move forward. And as long as government isn't doing its part, we can't
expect folks to jump into that bridge.

    CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We have funded the State Department of Weights and Measures to be working on this. So I think most of the technical things like how do you measure it and how do you ensure the consumer they're getting one kilogram when the meter says one kilogram, those things are pretty far downstream.

    But I think staff did maybe just give you an idea of when do you think there will be an answer so that a station owner can actually charge for the fuel they're distributing.

    CHAIRPERSON NICHOLS: Mayor Loveridge.

    CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We were going to give you the -- try to give you the answer of when.

    MANAGER ACHTELIK: This is Gerhard Achtelik.

    And from the conversations we had with the Division of Measurement and Standards, with the Department of Food and Agriculture, they expect to be completed within two years. They are currently actually going through a type approval already right now of one station.

    And while two years might seem like a long time, it is well before this regulation gets into effect. Some of the work that is going on in type certifying that is going on through the government funded station. So that
process is underway. And it is a critical process that's going on both globally and nationwide.

CHAIRPERSON NICHOLS: Okay. Well, that's certainly something we'll be thinking about as we're hearing the testimony and reflecting on what to do next.

BOARD MEMBER LOVERIDGE: Just a question, which I assume staff has more than thought through.

But seems to me for EVs to be successful, there ought to be -- and I guess why wouldn't a station in the same way that hydrogen is important to connect for stations, why wouldn't a quick charge not be helpful to the EV market?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, we think that it will be helpful. The question is how many. And right now, since you do most of your charging at home, it's not clear since we don't have that many vehicles out there how many public stations including quick charge --

BOARD MEMBER LOVERIDGE: No. Different issue.

The quick charge, the immediate so you don't have to sit there for a long time, if you were to identify the locations where you had a super charge or quick charge, it seems to me that would be helpful in the EV marketplace. I guess that's the question.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I
think you're right. It will be helpful. And there are
demonstrations of these going in. The biggest one in San
Diego and then also in the Bay Area. And there will be
some other private put in quick charges.

But in terms of if your question is in the
context of the CFO regulation and whether electricity
should be included in that, then my first answer is still
my answer, which is to make that work, you need to know
how many do we need given a certain number of cars. And
right now, we don't know what the demand is by the
consumer. How many times will they decide to use a quick
charge.

So we think they're useful, but I can't tell you
whether we need a thousand or 500 or what. And these
studies, especially in San Diego, will I think give us the
answer to that within a couple of years.

CHAIRPERSON NICHOLS: Okay. I'm waiting for a
list of witnesses so I can start calling for testimony.

BOARD CLERK MORENCY: Staff just gave me a list
that I need to incorporate into what I have. It will be
ready just momentarily.

CHAIRPERSON NICHOLS: Are you sure we can't start
with the first --

BOARD CLERK MORENCY: Let me give you what I have
right now. And we can start on that. Thank you.
BOARD MEMBER SPERLING: I'll ask a question.

CHAIRPERSON NICHOLS: Professor Sperling.

BOARD MEMBER SPERLING: On the clean fuel outlet, the discussion about the MOA, as I understand it, at some point if the funding doesn't become available through legislative action or through some investment activity, then the CFO kicks in. So when will -- is there a date built into that when do we say, okay, time is up in terms of coming up with these other ways of funding and starting today the CFO kicks in?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes. The way we've tried to structure the regulation is the CFO, if you approve it today, would go into effect as soon as the post-hearing process is done. But it has a provision in it that says if there is an MOA, then when you calculate the number of stations that an oil company would be obliged to put in, the answer is zero.

And there is criteria in the MOA saying the alternative, which would be getting those stations in some way, which generally translates into money, would have to be met some number on a certain time line. And in all likelihood, that time line would be the end of this year.

So if enough money was made available to give us the next increment of stations that we need to match the increasing number of cars that we are told are coming,
then the MOA would keep the oil company's regulatory obligation at zero. If the money is not there, then the regulation would remove that provision of zero automatically, and that would be the process of identifying how many stations would have to be billed at the responsibility of their fuel.

BOARD MEMBER SPERLING: Would that --

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: If there was not money available by the end of this year, it would happen very quickly after that.

It has to because -- going back to the Supervisor Roberts' discussion, when we say we need the station, let's get started, it's not going to happen for a few years. And we need the first installment at stations beyond what the State has funded, which are 30 station. We need 100 total. The next installment is needed before 2016. So you can count the years and see you have to know what's happening very quickly.

CHAIRPERSON NICHOLS: We have one more question. I do have my first list here so we can start.

BOARD MEMBER BERG: There are also for-profit companies that are out there also looking at hydrogen stations and putting hydrogen stations in, or have on their drawing board to do that. Do we have the ability to find out where those are going to be and incorporate that
into our plan as well?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.
The way it works is you get a survey from the auto manufacturers how many cars are coming in the next couple of years. And then you determine how much hydrogen is needed and translate that hydrogen volume into how many stations are needed and then you subtract off how many stations you have in that capacity. And if that number still identifies there is a need for more, then the CFO would require those stations. So we do know where they are. There are not many privately funded station activities. The first 30, there are a few out there, but almost all the other ones are funded out there.

CHAIRPERSON NICHOLS: Okay. According to the list I have in front of me, the first witness who signed up is Senator De Leon. Is he here? I know we said we'd call him when he arrived.
The next witness is Henry Hogo from the South Coast Air Quality Management District. It's like winning the lottery.

MR. HOGO: Good morning, Chairman Nichols, members of the Board.
I'm Henry Hogo, Assistant Deputy Executive Officer of the South Coast AQMD.
I'd like to welcome the Board to Southern
California where we have over ten million registered light- and medium-duty vehicles operating in this area. It's very appropriate to have this important hearing in our area.

I want to thank you for the opportunity to speak today on the proposed LEV III regulation and the ZEV amendments. The South Coast AQMD staff is supportive of the overall proposal to further reduce the emissions from light- and medium-duty vehicles.

In addition, the California Air Pollution Control Officers Association wanted to express their support of the proposed regulation.

The Advanced Clean Car Programs is an important step towards addressing the attainment of clean air standards in the 2024 time frame and the block box measures in the 2007 SIP. Given there are over ten million registered vehicles in the South Coast air basin, it is critically important that the overall fleet performance benefits of the proposed regulations are met.

We have provided written comments which include several recommendations that we believe can enhance the proposed regulations. The recommendations are summarized in attachments to a written comment letter, and we provided that to you this morning.

I want to highlight three key recommendations
from my written comments. First, we strongly believe that
the proposed criteria pollutant emission standards,
especially the proposed PM emission standards, can be
implemented early. As noted in the staff report, there is
several vehicles that already meet the three milligram per
mile and one milligram per mile levels. As such, we
recommend that the one milligram per mile standard be
implemented beginning in 2020 to 2022 time frame.

Second, we have concerns regarding the use of
credits in such a manner that may lead to greater sales of
vehicles that do not meet the applicable standards. We
recommend that the Board consider establishing optional
emission standards for zero and near zero and alternative
fueled vehicles that could be benchmarked for incentive
programs in California. We believe such an approach can
lead to earlier and greater penetration of ZEVs and
alternative fueled vehicles in California and provides an
incentive to have greater number of vehicles on California
roads.

While staff have indicated that generation of
credits will have the same effect, we believe that the
optional standards of credits can be a California-only
approach. And funding programs, there are other
incentives such as HOV access will be for vehicles
operating in California.
In order for optional standards to be effective, we believe that additional incentive mechanisms must be developed. Essentially, urge ARB to work with air districts to develop mechanisms that could significantly increase these levels to facilitate sales of these cleaner vehicles.

We urge ARB to adopt the proposed regulation with our suggested recommendation, and we'll be happy to answer any questions you may have. Thank you.

CHAIRPERSON NICHOLS: Thank you very much.

Judy Mitchell. Good morning.

MS. MITCHELL: Good morning. Thank you for the opportunity to speak to you this morning.

My name is Judy Mitchell. I'm a member of the City Counsel from the City of Rolling Hills Estates on the Palos Verdes peninsula right here in Los Angeles County. I'm immediate past Chair of the South Bay Cities Council of Government. I'm the past president of the League of California Cities. And I have the pleasure of serving on the South Coast Air Quality Management District Board.

I speak to you today in my role as a council member to share with you the support of California cities, counties, and local officials to improve the air we breathe. I urge you to move forward with this historic vote today. Local governments in California have stood up
to support electric vehicles and to advance clean car regulations.

My own South Bay Cities Council of Governments has a demonstration project with the South Coast Air Quality Management District using electric vehicles for local trips. It's been a great success, and we have 250 people on a waiting list that want to use these cars and try them out. Our data shows a 30 percent reduction in emissions just by using these electric vehicles for local trips.

As a local official, I support clean cars because air pollution burdens our communities. Our local hospitals have increased ER visits on smoggy days. Our families face ongoing health care costs because pollution causes asthma, heart disease, and respiratory illness. Our school children miss school due to asthma and other respiratory diseases. And our children miss opportunities to play outdoors and do sports on days when the air is unhealthy. We know that cleaner cars can make a very big difference in our communities, a very big difference. And these new requirements are also needed to fulfill commitments in the South Coast SIP previously approved by the South Coast Air Quality Management District and CARB Boards.

The standards before you will do a number of
things. They will cut down pollution that affects all of us and harms the most vulnerable among us. They will provide new options for people who want cleaner transportation. They will reduce gas costs that hurt our pocketbook, and they will protect our climate for future generations.

I have with me a binder today that contains Resolutions and letters from more than 80 local agencies and local officials that have stood up to support strong clean car standards. Support comes from both large and small cities across our state: California's largest cities, Los Angeles, San Francisco, Fresno; cities like Long Beach and Richmond, which have environmental justice issues. Cities and counties in the Central Valley, the San Joaquin Valley Air District, and in Southern California, they all support clean car standards.

And I'm pleased to be able to share the statewide support from communities all over our state. I urge you to move forward with clean air, with your vote for strong clean car regulations. Thank you.

CHAIRPERSON NICHOLS: Thank you very much. Thank you for bringing all those resolution to our attention as well.

Karen Messina Schkolnick from the Bay Area. Hi.

MS. MESSINA SCHKOLNICK: Hi. Good morning, Chair
Nichols and Board members.

My name is Karen Schkolnick. I'm here today from the Bay Area Air Quality Management District.

I would first like to congratulate you for your continued leadership in setting vehicle emission standards that have effectively resulted in cleaner air and healthier communities for the Bay Area and the state of California.

I especially would like to express appreciation for the staff who has worked tirelessly to include the input from the various stakeholders in development of these proposed amendments.

I'm here today to express the Bay Area Air Quality Management District's support of these proposed amendments that are intended to help our state transition to zero-emission vehicles and to help achieve the state's greenhouse gas emission targets.

In the Bay Area, we have seen an overwhelming support and early adoption of plug-in electric vehicles, and we are very glad to support regulations that will help to expand the adoption of these clean vehicles beyond the early adopters and into the mass market.

In addition to our support, we would like to offer a few suggestions that we ask you and your staff to consider as we believe they will strengthen these
regulations and help ensure their intended result.

First, the combination of the use of built-in staff compliance credits and GHG ZEV over-compliance credit provisions seem to have a significant impact on the numbers of ZEV vehicles that will be deployed in California in the years 2018 through 2021. In reviewing this provision, we have some concerns that the combination of both of these credit mechanisms may reduce the number of ZEVs deployed in California.

While ARB staff has assured us that there is only a remote chance that significant number of auto manufacturers will avail themselves of this option, we request that your Board consider including a provision that would give you an option to review and assess the impacts of these credits on ZEV regulation of deployment targets going forward.

Second, considering the targets being proposed for transitioning California's fleet to zero-emission vehicles and the higher incremental costs of these vehicles at least in the early stages of market adoption. We urge the Air Resources Board to institute incentive programs that will support mass ZEV adoption over the years between now and 2025. We believe such investment is crucial to ensuring the market for ZEVs remains robust and to ensuring that air quality and greenhouse gas emission
benefits are achieved as quickly as possible.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Mr. Cackette, do you want to just briefly describe what the state of the incentive funding as far as the State is concerned is now for LEV zero-emission vehicles?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yeah, I'm going to struggle to remember all the exact numbers.

We have a pot of money that divides incentives for purchasing electric vehicles and other ZEVs. And it was $5,000 because the demand is increasing and the pot of money isn't. It's now 2500 for a ZEV and 1500 for a plug-in hybrid vehicle and cannot --

CHAIRPERSON NICHOLS: That's the 118 money you're referring to?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: AB 118 money, right. And I think that looking at the demand, we cannot give you assurance that it will last a year, all the way through the year, because the number of vehicles is increasing quite quickly. So we're looking at other alternatives to see if we can build up that pot of money.

CHAIRPERSON NICHOLS: That is money that was authorized initially by the Legislature through a surcharge, I believe.
It's an alternative fuels fund and it's split between ourselves and the Energy Commission. We've chosen to use part of ours as incentives for purchasers of electric and other gasoline cars as well as trucks.

CHAIRPERSON NICHOLS: That could be considered in terms of how that money gets out.

We'll come to the Board to do that later this year.

CHAIRPERSON NICHOLS: Yeah. Okay.

Rebekah Rodriguez-Lynn from Senator Pavely's office next. Are you here?

MS. RODRIGUEZ-LYNN: Yes. Good afternoon.

My name is Rebekah Rodriguez-Lynn, district director for State Senator Fran Pavely.

The Senator asked me to make a statement on her behalf on the proposed advanced clean car package regulations.

"It is rare that new regulatory action will result in such a big win for the economy, consumers, national security, and the environment. As the original author of California's landmark Clean Car Law that serve as our national standard, the advanced clean car standards will help clean our air, reduce our dependence on foreign oil, and ensure automakers have certainty to create jobs
and save consumers money at the pump.

Clean cars are reviving American car manufacturers and their ability to compete and succeed in the global economy. California has and will continue to lead the world in creating markets for cleaner and more fuel efficient cars. Simply put, cleaner cars will save money and drive job creation. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Next is John Cabaniss.

Is this list posted somewhere? Pretty soon you'll be able to see where your. John and then Dr. Kubsh.

MR. CABANISS: Good morning. Still morning; right? Yes.

I'm John Cabaniss with the Association of Global Automakers. Our members are international automakers, part suppliers and other auto related associations.

As you've heard from staff, this is a very comprehensive, complex, and stringent package. And obviously all the pieces are important to our members. These are enormous challenges faced by these regulations. But we have worked with staff over the past two years, in some cases, in some pieces, even longer, to build in the needed flexibilities, compliance options, and federal harmonization elements that allow us to support the
advanced clean car package.

I just want to focus -- we sent out written comments last Friday, and I just want to highlight a couple of things in those.

With regard to the ZEV program, for the past 22 years, life of the program, the ARB has always had a range of flexibilities built into the program to address the kinds of uncertainties, many of which we still face, with ZEVs. Things like when we've heard something about costs, range, infrastructure, and probably most important of course is acceptance, consumer acceptance. These uncertainties demand that the manufacturers get as much flexibility as they can. And that's why, one, the important flexibility that was described to you in the staff proposal is the limited partial ZEV offset for years 18 to 21.

This is an important piece of the overall package to -- the cost of entry for that is very high in terms of over-complying with the national program for all four years. We don't believe it will be used by a large fraction of the companies and agree with the staff's assessment as you saw in the presentation that it will have a fairly small impact on the numbers of ZEVs that are not deployed.

The environmental benefits overall are not
sacrificed, of course. In fact, you end up with as much or more environmental benefit even with the small reductions because of the GHG over-compliance nationally.

The other thing on ZEV I'd just like to point out is that we were glad to see that the auto companies and the Section 177 states have worked out a compliance flexibility option. And we support that.

And finally on the Clean Fuel Outlets Program, this is again a very critical piece that obviously you have to have infrastructure to be able to support producing and selling these vehicles. So we fully support that.

Thank you very much.

CHAIRPERSON NICHOLS: Okay. Thank you.

MR. KUBSH: Good morning, Madam Chair, members of the Board.

I'm Joe Kubsh with the Manufacturers of Emission Controls Association. And I'm here to add my very strong support of the LEV III exhaust and evaporative emission standards that are part of the LEV III package before you today.

We agree with staff's assessment that these exhaust and evaporative emissions standards are both technically feasible and cost effective.

MECA also supports the proposed tighter
particulate matter standards for light-duty vehicle over both the federal test procedure and supplemental federal test procedure. However, the recent decision in Europe to establish a particle number emission standard for light-duty vehicles powered by gasoline direct injecting engines provides a more stringent particle emission limit for these GDI vehicles in the same time frame as the proposed three milligram per mile PM standard before you today.

This European particle number limit will cause auto manufacturers to introduce cleaner technologies, such as advanced fuel injection systems and/or gasoline particulate filters to comply with this Euro 6 GDI particle number limit. Auto manufacturers are already working to bring forward early introductions of these cleaner Euro 6 compliant gasoline engines to the European market in the coming couple of years.

Nearly all auto manufacturers that sell into the European market are working with MECA members right now on the potential applications of particulate filters on gasoline direct inject engines. These filters are based on the same technology that is used on diesel engines and has a very good track record.

ARB needs to make sure that the same ultra low PM Euro 6 GDI engines and technologies are also utilized here
in California. To that end, MECA believes it's critically important for ARB to hold a formal technology review around the proposed one milligram per mile PM light-duty vehicle PM standard and that review should occur sometime in the 2017 time frame.

In this review, ARB should consider the stringency, form, and timing of this PM standard. It is important for California to continue to set the bar on light-duty vehicle emission standards to encourage the development and use of best available control technologies for light-duty vehicles. ARB has a long history of setting technology-forcing vehicle standards. And this leadership needs to continue with respect to light-duty vehicle particulate emissions standards.

And in closing, I'd just like to thank the staff's effort for bringing this proposal forward. It's been a long time coming. We're all glad to see it here. I especially wanted to give my thanks to Mr. Achtelik and Mr. Hughes, the fathers of the LEV program here in California and largely responsible for the great leadership California has shown in bringing ultra clean vehicles to the marketplace.

Thank you.

CHAIRPERSON NICHOLS: Thank you. Thanks for that recognition as well.
Steven Douglas.

MR. DOUGLAS: Thank you, Chairman Nichols, members of the Board. I have a presentation as well. Good morning. I'm Steve Douglas with the Alliance of Automobile Manufactures. And we submitted written comments. And I've talked to many Board members, so I'll be brief here.

First -- and I'm pleased to say with the changes we recommend, we support your regulations and greenhouse gas regulations.

Before discussing our recommendation on the next slide, I'd like to commend both ARB staff and the stakeholders who cooperated over the last several years to make this happen. It's because of this cooperation and many, many hours of hard work that we were able to support what is unquestionably the most challenging regulatory package this Board has ever seen.

For our recommendations, given all the demands we must meet and the limited resources that we have, we simply cannot duplicate effort. We have to work together. The Board's recognized the importance of harmonizing the federal and California programs for greenhouse gases. And we now ask you for the same commitment to harmonize the criteria emission requirements, including the standards, the test procedures, the fleet averages, the fuels, and
the certification requirements. This will require an additional rulemaking.

I'd like to finish up by turning to particulate matter. Go to the next slide. These charts show the very low emissions that light-duty vehicle emissions are a very small part of the total inventory. Nonetheless, on the next slide, we do support the LEV III proposed 70 percent reduction in PM emissions in 2017.

However, we want to make it clear that this is still a challenge, the 2017 standard. First, measuring PM is at extremely low levels is difficult and sporadic. Second, to control PM gasoline vehicles requires fundamental engine changes, such as modifying the combustion chamber or changing the location of the fuel injector. And these take a very long lead time.

Finally, the vehicles of today are not vehicles of the 2017 time frame. It's going to be different. So while we support the three milligram per mile standard at 2017, we can't support the one milligram per mile standard in 2025. Right now, neither industry nor the agencies know how to measure PM at such low levels. And automakers simply can't design, develop, certify, validate, and produce vehicles to a standard they can't measure.

We, therefore, recommend a formal review of the PM standard, the measurement, technology, and the
alternatives. This could probably be completed in the next three to four years or sometimes around there. I appreciate your time, and I'd be happy to answer any questions.

CHAIRPERSON NICHOLS: Thank you.

Any questions at this time? Yes.

BOARD MEMBER SPERLING: Just to clarify a couple points here. I guess this is more for the staff on the process issue. So as I understand it, we are committed to a mid-term review with the feds on the greenhouse gas standards. But we're not on the LEV III local pollutants; is that right? Obviously, because they don't have one yet.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right. They don't have federal standards, so they don't have a mid-term review schedule.

BOARD MEMBER SPERLING: We don't have anything formally as part of this process planned either.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, because this is an integrated package, we expect the mid-term review will address all of the pieces of the rule. On the criteria pollutant parts, we don't think there are very many issues. So we don't think it would be a big part of that.

But this one measurement issue on PM, which is
something we're working on already, is something that we
have to look at in that time frame. And if we don't have
an answer before then, we would include it in the mid-term
review.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER BALMES: Chairman?

CHAIRPERSON NICHOLS: Yes, Dr. Balmes.

BOARD MEMBER BALMES: So the specific issue that
I wanted to ask a question about is the measurement, ten
milligrams per mile level. We just heard testimony that
it's not technically possible at this time. What is
staff's response to that?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well,
to get in much more detail, I'm going to have to ask
Alberta to come up.

I think one problem is one milligram is not very
much. You collect it and test and try to weight it. And
there's all other kinds of things that complicate weighing
one milligram, like moisture and things like that. That's
why we need to figure out a more precise test measure.

But we have a Plan B. The Plan B is if we can't
measure it in mass, then we would take a very serious look
at an alternative approach, which is particle number. And
believe it or not, we can count ten to the 14th particles
very accurately, while we can't measure one milligram very
accurately yet. So we're going to work with the industry and EPA and try to solve this in the next few years.

CHAIRPERSON NICHOLS: Mrs. Riordan.

BOARD MEMBER RIORDAN: One of the things -- and this is directed to staff -- that he recommended was of course the test procedures and some harmonization. And I fully support our efforts. Are we working towards that? You know, this is costly enough. If we can only just have one test that would satisfy the federal government and the state government would be very helpful.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: And you're referring specifically to the criteria pollutant part because we are -- you know, we'll be absolutely assigned with them on the greenhouse gas part.

But on the criteria pollutant part, we worked with EPA for the last year as they're developing their proposal, which is called Tier 3. And we've pretty much aligned on everything. We've done a bunch of switching of our rules to match the federal construct. But there are things where are different. Like they do not plan on proposing this one milligram PM standard, and we get the support. That's why there is an area of difference.

Other areas of difference, like we have different rules than the rest of the county. So we want our test fuel to be like our fuel, but we figured out a way that
manufacturers can take one or two fuels and give us equivalent results so it wouldn't result in double testing. So there's things like that. But there are probably half a dozen things that we purposely made different because we couldn't get support for air quality.

And the principle that I would like to avoid is that because the federal government decides they don't want to do something or do it differently that, by definition, we have to accept that. We'd like a more intellectual process saying do we need it or not, it may be different her than the rest of the world. But most of the things will be aligned.

CHAIRPERSON NICHOLS: Right. And there has been progress, as you said, in the last year in a number of areas as a result of the work we've done on the joint standards where we have come together with the federal government and aren't totally in alignment.

But I also think it would probably provide a good deal of comfort if we could come up with language in the Resolution that specifically stated our general intent, something to the point that Mr. Cackette is making about why California maybe not need to be different where there isn't any benefit for air quality or program to be different and trying to be harmonized.

BOARD MEMBER RIORDAN: I think that would be
helpful. And maybe you can convince them of our wisdom.

CHAIRPERSON NICHOLS: Occasionally, it works that way, especially when we have California and EPA.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We have a very close relationship with the EPA people. And I think that's why it's been successful to get everything aligned already. We'll keep trying.

CHAIRPERSON NICHOLS: Okay. Thank you very much. Stuart Johnson.

MR. JOHNSON: Hello, Madam Chair and members of the Board. I'm Stuart Johnson. I represent Volkswagen Group of America.

We submitted some written comments on some points, but I just want to raise one issue here today with regards to lead time for the ZEV portion of the clean cars regulation.

As you saw this morning, Volkswagen on the screen there, we were an intermediate volume manufacturer. But even under the current regulation, we expect to exceed 60,000 sales for '10, '11, '12 model year. And that would put us on the pathway to be a large volume manufacturer in 2018. So with the changes coming with the reduced volume, we would certainly also be a large manufacturer in 2018.

At issue with us is there is regulatory language that says if you acquire another company, you may be
subject to a four-year lead time. And it's possible that Volkswagen Group may acquire a smaller company in the next year or two. And we want planning certainty that we will have the large volume manufacturer obligation in 2018.

Our contention is that the smaller company does not have a zero emission vehicle program. And, therefore, does not add synergy and does not bring our ZEV program to market any faster. So that's just the one point I wanted to raise.

And I'm happy to take any questions.

CHAIRPERSON NICHOLS: Thank you. That is covered also in your written comments.

MR. STUART: Yes, it is.

CHAIRPERSON NICHOLS: Thanks.

MR. STUART: Thanks very much.

CHAIRPERSON NICHOLS: Michael O'Brien.

MR. O'BRIEN: I think we're a minute away from afternoon, so I'll say good morning, Chairman Nichols and members of the Board.

My name is Michael O'Brien. I'm Vice President of Corporate Product Planning for Hyundai America.

It's my pleasure to be here today to speak about this important program. As you know, we are supporters of this mandate and other proposals today.

Due to the limited time available, I'd like to
focus my remarks on just one area that's very important to
Hyundai. Hyundai strongly supports the flexibility offered
in the staff proposal which would provide short-term
relief of the ZEV requirements from 2018 to 2021 in
exchange for over-compliance with national greenhouse gas
and CAFE standards. In order to offset one zero-emission
vehicle, a manufacturer must provide significant greater
greenhouse gas reduction in all gasoline vehicles on a
national basis.

The potential to use this flexibility is of
particular interest to our company because we will be
reclassified as a large volume manufacturer in 2018, and
we'll join the program at a time when there will be a
significant ramp up in the number of ZEV required in what
could be a very competitive market. The steep ZEV volume
trajectory following the short-term period of time of
relief will require our company to aggressively introduce
zero emission vehicles into the market.

Hyundai has long been committed to fuel cell
vehicle development and will continue to do so. And in
fact, we have publicly stated we can make a mass-produced
fuel cell vehicle available as early as 2015.

In addition, we are actively preparing our
electric vehicle program and already have a fleet of I10
EVs launched prior to the G20 summit in Korea as well as
our award-winning Elontra electric vehicle we showed recently at the North American National Auto Show a few weeks ago. We view this flexibility as a hedge which, if necessary, we will be able to use only through overcomplying with the very stringent national greenhouse gas standards.

We appreciate the commitment of CARB to provide this flexibility and support the staff's proposal. We would like to go on record by stating that Hyundai does not oppose other flexibilities that have been outlined in the 2016 and 2025 national greenhouse gas and CAFE proposal that CARB has supported, even though these flexibilities likely will not be used by all OEMs, for example, ZEV super credits and reduced standards for large pickup trucks. Hyundai particularly supports flexibilities such as the greenhouse gas overcompliance option that continue to maintain greenhouse gas reduction goals.

Thank you.

CHAIRPERSON NICHOLS: Thank you. James Jack. Our next witnesses are from Nissan.

And while they're getting organized here, I indicated earlier we were going to take a break for lunch at 12:30 I think we're planning purposes and try to keep it to an hour. So you know where you are in the lineup
here. Good morning.

MS. WOODARD: Good morning. I'm Tracy Woodard, the Director of Government Affairs for Nissan. I handle all the legislative and regulatory affairs for Nissan in North America.

Thanks for the opportunity to be here to speak to you today. I won't take too much of your time because I'm afraid our CEO's comments may have taken up some of our testimony time.

Nissan has been an active participant in all of the greenhouse gas national program discussions, and we're very committed to the one national program. We're very committed to what CARB is doing with the GHG program. We recognize the importance of it and the compliance requirements. So we support the staff proposal, and we agree that it improves a lot of the aspects of ZEV.

Also going to turn it over to Bob Cassidy to identify a few of those technical issues.

MR. CASSIDY: Great. Thank you, Tracy.

Madam Chair, members of the Board, I'm Bob Cassidy. I'm with the technical side of Nissan. I just have a couple items I'd like to bring to your attention today.

One deals with the ZEV regulation. We completely support the staff's 45-day notice. We're especially
complementary of the recent agreement which you are seeing as a 15-day notice that we reached with the 177 states for this early compliance plan. It's the classic win-win. I think the states were very aggressive in having BEV type vehicles introduced into the area earlier. They're interested in terminating their travel provision. We are also able to accomplish a smoother transition, which could have been some of the compliance hurdle for the manufacturer and also obtained a pool and compliance concept similar to the LEV III features. So we strongly support that feature and ask for your support as well.

The next thing I'd like to touch on is the CFO. There's already been some discussion on this. As you know, Nissan is certainly a leader in the battery electric vehicle programs. Our management and engineering is strongly committed to fuel cell vehicles. We see these vehicles arriving in the next few years. We very much want an appropriate and guaranteed supply of hydrogen to be available. Therefore, we endorse the CFO as it's conceived.

We have great expectations for the Memorandum of Agreement. Look forward to seeing those details.

We would support and participate in any other processes which will be ahead.

With respect to the rest of our testimony, Madam
Chair, it's kind of at your wishes. I have Mark Perry who is our Director of Planning Advanced Technical Strategy. He is able to provide some background on the roll out and any other questions you have as to future technology. It's at your wishes.

CHAIRPERSON NICHOLS: Okay. Sure. We'd be happy to extend the time for at least a minute or so.

MR. PERRY: Well, thank you, Madam Chair.

Just to update the Board on where we are with the Leaf rollout. Fortunately, I'm making our boss very happy. That part is good. I may be here next year to be able to testify also.

We hit 10,000 sales. That's the all-time record for an EV in the world. We already passed 10,000 sales in the US. We're over 22,000 globally.

California represented almost 4500 of those 10,000 sales to the state, represents almost 50 percent of the national volume.

Those 10,000 sales did come out of seven states primarily. Now we're in 30. And we're going to be rolling out nationwide by the end of March 2012. So the launch is going well. Although it's still very, very early.

In our next steps now, of course, get our assembly plant in Tennessee up and running. That does
allow our capacity to triple. So that plant at full
capacity will be able to build 150,000 vehicles a year and
200,000 battery packs. So I know the staff shared that
slide of production cost versus volume. That's what we're
going for. This is a mass market launch and we're moving
rapidly through mass market production.

Welcome any questions.

CHAIRPERSON NICHOLS: Just a comment you may want
to respond or not. I think this is particularly
remarkable those numbers in light of what happened in
Japan. I don't think any of us can forget that Japan was
crippled almost literally as a result of the tsunami and
the closure of a major part of your power system. And so
to have been able to fulfill these orders and put on this
kind of a worldwide launch is really a very impressive
achievement.

MR. PERRY: Thank you for that, Madam Chair. And
the media tends to have short memories. They forget very
quickly that 10,000 sales was done in a world where we
lost almost six weeks worth of production.

The wait times now are down to 90 to 120 days.
Every vehicle is built to order. That's about the length
of the logistics pipeline. It takes about 90 days for us
to receive an order, build the car, ship it, and deliver
it. That's the kind of pipelines we're working with now.
It's getting faster and faster. Local production, we'll shrink that even quicker. Maybe 30 days.

CHAIRPERSON NICHOLS: Just need a plant in California.

MR. PERRY: They all come through Long Beach. Every one of them, for now.

CHAIRPERSON NICHOLS: We can do better.

Do we now have Mr. Jack? Was he able to get over here?

Well, all right. We'll turn next to Toyota. I have Michael Lord.

MR. LORD: So I think I can officially say good afternoon.

My name is Michael Lord. I'm a manager at Toyota, Technical Regulatory Affair of Toyota.

First, I would like to thank staff for all the hard work on all three of these important regulations. And Toyota supports all three rules. We do have some detailed comments which we have submitted.

Toyota also supports the roles of the ZEV program and the ARB's continuing efforts to accelerate the commercialization of advanced technology vehicles, and in particular, the certainty of the proposed changes to the clean fuels outlet that can provide some certainty for hydrogen infrastructure.
Toyota is pursuing a variety of ZEV vehicles. We currently have a fuel cell vehicle that can do greater than 300 miles range on one fill and ready for fuel cell commercialization in 2015.

Other plans include two new BEVs this year, that being in collaboration with Tesla and its EV.

Our Prius family is expanding. And as we increase hybrid availability, they'll move across our product line. For these technologies, our core premise remains that no advanced technology can truly become successful unless it becomes a mass market technology.

So I'd like to talk a little bit about the 2012 plug-in Prius. The 2012 plug-in Prius will get approximately 15 miles of all-electric range, the Prius platform, which has over one million cells in the United States already. We believe the Prius plug-in or other blended plug-in hybrids do provide comparable environment and oil displacement benefits at a lower cost than BEVs and larger battery plug-in hybrid electric vehicles.

It's on this subject that we differ with your staff. We believe that these plug-in Prius can and should play a large role in the ZEV regulation. They should not be viewed as transitional. They will be a key part of electrification for the fleet for the foreseeable future.
because it can reach a broader public due to the ability
to cover all customer driving use at a lower cost.

Specifically, we believe the current staff
proposal may limit the potential for plug-in hybrids.
One, they are proposing additional minimum hour
requirements that would dictate the circumstances when an
engine of a plug-in hybrid turns on. This may limit the
expansion of plug-in technology to larger heavier vehicles
of more cost sensitive models. We believe that there
should be a single minimum requirement, which is the EAR, and I believe staff has proposed some change on part of
that.

Second, the staff is perhaps overly optimistic
about the opportunity for a dramatic cost reduction in
batteries over the course of this decade and into the
next.

Not only is the overall requirement -- so we
would like actually to have a larger share of the
regulation to be covered by the hybrid electric vehicles.
And thank you very much for your time.

CHAIRPERSON NICHOLS: Questions, yes.
BOARD MEMBER D'ADAMO: Could staff respond to the
issue of greater flexibility on the minimum?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: On
the -- we show that line that has the distribution of
range from ten miles all the way out to many hundred mile fuel cell vehicle. That really was symbolic as well as the specific regulation is symbolic of the belief that we need vehicles in the long term that will run on low carbon fuels, like electricity or hydrogen to be most of the vehicles.

When you get to the left-hand side of that curve, you've got vehicles that can run a considerable amount of time on gasoline as an alternative to running on electricity, either because the consumer chooses to do that or because the vehicle doesn't have electric range.

So we tried to put a minimum and a maximum performance requirement on these vehicles. And the requirement is simply that the minimum vehicle qualifies for a ZEV credit would be one that can at least drive ten miles on electricity on the urban driving cycle, which is a very mild driving cycle. And we feel that that's necessary to make sure that we've got vehicles that actually will drive most of the time on electricity.

And because these vehicles with the lower range often have to turn their gasoline engine on like when you go more than 62 miles an hour or more than half throttle acceleration and things like that, we don't want them to be so weak that people don't know -- they can't sense they're getting the benefit from the electric part and
therefore have no incentive to actually plug the vehicle in.

And at the other end, we've got vehicles that can provide 50, 80, 100 miles on electricity, and those are the kind of vehicles that will use electricity and therefore have lower greenhouse gas emission.

It was a kind of a bottom line number as to where we felt like -- and ZEB looked more like a conventional hybrid than it did a ZEV. That was kind of the criteria So that's why we put that in there. And the plug-in Prius meets that requirement right now.

BOARD MEMBER D'ADAMO: I thought I was hearing you had worked something out with staff. But it sounds like staff is still pushing for the test cycle.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: I don't think so.

BOARD MEMBER D'ADAMO: And you're asking that that test cycle be removed. Instead, there would be still be the ten mile minimum.

MR. LORD: We feel that if we look linearly from the current Prius to the future, maybe this isn't an issue. But if we consider the expansion of hybrid technology to different types of vehicles, larger vehicles or maybe vehicles smaller, more cost-sensitive vehicles, this is an unnecessary barrier, unnecessary decision at
this point in time as we're all trying to figure out what
the market is and address the market demands. And my
colleague Mike Love is going to make a presentation on why
we think that this type of --

CHAIRPERSON NICHOLS: Okay. We're going to hear
from him. Thank you. Mike Love.

MR. LOVE: Thank you. And I have some slides. I
apologize. I'll go through them quickly, but they're also
part of our written submissions.

As Mike Lord mentioned, we have a wide variety of
vehicles that Toyota is working on. This is to make the
point this is not -- Toyota is just not about plug-ins.
We have two electric vehicles that will enter the market
this year. And we've also made announcements that we will
be ready to have a retail available fuel cell vehicle in
2015. We showed a show car of what it might look like at
the recent Tokyo motor show last month. We still believe
that hybrid vehicles have a big role to play.

Next slide, please.

--o0o--

MR. LOVE: This is something that data comes from
the US DOT 2009 National Household Travel Survey. And you
may have seen before the red line is often used to show
how a vehicle with a 35-mile electric range, a plug-in,
can cover 70 percent of the daily travel distance in the
U.S.

One thing that's not often shown is that you have the blue line shows the cumulative percent of daily energy use. You see that shows a quite different picture. In general, this shows that longer trips have a big influence on the energy use. And we would like to point out that the goals of CARB are more closely aligned with the replacing petroleum and the energy use than they are with miles traveled. We think that leads to an interesting effect. Next slide.

--o0o--

MR. LOVE: This shows that the percent of drivers driving daily distances versus their travel distance. What you can see if you have a 35-mile range electric battery, that's only fully utilized by about 35 percent of the people. Conversely, a 15-mile range battery is utilized fully by about 55 percent of the people.

Next slide.

--o0o--

MR. LOVE: If you plot the energy use in terms of daily distance, you can see there is a very long tail to the right, long trips, use a lot of energy. In fact, 11 percent of the energy is used on trips over 200 miles.

Next slide.

--o0o--
MR. LOVE: We did an analysis for three different vehicles. The first one is an assumed EV that has a 73 mile electric range showing it can displace 61 percent of the energy of all these trips from this survey.

Next slide.

--o0o--

MR. LOVE: If you had a 35 mile plug-in vehicle with this assumed data, you can have a 62 percent savings from the EV usage but an additional 8 percent savings from hybrids with a 70 percent savings. Both of those are quite excellent.

The third slide shows -- please, next slide.

--o0o--

MR. LOVE: -- a 15-mile plug-in analysis. While you have a lesser savings from EV, a 36 percent savings for this assumed data, you get an additional 26 percent from the hybrid, giving it a similar large displacement.

Next slide, please.

--o0o--

MR. LOVE: This shows the conclusions. And what we want to point out, there's still a huge benefit from small displacement of battery plug-ins in terms of removing petroleum from the vehicle fleet. And they can do so with what we believe is a much lower vehicle cost which will enable the wider expansion of these vehicles
into the market, which we all think is a CARB goal.

    Thank you. And I'd be happy to answer any
questions.

CHAIRPERSON NICHOLS: Thank you very much.

Yes?

BOARD MEMBER SPERLING: I'd like follow up with
staff on the previous question.

    I'm sympathetic to the idea that we want to
simulate innovation and experimentation. So the question
is if we made -- right now the way it's set up, as I
understand, there's that ten-mile all-electric range
threshold for vehicles to be able to get credit. And I
think what they're proposing -- at least what I think
makes sense to me -- is make it an equivalent all-electric
range. And, you know, you might not -- so there would be
more blended activity, and it isn't as much all-electric
perhaps as you're saying.

    But given how little we know about behavior and
the technology and the markets, how much would we be --
would we be giving up anything in terms of along any
dimension I think in terms of simulating innovation and
investment in batteries, getting more vehicles out there
would be better. Presumably, we're giving up a little bit
possibly in greenhouse gas reduction. Have you done any
analysis?
CHAIRPERSON NICHOLS: Mr. Cross.

DIVISION CHIEF CROSS: I think that -- first, I want to make a quick side comment. It's fascinating to see these slides, this kind of set of slides, because this is the set of arguments that we used ten years ago to try to say that most people could accommodate the EV in their driveway.

Now we're seeing them going the other way and saying we can use it to accomplish this to make a gasoline vehicle work via the e-verse way.

I think the problem with that argument is that at some point you get the vehicle so strong in gasoline that it has to start -- like Tom said, it has to start with acceleration. It has to start for IC. So a lot of the uses for EV that I was just describing which would be pure electric require vehicles to start the engine.

And I would argue that this is -- and the fact that your "electric benefits" are not that noticeable with those kind of vehicles because of that starting all the time.

I, as a consumer, probably wouldn't be inclined to plug it in. I would let it drain like a regular Prius. So that brings us to what it's assuming is that the vehicle's plugged in all the time. And that's the big assumption, I think as you get to vehicles that have very
limited capability. And the other ones we're talking about, you have to drive electric before it runs out of charge before the engine starts.

BOARD MEMBER SPERLING: My only response to that would be you're making a lot of assumptions about behavior. And we have no idea whether that is how people would behave.

And, you know, part of this is an experiment for all of us. And I think we need to be allowing more experimentation. I don't know if this is the right way to do it. But as a principle, I think we shouldn't be presumptuous we know how consumers are going to behave, and I don't think we should presume --

CHAIRPERSON NICHOLS: I think that's a fair point. I do think we need to gather more data quickly. So we would soon be in a position to make a much more informed decision about all this.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: I just wanted to say that my own driving habits suggest that occasionally I like to put my foot into it a little bit. And we do that, the gasoline engine will do that in this car. And I like to go a little faster than maybe the speed limit occasionally. And you do that, the gasoline engines comes on in this car.

You can have a ten-mile range or 13-mile range,
if you do a 13-mile trip, there's no guarantee that you're going to use very much electricity. It may be running a lot of the time on gasoline. Still be some electricity. So if you have a trip that's ten miles and under what we proposed you're going -- for most of that time, you're going to get ten miles of electricity or something close to that. With their proposal, you could end up getting three or four miles of electricity.

CHAIRPERSON NICHOLS: I think what this conversation illustrates is that this is going to be a very competitive market and that companies are placing bets and making decisions based on a lot of judgments they're making. I have great confidence that Toyota is a smart company. And they've done a lot of research that's convinced them this is the right way to go. They want to ease people into using batteries and make it as simple and incremental as possible. And they may be right. But our job is to try to figure out what we should be pushing for. So thank you.

I guess that's it as far as questions are concerned. We have a few more minutes before the break, and we have several people who I'd like to call on who I know have to leave. I am going to insert them ahead of you. Dr. Vinetz, Dr. Ong, and Dr. Lloyd, all people with Ph.D.s I guess. I don't think they're all MDs. But they
seem to want to be a group. So if we could get you guys
and gals up here.

MR. VINETZ: Good afternoon. I'm Dr. Robert
Vinetz. I'm a pediatrician and co-Chair of the Asthma
Coalition of Los Angeles County.

I'd like to offer a parable for you all. One day
some villagers were working in a field by a river.
Suddenly, someone noticed a baby kind of floating down the
river. A woman dove in, grabbed the baby, held it high
above her arms, and then swam to shore and then lovingly
cared for it. Soon, more babies were seen floating down
the river. And the villagers tried their best to rescue
them all. But before long, there was a steady stream of
these babies.

Abruptly, one villager broke into a run by foot
up stream screaming, "We've got to find out why all those
babies are in the river."

The parable exemplifies values. And I'd like to
focus on those values now. From my perspective, the
values are that in a human society we care for the
vulnerable and that we value this planet and the
environment we inherit and altered by our presence.
But the parable also represents a dilemma of
choice: Rescuing victims or preventing harm in the first
place. I think we have to do both.
My words or my work and that of my colleagues is downstream, trying to rescue and care for those with conditions caused by toxic air. Intrauterine poisoning, premature births and deaths, brain injury and permanent lung damage in children, asthma, COPD, lung cancer, heart disease, and many, many other diseases. We also have as our work to alert everyone to the harm that we see.

Your work is upstream. And with your advanced clean car standards, you offer a vital harm-preventing and life-saving gift to us all. It's public health at its best.

CHAIRPERSON NICHOLS: Dr. Vinetz, that buzzer was your time.

DR. VINETZ: Please run with it. Bravo. We thank you.

CHAIRPERSON NICHOLS: If everybody would just do that.

Dr. Ong and then Alan

DR. ONG: Good afternoon. My name is Dr. Michael Ong. I'm a physician and a member of the statewide Board of Directors for the American Lung Association of California. I don't mean to hold you to your watch.

As a physician and especially a physician living in Los Angeles County, I'm deeply concerned about the air pollution and lung health. Southern California is home to
one of the most entrenched air pollution problems in our
nation that affects million of our residents living with
asthma, heart and lung disease, and our chronic health
conditions.

So despite the decades of clean air progress in
the South Coast, dirty air still causes 5,000 premature
deaths annually according to the California Air Resources
Board estimates. In addition to premature deaths, studies
have clearly linked air pollution to a significant rise in
hospital emissions for respiratory disease and
cardiopulmonary disease, emergency room visits relate to
asthma, asthma attacks, asthma from schools due to
respiratory conditions, and reduced lung function and
growth in children.

From a public health and air quality perspective,
this is one of the most important regulations our state
will pass this decade. A strong clean cars program that
cuts smog, soot, and climate pollution and increases air
emission transportation is strongly supported by
California's public health community. Forty leading
public health organizations endorsed the California Clean
Cars campaign, including the American Lung Association of
California and the California Chapters of the American
Cancer Society, American Heart Association, the American
Academy of Pediatrics, the California Thoracic Society,
the California Academy of Family Physicians, as well metro societies and animal coalitions throughout the state.

So we have submitted a petition signed by nearly 150 authors, nurses, respiratory therapists, and other California health professionals with several hundred more clean air supporters calling on you to support the strongest possible standards.

Further, this letter from health and medical organizations ask that you go forward with a strong package of clean car standards. These organizations support the work of staff to bring about this opportunity to improve public health by setting strong smog and particulate standards to be implemented no later than 2025.

This letter also calls for strong limitations on provisions that reduce the benefits of California's Zero-Emission Vehicle Program. The ZEV program offers clear reductions in harmful emissions. These benefits should be preserved for California and the South Coast, in particular.

The health crisis caused by air pollution mandates we move forward with the strongest possible programs to reduce to burden generated by air pollution and climate change for future generations.

The public health community stands ready to
support and work with your staff as these programs move forward to improve our air and the health of our patients.

Thank you for the opportunity to speak with you today.

CHAIRPERSON NICHOLS: Thanks for taking the time. Appreciate it.

Dr. Lloyd. And then we're going to have one more witness before we break, Jack Gillis, who has a plane to catch. And we'll take a lunch break. And hopefully the rest of you will be able to stay with us.

DR. LLOYD: Sorry I got confused.

Chairman Nichols, distinguished Board members, it's a great pleasure to address you this afternoon. I tell you, I will not keep you very long before your lunch.

I want to provide strong support to your California advanced clean car rulemaking package. I'm speaking today as President of the International Council of Clean Transformation with expertise in the areas of transportation and fuels. I travel to different countries and the importance of and appreciation for the pioneering work of the Board and staff is more and more apparent and valuable.

We work closely with your staff on the ZEV, particulate, and black carbon portions of the advanced clean car package and are pleased with their
responsiveness.

As I discuss later, I do have a few suggestions the Board can strengthen the recommendations.

Skip part of the praising of the Board and the staff --

(Laughter)

CHAIRPERSON NICHOLS: Our former Chair as well.

DR. LLOYD: On the ZEV program, what a difference a decade makes. Amazing.

ICCT commends CARB for the development of a comprehensive staff proposed plan we took of the California ZEV program as manufacturers begin moving from limited placements to intense global activities, small volume prototypes to mass market.

The California program retains critical value as a unique floor for ZEV technology development in face of uncertainty. The creation of an upward trajectory post 2018 creates an important pathway to commercialization of vehicles that are critical to meeting clean air and climate change goals.

ICC also recognizes the need for hydrogen refueling infrastructure to support the commercialization of fuel cell vehicles and strongly supports CARB's effort to explore both voluntary and regulatory options to ensure adequate supply.
California is no longer alone addressing electric drive vehicles and in the battery vehicles and in the last few weeks plans separately joined Japan and Korea, China and Germany in establishing partnerships between vehicle and fuel providers with fuel cell vehicles.

We also agree that CARB's accounting -- proposed accounting for electric vehicle upstream in the LEV III package.

We have identified some areas in the ZEV program additional benefits could be included:

Capping the ability for automakers to reduce their targets through compliance with federal standards and notification ahead of 2018;

Moving the credits for the neighborhood electric vehicles;

Revising the proposed BEVx vehicles by -- BEVx vehicles. We support the concept of BEVx with any vehicle that has a tailpipe is not a BEV has the ability to pollute.

We commend CARB for continuing the leadership on reducing emissions. Its critical for the leadership to address public health in California and sets an important precedent for the nation and the world. However, we feel the reductions schedule for PM emissions is not commensurate with the previously successful implementation
of technology-forcing standards.

Over 15 years are far too in my opinion and does not reflect the critical need of the impact of PM on public health. Staff must be careful to avoid the tradeoff between public health and climate change.

Thus, we're recommending accelerating the fine particle limits, reducing the ozone precursor limits on the supplemental test procedure, more closely monitor in the FPT testing and progress.

We provided written comments to the staff, and we compliment you again for the work that you continue to do in this historic step in your pioneering work to address air quality, greenhouse gases, fuel diversity, and promote economic growth.

Thank you very much. And thank you for your indulgence.

CHAIRPERSON NICHOLS: Thank you for joining us here and for all your work on these programs in years past and hopefully to come.

Okay. Jack Gillis, and then we'll take a break.

MR. GILLIS: Thank you very much. My name is Jack Gillis. I'm Director of Public Affairs for the Consumer Federation of America and author of The Car Book. I appreciate the Board's understanding that consumer groups have a hard time dealing with airline change fees.
So thank you very much.

CFA is an association of over 280 consumer groups, a number of which are located here in California, including San Francisco Consumer Action, California Consumer Federation of America, the Cars, and Consumers Union.

CFA strongly urges the California Air Resources Board to approve a strong advanced clean cars program. In practice, tailpipe emission standards and the development of cars that go farther on a gallon of gas and of alternatively fueled vehicles, and the result is a cleaner, more efficient automobile that will reduce our vulnerability to oil price spikes and improve our nation's economic situation.

California's ability to set these strong standards is vitally important to the advancement of the American automobile industry, keeping U.S. cars globally competitive.

It also is critical for meeting consumer demand for cleaner cars in states across the nations. Consumers understand the benefits and consistent voiced support for leadership on clean car standards. In fact, CFA's latest pole found that more than 70 percent of Americans support states being able to allowed to continue setting tailpipe emission standards. In addition to CFA survey results,
CFA consumer reports found that 81 percent of respondents in California agree that the state should require all automakers to significantly reduce emissions.

Seventy-five percent of California consumers think California should require automobile makers to build fleets that include increasing numbers of zero-emission vehicles, including electric and hydrogen fuel cell cars.

Seventy-seven percent of Californians polled believe there should be state requirements for oil companies to make cleaner fuels like hydrogen and electricity available for public consumption.

While we appreciate the enormous economic benefits of this standard, there are enormous consumer pocketbook efforts as well. Right now, consumers are paying more on a household by household basis for gasoline than all the other energy in their home. This standard, along with the federal standard, will go a long way to reducing the enormous impact of gasoline on the American consumer's pocket books. So not only will this program save the environment, but it will save consumers money.

So we are counting on you. We are counting on California to lead America to a cleaner, more sustainable, more affordable future. All of the consumers that voice their support for these standards join me encouraging the Board to say yes for the strongest possible standard.
Thank you very much.

CHAIRPERSON NICHOLS: Thank you. And good luck in making your plane.

Mr. Modlin, we will call on you as soon as we get back from our break. So we'll take a break now. It's 20 of 1:00. And let's be back here by quarter of 2:00.

(Where upon a lunch recess was taken.)
CHAIRPERSON NICHOLS: So I think we can the
hearing at this time. And our next witness is the patient
and long-suffering Reg Modlin from Chrysler. Hi.

Mr. MODLIN: Thank you, Chairman Nichols and
members of the Board.

I don't know about that, suffering. I think
patiently waiting.

Thank you for having us for this hearing and
allowing us to testify. Chrysler appreciates the
opportunity to comment on the package of rules. We
support the single harmonized national greenhouse
accounting and standards and treat all manufacturers
equally and contribute to meeting California's air
quality.

We're here today to support the rules package
with one qualification. Chrysler takes exception to the
provision that would give a select group of manufacturers
the opportunity to avoid up to half of their ZEV
obligations as a result of over-compliance of the
greenhouse gas provisions of the federal or California
program.

Chrysler believes that this provision is
inconsistent with the Board's directives to move
zero-emission vehicles into commercialization. It does a
disservice to the citizens of California by denying them
the incremental air quality benefit that would be lost,
creates an unlevel playing field by providing a select
group of manufacturers a significantly lower cost of
compliance, and slows down the market acceptance of
electric drive vehicles.

This provision could reduce electric vehicle
products entering the market by about 350,000 units over
the four-year period that would be the place. The very
low costs avoided could be as much as $4.5 billion. This
would be at the time in the program when the vehicles will
be at their most expensive point and the market the least
willing. The manufacturers that have taken advantage of
the provision will be able to invest that money in
conventional advanced spark ignition technologies that
will sell profitably in a willing market.

Chrysler believes that there are unintended
consequences of the proposal that the staff may not have
considered. We have reviewed a couple of items in our
written comments that have been submitted to the Board.
We suggest that the Board review these comments before
making a decision.

Our net on this is that the Board should just not
adopt this particular provision of the proposed rules.
Thank you for your attention.

CHAIRPERSON NICHOLS: Okay. Thank you.

A question, yes.

BOARD MEMBER SPERLING: Question for staff.

Didn't I hear in the presentation that only
34,000 — the over-compliance provision would result in
only a reduction of 34,000 vehicles a year? Here,
Chrysler is saying it's 350,000.

AIR POLLUTION SPECIALIST WONG: This is Anna
Wong.

It's 38,000 — if there's manufacturers
representing 20 percent of California sales. In our
analysis, if they're fulfilling their pure ZEV category
and letting additional credits fill up to what they can in
their PHEV category, then it's 160,000 vehicles if
100 percent of manufacturers take it. We don't think
that's going to be the case.

I think that the 350,000 number comes from if
you're using all those credits to take away your PHEV part
of your requirement. But I don't see that happening only
because usually in the past manufacturers have taken
credits to offset their most expensive vehicles which
usually are their ZEV vehicles. So our numbers say closer
to 160,000. But in theory, yes, you could probably lose
more depending on how you use your credits.
BOARD MEMBER SPERLING: And what about the other Section 177, the other ten states? Our number is only --

AIR POLLUTION SPECIALIST WONG: Is only California, correct.

MR. MODLIN: And that's the difference. We're counting the opportunity in all the states.

CHAIRPERSON NICHOLS: Okay. Sara Rudy. And if you all can keep track of where you are on that list and be ready, we would appreciate it. Thanks.

MS. RUDY: Thank you for the opportunity to comment. We welcome this opportunity to comment on the California Advanced Clean Car Program.

Ford supports the national program for greenhouse gas and fuel economy. We commend the ARB for working with EPA in an effort to develop the second phase of this program. However, we oppose the proposal to offset ZEV requirements based on over-compliance with the federal greenhouse gas standard.

We understand that the Board will resolve to amend ARB's regulation to incorporate one national program once it is finalized, and we support this course of action.

Regarding the lab program, Ford has worked with staff to develop a program to target its near-zero emissions, while allowing the introduction of new fuel
economy technologies. In particular, the proposed PM phase-in allows us to introduce fuel efficient engines and provides time for us to make further engine improvements to achieve the long-term PM targets, while on parallel, improving the testing to provide reliable and repeatable measurements.

Following the success of the one national program fuel economy, Ford encourages the ARB to work with EPA to harmonize the three upcoming Tier 3 programs into a single national program for criteria emissions.

Regarding the ZEV program, Ford is doing its part by introducing a family of electrified vehicles. However, the market acceptance of these vehicles is very uncertain, and we are concerned about the ability to achieve the aggressive ZEV mandate, particularly in 2018 model year and beyond. In a few years, there will be more data regarding market acceptance and how consumers will use and charge these vehicles. Accordingly, we request that the Board require a formal review of the ZEV regulation and believe this must be conducted prior to the one national program review to impact the 2018 model year and beyond.

The goal of the ZEV program is to commercialize zero-emission vehicle technology. At some point, the ZEV mandate goes beyond its usefulness and market forces have to take over.
Similar to their approach taken by the Board when P ZEVs and ATP ZEVs became commercial, Ford requested that the Board incorporate the ZEV technologies into the performance-based LEV III emission and greenhouse gas program and in the post 2025 time frame.

Finally, although the Board expanded the ZEV program to include heavy light-duty trucks, the credit structure was not revised to support these vehicles. The credit structure encourages ZEV technologies at small sub-compact and compact cars which may flood this market with ZEVs while not having any ZEVs in the larger car market.

To encourage ZEV technology on a broader range of vehicles, Ford requests the Board to revise the credit structure to include an attribute-based factor for both ZEVs and T ZEVs.

In conclusion, Ford supports ARB's goal for a sustainable zero emission vehicle transportation system, but it must be economically sustainable for manufacturers, suppliers, fuel providers, and the government and driving public.

That concludes my comments.

CHAIRPERSON NICHOLS: You can say "bravo," if you want.

MS. RUDY: Any questions?
CHAIRPERSON NICHOLS: No.

We are now going to hear from James Jack, who was in the overflow room and was not aware he was on the witness list. I hope that anybody else in the overflow room will be watching. Okay.

MR. JACK: Thank you, Madam Chair and members, James Jack on behalf of the Emission Technology Control Association. In a word, bravo.

Thank you very much. We want to especially the Del Monte staff for the open and collaborative environment they created in helping develop the regulatory package. As you know, members have for over 40 years now been a partner with the Air Resources Board in helping to provide the technology to meet the air quality goals that California has led the nation in ensuring those goals can be met in a cost effective manner and the technology is available to do so.

The two points we would like to leave today, the first is with regard to the midterm review of the particulate matter standard in or around 2017 time frame as a concept. We're highly supportive of and strongly encourage the Board to include alongside review of the GHG standards. And also as many previous witnesses have stated, strongly encourage the Board to continue working with your federal counterparts to get the Tier 3 program
enacted to create a renewable standard and help the
friends at the federal level along with the California's
leadership.

    Thank you very much. Thank you, Chairman
Nichols.

    CHAIRPERSON NICHOLS: Robert Babik.

    MR. BABIK: Chairman Nichols and members of the
Board, my name is Robert Babik, Director of Environment
and Energy and Safety Policy at General Motors. And I
appreciate the opportunity to offer you these comments
today.

    New GM promised to focus on vehicles that
Americans want to buy. The approach is working and it has
enabled us to continue to invest in advanced technologies.
The successful debut of the Chevy Volt represents what is
possible in vehicle electrification. We recently launched
other extended range EV, the Cadillac ELR and an
all-electric version of the Chevy Spark mini car.

    We also continue to make large investments in
advances in hydrogen fuel cells with the system half the
size of the prior generation. All of these advanced
technology vehicles meet CARB's goals, but we'd like to
see them fit better with CARB's regulations.

    For example, this other regulation ideally
encourages vehicles that maximize electric vehicle miles
traveled. While pure BEVs are limited to trips in their immediate range, extended range EVs like the Volt can be driven on all trips and can be a household's only car. Extended range EVs like Volt will be driven most of the time on grid electricity. And we know this based on real world data. Therefore, we ask that the BEVx criteria be modified by changing the minimum electric range requirement to 50 miles to align it with the ZEV category and by allowing unlimited range on APU, auxiliary power unit.

The BEVx category will then promote vehicles that achieve more electric miles, have the same amount of EV technology, and have broader market acceptance than a similar range 50 mile BEV.

In contrast, the BEVx proposal strengthens the program. The greenhouse compliance provision runs directly counter to it and counter CARB's goal of ensuring volumes needed to commercialize ZEV's technology. We don't see how this provision makes the ZEV program better.

I would like to offer our support on several items including CARB's efforts to address hydrogen infrastructure through policies such as the clean fuels outlet rulemaking. Its critical to provide certainty that hydrogen stations will be there when fuel cell vehicles arrive in the marketplace. To put it simply, we can't
bring to market what consumers can't refuel.

We appreciate CARB working with EPA to harmonize greenhouse gas standards as part of one national program. We have worked closely with CARB on LEV III, ask that CARB to continue to work with EPA to harmonize the criteria emission standards with EPA's upcoming tier III rulemaking and being able to develop one set of clean cars, one set of national requirements makes sense to us all.

We also appreciate CARB and the 177 states working with us to develop a ZEV compliance option for these states. Thank you. And I will be glad to answer any questions you may have.

CHAIRPERSON NICHOLS: Yes.

BOARD MEMBER ROBERTS: Could staff respond, especially to the issue of the 50 miles range and the unlimited range on the backup?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.

This is similar to the discussion on the Toyota vehicle in a way. The BEV --

BOARD MEMBER ROBERTS: Since we're operating at the opposite end of the scale here.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Opposite end of the scale, right.

The BEV concept, as you've learned about it, is, in our view, very much a battery electric vehicle. So
that most of the time, almost all the time, maybe even
more the vehicle will run on the electric mode. And the
APU will be more of a backup for those unintended chances
when you run out of juice.

The Volt kind of falls in the middle. And it's
only right now has a 35 mile range. And people -- the
data show that people are using it two-thirds of the time
on electricity. But it's a long ways from being a pure
battery electric vehicle. Even at 50 miles, it would be
at the smallest end of the battery range. And the thing
that distinguishes it between a BEVx or a BEV is that you
can drive the vehicle an infinite distance on the gasoline
motor. Whereas, the BEVx concept is limited to so many
miles after the battery runs out. Basically, if it gets
you home.

And so what we can't -- what we see as being
distinguishing is that people over the lifetime of the
vehicle of the Volt will run it not just a third but
perhaps even more on the gasoline engine. We don't see
that with the BEVx. It's going to be just as a range
extender when you run out of juice when you didn't
anticipate it.

So Volt with unlimited APU range looks to us in
between BEVs and the lightest plug-in vehicle like a
Prius. And with a BEVx, there is really a category that
saying "I'm a BEV and I'm a slight variant of it," but it's
going to have all of its mileage on electricity. That's
the difference.

BOARD MEMBER ROBERTS: I guess I'm having a
little bit of a problem. And it wasn't at the lower end
whether. We're talking about ten miles. But it seems to
me at 50 miles -- I can't remember who showed us that one
chart with what happens at that 50 miles, but you're
capturing driving and from a practical standpoint you're
going to use a high percentage of electricity as opposed
to -- and to put a restriction on that might give us a
greater consumer acceptance by saying you can only have
this very limited range as opposed to having something
more of a bust.

Somehow I'm not agreeing with staff. I don't
feel comfortable with your intuitive conclusions,
especially with some of the analytic information that's
been on display here today.

CHAIRPERSON NICHOLS: I think as we proceed to
listen to all the companies and advocates, we're going to
hear a slightly different perspective on all these things.
I'm not to refrain anybody from asking questions. I think
it's going to be helpful if we wait to form a complete
judgment until you've heard from all of them.

Yes?
BOARD MEMBER LOVERIDGE: I'm wondering if you might offer a one-minute commentary on this discussion now.

MR. BABIK: Some of the things that, Chairman Nichols, that I can bring to the table are, you know, I heard earlier that Tom likes vehicles he can stomp on. The Volt for the first 50 miles, he can go on the freeway. He can go in the city. It is electric. It is very much like a BEV.

We received a 93 percent customer satisfaction for this vehicle. Talk about the mainstream public embracing a vehicle. I think that was one of the goals that you had in your BEVx proposal is that you want customers to embrace these technologies.

And last November, we highlighted the fact that the first ten million miles, two-thirds were being driven all electric. We're over 20 million miles now, still two-thirds.

Finally, the good news is that the Volt that would qualify for this would also come along with the very large battery warranty so that we don't see over time that the range will dissipate. In fact, as more home charging or workplace charging and such come online, we hope that it will stay equal or get better.

BOARD MEMBER LOVERIDGE: Thanks.
BOARD MEMBER RIORDAN: Madam Chair, quick question.

Do you have the ability on Volt to determine whether or not a driver or owner is on electric versus petroleum?

MR. BABIK: Yes. What we can do, ma'am, is we can aggregate data because we can't look at every individual vehicle. But we can take an aggregation of the data. That's where the two-thirds number comes from that we're looking at two-thirds of the time it's acting exactly like a BEV, and one-third of the time it's utilizing a range extender. So, in fact, it's about two-thirds of the time.

BOARD MEMBER RIORDAN: So you can verify?

MR. BABIK: Yes. And we've offered to -- happy to share that information with CARB.

RESEARCH DIVISION CHIEF CROSS: Can I make a quick comment?

I think that the big distinguisher is how they react. In other words, the BEVx has to have 75 miles on all-electric range and uses a small engine basically to deal with somebody who drives many miles and makes a mistake.

The GM vehicle basically can be driven on gas. So it has limited electric range, if you as a consumer or
new adopter or whatever chose to use it as an electrically
helped vehicle, and it will be. But if you as the third
owner or even somebody who is satisfied with the car who
doesn't want to charge it, you can drive it on gasoline.
I think that's the distinguisher. If you have a higher
range criteria, and so the fact that the vehicle really
isn't designed to be run on gasoline.

CHAIRPERSON NICHOLS: And my point here -- let me
just try to restate this one more time.
We're not passing judgment on who's good, better
or less good, or who's going to win and who's not going to
win in the marketplace. We can't know that. We don't
know that.

What we're talking about here is a ZEV mandate
and what the purpose of that mandate is. And then what's
going to get you credit or what's going to constitute
compliance with that.

And I think it's an important distinction because
we're not just trying to bet on the winners here. What
we're trying to do is use this mandate to set the minimum
expectations of where we want to push the technology to
go. So I just ask you to bear that in mind as we listen
to the various ideas.

DIVISION CHIEF CROSS: I'm trying to match the
credit up with where the technology is.
BOARD MEMBER SPERLING: Can I ask?
I agree with everything you said, but you would add to it that we also want to stimulate innovation and investment and encourage experimentation. As you say, this is really the marketplace. So we want to be careful how we create these credits that we do it in a way that does encourage innovation and experimentation. Because this is really just to get things started. We're counting on ZEVs dominating the market. And so --

CHAIRPERSON NICHOLS: But just to remember an addendum to the addendum, these credits live for a long time. A long time. Thank you for affording us this opportunity. Appreciate it.

Diarmuid O'Connell.

MR. O'CONNELL: Chairman Nichols, distinguished members of the Board, good afternoon. My name is Diarmuid O'Connell, Vice President for Corporate Business Development at Tesla Motors.

Thank you for the opportunity to testify before the Board today regarding the 2012 proposed amendments to the Zero Emission Vehicle Program.

As many members of the Board are aware, Tesla Motors is a California-based corporation with headquarters in Palo Alto and a large manufacturing facility based in Fremont, California. We're a California company dedicated
to the innovation, production of world-class hybrid vehicles in California, US market, and for the rest of the world. Tesla Motors is committed to large emission reducing, high performance, high utility, long range electric vehicles at ever increasing prices, thereby expanding the mass market.

Tesla's businesses strategies follows a two-prong approach. First, we produce our own vehicles like groundbreaking first of a kind Tesla Roadster with zero to 60 in 3.7 seconds and a range of 245 miles on a single charge. I think at this point, there is little argument that the launch of this vehicle in 2006 catalyzed the current generation of EVs.

We're quickly moving toward the start of production of our second vehicle, the Model S, which will begin customer deliveries by July of this year. The Model S is a premium EV that has seating for five adults and up to two children. Zero to 60 times of as little as 4.4 seconds and a range up to 300 miles on a single charge. The Model S will be offered at a base price of less than $50,000 after federal tax credit, costing less than half the Tesla Roaster.

We'll be producing Model S in Fremont in quantities of 20,000 or more a year, thereby increasing economies of scale by aggressively bringing down the price
point of Tesla EVs.

And we aren't finished there. We're continuing to develop new vehicles and platforms, improving our technology, building economies of scale, and bringing down the cost of EVs to more affordable levels while continuing to provide leadership in performance and range.

Second and less well known, we design and manufacture and sell EV powertrain systems for other manufacturers with a view towards leveraging economies of scale and further catalyzing the EV market.

As Board members may be aware, we develop battery packs and charging systems for Daimler, Mercedes Benz, power and smart ED, several hundred of which are already in service in San Diego, with large numbers of the road in Europe.

We've also designed and manufactured a battery charging system for the Mercedes Benz A Class, a popular class of vehicle offered in Europe.

More recently, we designed and will soon be manufacturing in Fremont the full powertrain solution, battery pack charger, motor, inverter, and related software for deployment in the next generation Toyota RAV4 EV as my colleagues have mentioned. This is slated for release later this year.

We continue to build our powertrain supply
business both with existing and new customers. Both our
own vehicles and the vehicles we're developing with our
strategic partners, Daimler and Toyota demonstrate the
market and technology leadership that Tesla has been able
to establish in this brief period of existence.

I'm about to run out of time.

We're broadly supportive of everything being
proposed here today. We're grateful for staff. We're
grateful for the attention of the Board.

We would note that while our opinion might be
that the mandate has slipped over the course of years in
respect to things that we care about, that efforts this
year constitute a significant strengthening.

I would, however, note our objection to the
over-compliance option that's been discussed in detail by
some of any colleagues. Let me just tell you a little bit
about why this is important to Tesla very specifically.
From Tesla's perspective, the impacts are very real. The
approval of this option will send a market signal that
could reduce the overall demand for EV technology in
marketplace, keeping costs high, slowing growth, and
impacting suppliers -- powertrain suppliers such as Tesla.

I would also note that the option will also
reduce demand for ZEV credits, the sale of which Tesla
uses to supports its operations and growth, including the
further development and production of EV and EV powertrains.

So I thank you very much for your efforts. Thank you for your attention. And thank you for the extra time.

CHAIRPERSON NICHOLS: We are now going to call out of order Senator De Leon. I apologize to everybody. We agreed we would take him when he arrived and I thought he had.

Okay. Barbara Nocera.

MS. NOCERA: Good afternoon. I'm Barbara Nocera, the Director of Government and Public Affairs for Mazda North American Operations.

The proposed change to the ZEV mandate definition for large volume manufacturers drops the threshold from its current level of California annual sales of 60,000 all the way down to 20,000. The change defines Mazda as a large volume manufacturer starting in the 2018 model year. But by any measure, such as market share in California, the U.S. or global markets, annual revenue and profitability, global production, number of employees, annual R&D investment, marketing resources or market capitalization, Mazda is not a large volume manufacturer.

Mazda is very similar to the remaining IBMs that should be similarly defined as a IVM. Mazda's approach for the short- to medium-term is to develop fuel-efficient
technologies that can be applied across our broad line and
made available to all of our customers at an affordable
cost.

The first vehicle being introduced in the U.S.
that incorporates many components of our sky active
technology is the 2013 model year CX5 SUV, which has a
highway fuel economy rating as high as 35 miles per
gallon, best in class for a cross over vehicle. And that
includes hybrid power cross over vehicles as well. It
goes on sale next summer.

Mazda is working to develop electric hybrid and
battery electric vehicles for the future. We have
announced a small evaluation period of electric vehicles
to be established later this year in Japan. From this
evaluation program, we hope to gain valuable feedback
regarding the battery and other technical features that
will serve as inputs for future Mazda EV development.

However, we do not foresee that our efforts will
enable us to comply with the stringent ZEV requirements
that are proposed to start in 2018 if we are categorized
as an LVN.

In addition to the significant level of resources
required to develop advanced technologies for EVs, it's
necessary vehicles be not only produced but solve in
numbers to meet the annual credit requirements.
However, where companies with limited resources such as Mazda, marketing such vehicles is another significant burden. In the proposed revisions to the ZEV program, there is no difference in annual minimum percentage requirements between the LVM and IVM categories. The only difference between the two categories are additional limited compliance flexibilities available to IVMs. Flexibilities that are essential to Mazda.

We respectfully request that ARB revise the proposed regulations to categorize Mazda as an intermediate volume manufacturer. While our preferred approach entails the addition of a secondary criteria, namely global auto sales volume, and that's included on Page 2 of our submission, you should have before you. We're certainly open to other potential solution that achieve the same end.

Thank you for considering our views.

CHAIRPERSON NICHOLS: Thank you. We have all received your input. So we're aware of the issue. Thanks.

Robert.

Mr. BEINENFELD: Chairman Nichols and members of the Board, I never thought I would be testifying after Reg Modlin who advocates for more -- or less flexibility in
the ZEV mandate. So it's a little awkward. But we proceed.

Honda has been a leader in high fuel economy vehicles for a few decades, and we were the first auto maker to bring to market advanced battery electric vehicles for consumers in the late 90's and first to market a hybrid electric vehicle in the United States.

Honda is committed to a robust portfolio approach that is actively advancing a broad range of technologies. Today, we have launched or are launching programs to market plug-in, hybrid electric, battery electric, and fuel cell vehicles.

Today, I'd like to call to the Board's attention three staff proposals that Honda supports. First, Honda is very supportive of the flexibility inherent in the GHG over-compliance proposal. Simply put, if an OEM achieves a national fleet average lower than your standard, it is as if that OEM -- it is as if that OEM took a significant number of vehicles off the road. These off-the-road vehicles provide a similar benefit to putting ZEVs on the road. This flexibility is limited in time and scope and does not allow an OEM to eliminate its ZEV obligations, only to reduce the number of actual ZEVs. This is an important distinction. An OEM that avails itself of this option still needs to develop and market fuel cell,
battery electric, and plug-in electric vehicles in significant volumes.

The option and flexibility merely allows an OEM to allocate resources and costs between the national GHG program and the California ZEV program in such a way as to maximize the advantage to consumers without sacrificing environmental benefits or technological problems.

Secondly, Honda supports the optional compliance path for Section 177 states, and we urge the Board to support this direction as well.

Lastly, infrastructure for both battery and fuel cell vehicles are key to the success of these technologies. Fuel cells are key technologies for a robust ZEV solution. Honda has invested significant resources in the development and construction of fuel cell vehicles and supports policy options that assure hydrogen infrastructure. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Andreas Klugescherd.

MR. KLUGESCHERD: Good afternoon, Chairman Nichols and members of the Board.

My name is Andreas Klugescherd. I'm Vice President of Governmental Affairs for BMW group. And we appreciate the opportunity today to comment on the proposed regulations. We focus our comments on the Auto
Alliance, but I would like to focus now on three topics of particular interest for BMW.

First, on the staff regulation, BMW supports the ARB staff's goal to establish BEV market penetration by establishing a new category, the BEVx. This new category can help track additional customers who are willing to buy a BEV, but are still reluctant to do so due to range anxiety reasons.

As a result, the BEVx will have to expand the electric vehicle markets equivalently while increasing total zero-emission vehicles miles traveled. Thus, the BEVx will serve the policy goals California has in terms of de-harmonizing the all-electric sector. BMW will have a verification program for approving the predominant use of BEVx in electric role, should this be included in the proposed regulatory proposal.

For GHG, ARB also supports the inclusion of emissions and the compliance calculation for automakers through the entire time frame of the regulation. And this contradicts the federal approach. As it is our understanding that a single national standard has lead to almost harmonization of standards and procedures, CARB should no longer set standards or comparables to the federal laws but also incorporate the same fundamental structure for achieving these standards.
What is more of the agency's responsibility for development of efficient vehicles with extremely low or zero tailpipe emissions with the OEMs, but manufacturers have absolutely no control over the CARB content of the upstream. And we are not responsible, and I would like to stress that we are not responsible for the decisions made that California, for example, can lead X times as early as 1901, which is the oldest station in California still in operation.

So, therefore, BMW continues to maintain that electric vehicles should encompass zero grams per mile, meeting greenhouse gas regulations.

On criteria pollutants, you already heard that before, but it's important to stress that again. Emissions targets for reduction of particulate matter need to be balanced with the emissions targets for reduction of greenhouse gas emissions.

The framework of a harmonized (inaudible) BMW believes we can do the three milligram per mile. We recommend to eliminate the per mile standard from the regulation and plan a review of PM standards with ARB, with U.S. EPA, and the industry. This should include a thorough assessment as well.

The regulatory process should evaluate new test procedures and facility requirements, consistency of group
capability of measuring PM at extreme low levels, as well as (inaudible) of particulate testimony method.

And the last five seconds go to the praise part of it. It's more than appreciating sharing the work we did with CARB and with staff. In particular, we totally understand that it's strength and balance; technology, markets, environment, but I think CARB has made a very good way here. And we applaud you guys for that.

CHAIRPERSON NICHOLS: Thank you. David Paterson.

MR. PATTERSON: Good afternoon. Thank you.

My name is David Patterson with Mitsubishi Motors. And I'm here today to talk to you about some of the concerns that we have.

We generally support all these regulations, and we congratulate staff for a very open and constructive process to develop these regulatory new regulations.

Next slide.

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MR. PATTERSON: Mitsubishi Motors has just launched our electric vehicle worldwide with the completion of the IMA here in the United States through the 2012 model year. And our company has made this internal commitment to lead the industry into the new EV era.

One of the big goals that we have is our
commitment of 20 percent EV production worldwide by the year 2020. So we have concerns when it comes to the ZEV regulation, and that's what I'm going to address here today.

Next slide.

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MR. PATTERSON: One of the most important things is when we start talking about the new dividing line between the large volume manufacturers and the smaller manufacturers.

Now with the change in the cutoff, now 97 percent are now classified as large volume manufacturers, and then four-and-a-half companies -- we don't where Subaru is going to fall every day -- is now three percent of the California sales volume.

Next slide.

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MR. PATTERSON: But we have these concerns. When you look at the concerns, they basically -- we have ended the classification for independent low volume manufacturers. And when that classification was ended when I spoke with staff about this, they said that we were going to move the classification towards the same requirements because those are the small companies and we are going to have a separate set of requirements for the
smaller companies. But somehow that doesn't happen.

Now these smaller companies are going to be held
to the same volume requirements as large manufacturers,
but with the flexibility of PHEV. You find out PHEV isn't
a great flexibility because there is no credit trading,
there is no travel provision for PHEV. So any
manufacturer using PHEV is going to have to meet those
fleet requirements in all of the 177 states.

That gets me to my second concern, is the Section
177 pooling and the optional compliance path. In general,
I've seen a draft of this and Mitsubishi is generally
supportive of this idea but brings up the same kind of
concern. We were not included in that process to discuss
that to discuss that compliance path. So we really can't
make a judgment one way or another whether that's going to
be beneficial or not for our company.

And it really shows the paradox of this. In the
first concern, we are now being addressed as a large
volume manufacturer with large volume requirements. Well,
you can comply with PHEV. But in the second concern,
we're not large enough to be considered part of the club
to discuss these issues.

In the third concern, it goes deeper into more
technical. These are things we'd like to resolve with the
staff. But we do not have a travel provision before 2017.
So we have no capability to move forward to 2018 with a compliance plan.

So we would like the Board to just direct staff to work with the intermediate volume manufacturers to resolve these issues going forward, because they're so important to our company.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Eileen Tutt.

MS. TUTT: Good afternoon, Madam Chair and members of the Board. I'm start with the LEV III comments.

My name is Eileen Tutt, Executive Director of the California Electric Transportation Coalition. First on LEV III, I want to commend you on your incredible success. And thank you, Madam Chair and staff and our Board.

But I want to focus my comments on the price reflection in the CARB staff report, because CalETC is conducting its own macro-economic assessment of the impact of electric vehicles on our economy here in California. We have a different idea of what some of those prices will be. There is a huge difference between electric vehicle and a combustion engine vehicle and the opportunities that affords people who buy an electric vehicle. And those benefits go beyond just the fuel cost savings. There are
other benefits to electric vehicles that can be monetized, and we have done so. I'm just going to provide a quick example.

For example, the example that was given earlier, U.S. EPA's decision not to count upstream emissions for battery electric vehicles, that's worth about $2,500 for a plug-in hybrid and about 4,200 for a pure battery electric.

HOV lane access is the number one, the biggest non-monetary incentive for electric vehicles. And it's valued with all kinds of market research at about $4,000 per vehicle that gets into that lane.

And then I'll finally mention the reduced maintenance cost for electric vehicles which is around $1200 per vehicle. So these are real cost savings for consumers who buy these vehicles. And we'd like to see them reflected when we consider prices.

I'll move quickly onto the ZEV mandate. We are not supportive of the over-compliance, the allowing over-compliance with the LEV III mandate to meet the -- greenhouse gas over-compliance to meet the ZEV obligation. And the reason for us is we see the ZEV mandate as much more than a greenhouse gas mandate. It is a key policy driver getting us off our dependence on oil. And this dependence is strangling our economy. Our kids are going
overseas fighting in unstable countries that have a lot of oil. And it's damaging our environment. We need to reduce the dependence that's very important.

But even more important, we need to diversify our transportation fuels sector. And the ZEV mandate is a key policy driver to do that. So I encourage you to reconsider this over-compliance opportunity for some automakers.

Finally, on an up note, we do very much support the staff's proposal and clean fuels outlet regulation particularly as it pertains to electric vehicles and electricity. In the case of electricity, the market for the charging is just changing. New technologies are emerging. There is innovation happening. Right now, we just don't know really know what that market is going to look like. Any mandate right now could stifle innovation. So we commend the staff on that particular decision. And we really appreciate also the number you're considering in two years.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Tyson Eckerle.

MR. ECKERLE: Hi. Thank you. I'm Tyson Eckerle with Energy Independence Now, one of the environmental NGOs who's paying close attention to all these regulatory
developments.

And first, I want to express my strong appreciation for all the staff's work on this. They've been great at engaging multiple stakeholders and I think put together a very strong package of regulations. So we're generally very strongly supportive of the Board's adoption of these regulations. Some of my environmental colleagues will also talk about our concerns with this particular exempt program as far as ways to strengthen it.

I wanted to put my testimony time into the clean fuels outlet, which I think is absolutely critical. It's a complement to the Zero Emission Vehicle Program. Without it, we seriously risk missing ZEV targets.

I strongly agree with the staff proposal. They've done an excellent job thinking through all the details needed to implement hydrogen and electric infrastructure. We particularly agree with the decision to lower the trigger level to 10,000 vehicles in a region, which makes a lot more sense for filling the gaps and also changing the regulated parties to those parties who benefit -- stand to benefit most from the sale of gasoline in the states.

Additionally, we strongly support the staff proposal that said the need for plug-in infrastructure. I think it's very appropriate as Eileen just talked about
right now as far as we don't know where the market is going, but data collection can play a tremendous role in figuring out how to use a potential mandate to expand the battery electric vehicle infrastructure market.

So the success really of ZEV comes down to certainty. That's what the clean fuels outlet provides. We can't expect automakers to invest in the mass deployment of fuel cell vehicles without certainty that the infrastructure will be there to meet them.

So in closing, I actually want to talk a little bit about the MOA process, which I've been an active member in with the ARB staff. And I've actually -- Energy Independence Now has ended up doing a lot of the modeling analysis that goes into figuring out the costs and benefits of putting out hydrogen infrastructure. It turns out it's not as expensive as it could be. In the early years, it's very difficult to get into the market and make a profit. But after three or four years, there's actually a tremendous amount of profit to be made. So this regulatory policy driving investment into the hydrogen infrastructure in the early market will help us get to that later part.

And so regardless of what happens with the MOA, I think the CFO is absolutely critical to keep driving the process forward. The MOA provides a preferable way to
deploy infrastructure and the CFO provides the certainty needed to make sure the infrastructure is there when we need it.

So thank you very much.

CHAIRPERSON NICHOLS: Okay. Thank you.

I think that I'm prepared to actually announce the arrival of Senator De Leon, who asked -- thanks so much.

SENATOR DE LEON: Thank you, Mr. Chairwoman Mary Nichols.

I want to congratulate and recognize Assemblymember De La Torre, your appointment. Congratulations. It's good to see you.

To the members of CARB, first of all, I want to take this opportunity to thank each and every one of you. And I want to offer my strongest support for the full suite of clean vehicle fuel policies that are under consideration today. I have the good fortune of representing what I would say the most diverse legislative district on planet earth, believe it or not. We are right in the middle of that district. Have the good fortune of representing all of Chinatown, which is to the right of me; Koreatown, which is to the southwest of me; Thaitown, Little Armenia, Little Tokya, Pico Union/McArthur Park, which has the largest concentration of Central Americans
outside of Central America, and Boyle Heights and East L.A. which has the largest concentration of Mexican immigrants outside of the republic of Mexico. It is an amazingly diverse tapestry of diversity.

At the same time, this is a district that, without question, this beautiful mosaic, this tapestry is being choked like a serpent because it is home to six of the busiest freeways in the country: The 2, 5, 10, 101, 110, as well as the 710 freeway. So obviously, the children in my district are disproportionately impacted by emissions, whether it's stationary or mobile in my district.

So I just want to say that these rules that are put forth here today for your deliberation will improve without a doubt the air quality in my district and constituents in many districts that are very similar whether they're urban or whether they're rural throughout the state of California.

These rules include obviously stronger standards to reduce smog, stronger standards to increase the environmental efficiency of new vehicles, thereby reducing heat trapping gases that cause global warming, a forward-looking clean fuels requirement and the very important zero emission vehicle program to help bring about truly advanced vehicles to the market.
California, without a doubt, has led the nation and the world protecting public health. Obviously, AB 32 came to fruition. We had the Kyoto plan. There was a lot of concern with scientists and throughout the world what was California going to do, especially given the fact that the Kyoto plan and the speed within the George W. Bush administration was not moving forward. Obviously, California has been a trend setter, not just in the nation, but obviously throughout the world.

What I want to do is take this opportunity to thank you, Madam Chair Mary Nichols, for working very closely, and to all the Board members of CARB collectively for working very closely with the Obama administration. I have been working with the White House as well. And the cooperation that has developed between both entities and developing greenhouse gas standards will no doubt not just benefit the state of California, but also the entire world, but also the country.

So California must continue to obtain its authority and ability to protect the public's health from the harmful pollution emitted from our transportation sector. And energy companies should be part of the solution, no doubt, and make the modest investments necessary to make sure that complete fuel cell vehicles are available to consumers as automakers roll out these
advanced vehicles.

Bottom line is Californians are facing $4 a gallon when it comes to gasoline, while oil companies are reeling in billions in profits. And the last thing that oil companies should be doing is the same in California is that we should have alternatives to oil.

One last point I wanted this Board to highlight. Obviously, we have the largest port in the country, I do believe the fifth largest in the world. So with the transportation sector, with the goods movement, when we have the Pacific Rim and Trade, when someone who lives in Paducah, Kentucky or, say, someone who lives in Bloomington, Indiana goes to a WalMart or Best Buy and they purchase tube socks, whether it's Fruit of the Loam or Hanes, when they by a plasma television set, a wide flat screen, when they go to Paducah, Kentucky WalMart or they go to Best Buy, that price point they purchase it at is subsidized by the lungs of many children, citizens who live in and around these corridor sectors where goods movement take place. Whether particulate or greenhouse gas, atmospheric, this is an issue that's very, very critical for us here in Los Angeles and I believe throughout the state. What happens here is going to have a monumental impact nationwide.

And therefore, Madam Chair Mary Nichols, as well
as the Board members here, I encourage you highly to move forward with the proposal that's set forth on the table. And again, I want to thank each and everyone of you for your hard work. I know it can be very difficult. There's diverse opinions, very strong interest on this issue. But you are an inspiration collectively to many policy makers. With that, I want to thank you, Madam Chair.

Again, I thank you very much.

CHAIRPERSON NICHOLS: We appreciate your coming. As you know, it's usually the other way around. I'm sitting down there and speaking before you. It's really a pleasure.

SENATOR DE LEON: Thank you. Have a good day. Thank you.

BOARD MEMBER DE LA TORRE: I'll be very, very brief. I just wanted to comment that Senator De Leon had mentioned this point in Sacramento. It isn't like he was around L.A. to speak to us. He made the effort to come down and express those important thoughts to us on these very tough issues. So thank you very much.

SENATOR DE LEON: Thank you.

CHAIRPERSON NICHOLS: Thank you. Okay. We have a couple of requests for people who wish to speak early. And I'm going to try to accommodate people who have flight issues. So if you're one of them, you can let the Clerk
know.

I'm going to call out of order number 70 and number 77, James Friedland and John Boesel, if you would come forward and be brief, we would appreciate it.

MR. FRIEDLAND: Thank you very, very much, Chair Nichols and members of the Board and also staff.

I'm James Friedland from Plug-In America and you've seen me here many times.

I want to start off with absolute praise. The success of the Air Board in reaching the milestone this year of over 18,000 plug-in vehicles, to compare this, in 2001, we had 5500 Priuses. This is really -- when everybody starts saying the market is not here or this is an issue where there's so few of them sold, we sold more than three times as many plug-in vehicles this year. I think that is really a testament to what the ARB Board has done in the past. And creating the ZEV program really has driven us to be true.

Without the ZEV program, it's highly unlikely that automakers would make these new plug-ins. And changes to the program by the Board in 2008 really started this renewed effort. And going forward, we believe that we need a really strong ZEV regulations in terms of creating long-term success.

And let's all keep our eye on the goal, which is
80 percent greenhouse gas reduction by 2050. The cars that we put on the road today are very, very important and the cars we put on the road tomorrow. So the sooner that we get the cars on the road, the better off it will be.

So we really believe that the current proposal is very good, but there is a couple of places that need addressing. Probably most important is the over-compliance provision. We strongly urge the Board not to approve the proposed over-compliance provision. It would dramatically weaken the ZEV program because it would allow automakers to over-comply with the federal greenhouse gas standard and get away with producing fewer battery electric vehicles and plug-ins.

We made further comments on this in writing, but I want to really specifically point out that if you have this loophole, what could happen is, you know, we could lose volume production and, you know, costs for the initial vehicles are high and ZEV credits are key to some of the OBD manufacturers. That's really critical.

The other thing I wanted to quickly address is wimpy plug-in hybrids. We really think that wimpy plug-in hybrids are a bad idea. Ten miles of electric range is ridiculous. We basically -- you know, Toyota is advocating for this, and today they go 15 miles. So why are they advocating for something in a standard in 2018
that only goes ten. We think that's critical.

Finally, in terms of clean fuel outlets, I think the other thing we should consider is if we are talking a million dollars an outlet, Nissan has just announced a $10,000 fast charger. Why don't we put two or three of those and spend one or two or three percent of that money into each one of those clean fuel outlets and really make them a clean fuel outlet so there is multiple fuel types there.

Thank you very much again. And really, really appreciate the opportunity to talk.

CHAIRPERSON NICHOLS: Thank you. Okay. Mr. Boesel.

MR. BOESEL: Thank you very much. I really appreciate you taking me out of order, Madam Chair.

My name is John Boesel, President and CEO of Cal Smart. We are a nonprofit organization headquartered in Pasadena. Since its inception in 1992, we have been working to enable the suite of policies that are being considered today, and we are so happy that they are being considered.

Our mission when we were started in 1992 was to enable the development of a clean transportation technologies industry, and then we worked to accelerate the growth of the industry.
As Chair Nichols noted in her opening comments, we have, indeed, seen very significant technological process in our two decades in our organization's history and since that first was created. Today, Cal Start has more than 145 member companies, including car, truck, bus manufacturers, as well as start-up vehicle manufacturers, utilities, part suppliers, non-profits, agencies, venture capitalists, and banks.

The suite of regulations being considered today overall and in their entirety are good for the clean car technology industry and in general and very good for several California firms. These rules will encourage innovation in this sector and they will encourage innovation.

I don't have time to go through the whole list, but quickly I'd like to read off a few of the California companies that I think will benefit. Two start-up companies, Santa Clara has a chip that will help engines run. Power Genex in San Diego has a better battery for mile hybrids. KD's (phonetic) Power has a next generation internal combustion engine. Coda and Tesla obviously are two promising electric vehicle start-ups. Coulon and ClipperCreek have electric vehicle chargers. Simple Materials out in the Coachella Valley area is developing lithium from geothermal wells. They will become one the
biggest lithium suppliers, and it will be bold. And of course, we have Quantum developing a plug-in hybrid pickup truck and EVI and Vision Industries developing all-electric trucks.

All I want to say here in closing is that we are on a bit of a collision course. And as all these great new vehicles are coming to the market, California incentives are due to sunset and expire. This is an issue that we look forward to working with you on and developing because I do think we need incentives here that address not only criteria emissions but greenhouse gas emissions and reduce dependence on oil. That's something we very much -- it's our highest priority this year in California and want to get that achieved.

And then just closing, now that we've learned more about the CFO debate and where that's headed, if other fuels are going to be considered other than hydrogen, I just encourage staff to consider biomethane renewable natural gas which received the lowest carbon rating of any fuel scored by the agency. If we are going to support low carbon fuel other than hydrogen -- bravo.

CHAIRPERSON NICHOLS: Everybody ends that way. Back to the list as it was. James Provenzano.

MR. PROVENZANO: Madam Chair, Mr. Mayor, the rest of the Board, thank you for this opportunity to talk to
you today. Very exciting day, by the way.

I'm James Provenzano, President of Clean Air Now. And we are based in Riverside. And it's good to go before -- go after Tyson from Energy Independence Now and before Hydrogen Business Council, because we agree with everything in their testimony, written and spoken. So it makes our job easier here.

Clean Air Now supports staff's recommended revisions to the clean fuels outlet regulation, and we especially applaud the new focus on hydrogen fuel infrastructure development, which will subsequently provide support for advancing the marketing of fuel cell vehicles within the state of California.

We need to give a strong go decision to the OEMs to bring these technologies to a wide market. Fuel cell vehicles will give the consumer a broad range of choice. By doing this, you're not only advancing passenger vehicles, but as you know, fuel cells can be scaled out for medium and heavy duty use. So you are going to be addressing several things with this.

Fuel cell vehicles will give the consumer a broad range of choice, enhancing the market penetration of zero-emission vehicles. This, in turn, will facilitate great reductions of air pollutants over a shorter period with resulting reduction in morbidity and mortality rates.
among the public from air pollution.

Therefore, a couple things -- one thing we want to agree with the South Coast Air Quality Management District's concern of the sunset provision in the CFO from ten percent penetration in the number of outlets to five percent. We agree with the district that it should be kept at ten percent.

I also come here today as a proud hydrogen Clarity CSX fuel cell electric driver. And I think the OEMs actually are understating the capability of the technology. It's fantastic being a part of that program. It's just been a real joy. And to see -- thinking for a while that California was starting to lag behind Germany, Japan, and Korea, and now the European Union and now Great Britain is throwing finally some money into hydrogen infrastructure.

This act today -- or what you're going through, this process by adopting these provisions is going to catapult California to the lead once again with these great technologies that have such great promise and will deliver on those promises.

One thing we're concerned about -- the other thing we're concerned about -- bravo.

CHAIRPERSON NICHOLS: You can submit written testimony.
MR. PROVENZANO: Keep on this track. It's wonderful. Thank you.

CHAIRPERSON NICHOLS: Mark Abramowitz.

MR. ABRAMOWITZ: Thank you very much, Madam Chairman, members of the Board.

My name is Mark Abramowitz. I'm President of California Hydrogen Business Council. The CHBC is a nonprofit organization comprised of organizations and individuals involving business of hydrogen energy. Our members include fuel cell manufacturers and suppliers, manufacturers and distributors of hydrogen generation, compression and storage technologies, manufacturers and suppliers of hydrogen internal combustion engines, engineers and service providers, municipal, State, and federal agencies.

CHBC actively supports hydrogen's growing commercial use, new hydrogen applications, and the transition of our energy infrastructure towards a cleaner, low-carbon hydrogen economy.

We recognize that the hydrogen power fuel cell electric vehicles can play an important role in moving our economy towards a greener more sustainable model. Several of our OEM member companies are marketing FCEVs today and they are planning larger volumes in the future.

Our OEM members have expressed concern even in
the limited FCEV instruction so far that their vehicles have sat unused for extended periods of time while awaiting infrastructure. As volumes increase, it is essential that infrastructure be planned in advance of and in coordination with planned introduction of fuel cell vehicles. Without good public policy, we will forever be struck in neutral.

Automakers will not be able to build FCEV without adequate infrastructure, and adequate infrastructure will be lacking without the promise of high volumes of FCEVs.

Generally speaking, CHBC is not in favor of mandates as the optimal public policy tool to achieve social goals. However, since a mandate on motor vehicles -- on vehicle manufacturers to introduce zero emission vehicles into the marketplace already exists, appropriate policies are necessary to assure the availability of adequate hydrogen infrastructure.

Therefore, the California Hydrogen Business Council supports the amendments to the CFO as proposed by staff. In addition, we support voluntary mechanisms that may be acceptable to CARB and industry that may achieve substantially similar results without actually implementing the CFO. Bravo.

CHAIRPERSON NICHOLS: Thank you.

MR. LAND: Madam Chair and Board members, I'm
Klaus Land with Mercedes-Benz. It's an honor to be here today.

I would like to thank the ARB staff for their tireless effort to work with the industry and Mercedes-Benz on these new regulations.

And I would like to make comments on three important topics. First topic, the PM standard of the very aggressive (inaudible) standard. ARB staff is proposing a new (inaudible) that is approximately a 90 percent reduction compared to the current standard.

Industry testing and current experience of independent researcher institutes shows that this PM standard is not achievable for advanced technologies, especially low-powered down-sized engine technologies. But that will be necessary to meet the new national greenhouse gas standards.

We have cover in U.S. PM standard for six passenger cars and light duty trucks of 25 milligrams per mile or as an alternative STPE standard of 10 milligrams per mile. This is also used for other limited criteria pollutants in the clean air regulations and covers very well the real world driving behavior in the U.S.

Second topic, need for public fueling infrastructure. The clean fuel are recommend that to assure that we have clean fuels such as hydrogen available.
to meet the demands by the commercialization of fuel cell vehicles and proposed amendments to the self regulation. Mercedes has a plan for high volume production in years 2015 to 2017. But the goals of the fuel cell vehicle market is highly dependent on area-wide availability of population hydrogen fueling stations. We request you lower the threshold trigger from 10,000 to 2,000. The lower trigger ensures infrastructure will be there when these are delivered.

Third and final topic regarding zero emission program, zero-emission program offers flexibilities we support including PZEV and BEVs. These vehicles use technologies and infrastructures that will be advanced in commercialization of zero-emission vehicles. No ZEV credit should be given for greenhouse gas overcompliance. Such flexibility was used a number of ZEVs which would have a negative effect on the deployment of fueling infrastructure. Thank you very much for your attention and considering these topics.

CHAIRPERSON NICHOLS: Thank you.

Yes.

BOARD MEMBER BERG: From a previous speaker, we heard that the PM standards for Europe are, in fact, stricter than the ones we have in our regulation today. Could you may be make a comment on that?
MR. LAND: Yes. When we consider PM standards, we have to consider the test sitting, which is behind. In Europe, we have our certified new driving site, which is less aggressive than the FTP side. What we further developed was the FTP side use the PM standard for ten milligrams to three milligram and one milligram. What I'm talking about is the very special aggressive U.S. test site which is just for the U.S.

BOARD MEMBER BERG: Thank you.

CHAIRPERSON NICHOLS: Okay. Thank you.

Elaine O'Grady.

MS. O'GRADY: Good afternoon. My name is Elaine O'Grady, counsel for the Vermont Air Pollution Control Division.

Thank you for the opportunity to speak today and for your longstanding leadership in developing groundbreaking vehicle emission control programs.

I'd also like to thank California for their support in helping Vermont to successfully defend legal challenges against the Pavely I regulations. Special thanks to Ellen Peter and Aaron Livingston.

While I'm here today speaking on behalf of Vermont, many of Vermont's interests are shared by the other Section 177 states in the northeast. We strongly support California's proposed advanced clean car
rulemaking. And in particular, we support the new optional Section 177 compliance path.

Section 177 states in the northeast recognize that to address climate change and reach long-term greenhouse gas emission reduction goals, vehicle fleets must be transformed from gasoline vehicles to electric vehicles. Since the last set of amendments, Section 177 states in the northeast has been installing electric vehicle charging stations, developing incentives for advanced technology vehicles, and coordinating efforts of other states through the transportation and climate initiative.

The new optional Section 177 ZEV compliance path complements these ongoing effort to follow California's lead and transform our vehicle fleets in the northeast. Vermont urges the Board to adopt this new option and allow 177 states to establish and grow BEV markets sooner.

Staff's initial proposal delayed the requirement to place new BEVs in Section 177 states until model year 2018 by extending the travel provision. The new compliance path requires manufacturers that select this option to place a reasonable number of battery electric vehicles in Section 177 states in model year 2017 and model year 2017. Thus, this new compliance path will
establish BEV markets in the Section 177 states two years earlier than the initial proposal.

New compliance path will also provide for steady growth of the BEV market in the northeast region and a smoother transition of manufacturers by gradually ramping up BEVs over a five-year period.

Establishing BEV markets in the northeast will also help Vermont and other Section 177 states to meet long-term climate change goals. As Chairman Nichols said earlier today, we can't afford to wait. We have to act now.

California and Vermont and other Section 177 states have aggressive climate change goals. Vermont's goals include a 50 percent reduction of greenhouse gases by 2028, a 75 percent by 2050. To meet these long-term goals, the large scale electrification of light-duty vehicle fleets is essential, just as ZEVs are necessary for California to meet its long-term climate goals.

The bottom line is that staff's new option will help to get Section 177 state fleets on appropriate projectory towards meeting our long-term climate goals.

Unlike California, other states are preempted from establishing emission standards under the Clean Air Act. Consequently, the Board is uniquely positioned to either enhance or impede our efforts to transform
light-duty vehicle fleets in the northeast and to meet our long-term climate change goals.

For all these reasons, we urge the Board to adopt the new ZEV compliance path. Bravo and thank you.

CHAIRPERSON NICHOLS: Thank you.

And I want to thank you a second and extend time to recognize in response to your remark about California's supporting litigation that Vermont paid a very heavy price for having been so bold as to adopt the 177 standard and then to go after greenhouse gas emissions because you were really targeted by the industry for litigation that was aimed at us primarily. And of course, we were happy that we were able to be of assistance. But Vermont just did a terrific job, a lot of leadership. And we're very happy to be aligned with you in this effort.

MS. O'GRADY: Thank you. Appreciate that.

(Applause)

CHAIRPERSON NICHOLS: And now our neighbors to the north.

MR. GINSBURG: Good afternoon, Chair Nichols and members of the Board. I'm Andy Ginsburg, the Air Quality Administrator for Oregon Department of Environmental Quality representing the western Section 177 states. I'm here to comment on the proposed ZEV 2.0 rules and express Oregon's support for the optional Section 177
compliance path as proposed by staff.

Oregon opted into your LEV program in 2005 to help meet our greenhouse gas goals and to support the development of advanced technology vehicles. We're indebted to you for establishing these programs, and we consider ourselves partners in your agency's long-standing commitment to reduce emissions from vehicles.

Early introduction of zero-emission vehicles in Oregon is a priority in our state, and I know it's important to you as well as the rest of the nation to build upon the advances that you have pioneered. We join with you and Washington to implement the West Coast Green Highway that will allow electric vehicles to travel from Canada to Mexico.

We currently have well over 100 publicly-available charging stations with more planned in the coming year. Our Public Utilities Commission is established procedures for utilities to assess tariffs for electric vehicle charging. Our Building Codes Division is developing requirements for new construction to accommodate electric vehicle charging. And our local governments are developing incentives to stimulate electric vehicle use. So we're ready for the electric vehicles that will be required in our state under the optional requirement path. We just need more vehicles.
I want to highlight a couple of key provisions in the proposal that we urge you to include in the final rule.

First, it's important to the 177 states who automakers choose the optional compliance path must meet all of its elements until it ends in 2021. The gradual phase-in of credit percentages and the pooling of credit obligations as described by Ms. Wong would only be available to manufacturers who opt in by September 1st, 2014, and provide the additional ZEVs to 177 states in model years 2015 and 2016, as Elaine just mentioned.

Second, the gradual phase-in of battery electric vehicles in the optional path will result in credit obligations lower than those in California in some years. It's very important to the 177 states that these excess credits do not create a windfall of credits that can be used to meet other obligations through the travel provisions of the rules.

Last, important to the 177 states that two compliance pools are created, one for the east and one for the west, as Ms. Wong mentioned. This will allow ZEV obligations to be met in places where they are most accepted by car buyers, while maintaining a regional balance in the deployment of ZEVs.

We also agree to trading between the two pools at
a 30 percent premium to provide automakers with added flexibility, while maintaining a strong incentive for ZEVs to be distributed to each of the pooled regions.

So, again, Oregon supports the optional compliance path as agreed with the auto makers and as proposed by ARB staff today. These changes will allow early introduction and a smoother phase-in of electric vehicle requirements in 177 states and should benefit all parties affected by these pivotal regulations.

Thank you very much for the opportunity to comment.

CHAIRPERSON NICHOLS: Thank you, Mr. Ginsburg, and thank you for your working out I think is a very progressive solution here. It's really I think impressive to see that the 177 states have come to the table and come up with some very sophisticated solutions to some quite difficult problems. So thank you.

Cathy Reheis-Boyd.

MS. REHEIS-BOYD: Good afternoon, Chairman Nichols and members of the Board.

My name is Cathy Reheis-Boyd, and I represent the Western States Petroleum Association as President.

I'm going the talk about the CFO rule in particular and then start with that and then move and talk to the collaborative process that's been referred to.
So WSPA and our members, we've been actively involved in the clean fuels outlet regulatory amendment workshops and all of the meetings over the past two years. We strongly oppose the CFO regulation. It imposes an obligation to refiners and importers of gasoline and diesel fuels as the regulated parties responsible for building and operating facilities statewide to dispense hydrogen fueled retail. Forcing CFO infrastructure investments from non-interested parties will likely result in legal challenge.

Now I do want to talk about what I've personally been involved in and commend Tom Cackette, Analisa, all of the partnership, the automakers. And what we have been involved in is a productive participant in the hydrogen infrastructure stakeholder work group. We've diligently worked together to try to understand technology, equipment, funding challenges necessary to make an efficient business case for early deployment of hydrogen infrastructure. And we all want to avoid stranding any investments for those interested in voluntarily engaging in this. I think you'll hear from the COIMA representative next. In fact, our industry hired Ken Gunn to help that collaborative process to develop a business case and offered that over a year's period to make sure investments would deliver a positive result.
So there have been great discussions on roll-out plans and feedback loops and voluntary capital investments to position this appropriately. And we've been very encouraged by some of the discussions of using the existing programs like 118 and certainly we've been involved in other collaborations, like the Carl Moyer Program. But to insist on adopting a CFO mandate for refineries and importers will only stifle collaborative discussions. Potential litigation would delay incentives for early deployment of hydrogen at retail and won't provide the certainty we're all looking for.

I can go into it at the end if you want to understand some of the nuances between how we feel about the hibernation language and the Air Resources Board would be happy to do that. But there is no legislative authority for requiring refiners and importers of run fuels such as petroleum products to construct and operate retail facilities to sell a completely different fuel.

So we've just submitted extensive written comments. I have a packet here to give to the record.

We urge ARB to withdraw the CFO amendment provision on refiners and importers and instead continue to support the collaborative efforts within the hydrogen collaborative framework to progress the installation of hydrogen infrastructure in the state in a voluntary
cost-effective manner.

And, again, if there is interest, I would be happy to go into our differences on the nuance of the hibernation clause.

CHAIRPERSON NICHOLS: Anybody want the hydrogen infrastructure about it? Oh, we have your written comments.

MS. REHEIS-BOYD: Yes.

CHAIRPERSON NICHOLS: I think that will do it then.

Okay. Jay McKeeman.

MR. MCKEEMAN: Good afternoon, Chair and Board members.

We are on the brink of success or failure. I cannot speak for the major oil companies, but I know they are adamantly opposed to your proposal to require commercial entities that do not make hydrogen as a fuel to retail that product. This will be litigated if you adopt the regulatory backstop.

On the other hand, an excellent collaborative work has gone into a new and innovative way to comprehensively match hydrogen fuel with the cars purchased.

Most importantly, this work establishes a business case focused on marketers who would most likely
enter this emerging market and it creates a much more
efficient and transparent mechanism for funding. However,
if litigation on the CFO happens, all this good work stops
and we lose the important and broad coalition needed to
obtain the funding to make the MOU work.

The decision is in your hands. Suspend the
backstop and allow an innovative program to progress.
Adopt the backstop, and the attorneys will make the
profits from the CFO, not the retailers.

CHAIRPERSON NICHOLS: Just a comment. You know,
our attorneys don't make any profits from litigation.
They're also not the ones who would be suing.

The choice about litigation is in the hands of
the oil companies. And I would just say, as a lawyer,
that I've seen any number of situations where litigation
has actually eventually led to a settlement that would not
have been possible otherwise.

We're not trying to suspend or abrogate or
overthrow discussions that have been going on towards a
voluntary agreement in any way, shape, or form.

But as I think the staff has laid out, we also
have an obligation here to try to keep faith with people
who are producing the cars that need this fuel. And we
have simply got to have a structure that makes sure that's
going to happen.
MR. MCKEEMAN: And you have that. You have that in the MOU. It's very carefully worded. The metrics have been carefully established to allow understanding of progress and success. It's all there. I'm just saying, if you go forward, it's going to create a big problem.

That's what I'm observing. I'm not predicting lawsuits. I'm just saying it's going to create a problem.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER SPERLING: And I'd like to respond to this and the previous point that we're asking or telling companies to sell a fuel that's different than what is their business.

And I would note, first of all, all the major oil companies have said for years they're energy companies; they're not oil companies. But they're in the business of providing transportation fuels. And I know Shell, BP, and Chevron have all had business units that have been dedicated to hydrogen.

So it's a little disingenuous, if not totally wrong, you saying that it's selling a fuel they have no interest or no business with.

MR. MCKEEMAN: I would suggest you're talking to the wrong person.

CHAIRPERSON NICHOLS: You're the one who stood up and made the comments.
BOARD MEMBER SPERLING: It was intended more to WSPA.

CHAIRPERSON NICHOLS: Thanks, Jay. Appreciate your attempts to try to make something good happen here. Tim.

MR. CARMICHAEL: Good to see you all. And welcome, Mr. De La Torre. Very hardy congratulations on your appointment. Good to have you here.

I'm Tim Carmichael with the California Natural Gas Vehicle Coalition. Just a couple of comments. We submitted written comments, but a couple things I'd like to highlight.

Our organization and our coalition strongly supports the goals of what the Air Resources Board is trying to do here with the coordinated effort on criteria pollutants, greenhouse gas emissions, and advancing clean fuels and clean technology.

That said, we're very frustrated that today the staff of the Air Resources Board doesn't appear to see natural gas as an ultra-clean fuel that we believe it is. And it seems to be -- that position seems to be in pretty stark contrast with recent events, such as the ACEEE, the American Council for Energy Efficient Economy, the L.A. Auto Show and others identifying a natural gas car, the Honda Civic, as the greenest car in America. And in fact,
it's been identified as that for the last eight years running.

So for us, there is a big disconnect between the way things are framed in the staff report and what's happening literally on the streets with clean fuels today and what we think is going to happen in the future.

I think our biggest concern with the staff reports in the package is this attempt to draw a bright line distinction between zero emission technologies or zero emission fuels and non-zero-emission and putting natural gas in the non-zero-emission category.

I submit that that bright line today with natural gas is actually pretty faint and in the future with biomethane and new engine technologies, I would argue that light may disappear entirely, if we're looking at life cycle emissions for all of the fuels and technologies that we're talking about today.

It was very curious to me that biomethane or renewable natural gas doesn't appear in any of the staff reports, at least I couldn't find it. And we're talking about where are we going with clean fuels. And the ARB's own analysis in the LCFS identifies biomethane as one of the cleanest possible fuels for the next several decades.

So my request -- or our coalition's request is that as part of your adoption and your resolution today
that you ask the staff to work with our industry and take
a look at the life cycle emissions again for natural gas,
for renewable natural gas, and compare it to where we
think these other fuels and technologies are going. And
we do that work this year.

And then the last thing I'll mention is there
were some errors in how many stations the staff believes
natural gas with fueling stations that are in the state.
We submitted that in our written documents. But the staff
reports significantly understate how many natural gas
stations are out there today. And I noted where those
differences are. Thank you very much.

CHAIRPERSON NICHOLS: Okay. Thanks, Tim. We
have your written testimony. Appreciate it.

Katherine.

MS. DUNWOODY: Good afternoon, Chairman Nichols
and members of the Board.

I'm Catherine Dunwoody, Executive Director of the
California Fuel Cell Partnership.

While the Fuel Cell Partnership doesn't take
positions on regulatory matters, we do work together to
promote commercialization of fuel cell passenger vehicles
and buses.

California communities must have retail hydrogen
stations available before customers can chose to buy or
lease a fuel cell car. Automakers have invested billions
to make fuel cell vehicles a commercial reality,
commercial product, and many of them plan volume
production in the 2015 time frame.

As vehicle volumes grow, retail hydrogen outlets
can be profitable and as they sell more kilograms of fuel
per day. For over two years now, the California Fuel Cell
Partnership members' staff have worked with the small and
medium businesses who own most of the retail fuel outlets
and stations in California to understand their business,
keep them up to date on hydrogen and development of fuel
cell vehicles, and to really use it as an opportunity to
learn from each other where our common interests lie.

Even at this early stage, there are retail fuel
outlets who are very interested in hydrogen. And some of
them are raising their hands to be sites for the funded
stations under the AB 118 program. And they see this as
an opportunity where they can actually increase their
revenue stream by adding a new product to the mix of
transportation fuels that they sell. So clearly, this is
an area of significant mutual opportunity going forward.

Now, last July, I was asked to convene a group of
stakeholders to find a collaborative approach as an
alternative to require regulated parties to build hydrogen
stations. Oil companies, auto companies, industrial gas
companies, government agencies and environmental
organizations have met seven times and made significant
progress in developing a common understanding of the needs
as well as innovative mechanisms to support success.
While there is no agreement yet, the stakeholders continue
to meet in small teams to work on specific tasks and we
have scheduled large group meeting in February.

I believe there is a strong probability of
success with this approach, and I welcome the opportunity
to continue working on this path.

Thank you very much.

CHAIRPERSON NICHOLS: I think, Katherine, you
sort of raised a question, which requires me to ask a
follow-up question and I hope you could answer, which is,
do you believe that there is anything necessarily
inconsistent? I'm not saying you predict what anybody
would do. Is there any inherent reason why we can't have
both the CFO and Memorandum of Agreement if people want to
keep working on it?

MS. DUNWOODY: I think that the mechanism that
the staff has proposed is a very elegant solution. It
kind of enables there to be options going forward.
Certainly, it sets forth the regulation that the staff is
recommending, but also provides an alternative approach if
the stakeholders come to an agreement and find a
collaborative pathway forward. So it's kind of an opportunity to have really the best solution come forward.

CHAIRPERSON NICHOLS: Okay. Thank you.

Julian Canete.

MR. CANETE: Good afternoon, Chairman Nichols, Board members.

Julian Canete, President and CEO of California Hispanic Chambers of Commerce.

The California Hispanic Chambers of Commerce believe this rule is seriously flawed and should not be amended but should be eliminated.

First, we believe that this agency's authority does not extend to compelling any private business or company to provide infrastructure for or offer for sale any product it does not wish to sell. If implemented, this regulation will send a chilling message to every business in this state, creating an even less attractive business climate than we already have.

Our members, like all small businesses throughout this great state, are still suffering from the effects of the recession. Business is still down. Costs are still going up. And access to capital continues to be an issue. The government is asking us to pay more taxes at a time when we can least afford it. Consumers are facing similar challenges with their own families.
We already experiencing or facing significant increases in energy costs due to regulations like the renewable portfolio standard, cap and trade, and the pending low-carbon fuel standard. The billions of dollars in costs from the clean fuel outlet rule will inevitably be passed along to consumers' businesses as well as adding to this burden. Yet, this regulation would be a windfall for companies that sell hydrogen fuel and hydrogen vehicles without having to pay for a delivery system for their product and for a handful of consumers who can already afford a hydrogen vehicle.

There is no reasonable assurance those cars or fuels would be commercially available and no evidence there will be an environmental benefit. This regulation is like forcing a billion-dollar non-refundable bet on a horse that may not even be in a race. Our businesses, our communities, and our state's economy can't afford that kind of gambling. We suggest that you look for other means of reaching your emissions reductions goals.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

While you're there, I know you are only addressing the clean fuel outlet portion of this, but do you have a position on the clean cars?

MR. CANETE: Our staff is still looking at that
and they've been meeting with other auto manufacturers, et cetera, and discussing that. I would just -- Ford Motor Company and GM earlier this month assessing those issues. We hope to have that over to you soon.

CHAIRPERSON NICHOLS: Thank you.

Dr. Jackson.

DR. JACKSON: Good afternoon, Madam Chair, members.

My name is Dr. Joseph Jackson. I'm here today representing the Carson Black Chamber of Commerce.

When our chamber looks at regulation, we're interested in knowing a few specific things. How much is it going to cost? Who's going to pay for it? And what benefit will it bring to our community?

We've looked at this rule and have determined that it's going to cost millions of dollars. Those costs will ultimately find a way into businesses and consumers. As for benefits concerned, we do not see any for the most part, not for the environment, not for the economy, and not for the businesses that are going to have to lay out the investment to build these fueling stations.

We certainly do not see any benefit from our members in our community. We also do not support the premise that without forcing certain gas stations to install hydrogen fueling pumps, the hydrogen vehicle
market will die.

To update an old saying, you can fill the trough with water, but if there is no horses to drink it, you will have wasted the price of the trough and the water. Ultimately, this exercise will be an extremely expensive lesson.

On a personal note, I'm highly supportive of the development of new technology. Having been issued six U.S. patents in the area of telecommunications: One for the programmable television receiver controller -- that remote that you use every day. But experience has taught me that if you have a good product that meets an unmet need, private investors will be willing to risk their capital on the expectation of future profits. That's how rich venture capitalists get richer.

In this case, there is no viable product, i.e. hydrogen vehicles. And forcing millions to be spent on infrastructure won't make them be there any time sooner. Our members would spend their precious dollars to open stores with empty shelves. The gas stations shouldn't be forced to install equipment to provide fuel for which they have no customers. Therefore, the Carson Black Chamber of Commerce oppose this regulation.

Thank you.

CHAIRPERSON NICHOLS: Thank you.
Tara Lynn Gray.

MS. GRAY: Good afternoon.

My name is Tara Lynn Gray. I'm with the Solano County Black Chamber of Commerce and also sit on the Board of the California Black Chamber of Commerce.

We find it troubling that this will not be a voluntary program and that gas stations will be required to install nitrogen fueling equipment, whether they want it or not, whether they can afford it or not. And even if the rule shifts that investment to major refiners, that cost will still eventually be passed along to consumers.

We support the goal of reducing vehicle emissions, but we firmly believe that the policies to do this must be both cost effective and provide the greatest reductions possible. And we feel that this regulation fails these two tests.

First, cost effectiveness; your staff has estimated each hydrogen fuel outlet will cost up to $2.4 million. For 100 stations, that works out to about a quarter of a million -- quarter of a billion dollars. They also project that by 2017 market penetration of hydrogen vehicles will be less than two percent of all cars on the road in California.

But there's no guarantee that even that many vehicles will be produced, let alone sold. So we could
easily wind up with lots of hydrogen stations gathering
dust and longer lines and higher prices at the regular gas
pumps.

Second test, emissions reductions. Concerning
this, we will have no impact whatsoever on global warming
and taking into account continuously decreasing
smog-forming emissions from conventional vehicles. Thanks
to other existing regulations, it's doubtful that we will
see a meaningful net reduction from this program.

The Legislature has directed that emissions
reductions in programs provide maximum benefit at the
least possible cost. This regulation does just the
opposite. In fact, promising minimum benefits at maximum
costs. Hydrogen fuel outlets are better left to those
voluntary development by those who actually want to be in
that business. And it's time to seriously consider
repealing this regulation all together.

Thank you.

CHAIRPERSON NICHOLS: Ms. Gray, before you
leave -- sorry. But what in the regulation that you've
seen leads you to believe that any particular station
would be forced to have hydrogen or that hydrogen would be
required in advance of vehicles that actually need to use
the hydrogen? I'm asking you that, because it's the
direct opposite of what I read in the staff report. So
I'm expecting your view here. I'd like to know why you think that's the case.

MS. GRAY: I did a quick read of some information. And as I read it, it appeared not to be a voluntary program. And as a businesswoman, I have a problem with anything that involves a business like mine that is not a voluntary program.

CHAIRPERSON NICHOLS: Okay. Thanks.

Mr. Lombard.

MR. LOMBARD: Good afternoon, Madam Chair and staff.

My name is Edwin Lombard. Today, I'm representing the Sacramento Black Chamber of Commerce and the Black Business Association. Collectively, we do not support the CFO ruling and encourage you to reconsider it.

We have had the electric vehicle mandate in California since 1990. We've subsidized cars, suppliers, and infrastructure. But although all Californians have paid for those subsidies, the benefits have largely gone to the wealthy.

After 21 years, it was recently reported that the average annual income of the Chevy Volt buyer is $170,000. And buyers of the Fisker, Karma, and Tesla Roadster earn more than $250,000 a year.

Prime spots reserved for EV parking at shopping
malls and airports are rarely occupied. And EV market penetration is not nearly what it was predicted to be. Now you want to mandate the installation of hydrogen fuel station in southern California's wealthiest neighborhoods at a cost of hundreds of millions of dollars when hydrogen cars aren't even commercially available. Unlike the ZEV mandate, you're not requiring automakers to sell specified numbers. So it's even less likely there will be customers for those fueling stations.

From the perspective of our small business members who have to scramble to make the rent and payroll each month, we think it's just fine that people who can afford Volts, Teslas and Karmas want to spend their money on hydrogen vehicles and if the folks who sell them those vehicles want to invest in fueling stations.

But we strongly oppose arbitrarily forcing anyone to install fueling stations at a cost that is bound to be passed along to the rest of us. We have no problem whatsoever in fuel-efficient cars. In fact, we think the future is based on this technology. But we would rather see it happen not on the backs of small minority business owners.

Thank you.

CHAIRPERSON NICHOLS: Ronald Stein.

MR. STEIN: Chairman Nichols, members of the
Board, I'm Ronald Stein, Vice President of Business Development for a small family-owned business that does staffing for technical and professional people related to energy industries in southern California.

I want to thank you for your previous actions that have significantly cleaned up our air to the point that California on an international basis contributes less than one percent of the world's greenhouse gases.

This progress has, however, come with a financial cost. It seems we're spending more and more to achieve less and less in incremental emission reductions. We've seen the ZEV mandate, which, after decades on the books, and enormous publicly-funded subsidies has consistently failed to meet market share projections or offer vehicles that can compete with conventional vehicles in cost and performance.

The CFO role is an extreme example of this paradigm. If implemented as planned, conventional fuel providers and ultimately California businesses and their 37 million citizens will be paying hundreds of millions of dollars to directly or indirectly subsidize fueling infrastructure for hydrogen vehicles that are not yet commercially available and even more likely to be prohibitively expensive when they are.

It's painfully obvious the cost/benefit ratio to
further reduce California's minuscule contribution to the world's greenhouse gases and projected one percent of the 32 million vehicles out on the road to be hydrogen fuel cell vehicles.

I support diversifying the fuel supply and vehicle fleets. I'm in a green business myself, but it's impossible for me to support a policy that spends hundreds of millions, if not billions, of California consumers' money and infrastructure for cars not yet on the market and that most of us will never be able to afford or more likely not chose to purchase.

I suggest you give serious consideration to the impact on businesses and our California unemployment to developing a more fair and cost effective means of subsidizing emission reductions by our fragile California economy.

Thank you.

CHAIRPERSON NICHOLS: Thank you.


MR. ALARID: Good afternoon, Madam Chair, Board members.

My name is Jack Alarid. I'm the Past National Commander of the American GI Forum. I'm here today on behalf of the American GI Forum of California, the
American GI Forum's National Hispanic Veterans Organization with chapters throughout the nation and the state of California.

I reside in Whittier, California, Los Angeles County, and I'm wearing my veterans cap today because I'm representing American GI Forum and I'm proud to be a veteran.

I also own a small business. The California Air Resources Board is proposing to require the installation of hydrogen fueling stations on existing businesses that do not currently sell hydrogen and some have no desire to sell it.

This proposal requires these businesses to spend millions of dollars to install the hydrogen fueling equipment either out of their own pockets or from public funds.

The question is: What is the demand for hydrogen in the future? Are automakers going to be required to sell these vehicles? If these cars are manufactured, will they be affordable to the population middle class? Will the costs justify the demand or will the taxpayers have to subsidize automakers?

The American GI Forum of California is opposed to the legislation that would require this installation of hydrogen fueling stations on existing businesses. As a
veteran advocate, I don't see any realistic opportunities for job creation for our men and women who have the worn the uniform and are now returning home from war's way. As a small businessman, I would oppose the installation of such equipment in my business. Our struggling economy needs a shot in the arm. And the resources that will go to finance the proposed fueling stations would must better be used in repairing our infrastructures and creating jobs. We don't need to inconvenience businesses to provide a service for product when we don't have a demand for it.

Thank you for your time and allowing me to make these comments.

CHAIRPERSON NICHOLS: Thank you, sir.

Erick Verduzco.

MR. VERDUZCO: Good afternoon, Madam Chair, Board members.

My name is Erick Verduzco. I'm the President and CEO of the South Bay Latino Chamber of Commerce. Our members are primarily hispanic-owned small businesses. They're interested in responsible economic growth and job creation in the state of California. And on top of that, we're also very concerned with our communities. We want to grow, but we want to grow responsibly.

Now, as a representative of over 300 businesses
and as a business owner myself, the clean fuel outlet regulation just doesn't really make sense. What you're doing is asking refiners who are not in the business of making hydrogen-fueled vehicles to spend millions of dollars on a delivery system for those products.

But what we're not doing along with this is mandating a quota of hydrogen fueled vehicles. A more realistic business model for this regulation would be for the automakers and hydrogen fuel producers to invest in the infrastructure to support their products. They're the ones that are going to benefit the most from this, so let them pay for it.

A good example is the development of the cell phone industry. When the cell phones were developed, the phone companies were the ones that went out, they leased the land and they paid to build towers so they could provide a good product, a good service to their customers. They did all this without government quotas and mandates and they've done extremely well.

Meanwhile, we really can't afford regulation that's going to siphon millions of dollars out of the economy and force companies to engage in business ventures with really no tangible returns on their investments for a long time or even ever. This is not good for the environment -- for the business environment. It's not
good for job creation, and it's really not good for our communities.

The South Bay Latino Chamber of Commerce opposes this rule.

CHAIRPERSON NICHOLS: I do want to correct one point I think is a misunderstanding about the rule. And that is there is no requirement that anybody furnish the fuel unless and until there is a certification on the part of the company that actually builds these vehicles they will be placing a certain number of vehicles in a particular area. And the penalties for misstating that information are quite high.

So while we may have a philosophical disagreement, I don't know about how this should operate. It's not the case that there's going to be hydrogen being pushed out into communities where there aren't any vehicles that need that fuel, at least not if the regulation were to go into effect as it was proposed.

But, obviously, we're all hoping, as staff indicated, we'll be able to do this with a voluntary agreement. And that would be the preferred option if we can get there. So thank you.

MR. VERDUZCO: Thank you, Madam Chair.

CHAIRPERSON NICHOLS: Andrew Barrera.

MR. BARRERA: Good afternoon, Madam Chair and
honorable members.

My name is Andrew Barrera, and I'm here today representing the Los Angeles Metropolitan Hispanic Chamber of Commerce. We are concerned that this Board is considering diverting millions of dollars from our economy to provide infrastructure for vehicles that essentially are not available in the commercial market, at least not in any mass quantity. When they do become available, they will only be affordable to the very wealthiest among us.

The fact is that the targeted location for these fueling stations will be placed in places and cities like Santa Monica and the west side where they instructed -- basically meaning that we're probably looking at millions of dollars for a program to promote a technology that won't be accessible to small businesses, the middle class, or low income communities for the foreseeable future.

It reminds me what Mr. De La Torre said about the solar roofing program. This is not a direct quote, but constituents of South Gate that have a few thousand dollars to spend will probably spend it on new roofs and not on solar panels. And it turns out that in Malibu where there is approximately 13,000 residents, approximately $1.5 million in solar panel rebates were actually paid out. However, in cities like Compton where there's 140,000 residents, only one solar subsidy was for
over slightly $2,000 was paid out. Only one. And this is for an existing technology that is available in the market.

Your own staff's projections for fuel cell vehicles state that in the next five years these types of vehicles will make up less than two percent of all the cars on the road today. Clearly, it will be the millions of people who cannot afford this technology that will be subsidizing less than 100,000 people who can.

The simple point is that a lot of money is going to be spent in this program, but very few people or companies will benefit from them.

We support the right for companies to voluntarily invest in hydrogen fuel outlets. However, we strongly oppose this and any other type of legislation or requirement that is mandatory on small businesses. We simply feel that these costs are going to be passed down one way or another to small businesses and to the consumers. Even though we want to be part of the green movement and we want to be in front of technology and we would like opportunities for our small businesses to have contract opportunities, we don't see that really developing as well.

So I want to thank you for your time and consideration.
CHAIRPERSON NICHOLS: Okay. I think Mr. De La Torre deserves at least an opportunity to respond.

BOARD MEMBER DE LA TORRE: It's to this last batch of comments because I think they're all related.

I do remember that conversation. I think the difference was that on solar panels you were talking about a subsidy that every utility customer was going to pay for on their bill. So there was a subsidy issue there that I don't see in this case.

And second, I didn't say they were more likely to fix their roof with the money. I said they would more likely be the ones installing the systems than getting them on their own homes, which in this case I think accrues to the benefit of the consumers the middle class, working class folks in the Latino community, African community, et cetera, because they are most likely the ones that are going to be installing these facilities at these gas stations that are for all intents and purposes pretty static.

There isn't any improvement going on at a gas station nowadays. So this would be a new amount of work to install these facilities. And going forward, once it's there, you have to truck the stuff to bring it in. It's another kind of fuel that has to come from somewhere to these facilities. Those are jobs. The fuel itself, fuel
whether it's oil or these others, is not a very labor-intensive system.

So I think these jobs will benefit the folks that you're representing and the others are representing. And I do see a distinct difference here, because it is a question of who is using these facilities to pump that fuel, not what was going on with the solar panels, which was everybody subsidizing the panels through their electric bills.

MR. BARRERA: We understand that, Mr. De La Torre. It's just that we feel we're not going to be the people buying and purchasing these vehicles. And we see that as a bad precedent to require businesses to install these types of things, these types of high-tech fuel cell fuel pumps.

BOARD MEMBER DE LA TORRE: I don't want to get into a dialogue.

But I will close within comment, which is that the same folks who are asking us not to make them do it are asking us, the government, to fund it, which gets us back to the model from the solar panels, which is everybody subsidizing the very few people who are going to use it. So you cannot have it both ways. Not you, but oil companies.

CHAIRPERSON NICHOLS: Well, I think the
underlying premise here -- and this is unfortunately I think we get caught up in analogies like the analogy about the cell phone, which undoubtedly was a technology that took off because it met a need that consumers had. No question about it. People wanted to have cell phones.

MR. BARRERA: If these cars could be affordable like that, it would be great.

CHAIRPERSON NICHOLS: We're not at that point yet, but we will be. Thanks for coming.

Matt Myasato.

MR. MYASATO: Thank you, Madam Chair.

I think you put me in the wrong batch.

Madam Chair, Mayor Loveridge, and members of the Board, I'm Matt Myasato, the Assistant Deputy for Technology Advancement at the South Coast Air Quality Management District. I'm here to support the clean fuels outlet regulation and the staff of AQMD offers strong support.

Let's take a minute and take a breath. This is an exciting time. You've got three very exciting regulations before you that are critically important. And for the first time, I think we have a regulatory framework to ensure that we have clean fuel, coupled with the vehicle to be deployed in the South Coast basin. As you know, we suffer from the worst air quality in the nation.
As Chairman Nichols knows, if you flew into L.A. or Ontario, you saw the brown cloud; that's what's what our residents breathe every day, 100 days out of the year. We need the deployment and acceleration of these clean technologies. As my colleague Henry Hogo testified, we need them at an accelerated pace, even faster than what's proposed in the ZEV regulation.

I'm sure you're aware at South Coast AQMD, we funded hydrogen stations to the tune of about 13-and-a-half million dollars over the past ten years. Many times we've been partnering with the staff of ARB, the California Energy Commission, and even the Department of Energy to deploy hydrogen stations throughout our region. But we can't continue to fund stations with public moneys. If we are going to have mass deployment, we need to have the CFO. It's incredibly important. If we're going to have mass deployment in our region, we certainly support that lower trigger of 10,000 vehicles.

We did submit written continues. I just want to make one highlight here. That's really to carefully examine the sunset provision. I think James Provenzano mentioned in the South Coast comments, let's put this in perspective. The original CFO estimated ten percent of all retail fueling markets had to be a clean fuel outlet. The staff is proposing five percent. So it's about 10,000
stations. That's 500 stations. And now the MOA hibernation language is suggesting that after 100 stations, so one percent, the CFO would go away.

We ask you simply not to set a cap prematurely now. We have a monitoring process where we go back and ensure the market penetration is sufficient before you essentially give away the store, before the market is even open.

So, in summary, I want to reiterate our strong support for the CFO and look forward to working with you and your staff and helping clean the air in California.

CHAIRPERSON NICHOLS: Maybe you need to form your own Chamber of Commerce.

Next, Eunic Nutac (phonetic). I apologize if you've butchered your name.

Aaron Sladek.

MR. SLADEK: Good afternoon, Chair Nichols and the rest of the Board.

My name is Aaron Sladek. I'm a 21-year-old college student studying political science with a minor in sustainability. I'm President and co-founder of the Sustainability Club at Cal State University at North Ridge.

I'm here today not to express technical jargon to you, but rather what college students' insights are and
importance of clean cars and essential need the put forth strict standards on zero-emission vehicles.

First, let me commend all of you with working with PDPA and the Department of Transportation to create strong national standard on vehicle emissions. This is a great opportunity for California to continue its leadership role on air and climate policy and lead the rest of the country towards the best standard possible.

ARB has already proven the need to reduce all California emissions, standard, leads, and national progress. As a college student and president of the Sustainability Club, setting forth zero-emission vehicle standards is of the utmost importance.

In the Sustainability Club, we have many discussions about zero-emission vehicles. And if we had a choice of a zero-emission vehicle, what we would pick as our dream vehicle and why?

For myself, I picked a Tesla because I like sports cars personally and I drive a little bit fast.

And so the point of bringing up this conversation though is to show the enthusiasm amongst college students and a demand for zero-emission vehicles and you setting the strong standards today brings the idea to fruition for us as students.

So obviously there were huge environmental,
economic, and social health benefits of setting stricter clean car standards. But there's an overall social change that's being impacted. So when setting today's standards, you are making that ever-lasting change in the right direction for future generations.

I would love to see the day where I would be -- when all vehicles are zero-emission or using other energy resources and I would be telling my grandkids about the day where I built a car that was ran on something called gas and they look at me like, "What are you talking about? What's gasoline?"

So as you're probably all thinking, so this is what this college student's thinking right now. But what does he want from us?

My answer is simple. I support President Obama's goal of one million electric vehicles on the road by 2015 and believe that the Air Resources Board in collaboration with EPA Department of Transportation should be setting the same kind of technology-forcing standards that would create that trajectory.

So as a resident of the beautiful state of California, I trust that you enforce the strictest standards possible to make this whole country. Thank you.

CHAIRPERSON NICHOLS: Thank you.

He's actually -- although he's a mayor, he's also
a professor.

BOARD MEMBER LOVERIDGE: What university or college are you with?

MR. SLADEK: Cal State University North Ridge.

BOARD MEMBER LOVERIDGE: What are you majoring in?

MR. SLADEK: Political science.

BOARD MEMBER LOVERIDGE: How did you hear about the event today?

MR. SLADEK: I heard about it from the Coalition for Clean Air.

CHAIRPERSON NICHOLS: Thank you. Good job.

Lloyd Tran.

Emily Schneider.

MS. SCHNEIDER: Good afternoon. I'm Emily Schneider on behalf of the Professional Engineers in California Government, or PECG.

I write in support of the advanced clean car standards. We represent 13,000 State-employed engineers, 500 of those being ARB members, air pollution specialists, and air resource engineers. So we are very proud of them and congratulate the Board as well as the staff members and all ARB employees.

Those employees are improving California's air quality, public health. And they are assisting to address
the threat of climate change. And we appreciate that.

We strongly support ARB's energy and
environmental standards. By approving these three
different programs, we understand that it will continue
California's leadership role in the United States, growth
of the economy, and job market, and also the movement
towards a more diversified transportation sector, which we
appreciate.

We have reviewed ARB's clean car standard and
support the updates and amendments to the programs. And I
understand that helps to achieve the climate change goals
that we have and transition it to a clean energy future.

We also fully support the collaboration with
federal agencies, the U.S. EPA, and staff. We offer our
help any way that we can.

We urge you to adopt those amendments to these
three programs. We can't afford to wait. So let's do
this. Thank you for the opportunity. And I'm here for
any questions.

CHAIRPERSON NICHOLS: Thank you, Ms. Schneider.

Thank you for coming.

Lance Tunick.

MR. TUNICK: Good afternoon. My name is Lance
Tunick, and I'm here today on behalf of Aston Martin,
Lotus, and McLaren.
We support the CARB LEV III and GHG proposals. Each of these three manufacturers is classified as a small volume manufacturer, SVM, under CARB regulations. And they manufacture a very small number of vehicles.

All three manufacturers also understand the very important need to control criteria pollutants as well as GHG.

The three companies further believe that SVMs must do their fair share to reduce vehicle pollution. Fair share includes SVMs being on the leading edge in developing advanced vehicle construction, light weight materials, especially the use of carbon fiber, and new technology.

For LEV III and also for GHG, CARB is proposing specific requirements for the SVM category. The specific SVM requirements were proposed in recognition of SVM's limited model lines with which they can comply with fleet averaging requirements. In addition, the proposal recognized the more limited investment in engineering resources that small volume companies have.

In closing, we have submitted written comments addressing a few issues on SVM timing, mainly to seek some clarification. But again, we support the LEV III and GHG proposals and look forward to seeing the finalization of the rules. Thank you.
CHAIRPERSON NICHOLS: Thank you very much.

Rudy Tapia.

MR. TAPIA: Thank you for having me today. I'm Rudy Tapia, Vice President of Business Development for Vision Motor Corp. We just recently moved from El Segundo to Long Beach. And we design and manufacture zero-emission hydrogen fuel cell Class A trucks.

We recently just received our biggest order today, which is a 400 order from a company called TTSI. We hope to deliver it over the next year and a half.

I'm here today to request that the ARB Board direct staff to develop a mechanism that would allow Vision Motor Corp to receive ZEV credits under the current ZEV program.

To date, our efforts in going forth in this direction is that I've met numerous times with CARB staff. I've met with a number of the ARB Board members. We've submitted written comments, and I was directed by the ARB staff to discuss this concept with OEMs. And I have done so, and I have received some interest from a number of the OEMs.

In short, we believe that commercial hydrogen fuel cell vehicles will lead the way in commercialization due to the fact you can actually build a business case that actually benefits not just the OEMs, the trucking
firms, but also possibly effect the citizens who these heavy-duties trucks operate in their neighborhoods. So I just once again ask the Board to please take this into heavy consideration.

Thank you.

CHAIRPERSON NICHOLS: On the list of issues that we'll be talking about I'm sure.

Michael Strada.

MR. STRADA: Thank you, Chairman Nichols and Board members for allowing me to speak.

I'm a student at Cal State LA, graduate in industrial technology with a focus in alternative power and energy and transportation.

Dr. Blackman is the Professor I'm studying under. And our class right now is the alternative power -- electric hybrid and alternative fueled vehicles. And we currently have a hydrogen fueling station we're building on campus that is going through its commissioning stage. And we just had a 350 car fill two weeks ago.

I came here today to urge you to approve these clean car regulations and tell you why they're so important to me.

The first is I'm fortunate to be at a college that is looking towards the future and is aligned with my interests. I'm passionate about what I'm studying because
I think electric and alternative-fueled transportation and zero-emission vehicles are the future. They have to be the future because our air pollution is poor in California. And when people think of L.A., they think Hollywood, beaches, and the smog you fly into every day.

Hopefully, it will affect the way that my children live and they don't have to worry about the poor air quality.

Second is I'm devoted to this study. And with the uncertain economy, I believe that alternative fuels and vehicles are the future and can lead to more employment for engineers and other technologists, as myself.

That is why what you are guys are doing here today is so important. With this regulation, California is setting the future direction for vehicles. And your actions will benefit all of society. I think we've made a good choice. I think I've made a good choice with my chosen profession, and I'll be ready to fill any jobs that may come up through this industry. I hope you will adopt this regulation and send a signal to the industry and the rest of the world that we need to be prepared for the future. Thank you.

CHAIRPERSON NICHOLS: Thank you for coming to testify.
Don Anair.

MR. ANAIR: Good afternoon, Ms. Chair, members of the Board.

My name is Don Anair. I'm a Senior Engineer with the Union of Concerned Scientists.

In addition to my own comments today, I'm also happy to present to the Board a letter of support from nearly 160 scientists and engineers from across California with expertise in climate change, its impact, or solutions.

Along with this letter, we also have submitted a letter from over 100 Ph.D. economists in support of clean car standards. And we submitted these letters along with supportive comment letters from over 4200 UCS members across the entire state of California. UCS strongly supports the clean car standards under consideration which will help clean our air, reduce global warming pollution, protect public health, while saving consumers money, creating jobs in California.

We also strongly support California's coordination with the federal agencies in developing greenhouse gas standards. This will mean consumers will have a greater clean car choices, not just in California but across all 50 states.

The proposed greenhouse gas standards are
expected to cut greenhouse gas emissions by 50 percent, offering consumers an average $4,000 savings over the life of the vehicles sold in 2025.

I do want to raise one concern that could revoke some of the expected emission benefits. These standards are based on footprint of the vehicle, meaning that the sales mix of vehicles sold in the years under consideration could change compared to the projections that staff has made. These projections assume about 60 percent of vehicles sold will be cars and 40 percent trucks. However, this shift could -- this mix could shift based on market forces or through compliance strategies that automakers may take advantage of. And there is potential for auto manufacturers to re-classify cars as trucks or as vehicle footprints to qualify for the relatively meager standards for trucks. And that would result in failure to meet the 166 gram per mile standard.

It's quite easy to make some cars into trucks basically by adding four-wheel drive capability on cross over vehicles, the Honda CRV, for example. The four-wheel drive version is a truck. Two-wheel driver version is a car. Four-wheel drive version emits two to three percent more than the two-wheel drive. However, the gap between the standards is more than five times this amount. So we see this as potential loophole that could erode the
benefits.

We are strongly supportive of staff who have recognized this issue. They've estimated potential 16 percent loss in the benefits of the program. It's possible, and that is why we strongly support staff's proposal to include auto manufacturers report to the Board their compliance information, even if you accept federal standards, as well as reporting back to the Board on this issue.

The one ask I do have is this information be made publicly available. It's a challenge because you can get this information from private companies, but it can cost tens of thousands of dollars. And we don't think this information should be available only to people with means. So to close, bravo.

BOARD MEMBER RIORDAN: Thank you. And you have the written testimony.

Thomas Jordan.

BOARD MEMBER DE LA TORRE: I know we're going to get a chance to speak later, but since it's just come up, this car versus truck issue, I think is a very important one. I think you talk to a man on the street and they know the difference between a car and a truck. It's got a bed in the back that's uncovered, it's a truck. If it's an SUV, it's a car. Difference in passenger to go around
no matter what you can fit in the back.

So I think we need to keep very clear, regardless of what Washington is doing on this issue, which is pretty much nothing -- that we need to be very clear. And I think at very least, what's in the resolution is great in terms of how it covers these issues. But the issue of making that information the data that we get publicly available I think is a good first step that might down the road influence what's going on in Washington.

BOARD MEMBER RIORDAN: Okay. Yes.

BOARD MEMBER YEAGER: And at least tied into that is the mid-term review of looking at that mix and whether it's changing, and also issue about vehicle size and how that sort of factored what you're looking at and making sure you're trying to reach the targets that you're initially setting.

BOARD MEMBER RIORDAN: Mr. Cackette, you want to respond?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes. This is an issue that we identified. We were having discussions with the federal government, and it's a concern of the staff. And we would probably like to look at this in 2016 so we kind of see what's happened in the market at the end of one and look at them at the end of the mid-term review as we start seeing and look at what
the trends are when we have some insight into the business plans that suggest that we should worry about this.

BOARD MEMBER YEAGER: And certainly will that information be made public and can we require that the automobile manufacturers release that information? Or how might we know understanding which direction we are headed?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I think we can probably report on the expected trend, but not in a public way. In other words, we couldn't say which manufacturer, because that's going to be their business plans for two or three years downstream. But once the cars are produced, then we can report actual facts or how many are sold, which categories they were in. And that would be public.

BOARD MEMBER RIORDAN: Madam Chair, Mr. Jordan is available to speak.

MR. JORDAN: Thank you, Madam Chair.

I'm Tom Jordan, Senior Policy Advisor to the San Joaquin Valley Air District. And I'm here today to speak in support of the advanced clean cars package regulation. Chairman Nichols, as you mentioned at the beginning this morning, we have come a long way. In the San Joaquin Valley, since the early 1980s, we've reduced emissions from stationary sources of pollution by about 80 percent. We've also seen a reduction in emissions from
automobiles. And it's quite remarkable because during that time, vehicle miles traveled has increased by over 300 percent. So it's quite a feat that we've been able to accomplish. But as you're all aware, we still have a lot to do. We have big challenges ahead.

The San Joaquin Valley is in a situation where we're an extreme non-attainment area, so we're still trying to identify control measures to meet the existing standards. Mobile sources are now about 80 percent of the emissions in the valley. So the Advanced Clean Cars Program is vitally important for us to continue to make progress to meeting the national ambient air quality standards.

I thank you for the regulation and we look forward to working with you in the future to bring clean areas to the residents of the San Joaquin Valley and the rest of the state. Thanks.

CHAIRPERSON NICHOLS: Thank you, Mr. Jordan. Thank you for coming down to join us today.

I'm calling for a very short break here until 4:30. And looking ahead the testimony, I see a large number of people who have taken the time and trouble to come and support us here today. I guess there's one on the list that shows as a neutral or not taking a position and one who's oppose on the CFO. But other than that,
these are all people who are supporters, which is really wonderful. But I do want to just let people know that we're going to need to shut this down today at about 5:30. So if people don't want to come back tomorrow -- and I hope you don't because I think tomorrow we're going to need the time to work through the discussion -- I'm going to ask you to consider either shortening your testimony or possibly allowing somebody else to make the statement that you were planning to make so that we can give, you know, a chance for everybody's views to get heard.

And with that, we'll take a break. Court reporter can take a break, et cetera. And let's just get back here in ten minutes.

(Whereupon a recess was taken.)

CHAIRPERSON NICHOLS: I understand there are a few people who have decided to merge their testimonies and others agreed that a two-minute time limit would be sufficient to say what they feel like they really need to say. So I'm going to impose a two-minute time limit starting with our next witness who is our dear friend, Shankar Prasad. I know Shankar is a fast talker.

MR. PRASAD: Thank you, Chairman Nichols and members of the Board.

It is a pleasure to be here. Bravo. And I also express my personal gratitude to the two fathers of the EV
program and the two others in the staff and Bob as well and all the staff who are working with you.

Now, overall, we support the program, all the three regulations. We have one concern. I just want to highlight that part.

We feel giving additional time for the gasoline technology to improve is contrary to the Board's wishes of being technology neutral, technology forcing, and being driven. All of you are very well aware of the fact related to the regulatory proposal for fine particle air pollution. I don't have to give you the numbers.

We acknowledge there is a problem with the monitoring technology, but we feel given that giving ten years lead time is sufficient for the technology to catch up. And also one could decide that there is additional need to be provided or whether one could change his particle number standard as has been talked about since we are due to accelerate the PM emission reduction and start phasing in the PM one milligram per mile standard beginning in the model year 2018. Thank you.

CHAIRPERSON NICHOLS: Thank you very much.

MR. BARRETT: Good afternoon. My name is Will Barrett with the American Lung Association of California.
strongly supports moving forward with the strong advanced clean cars package.

To be brief, I will focus on the LEV III portion as well. And basically, we strongly support the proposed one milligram standard for particulates, but we do encourage you to move the time frame forward for implementation.

We urge the Board to amend the proposal, begin the phase-in to one milligram standard starting in 2022, with full implementation in 2025.

We also appreciate the need for development lead time and understand the limits of today's compliance measurement technologies.

Similar concerns were raised regarding the SU LEV standard during the LEV II amendments. And these technologies are now commonplace. So the time and technology develops, and we think this will be a similar issue.

As proposed, the one milligram standard would not be fully implemented across the new car fleet until 2028, 16 years from now. And basically, there is a 2021 and 2025 holding pattern for the standard.

So we believe there is ample time to address -- assess the development of the improved testing and certification procedures as well as emission control
technologies, including, for example, the levels to which
gasoline particulate filters are deployed throughout
Europe to comply with their standards.

So to wrap up, the American Lung Association
fully supports the stringency levels that you have
proposed. We recommend eliminating this holding pattern
on the PM and look forward to working with you and your
staff as the work is finalized to improve California's air
quality and public health.

And I'd like to thank all of you and the staff
who has worked very hard on these standards. Thank you
very much.

CHAIRPERSON NICHOLS: Thank you. Thank to the
Lung Association for all your support.

Elizabeth Jonasson.

MS. ARGUELLO: I'm Martha Aguello with Physicians
for Social Responsibility. We're switching, because I
have to leave very soon.

So we want to commend the Board. Physicians for
Social Responsibility in Los Angeles, together with our
sister chapters in Sacramento and the Bay Area, strongly
support the most stringent standards.

We cannot ignore the long-term entrenched health
inequities in low-income communities of color. Black
women have for decades been twice as likely as white women
to give birth to babies with low birth weight and more elevated risk. And these babies then, in turn, are at increased risks of developmental disabilities. These differences cannot be attributed to the existing known factors, such as prenatal care.

But what we do know now is that women living in close proximity to heavy traffic freeways with elevated pollutions are more likely to give birth to low birth weight children. These children are under lifetime disadvantaged for learning.

We also know that children of asthma is the number one reason children miss school. Asthma is not just a respiratory disease. If you're missing school, you're missing learning. You're less ready to learn when you're in school. So we know that to handle these things, most physicians have to step out of the clinical setting. And as Dr. Vinetz said earlier, we have to go upstream.

Where we live matters. The air we breathe matters. And what we drive matters. People who live in communities of color and low-income communities have the worst pollution and environmental health problems.

The advanced clean cars will clean up the air and protect public health. Despite progress in recent years, California still has a long way to go to protect the most vulnerable from air pollution.
I think with the communities that live just south and east of here and people that live near freeways and heavy traffic arteries where is poverty and makes it impossible for them to move. So I think of Boyle Heights and I think of the clean car campaigns. And I also think that in Boyle Heights, we need more housing. Where can we build that housing? Next to freeways. Well, the only thing we can do is act right now is clean up those roadways. When fully implemented, the California standard could annually avoid hundreds of premature deaths, heart attacks, and thousands of asthma attacks. We urge you to adopt the most stringent standards. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Elizbeth.

MS. MOREHOUSE: Erica Morehouse on behalf of Environmental Defense Fund's more than 700,000 members nationwide.

And we applaud California and CARB on their decades-long bipartisan leadership on the issues of clean cars and urge the adoption of this package of standards. Basically, we think that California and CARB has done an admirable job in collaborating with EPA and NHTSA on developing these standards. The 2012/2016 model year standards are also saving consumers dollars at the pump and increasing our energy security. And the 2017 to 2025
standards under consideration are an important step
towards our nation's path to a low-carbon economy and
protecting against the most disastrous consequences of
global climate change.

So I had a lot of great inspiring statistics I
was going to share. I'll leave those to my written
comments in the interest of time. But we wanted to
particularly thank California for its continued leadership
in the area of criteria pollutants reductions from cars.
And thank you and continue the great work.

CHAIRPERSON NICHOLS: Thank you.

Bonnie Holmes-Gen.

MS. HOLMES-GEN: Chairman Nichols and Board
members, Bonnie Holmes-Gen with the American Lung
Association.

I'm just thrilled to be here in support of strong
as possible advanced clean car standards. And I wanted to
note that we have about 500 live volunteer advocates that
submitted letters. And you've heard from physician
volunteer with our Lung Association, and we have of course
letters and petitions that we've submitted in support of
strong action today.

And we believe these standards are not an option,
but frankly they're a necessary step to protect public
health in California and to protect the millions of
individuals who are suffering from lung ailments in the state.

I want to get to the essence of the comments. The American Lung Association of California has released two reports that confirm the health and economic benefits of a clean car future in California. And this is based on different mixes of clean vehicles in our state. And if you look for a minute at the benefits of turning over all the cars in California to a zero emission fleet, we can see that California could avoid over 13 billion in annual health, societal, and energy damages compared to a future where vehicles were operating at today's standards.

So these avoided costs translate to reduced deaths and illnesses in California. Each year, California could avoid over 230,000 respiratory symptoms. Could avoid 50,000 lost work and school days, 10,000 asthma attacks and could avoid over 500 premature deaths. This is every year.

We think it's really important again to put the face on what exactly are we going to achieve with these clean car programs and what public health benefits. And here, we have concrete evidence that California will dramatically reduce the toll on public health from dirty cars today.

We want to call special attention to the
importance of the zero-emission vehicle program and protecting the mandate on car companies. So there's provisions that will be presented by our colleagues to limit the automakers' ability to reduce their obligation through the over-compliance provisions and to strengthen the threshold to qualify for zero-emission vehicle reduction over-compliance provision.

Thank you for maintaining your strong leadership.

CHAIRPERSON NICHOLS: Bravo. Now Elizabeth's turn.

MS. DRUFFEL: Good afternoon, Chairman Nichols and Board members and CARB staff.

My name is Allis Druffel, and I'm the Southern California Outreach Director for California Interfaith Power and Light. And our organization works with the interfaith community in California on energy efficiency, renewable energy, education, and advocacy. And California is one of 38 states with an Interfaith Power and Light.

I'm here on behalf of California Faith Community. We submitted a faith letter that was signed by ten organizations which represent thousands of congregations in the state. And we urge you to pass these clean car standards.

We also submitted an electric letter signed by 159 of our faith advocates.
We believe that this is a matter of faith, because practicing our faith means that we are working for better air quality and health, working for a health economy, transitioning to a clean energy future, and mitigating climate change.

And I just want to point out one thing. I'd like to point out a sense of urgency. The International Energy Agency on November 9, 2011, put out an analysis that stated that by 2017, which is a mere five years from now, if we have not drastically reduced our carbon emissions globally, we will have doomed the earth to at least a two degrees Celsius warming. And it's just going to go up from 2017. So by 2017, we're at two degrees already. So we need to have a sense of urgency and do everything we can to fight climate change.

Thank you very much.

MR. SHEARS: Good afternoon, Chair Nichols members of the Board.

And my name is John Shears. I'm a Research Coordinator for Center for Energy Efficiency and Renewable Technologies. Appreciate the opportunity to testify before you this afternoon on this momentous occasion.

First like to thank the staff for all their hard work, express our broad overall support for the program, although we do have couple suggestions that are in our
submitted comments in terms of ways that we think the program could be improved.

Support the CFO. Support the PM standard. And thanks to Steve, Paul, and the El Monte staff for all their work on that.

We appreciate keeping the one milligram standard in there, although we think we'd like to see the hiatus period removed so we can accelerate that and urge you to look at it a little more closely.

Also, we actually oppose the greenhouse gas compliance provision as currently constructed. And my colleague, Simon Mui, will go into more detail.

That's just some ideas that we've all been working on.

Today, I want to talk specifically about the BEVx for X ZEV 1.52X. We worked with a representative from industry, provided some resolution language and also some regulatory framework language to staff and a few of the Board members. We think it's very important that there be a monitoring and verification program for how these vehicles are used. Given in its early days the criteria and how creative the manufacturing engineers can be, we're not sure what the applications nor the uses of these vehicles would be like. What a lot of these companies will be doing their own consumer research and ARB can take
advantage of accessing that data.

So we would like to urge you to consider including monitoring and verification program as part of that X ZEV component. Thank you very much.

CHAIRPERSON NICHOLS: Okay.

MS. JONASSON: I'm Elizabeth and I traded. Thank you for that.

And thank you for the opportunity to speak and to staff and the Board for working so diligently on this.

My name is Elizabeth Jonasson. I'm with Coalition for Clean Air. We are a statewide advocacy organization for clean air. I work out of the Fresno office, and I want to focus my testimony on the importance of these regulations for the San Joaquin Valley and how that importance has manifested itself in widespread support.

The Valley, as I'm sure all of you are aware, has really bad air quality, which burdens our communities with significant health issues. Passenger vehicles play a significant part in this, with two major corridors traveling through the valley, the 99 and the I-5 with the pollution being left behind.

Low-density planning has also led to residents having to travel higher vehicle miles traveled than other areas in the state. This makes reductions in emissions from passenger vehicles an important part of achieving
clean air in the valley and protecting our economic base, mostly agriculture, from climate change.

The importance of this was understood by a number of organizations and governmental agencies. To name a few: The Central California Hispanic Chamber of Commerce, Fresno Metro Black Chamber of Commerce, City of Fresno, Livingston, Mendota, Merced, Reedly, Riverbank, San Joaquin, Visalia, and the counties of Kern, Kings, and Madera. Also, the California Partnership of the San Joaquin Valley, the San Joaquin Valley Air Pollution Control District and numerous other faith and environmental groups, just to name a few.

Thank you very much. And with this, I urge you to adopt the most health protective program possible.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Darrell Clark.

MR. CLARK: Should I be saying good evening?

I'm Darrell Clark, national co-lead of the Sierra Club's Beyond Oil campaign.

I almost feel like there were two different worlds. There's the world in here that gets it, and there's the world out there that doesn't. But I would like to reinforce that the world out there that are glued to their TV sets watching our proceedings, three critical
reasons to be reducing oil use that these regulations will take us toward.

First is, of course, the reality of global warming already manifesting in record temperatures in unprecedented drought in Texas. Okay. I'll tell my story. Biblically, God spoke through the burning bush to Moses. Now God is speaking through a burning state to its Governor, but I don't know if the Governor is listening. So much for levity.

Second, health impacts of air pollution, your own excellent brochure, the AQMD page that says to meet the NOx standard, we have to heavily electrify. And of course, the national and economic security risks of importing over 60 percent of our oil. Global production is flat. Demand is rising. We can't replace the big fields running down. And half of our oil is used for cars and light trucks. Yes, we must be doing this. Fuel economy standards are important. That's the first part of what you're doing.

But as staff already so vividly emphasized this morning, ZEVs and plug-in hybrids are critical to meeting the standards we must meet from mere thousands in 2011, to President Obama's goal of a million in 2015 to a major fraction of fleet by 2030.

CHAIRPERSON NICHOLS: Two minutes goes fact.
MR. CLARK: And I encourage you to, if anything, strengthen the ZEV mandate to drive the market forward. Thank you very much.

CHAIRPERSON NICHOLS: Simon Mui.

MR. MUI: Good evening, Chairman Nichols, members of the Board. And I'm Simon Mui with the Natural Resources Defense Council. Thank you for the opportunity to testify. This is a real pressure. We support this package driving forward. These standards are good for the environment, good for public health, and good for the economy. In a single word, bravo.

What's more, the landmark BEV standards are -- the staff's proposed BEV targets are a strong start, are reasonable, and achievable and need to go further. NRDC is strongly committed to working collaboratively with state agencies and local government, auto makers, utilities, and infrastructure providers to make electrification a success. But let's be clear. A strong ZEV program still remains the state's strongest policy tool for commercialization. That's why we're very concerned and oppose the inclusion of a special carve-out in ZEV for some manufacturers that over-comply with GHGs and recommended some simple changes that could improve the situation. This is more than the risky business of losing
unknown amounts of ZEV vehicles. It's about sending the wrong signal to those that want to continue kicking the ZEV can down the road.

    As you've heard from many stakeholders today, it's also about fairness and certainty for the many companies that are already launching vehicles today and committed to making electric drive a success.

    We would support the Board adding sensible protections, such as an industry-wide limit, a cap on manufacturers, making the exchange rate higher. The wonderful thing is that compared to past hearings, the large majority of stakeholders today are rolling up their sleeves to work collaboratively to make this work, but we need to move forward with a strong ZEV program. We need to move forward with a strong ZEV program. Let's tune up things with ZEV and drive forward with these landmark clean car standards.

    Thank you very much.

    CHAIRPERSON NICHOLS: Thank you.

    Max.

    MR. BAUMHEFNER: Thank you, Madam Chair, Board members, for the opportunity to speak.

    My name is Max Baumhefner. I'm an attorney with the Natural Resources Defense Council. Yesterday, in our nation's Capitol, members of the Congressional House
Oversight Committee called into question safety of the electric vehicle technology with hopes of undermining adoption of a strong national fuel economy standard. The naysayers and the critics are relying upon the same tired and empty rhetoric employed by their predecessors. We can't do it. It's too expensive. We can't have cars that are both safe and efficient.

The package of regulations before you today for your consideration articulates a very different message; that California knows that we can and must move decisively towards a cleaner, less oil dependent future. Your predecessors new this to be true when they created the ZEV program which laid the foundation for today's electric vehicles which are increasingly common on California's streets.

In their first year, Chevy and Nissan sold 17,000 Volts and Leafs, not bad for the first year of a new technology by any imagination.

In 2012, you will see the introduction of a myriad of plug-in electric vehicles, including sedans, compacts, sub- compacts, SUVs, and luxury and performance vehicles.

Over the next few years, you will see between 30 and 40 plug-in electric vehicle models hit California and America's streets.
A strong ZEV program will ensure this proliferation of consumer choice continues by providing a long-term regulatory certainty necessary for investments in the next generation of automotive technology. A strong ZEV program will save consumers thousands of dollars at the pump. A strong ZEV program will move us beyond oil.

We are presently witnessing the most dramatic and important transformation of the automobile since we ditched the steam engine.

Your vote today in favor of a strong ZEV program will ensure that California places its thumb firmly on the more promising side of that technological evolution.

Thank you.

CHAIRPERSON NICHOLS: Wendy.

MS. JAMES: Good evening, Madam Chair and members of the Board. Thanks to so many of you who are volunteers and devoted so much time for meeting with stakeholders on this issue.

My name is Wendy James. I'm a coordinator with the California Clean Cars Campaign. The Advanced Clean Cars Program has a broad and diverse set of supporters and not just in California.

First, I want to highlight a letter that was submitted this week -- you should have received a copy -- this was from 23 organizations across the U.S.
representing not just our partners in the Section 177 states, but also states where they want to protect the right to join the California program in the future. Collectively, these organizations represent literally millions of Americans standing strongly behind your actions today.

Closer to home, the California Clean Cars Campaign represents a broad cross section of Californians. Our campaign co-chairs reflect some of the strongest sectors who support the Advanced Clean Cars Program. Ken McEldowney, Executive Director of Consumer Action, represents consumers. Bruce Klafter, Managing Director of Worldwide Operations for Applied Materials represents business. Jane Warner, President and COE of the American Lung Association of California, representing public health. And right here in Los Angeles, Wendy Greuel representing local government.

People came to this campaign for different reasons, but they all came because they care deeply about this issue. For some, it was personal. For some, it was about their business. For many, it was about their belief in California's leadership. They include the mayor of a small rural town in northern California who became a one-woman speakers bureau in her area.

The California chapters of the three largest
health organizations in the country, the American Cancer Society, the American Heart Association, the American Lung Association of California, practically every IEW local in the state -- we had several here today who didn't have time to testify -- from mom and pop businesses, to clean tech and blue chips, in the spirit of true coalition, we have unparalleled community and environmental group support.

It's impossible to mention everyone who played an integral roll in this campaign, but we provided you with a notebook that tries to summarize it. You should receive this today. As you proceed to this vote, know that you have a lot of support behind you. In L.A., we say, it's a wrap. Thanks.

CHAIRPERSON NICHOLS: David Chase.

MR. CHASE: Good afternoon. My name is David Chase for Small Business Majority. We are a California-based nonpartisan small business advocacy organization both founded and run by small business owners. We represent the 28 million Americans who are self-employed or own businesses of up to 100 employees. Our organization uses scientific opinion and economic research to understand and represent the interests of all small businesses.

The rising cost of fuel is a key area where the
government can help small businesses. We released a national opinion pole in September of last year that found 87 percent of small business owners believe it is important to take action now to increase fuel efficiency in cars and light trucks. A 59 percent majority described this as very important.

Moreover, small business owners in influential automotive states of Michigan, Ohio and here in California demonstrated equally strong support for these standards.

Our survey also found that 71 percent of small business owners believe American car companies do not innovate enough, and 73 percent told us that government should do more to make them innovate. Therefore, it's not surprising that 80 percent of business owners support requiring the auto industry to increase fuel efficiency to 60 miles per gallon by 2025.

Small business owners know they'll benefit from these strengthened fuel economy standards. The proposed rules are right on par with what business owners told us they want: Improved fuel standards that have the power to cut long-term business costs.

Stronger standards are a sure-fire way to help small business owners save money on fuel and invest in their companies and higher.

Through higher standards, the money small
business owners and consumers will save on gas will better equip Californians to foster economic growth by patronizing businesses everywhere. We support raising fuel economy standards, because it will be a boom to our small businesses and our economy. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Danny Altman. Sean Carroll.

MR. CARROLL: Thank you, Mr. Chair. Thank you, members of the Board.

My name is Sean Carroll with Environment California. And I'm here to represent our 50,000 members across the state of California. We are a statewide citizen-based environmental advocacy group. We strongly applaud everything that the Air Resources Board has done so far and are here today to ask you to continue to lead the way and push the envelope for ZEV vehicles and for California's clean cars rules.

Just want to quickly highlight we know that as Californians, a deep part of our identity is connected with our environment. Places like the beaches and Yosemite are near and dear to our hearts, city centers. We've heard many speakers today highlight the threats of these areas, from smog in our cities to the long-term effects of global warming. And it is I think worth mentioning that this month marks the 23rd anniversary of...
the Santa Barbara oil spill, which at the time was the largest oil spill in the county. Is now the third largest.

We know that these are major threats to these areas. We also know that with these challenges California has shown great leadership on this issue already, from being the first state to pass a cap on global warming pollution to our investments in rooftop solar power to, of course, our being the first state to pass a statewide clean cars law of its kind.

And when we look at those issues, it's very clear that when we do something here in California, that's what enables other states and the federal government to follow.

So for those reasons, we applaud everything that has been done so far. Ask to continue to adopt the strongest standards going forward. And we'll be leaving with you 10,000 signatures from citizens across the state that are saying exactly that. So thank you very much.

CHAIRPERSON NICHOLS: Thank you.


MR. LYOU: Hi. Joe Lyou, Coalition for Clean Air, also the Governor's appointee to the South Coast AQMD Governing Board.

When I come to work every day, there is a point at which I can see downtown Los Angeles and virtually all
of the South Coast air basin. And yesterday and again
today, I was coming in and I got to witness perhaps the
cleanest, clearest skies I've ever seen in Los Angeles. I
have to admit, my first inkling, I have to call Barry
Wallerstein and tell him to order some smog for tomorrow.
I was thinking we really needed a more representative day
to frame the debate over these regulations.

But the more I thought about it, I realized, you
and I know better. In California, we know, on average, we
have the worst air quality in the country. So I came to
realize that mother nature and 50 years of regulation over
air quality gave us this opportunity to have a preview of
where we could be and where we can go to, and if we're
successful.

So in more than one way today, this is the day
Coalition for Clean Air envisioned when we co-sponsored AB
1493, the Pavely Bill in 2002. Thank you for developing
these regulations. Put California and the rest of the
country on the path to achieving clean air and preventing
climate change.

That said, the regulations aren't perfect. Both
Coalition for Clean Air and AQMD staff have some concerns.
I'm most concerned about the possible ZEV over-compliance
issue and the one milligram per mile PM standard. Urge
you to fix those problems.
To conclude, congratulations on moving this ball forward. It's an important achievement. Please consider improving it. And again, enjoy today as an example of the kind of air quality that we want and need in California every day. Thank you.

CHAIRPERSON NICHOLS: Thank you. I don't think most of us have been outside to look at it. Maybe there will still be a little daylight left when we get done.

Diane Whitenburg. David Friedman.

MR. FRIEDMAN: Thank you. My name is David Friedman, and I want to thank the Board, Chairman Nichols, and all the staff on behalf of the Union of Concerned Scientist, our members across California and the nation for proposing strong advanced clean car standards.

And as an engineer by education and working for a group named the Union of Concerned Scientists, I want to say I've been incredibly impressed by the thoroughness of research, analysis and the public process involved with these advanced clean car proposals. This is how regulations should be done.

The Union of Concerned Scientists strongly supports the Advanced Clean Car Program and especially the Zero-Emission Vehicle Program. But we do ask for the elimination for the significant modification to the greenhouse gas zero emission vehicle over-compliance
provision. This provision creates a strong economic incentive for car companies to avoid selling up to 40 percent of their electric car requirements from 2018 to 2021 in return for overcomplying with greenhouse gas standards by just one percent, a 40-to-1 exchange rate.

But let me look at it in terms of dollars and cents. Auto companies using this provision would have to invest just 2- to $3,000 into off-the-shelf technology they were going to do anyway to avoid selling 10- to $15,000 worth of truly advanced technology. That's not a good deal for California, especially in critical years of the program for infrastructure development and market ramp-up for battery electric and fuel cell vehicles.

The clock is ticking on global warming pollution and dangerously unhealthy air. So please adopt the strongest BEV program.

A quick sidenote. I may go over really quick on this, but I want to make an observation about the hearing today, which is there is a lot of people here working hard to try to slow and stop climate change. But what we've seen here and at EPA and NHTSA hearings around the nation has been the kind of climate change we need with auto companies stepping up and committing to produce cleaner cars. We need to see that same commitment from a lot of the other industries involved.
So just to put the clean fuels outlet in perspective, the first two years of the clean fuels outlet are simply asking oil companies to invest one half hour of profits -- one half hour of profits, an investment that will lead to long-term profits in the hydrogen industry. We need the oil companies to step up and change the climate as well in a positive way. Thank you.

CHAIRPERSON NICHOLS: Thank you, David. I think that's the first time I've ever seen anybody read testimony off of their smart phone.

Shannon Baker-Branstetter.

MS. BAKER-BRANSTETTER: Thank you, Chairman Nichols, members of the Board.

I'm Shannon Baker-Branstetter. I'm Policy Council for Consumers Union, the policy division of Consumer Reports.

I appreciate the opportunity to convey Consumer Reports' support for the proposed advanced clean cars rules. Consumer Reports tests and rates approximately 80 new vehicles every year which we buy honestly at retail. We do not accept outside advertising and we have more than eight million subscribers.

We believe that improving consumers' choice is very important. It is our view that the Advanced Clean Cars Program will increase vehicle choices by providing
cleaner vehicles and alternative fuel options that will save consumers money and lower monthly fuel costs.

In November 2011, Consumer Reports conducted a nationally representative survey and found significant consumer interest in alternative-fueled vehicle. According to the survey, over half of car owners would consider a hybrid, pure electric, or hydrogen fuel cell vehicle for the next vehicle purchase. If availability improved over the next 15 years, 72 percent of consumers would consider an alternative powertrain.

We also surveyed California residents to find out their views on the three key elements of the Advanced Clean Cars Program, all three received at least 75 percent support. In fact, 81 percent of Californians agree that the state should require all automakers to significantly reduce greenhouse gas emissions from new vehicles. Seventy-five percent agreed that California should require automakers to build fleets that include increasing numbers of zero-emission vehicles.

Indeed, in our owner satisfaction survey, fuel efficient and all-fuel vehicles dominated the list. The Chevy Volt topped the list with 93 percent of buyers saying they would buy the car again. The Toyota Prius, Ford Fusion hybrid, VW DTI, and Jetta TI all rank the top or near the top of class for customer satisfaction.
Californians also recognize the importance of coordinating alternative fuel infrastructure to match clean vehicle deployment. According to our survey, 77 percent agree that California should require oil companies to make cleaner fuels like hydrogen or electricity available for public consumption.

California's driving the rest of the country to follow improving the cleaner cars, possible, affordable, and desirable. Thank you for your leadership on clean cars.

CHAIRPERSON NICHOLS: Thank you. Thanks for your help.


If none of them are stepping forward, then that's our last witness on this item. And I can announce we're going to carry over through tomorrow. This will conclude the public testimony portion of the discussion.

But tomorrow, when the Board assembles, we will begin with the Board member comments, questions, and any amendments any Board members wish to offer at that time.

I know many people have been -- well, everybody has been listening. And many people have also been taking notes on things they want to talk about. And I'm sure it will be a lively and interesting discussion.

We all share the common goal of getting to a
final product, which is as good as we can make it. And I
know that it's going to be -- that there are some things
that we all think we might be able to do. I'm very much
looking forward to that.

I would like to say that I omitted to do
something I should have done earlier today, which is when
we came back from lunch, we had a closed session at lunch
to be briefed on litigation. No action was taken, but I
needed to put that on the record because, otherwise, it
would not be proper for the Board to engage in a closed
session meeting. But there was no discussion. It was a
briefing by our legal staff on pending litigation.

Other than that, I need to know, do we have to
call for an open public comment on other issues while the
hearing is still pending before we adjourn for the day?

CHIEF COUNSEL PETER: Madam Chair, are you

closing the public testimony?

CHAIRPERSON NICHOLS: Yes, on this item. The
record is now closed.

CHIEF COUNSEL PETER: So then you can proceed to
discuss it tomorrow and then bring your other -- you have
the discretion to either if somebody has signed up and you
want to hear it today or else you can defer it to	
tomorrow.

CHAIRPERSON NICHOLS: Do we have anyone signed up
for open comment?

    BOARD CLERK MORENCY: I do not have anyone signed up.

    CHAIRPERSON NICHOLS: We're clear on that. Okay. I believe we're allowed to leave papers here overnight since we're coming in first thing in the morning. You don't need to worry about whatever you need to leave behind tonight. We made our proposed deadline. I want to thank everybody for their cooperation. And we will resume at 8:30.

    (Whereupon the Air Resourced Board recessed at 5:30 P.M.)
CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, 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 hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

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

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of February, 2012.

________________________________________
TIFFANY C. KRAFT, CSR, RPR
Certified Shorthand Reporter
License No. 12277