

MEETING  
STATE OF CALIFORNIA  
AIR RESOURCES BOARD

METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
BOARD ROOM  
700 NORTH ALAMEDA STREET  
LOS ANGELES, CALIFORNIA

THURSDAY, JANUARY 26, 2012  
9:16 A.M.

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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

APPEARANCES CONTINUED

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

1  
2 CHAIRPERSON NICHOLS: So I'm going to call the  
3 meeting to order now and welcome you all here for the  
4 January 26th, 2012, our first Board meeting of 2012.

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

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

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

12 BOARD CLERK MORENCY: Dr. Balmes?

13 Ms. Berg?

14 BOARD MEMBER BERG: Here.

15 BOARD CLERK MORENCY: Ms. D'Adamo?

16 BOARD MEMBER D'ADAMO: Here.

17 BOARD CLERK MORENCY: Mr. De La Torre?

18 BOARD MEMBER DE LA TORRE: Here.

19 BOARD CLERK MORENCY: Mayor Loveridge?

20 Mrs. Riordan?

21 BOARD MEMBER RIORDAN: Here.

22 BOARD CLERK MORENCY: Supervisor Roberts?

23 BOARD MEMBER ROBERTS: Here.

24 BOARD CLERK MORENCY: Dr. Sherriffs?

25 Professor Sperling?

1 BOARD MEMBER SPERLING: Here.

2 BOARD CLERK MORENCY: Supervisor Yeager?

3 BOARD MEMBER YEAGER: Here.

4 BOARD CLERK MORENCY: Chairman Nichols?

5 CHAIRPERSON NICHOLS: Here.

6 BOARD CLERK MORENCY: Madam Chairman, we have a  
7 quorum.

8 CHAIRPERSON NICHOLS: Thank you.

9 A couple of remarks before we get started.

10 First of all, we'll let people know that at the  
11 moment we seem to be comfortably sized for this room, but  
12 we are expecting a large attendance today. And we do have  
13 an overflow room available in Room 102 across the hall,  
14 which is available and has audio/visual communication with  
15 this room.

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

21 There is going to be a closed session at lunch  
22 today. The Board members are going to be receiving a  
23 briefing on pending litigation. So just so you know,  
24 there will be a lunch break. And during that lunch break,  
25 we will be going into executive session.

1           We are, as I think everybody here knows, here to  
2 discuss the advanced clean car regulation package and we  
3 intend to get to that shortly. And we will continue this  
4 meeting through tomorrow beginning at 8:30 a.m. if we  
5 haven't completed action today. What we're doing today is  
6 considering a package of three rules that include  
7 amendments to our current Low-Emission Vehicle,  
8 Zero-Emission Vehicle, and Clean Fuels Outlet Programs.

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

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

25           If you already taken advantage of the online

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

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

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

23           I'm also asked to have you note the emergency  
24 exits in this room. In the event of a fire alarm, we're  
25 required to evacuate the room immediately and leave the

1 building until we get the all-clear signal.

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

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

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

12           Seeing none, then I believe --

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

16           CHAIRPERSON NICHOLS: Do I have a second?

17           BOARD MEMBER D'ADAMO: Second.

18           CHAIRPERSON NICHOLS: Any objections?

19           All in favor, please say aye.

20           (Ayes)

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

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

25           Any other abstentions?

1           Hearing none, this item is approved.

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

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

13           The Air Resource Board's core business for over  
14 40 years has been regulating emissions of air pollutants  
15 from motor vehicles. And we have made huge strides along  
16 the way. In fact, I think it's not too much of an  
17 exaggeration to say we've made quantum leaps in both  
18 technology and in the whole concept of what it means to  
19 have a clean vehicle.

20           I do recall when we first removed lead from  
21 gasoline in order to protect the health of people and  
22 especially children from exposure to lead. But also  
23 because lead was poisoning the catalytic converters that  
24 we first pioneered here in the state of California. And I  
25 also remember very well when we set the stage for the

1 introduction of the three-way catalyst. We've developed  
2 revolutionary advances in on-board diagnostics in our own  
3 laboratories. And we gave the world the famous check  
4 engine light.

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

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

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

23           Now, conceptually, what we are doing here is  
24 different. We're not just addressing various emissions  
25 from a car with a separate sequential set of regulations

1 dealing with one pollutant at a time. I think we've  
2 finally gotten to the point where we're looking at the car  
3 as a unit, as a wholistic item, and looking at it as a  
4 vehicle that uses fuel, and not just as a vehicle that's  
5 separate from the fuel as well. And I think it's an  
6 important change in terms of the whole philosophy of what  
7 we're doing. And it also puts us on the path, really, to  
8 achieve some very ambitious clean air and climate goals.

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

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

21           And these advances will be the product of  
22 technologies that already exist. They're on the shelf and  
23 they're already found in many cars on the road. When it  
24 comes to the zero-emission vehicle mandate, we're working  
25 to force technology, to accelerate and improve on the



1 exiting technologies in electric cars and fuel cell  
2 vehicles. So we're not just resting on the effects of the  
3 internal combustion engine, as dramatic as those have been  
4 and continue to be, but we're also moving forward in a  
5 whole new era of electric and fuel cell vehicles. And we  
6 intend to put 1.4 million of the cleanest cars on our  
7 roads at 2025. This will ensure that the market for these  
8 vehicles, which is already launched, will grow and be  
9 diverse and robust and that California continue to lead as  
10 a hub for cultural and technological innovation.

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

19 Today, we're also considering an approach to  
20 assure that sufficient hydrogen fueling infrastructure  
21 gets built to support the tens of thousands of fuel cell  
22 cars that manufacturers expect to sell in California after  
23 2017.

24 Once again, California is leading the nation.  
25 And there is a good reason why we're moving so far so

1 fast. Simply put, the reason for this is that we can't  
2 afford to wait. We have to act on these issues now. Our  
3 projections show that continued growth in population and  
4 vehicle miles traveled will threaten air quality for years  
5 to come. Even with today's very clean cars, we have air  
6 quality violations in the Bay Area, Los Angeles, and San  
7 Joaquin Valley. We clamped down on every other source as  
8 well. But only a shift to zero-emission vehicles using  
9 renewable fuels will get us to healthy air and reduce our  
10 state's contribution to global warming.

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

15 Our history with the Zero-Emission Vehicle  
16 Program is somewhat checkered. The original program had  
17 at its time overly ambitious goals perhaps, although they  
18 were based on good reasoning. But the fact is there were  
19 two hurdles that were not able to be overcome. One, of  
20 course, perhaps most important, was the price of gasoline  
21 stayed cheap. And the other was the cost of the new  
22 technologies remained very high. Improvements in  
23 durability and cost of batteries simply took longer than  
24 we anticipated, making the early ZEV cars less appealing  
25 and more expensive.

1           But the situation today is very different. Gas  
2 hovers at \$4 a gallon, while the cost of technology has  
3 dropped and durability has improved. Equally important,  
4 the auto companies have now embraced the idea that  
5 electric drive vehicles, advanced hybrids, battery  
6 electric fuels, and fuel cells will play an increasing  
7 roll in the near future. And they are competing with each  
8 other around the globe to bring out advanced clean cars.

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

16           So what we are undertaking today is more than a  
17 milestone. It marks the beginning of a new chapter in  
18 this Air Resources Board and California's decades long  
19 love and sometimes hate affair with the automobile. This  
20 program will make the cleanest cars and new technologies  
21 commonplace, something that we've already seen with the  
22 hybrid car. The Advanced Clean Car Program will also  
23 continue to help clean our air, help us fight climate  
24 change, and perhaps most important for the average  
25 citizen, it will save consumers thousands of dollars over

1 the life of these cleaner, more efficient vehicles. And  
2 of course, as Californians, it also gives us the ability  
3 to brag that we are once again the clean car advocate of  
4 the world.

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

9 EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman  
10 Nichols.

11 As Chairman Nichols mentioned, the Advanced Clean  
12 Cars Program is a coordinated package of regulations that  
13 sets a pathway to achieving sustainable transportation in  
14 California by assuring the development of environmentally  
15 superior cars that will deliver the performance, utility,  
16 and safety vehicle owners have come to expect. The  
17 Advanced Clean Cars Program consists of three primary  
18 elements, combined to achieve significant reductions in  
19 criteria and greenhouse gas emissions for the new vehicle  
20 fleet. These elements include amendments to the  
21 low-emission vehicle, or LEV, program that achieve  
22 significant reductions in criteria and greenhouse gas  
23 emissions from passenger vehicles, a strengthening of  
24 California's zero-emission vehicle, or ZEV, program to  
25 help jump-start the commercialization of the cleanest

1 vehicles, such as those powered by electricity, and  
2 amendments to the clean fuels outlet regulations so that  
3 clean fuels, such as hydrogen, will be available for the  
4 next generation of clean vehicles that need them.

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

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

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

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

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

24           And, finally, Ms. Leslie Goodbody will present  
25 staff's proposal for the clean fuels outlet part of the

1 Advanced Clean Cars Program.

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

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

8 (Thereupon an overhead presentation was  
9 presented as follows.)

10 STAFF AIR POLLUTION SPECIALIST CARTER: Thank  
11 you, James.

12 Good morning, Chairman Nichols and members of the  
13 Board.

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

17 --o0o--

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

25 Second is achieving the climate change goals set

1 forth under AB 1493, the Pavely legislation, and AB 32,  
2 the Global Warming Solution Acts of 2006.

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

7                               --o0o--

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

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

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

23           Finally, amendments to the clean fuels outlet  
24 regulation will assure ultra clean fuels such as hydrogen  
25 are available to meet vehicle demands brought on by

1 amendments to the ZEV program.

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

9 --o0o--

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

24 Responses to comments received during a 45-day  
25 public review period will be included in the final



1 statement of reasons.

2 --o0o--

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

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

14 Staff conducted three community meetings in July  
15 2011 in communities with environmental justice concerns:  
16 Fresno, Oakland, and Pacoima in the Los Angeles area. At  
17 these meetings, community members heard from a panel of  
18 experts as staff presented information about the advanced  
19 clean cars regulations and the CEQA scoping process.

20 --o0o--

21 STAFF AIR POLLUTION SPECIALIST CARTER: I'd now  
22 like to turn to the first element of the Advanced Clean  
23 Cars Program, the Low-Emission Vehicle Program. The  
24 Low-Emission Vehicle Program established the emission  
25 standards that must be met by all light and medium-duty

1 vehicles and include both criteria pollutants and  
2 greenhouse gases.

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

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

11 --o0o--

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

22 --o0o--

23 STAFF AIR POLLUTION SPECIALIST CARTER:  
24 California's low-emission vehicle, or LEV, program was  
25 first adopted in 1990. This first-of-its-kind program

1 achieved significant reductions in smog-forming emissions  
2 between model years 1994 and 2004 by allowing  
3 manufacturers to sell a mix of vehicles that met standards  
4 of different stringencies, provided that their overall  
5 fleet became cleaner each year. This was accomplished  
6 using declining fleet average non-methane organic gas or  
7 hydrocarbon standards and more stringent NOx standards.

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

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

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

23           --o0o--

24           STAFF AIR POLLUTION SPECIALIST CARTER: Although  
25 the LEV program has been a major success and has resulted

1 in substantial reductions in smog-forming emissions from  
2 light- and medium-duty vehicles, California needs further  
3 reductions to meet health-based state and federal ambient  
4 air quality standards. Therefore, today staff is  
5 proposing a second revision to the LEV program which will  
6 be phased in between 2015 and 2025 that will continue to  
7 drive vehicle emissions to near zero levels.

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

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

17 Other important elements of the LEV III program  
18 include the increasing the durability requirements to  
19 150,000 miles to ensure that the emission benefits of the  
20 program are maintained throughout the life of the vehicle.  
21 And it includes a provision that allows manufacturers to  
22 pool the vehicles sold in California and those states that  
23 have adopted California's Low-Emission Vehicle Program  
24 when demonstrating compliance with the LEV III  
25 regulations.

1 --o0o--

2 STAFF AIR POLLUTION SPECIALIST CARTER: This  
3 slide shows fleet average emission requirements for LEV  
4 III. Recognizing considerable workload required to comply  
5 with the Advanced Clean Cars Program, the proposed  
6 revisions provide manufacturers with significant lead time  
7 and considerable flexibility to incorporate these  
8 technologies into their vehicles.

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

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

16 --o0o--

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

23 In response to current and future greenhouse gas  
24 requirements, manufacturers are incorporating gasoline  
25 direct injection engines, or GDI engines, across the

1 vehicle models because of their higher efficiency compared  
2 to current engine technology. However, first generation  
3 GDI engines emit higher PM levels. Further improvements  
4 in combustion and fuel injection design are expected to  
5 reduce GDI PM emissions.

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

14           A one milligram per mile standard is proposed for  
15 2025. Staff believes this is technically achievable in  
16 this time frame and refinement of the test procedures to  
17 more accurately measure these low emission levels is  
18 ongoing.

19   --o0o--

20           STAFF AIR POLLUTION SPECIALIST CARTER: Another  
21 element of the LEV III proposal are modifications to the  
22 supplemental federal test procedure, or SFTP, which  
23 controls vehicle emissions during real world driving  
24 conditions, such as aggressive driving and air conditioner  
25 usage. These are conditions that are not represented in

1 the federal test procedure that is used for certification  
2 testing.

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

10 --o0o--

11 STAFF AIR POLLUTION SPECIALIST CARTER: In the  
12 2010 model year, 28 percent of passenger cars and  
13 light-duty trucks were certified as partial zero-emission  
14 vehicles, or P ZEVs, to the zero evaporative emission  
15 standards, thus demonstrating the feasibility and cost  
16 effectiveness of this technology.

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

25 --o0o--

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

9   --o0o--

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

18   --o0o--

19           STAFF AIR POLLUTION SPECIALIST CARTER:  Finally,  
20 staff is proposing minor changes to the California  
21 environmental performance label requirements.

22           Since 1995, California's smog index label has  
23 helped consumers assess the relative smog emissions from  
24 new cars.  Our current label provides consumers with smog  
25 and global warming scores, both on a scale from one to



1 ten, with ten being cleanest.

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

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

13 --o0o--

14 MR. LUTSEY: Thank you, Sarah.

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

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

24 I'll highlight the staff's projected costs and  
25 benefits from the regulation. And I'll finish with a

1 discussion of the coordination with the federal greenhouse  
2 gas regulation.

3 --o0o--

4 MR. LUTSEY: So how did we get here. The  
5 original Pavely legislation in 2002 first tasked ARB staff  
6 with drafting maximum feasible cost effective greenhouse  
7 gas standards. In 2004, this Board approved the first  
8 greenhouse gas standards, which regulated vehicles through  
9 2016.

10 In 2010, U.S. EPA adopted similar federal  
11 2012-2016 standards that California deems as sufficient to  
12 demonstrate compliance.

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

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

22 --o0o--

23 MR. LUTSEY: Before presenting the proposed new  
24 standard, I would like to review the great progress made  
25 toward adopting 2016 standards. Since Board's approval of

1 the 2016 standards in 2004, great strides have already  
2 been made across new car, cross-over, and pickup truck  
3 models to lower greenhouse gas emissions.

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

10 --o0o--

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

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

24 --o0o--

25 MR. LUTSEY: One important feature of the

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

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

21 --o0o--

22 MR. LUTSEY: I would also like to spell out a few  
23 more of the detailed provisions of the proposed standards.  
24 The standards allow for company sales weighting to allow  
25 flexibility. The footprint indexed standards push

1 technologies across all vehicles, while protecting fleet  
2 diversity.

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

8           There are also a number of crediting  
9 opportunities to help spur new technologies. As in the  
10 2016 regulation, air conditioning technologies receive  
11 credits for improvements in air conditioning efficiency,  
12 low leak refrigerants, and global warming potential  
13 refrigerants.

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

20           Finally, two other greenhouse gas pollutants,  
21 nitrous oxide, or N<sub>2</sub>O, and methane, CH<sub>4</sub>, continue to be  
22 regulated within these greenhouse gas standards. All of  
23 these provisions by design are identical to those of U.S.  
24 EPA's proposed 2025 greenhouse gas standards.

25

--o0o--

1           MR. LUTSEY: From a technology perspective, the  
2 proposed standard will push many exciting off-the-shelf  
3 and emerging internal combustion technologies into the  
4 mainstream. As Chrysler and Fiat Chief Executive Sergio  
5 Marchionne put it, due to the new greenhouse gas  
6 standards, if you are an engineer, you will get to walk  
7 into a toy store and have any toy off the shelf that you  
8 want.

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

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

21                           --o0o--

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

1 in introductory slides.

2 As shown in the figure, as new, ever lower  
3 greenhouse gas emission vehicles enter the fleet due to  
4 2017 to 2025 regulations, the overall vehicle greenhouse  
5 gas emissions see increasing reductions from 2025 on.

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

13 --o0o--

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

18 We would like to emphasize one major point  
19 related to federal regulatory coordination. As did for  
20 the original Pavely regulation, it is our intention to  
21 deem auto maker compliance with the U.S. EPA greenhouse  
22 gas regulation as sufficient for California greenhouse gas  
23 compliance, provided that the standards are substantially  
24 similar. This means that we would come back to the Board  
25 to adopt this provision later this year.

1           Also, ARB intends to participate in the federal  
2 agency's mid-term review regarding the 2022 to 2025  
3 greenhouse gas standards with the review set to be  
4 finished in 2018.

5                               --o0o--

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

18                              --o0o--

19           MR. LUTSEY: In conclusion, the proposed  
20 revisions to the LEV regulation are intended to achieve  
21 the maximum feasible and cost effective reduction of  
22 criteria and greenhouse gas emissions from new motor  
23 vehicles. The nearly 15 year lead time and built in  
24 flexibility provide long-term targets to manufacturers.  
25 The proposed standards offer the lead time and regulatory



1 certainty needed to develop and deploy advanced low  
2 greenhouse gas emission engine and drivetrains, while at  
3 the same time drastically lowering criteria pollutant  
4 emissions. The proposed greenhouse gas regulation  
5 continues one national program, while saving vehicle  
6 consumers money for each new low emission vehicle that is  
7 sold.

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

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

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

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

17 EXECUTIVE OFFICER GOLDSTENE: Okay.

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

23 In 1990, the Board adopted this ambitious program  
24 to significantly reduce the environmental impact of cars  
25 and trucks through the introduction of zero-emission

1 vehicles to California's fleet.

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

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

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

22   --o0o--

23           AIR POLLUTION SPECIALIST WONG: This slide shows  
24 one scenario staff developed during our review in which 87  
25 percent of the on-road vehicle fleet would need to be

1 zero-emission vehicles, meaning battery electric vehicles  
2 or hydrogen fuel cell vehicles. This would mean nearly  
3 every car sold in California in 2040 would need to be a  
4 pure ZEV with commercialization beginning in the 2020 time  
5 frame. This analysis became the basis of the proposal I  
6 will present to you today.

7 --o0o--

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

14 Even on a life cycle basis, plug-in hybrids,  
15 battery electrics, and fuel cell vehicles as shown in  
16 these two red boxes are significantly lower emitting in  
17 both criteria pollutants and greenhouse gas emissions.

18 Additionally, these advanced vehicles utilize  
19 fuels that are moving towards more renewable sources,  
20 further securing California's sustainable energy future.

21 --o0o--

22 AIR POLLUTION SPECIALIST WONG: Before I give the  
23 staff's proposed amendments, let me first explain a bit  
24 about the how the current ZEV regulation works. A  
25 manufacturer's ZEV obligation is determined by how many

1 vehicles it sells in California. Each manufacturer's  
2 obligation is a credit requirement. Each vehicle produced  
3 by a manufacturer is given a credit, where ZEVs typically  
4 earn more than near zero-emission vehicles.

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

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

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

15 --o0o--

16 AIR POLLUTION SPECIALIST WONG: The ZEV  
17 regulation has been successful. The cleanest gasoline  
18 vehicles known as partial zero-emission vehicles, or  
19 P ZEVs, and conventional hybrids have reached  
20 commercialization. Over 1.7 million P ZEVs and nearly  
21 400,000 conventional hybrids have been produced for sale  
22 in California.

23 Additionally, through demonstration programs and  
24 limited production, over 30,000 battery electric vehicles  
25 which includes full function battery electric vehicles

1 like the Nissan Leaf and neighborhood electric vehicles  
2 like the Gem have been placed, as well as 350 hydrogen  
3 fuel cell vehicles.

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

12                               --o0o--

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

21                               --o0o--

22           AIR POLLUTION SPECIALIST WONG: Today, I will  
23 present to you staff's propose to increase manufacturers  
24 requirements -- 2018 through 2025 ZEV requirements,  
25 including more manufacturers into the ZEV mandate, modify

1 how to determine ZEV credits and plug-in hybrid credits,  
2 and add flexibility for manufacturers faced with increased  
3 requirements.

4 --o0o--

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

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

15 --o0o--

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

22 Based on the likely compliance scenario we  
23 developed, this increased requirement could result in 15.4  
24 percent of annual sales in 2025 being ZEVs or plug-in  
25 hybrids.

--o0o--

1  
2 AIR POLLUTION SPECIALIST WONG: This graph shows  
3 an example of how increased production that would result  
4 from the increased proposal brings down the cost of  
5 technology.

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

15 (Whereupon a video presentation was made.)

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

18 Nissan, as well as the other five manufacturers  
19 in the blue box on this screen, are currently required to  
20 make ZEVs, because these manufacturers produce more than  
21 60,000 vehicles annually for sale in California.

22 The ten manufacturers in the green box are  
23 smaller by California sales volume than those in the blue  
24 box, but are still required to comply with the ZEV  
25 regulation. The only difference is the manufacturers in

1 the green box are allowed full flexibility to meet their  
2 requirements with P ZEVs, the cleanest gasoline vehicles.

3           You'll notice that you do not see some  
4 manufacturers on either list, like Maserati or Suzuki.  
5 This is because those manufacturers produce less than 4500  
6 vehicles for California and do not have a ZEV requirement.

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

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

23                           --o0o--

24           AIR POLLUTION SPECIALIST WONG: Another way staff  
25 is proposing to simplify the overall ZEV regulation is by



1 modifying how we award ZEV credits. Currently, credits  
2 are based on range and fast refueling capability. The  
3 credits system is tiered, so it encourages manufacturers  
4 to produce a vehicle meeting the range threshold rather  
5 than rewarding the actual range of the vehicle. For  
6 example, in the current system, a 100 mile range BEV would  
7 earn the same amount of credit as a 150 mile range BEV due  
8 to the tiered nature of the crediting.

9 --o0o--

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

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

21 --o0o--

22 AIR POLLUTION SPECIALIST WONG: Staff is  
23 proposing to base credits for plug-in hybrids using a  
24 similar linear credit system. You can see on the bottom  
25 left of the screen where plug-in hybrid credits would

1 fall. This ensures that a 60-mile plug-in hybrid would  
2 earn no greater credit than a 60 mile BEV.

3 --o0o--

4 AIR POLLUTION SPECIALIST WONG: Here, I have  
5 extended the blue box from the previous slide that showed  
6 the plug-in hybrid credits. For the proposed plug-in  
7 hybrid credits, you can see there are two credit lines.

8 The purple line shows credits awarded to plug  
9 Prius like plug-in hybrids where the engine is supporting  
10 the vehicle's operation, even when the battery has not  
11 been fully defeated.

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

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

21 --o0o--

22 AIR POLLUTION SPECIALIST WONG: Staff proposed  
23 numbers to aggressively advance California towards ZEV  
24 commercialization. However, staff believes it is  
25 appropriate to offer regulatory flexibility to

1 manufacturers facing such aggressive numbers. These  
2 proposed flexibilities allow manufacturers greater control  
3 over introduction rates for ZEVs and awards  
4 over-compliance.

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

10 --o0o--

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

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

1 utilize all of the battery capacity.

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

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

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

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

19 --o0o--

20 AIR POLLUTION SPECIALIST WONG: Another  
21 flexibility proposal awards manufacturers who over comply  
22 on their greenhouse gas fleet average with credits that  
23 can be used to meet a portion of their ZEV requirement.  
24 This proposal was included in California's July 28  
25 commitment letter to the National Program.

1           Staff proposes to offer this provision for a  
2 limited time from model year 2018 through 2021. During  
3 that time, manufacturers who overcomply with their  
4 greenhouse gas fleet average by at least two grams per  
5 mile each year for all four model years will be allowed to  
6 offset a portion of their ZEV requirement up to half in  
7 2018 and 2019, 40 percent in 2020, and 30 percent in 2021.

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

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

15                           --o0o--

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

21                           --o0o--

22           AIR POLLUTION SPECIALIST WONG: We expect  
23 manufacturers responsible for somewhere between 20 and  
24 50 percent of California sales will be able to take  
25 advantage of this provision. If two manufacturers

1 representing 20 percent of the vehicles sold in California  
2 took this option as we anticipate, the red and blue lines  
3 and area below represent how many vehicles could be  
4 expected to be produced in California. This could result  
5 in 38,000 fewer ZEVs and plug-in hybrids cumulatively  
6 between 2018 and 2025.

7 --o0o--

8 AIR POLLUTION SPECIALIST WONG: The final  
9 provision staff is proposing to change is the travel  
10 provision. Section 177 of the Clean Air Act allows other  
11 states to adopt California's regulations. We call these  
12 the Section 177 ZEV states. Because of other state's  
13 adoption of the ZEV regulation, for every 100 vehicles a  
14 manufacturer must produce in compliance with the  
15 California requirements, the manufacturers must produce  
16 140 additional vehicles in the Section 177 ZEV states to  
17 meet its ZEV requirements in those states.

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

24 When adopted, this provision was meant to allow  
25 manufacturers to focus resources on ZEV demonstrations in

1 the central location. Currently, this provision is  
2 scheduled to expire for BEVs after model year 2014 and for  
3 fuel cell vehicles after 2017 model year.

4 --o0o--

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

11 For fuel cell vehicles, staff is proposing that  
12 the travel provision continue until there is sufficient  
13 infrastructure to support those vehicles in the Section  
14 177 ZEV states.

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

22 In exchange for those early BEVs, manufacturers  
23 would get some relief on their plug-in hybrid requirements  
24 in Section 177 ZEV states for model years 2015 through  
25 2018 and relief on their ZEV requirement in the Section

1 177 states from 2018 through 2020.

2           Additionally, manufacturers who took this path  
3 would also be allowed to pool amongst the Section 177  
4 states their plug-in hybrids beginning in model year 2013  
5 and their BEVs starting in 2018.

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

11           This optional compliance path ensures more BEVs  
12 will be placed in Section 77 states prior to 2018 while  
13 giving the manufacturers a smoother phase-in of their  
14 advanced technology vehicles to markets in those Section  
15 177 states.

16   --o0o--

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

23           Through staff's proposed increase in numbers of  
24 ZEVs and plug-in hybrids, costs will be driven down to  
25 help facilitate commercialization. And overall, staff



1 proposes to simplify the regulation while still offering  
2 appropriate flexibility in meeting these more stringent  
3 requirements.

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

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

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

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

15 CHAIRPERSON NICHOLS: Yes, please.

16 --o0o--

17 AIR RESOURCES ENGINEER GOODBODY: Thank you,  
18 Anna.

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

23 After exploring financial and regulatory  
24 incentives, staff concluded that an infrastructure mandate  
25 is a necessary complementary policy to the ZEV mandate.

1           In addition to developing amendments to the CFO  
2 regulation, staff worked with regulated parties and other  
3 stakeholders on a parallel voluntary approach to ensuring  
4 that hydrogen stations are built. This parallel process,  
5 taking the form of a Memorandum of Agreement, is still  
6 being formulated. Staff is presenting both approaches  
7 today and has created a bridge between the two approaches  
8 for your consideration.

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

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

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

18                           --o0o--

19           AIR POLLUTION SPECIALIST WONG: The CFO  
20 regulation is not new. It was adopted back in 1990 along  
21 with the adoption of the original low emission vehicle  
22 regulation. Back then, it was anticipated that  
23 alternative fuel infrastructure would be needed to support  
24 the introduction of low-emission vehicles in the light-  
25 and medium-duty sectors.

1           Within the regulation, the requirements to build  
2 clean fuel outlets is driven by automakers' alternative  
3 fuel vehicle projections. Once vehicle projections reach  
4 a certain threshold, those who own the most gas stations  
5 are required to build the clean fuel outlets. As it  
6 turned out, automakers met their low emission vehicle  
7 requirements using gasoline engines so the larger number  
8 of alternative fueled vehicles did not materialize. As a  
9 result, the CFO regulation has never required the  
10 construction of alternative fuel outlets.

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

17                           --o0o--

18           AIR POLLUTION SPECIALIST WONG: Automakers are  
19 planning to introduce 1400 fuel cell vehicles in  
20 California by 2014 and quickly ramp up to 53,000 by 2017.

21           In the early years, most of these vehicles will  
22 be placed within the regional cluster in southern  
23 California, then expand to parts to northern California  
24 later. The 53,000 vehicle projection represents a  
25 launching point for fuel cell vehicle commercialization

1 needed to achieve the fleet mix of 87 percent by 2050 as  
2 described by Ms. Wong.

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

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

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

22   --o0o--

23           AIR POLLUTION SPECIALIST WONG: Each year,  
24 automakers submit their alternative fuel vehicle  
25 projections, which are used to determine if the trigger

1 will be reached two years into the future. The current  
2 trigger for building stations is 20,000 vehicles  
3 statewide.

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

7           Next, staff calculates the total number of  
8 required stations.

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

12           The requirement to build new clean fuel outlets  
13 is then divided among the regulated parties, who then have  
14 18 months following their first notification to build the  
15 outlets.

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

18   --o0o--

19           AIR POLLUTION SPECIALIST WONG: The current  
20 regulation places the responsibility to build CFOs on the  
21 larger gasoline station owners, which meant petroleum  
22 companies when the regulation was first adopted in 1990.  
23 Even in 1997, eight petroleum companies were the  
24 owner/lessors of half of the retail gasoline outlets in  
25 California.

1           Since then, the petroleum companies have divested  
2 themselves of most of their retail stations. The vast  
3 majority of gas stations are now owned by small  
4 businesses, supermarkets, and convenience store chains.  
5 Because of this, staff believes that it is no longer  
6 appropriate to base the CFO requirement on station  
7 ownership.

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

12                           --o0o--

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

21                           --o0o--

22           AIR POLLUTION SPECIALIST WONG: Staff is also  
23 proposing to narrow the regulation so that it applies only  
24 to zero-emission vehicles and ZEV fuels, a change  
25 consistent with California's long-term goals to reduce

1 criteria and greenhouse gas emissions by advanced ZEV  
2 technologies.

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

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

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

21           Finally, staff is proposing to reduce the total  
22 number of required stations by half. Today, there are  
23 about 9,700 retail gasoline stations in California. So  
24 this would mean that the regulation would sunset once  
25 they're at 485 hydrogen stations instead of 970. Staff

1 believes five percent is consistent with the need for  
2 coverage and encouraging natural market growth.

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

6 --o0o--

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

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

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

22 --o0o--

23 AIR POLLUTION SPECIALIST WONG: In the near term,  
24 it will cost about 1.5 to 2 million to build a hydrogen  
25 station. In the early years when numbers of fuel cell



1 vehicles and demand for hydrogen is expected to be low,  
2 station owners could face a period of loss of up to four  
3 years. Since gas station owners are accustomed to seeing  
4 return on their investments within one year, their  
5 unwillingness to voluntarily add hydrogen to their  
6 stations without the help of state funding is  
7 understandable.

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

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

13 --o0o--

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

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

23 The MOA is currently in draft state. However,  
24 stakeholder groups have made tremendous progress in  
25 establishing the goals, needs, and mechanisms to support

1 hydrogen station deployments. The basic framework of the  
2 agreement is to work together to seek public funding to  
3 provide incentives to station providers during the first  
4 few years they are not profitable. It is estimated that  
5 support of 100 stations could require about \$100 million.

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

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

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

1 volumes of fuel cell vehicles.

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

4 --o0o--

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

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

19 The U.S. Department of Energy in conjunction with  
20 state, local, and regional agencies, has embarked marked  
21 on an ambitious program to install 5,000 home, workplace,  
22 and public charging stations, as well as a network of 100  
23 quick chargers in the San Diego, Los Angeles, and  
24 Sacramento and San Francisco areas. Once implemented,  
25 this program will provide important insight on the

1 charging station usage patterns and performance, as well  
2 as the need for an amount of additional public charging  
3 stations.

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

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

17 --o0o--

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

1 introduction of hydrogen stations.

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

8 --o0o--

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

17 --o0o--

18 AIR POLLUTION SPECIALIST WONG: Based on the  
19 state-of-art research and extensive input from automotive  
20 engineers and suppliers, the associated increase in  
21 vehicle technology cost to automakers and consumers when  
22 all standards are fully phased in is shown in this chart.

23 Here, the three vehicle components, criteria  
24 pollutants, greenhouse gas, and ZEV together would  
25 increase the new vehicle prices by an average of about

1 \$1900, or eight percent. And the greenhouse gas  
2 regulation would be responsible for the majority of the  
3 vehicle price increase.

4 --o0o--

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

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

20 --o0o--

21 AIR POLLUTION SPECIALIST WONG: Along with the  
22 strong positive effects on the environment and consumers,  
23 the entire Advanced Clean Cars Program provides broader  
24 benefits to the California economy. The regulation  
25 directly impacts vehicle prices and reduces overall fuel

1 expenditures. These fuel savings ripple through the  
2 economy, causing a slight increase in purchasing of other  
3 consumer goods and service.

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

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

12 This concludes staff's presentation.

13 EXECUTIVE OFFICER GOLDSTONE: One close. Want to  
14 wrap it all up.

15 So in summary, the adoption as proposed is going  
16 to provide substantial benefits to California. It's going  
17 to reduce urban pollution and help meet the ambient air  
18 quality standard. It's going to reduce greenhouse gas  
19 emissions and provide an example of leadership in  
20 addressing the global challenge of climate change. It  
21 will also pave the way for widespread commercialization of  
22 ultra-low emission vehicles fueled by efficient, low  
23 carbon, non-petroleum fuels, and a clean fuel outlet  
24 regulation, which we view as an essential part of the  
25 package will ensure alternative fuels are available, thus

1 ensuring clean advanced vehicles such as hydrogen fuel  
2 cells are on the street and not remaining in a lab.

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

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

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

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



1 either side of us.

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

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

9           (Whereupon a recess was taken.)

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

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

23           BOARD MEMBER ROBERTS: If I might, Madam  
24 Chairman, you know, in considering the time line that it  
25 takes to bring one of these hydrogen fueling stations

1 online, I'm wondering -- we're going to have these  
2 hopefully all over the state. It seems to me probably the  
3 longest lead time item in bringing one of those stations  
4 online is the environmental review process ironically that  
5 we're going to force them to go through. And here's  
6 something we're all in agreement is good for the planet  
7 and yet probably the single most expensive and long  
8 lasting item getting constructed is going to be the  
9 environmental review.

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

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

24 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.  
25 We are planning -- right now, it takes about 18 months

1 from the go to get the station in. And the actual  
2 construction time is probably on the order of two or three  
3 months at the most. So that rest of that is in process,  
4 contracting, permits, all that kind of stuff. So we're  
5 working with the Fuel Cell Partnership and all the  
6 stakeholders. We're going to try to get advanced permits  
7 for sites that are yet to be built. And we're going  
8 to when this one needs to be put in, here's a site that's  
9 already qualified. We believe that working with the  
10 permitting people, once one is done, the second one will  
11 be easier. So our approach is more at the local level. I  
12 can't really comment on whether legislation would be good.  
13 But that's --

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

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

24 So I'm trying to suggest a different tactic here  
25 that would be very advantageous to all of us who are

1 interested in seeing this successful program.

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

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

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

21 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: We  
22 would greatly appreciate that. I understand how hard it  
23 is. And my prescription is only to let you know we're  
24 trying at the more bureaucratic staff level it would be of  
25 great assistance if we could have higher level support and

1 legislation or whatever that would make this go smoother.

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

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

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

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

1 expect folks to jump into that bridge.

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

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

12 CHAIRPERSON NICHOLS: Mayor Loveridge.

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

16 MANAGER ACHELNIK: This is Gerhard Achteplik.

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

22 And while two years might seem like a long time,  
23 it is well before this regulation gets into effect. Some  
24 of the work that is going on in type certifying that is  
25 going on through the government funded station. So that

1 process is underway. And it is a critical process that's  
2 going on both globally and nationwide.

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

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

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

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

19 BOARD MEMBER LOVERIDGE: No. Different issue.

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

25 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I

1 think you're right. It will be helpful. And there are  
2 demonstrations of these going in. The biggest one in San  
3 Diego and then also in the Bay Area. And there will be  
4 some other private put in quick charges.

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

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

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

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

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

24 BOARD CLERK MORENCY: Let me give you what I have  
25 right now. And we can start on that. Thank you.



1 BOARD MEMBER SPERLING: I'll ask a question.

2 CHAIRPERSON NICHOLS: Professor Sperling.

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

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

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

23 So if enough money was made available to give us  
24 the next increment of stations that we need to match the  
25 increasing number of cars that we are told are coming,

1 then the MOA would keep the oil company's regulatory  
2 obligation at zero. If the money is not there, then the  
3 regulation would remove that provision of zero  
4 automatically, and that would be the process of  
5 identifying how many stations would have to be billed at  
6 the responsibility of their fuel.

7 BOARD MEMBER SPERLING: Would that --

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

11 It has to because -- going back to the Supervisor  
12 Roberts' discussion, when we say we need the station,  
13 let's get started, it's not going to happen for a few  
14 years. And we need the first installment at stations  
15 beyond what the State has funded, which are 30 station.  
16 We need 100 total. The next installment is needed before  
17 2016. So you can count the years and see you have to know  
18 what's happening very quickly.

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

21 BOARD MEMBER BERG: There are also for-profit  
22 companies that are out there also looking at hydrogen  
23 stations and putting hydrogen stations in, or have on  
24 their drawing board to do that. Do we have the ability to  
25 find out where those are going to be and incorporate that

1 into our plan as well?

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

14 CHAIRPERSON NICHOLS: Okay. According to the  
15 list I have in front of me, the first witness who signed  
16 up is Senator De Leon. Is he here? I know we said we'd  
17 call him when he arrived.

18 The next witness is Henry Hogo from the South  
19 Coast Air Quality Management District. It's like winning  
20 the lottery.

21 MR. HOGO: Good morning, Chairman Nichols,  
22 members of the Board.

23 I'm Henry Hogo, Assistant Deputy Executive  
24 Officer of the South Coast AQMD.

25 I'd like to welcome the Board to Southern

1 California where we have over ten million registered  
2 light- and medium-duty vehicles operating in this area.  
3 It's very appropriate to have this important hearing in  
4 our area.

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

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

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

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

25 I want to highlight three key recommendations

1 from my written comments. First, we strongly believe that  
2 the proposed criteria pollutant emission standards,  
3 especially the proposed PM emission standards, can be  
4 implemented early. As noted in the staff report, there is  
5 several vehicles that already meet the three milligram per  
6 mile and one milligram per mile levels. As such, we  
7 recommend that the one milligram per mile standard be  
8 implemented beginning in 2020 to 2022 time frame.

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

20           While staff have indicated that generation of  
21 credits will have the same effect, we believe that the  
22 optional standards of credits can be a California-only  
23 approach. And funding programs, there are other  
24 incentives such as HOV access will be for vehicles  
25 operating in California.

1           In order for optional standards to be effective,  
2 we believe that additional incentive mechanisms must be  
3 developed. Essentially, urge ARB to work with air  
4 districts to develop mechanisms that could significantly  
5 increase these levels to facilitate sales of these cleaner  
6 vehicles.

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

10           CHAIRPERSON NICHOLS: Thank you very much.

11           Judy Mitchell. Good morning.

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

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

21           I speak to you today in my role as a council  
22 member to share with you the support of California cities,  
23 counties, and local officials to improve the air we  
24 breathe. I urge you to move forward with this historic  
25 vote today. Local governments in California have stood up

1 to support electric vehicles and to advance clean car  
2 regulations.

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

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

25 The standards before you will do a number of

1 things. They will cut down pollution that affects all of  
2 us and harms the most vulnerable among us. They will  
3 provide new options for people who want cleaner  
4 transportation. They will reduce gas costs that hurt our  
5 pocketbook, and they will protect our climate for future  
6 generations.

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

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

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

24 Karen Messina Schkolnick from the Bay Area. Hi.

25 MS. MESSINA SCHKOLNICK: Hi. Good morning, Chair



1 Nichols and Board members.

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

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

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

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

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

23 In addition to our support, we would like to  
24 offer a few suggestions that we ask you and your staff to  
25 consider as we believe they will strengthen these

1 regulations and help ensure their intended result.

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

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

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

1 benefits are achieved as quickly as possible.

2 Thank you very much.

3 CHAIRPERSON NICHOLS: Thank you.

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

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

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

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

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

23 CHAIRPERSON NICHOLS: That is money that was  
24 authorized initially by the Legislature through a  
25 surcharge, I believe.

1 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right.  
2 It's an alternative fuels fund and it's split between  
3 ourselves and the Energy Commission. We've chosen to use  
4 part of ours as incentives for purchasers of electric and  
5 other gasoline cars as well as trucks.

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

8 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Right.  
9 We'll come to the Board to do that later this year.

10 CHAIRPERSON NICHOLS: Yeah. Okay.

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

13 MS. RODRIGUEZ-LYNN: Yes. Good afternoon.

14 My name is Rebekah Robriguez-Lynn, district  
15 director for State Senator Fran Pavely.

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

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

1 and save consumers money at the pump.

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

8 CHAIRPERSON NICHOLS: Thank you.

9 Next is John Cabaniss.

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

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

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

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

1 advanced clean car package.

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

5 With regard to the ZEV program, for the past 22  
6 years, life of the program, the ARB has always had a range  
7 of flexibilities built into the program to address the  
8 kinds of uncertainties, many of which we still face, with  
9 ZEVs. Things like when we've heard something about costs,  
10 range, infrastructure, and probably most important of  
11 course is acceptance, consumer acceptance. These  
12 uncertainties demand that the manufacturers get as much  
13 flexibility as they can. And that's why, one, the  
14 important flexibility that was described to you in the  
15 staff proposal is the limited partial ZEV offset for years  
16 18 to 21.

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

25 The environmental benefits overall are not

1 sacrificed, of course. In fact, you end up with as much  
2 or more environmental benefit even with the small  
3 reductions because of the GHG over-compliance nationally.

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

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

13 Thank you very much.

14 CHAIRPERSON NICHOLS: Okay. Thank you.

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

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

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

25 MECA also supports the proposed tighter

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

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

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

24           ARB needs to make sure that the same ultra low PM  
25 Euro 6 GDI engines and technologies are also utilized here



1 in California. To that end, MECA believes it's critically  
2 important for ARB to hold a formal technology review  
3 around the proposed one milligram per mile PM light-duty  
4 vehicle PM standard and that review should occur sometime  
5 in the 2017 time frame.

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

15 And in closing, I'd just like to thank the  
16 staff's effort for bringing this proposal forward. It's  
17 been a long time coming. We're all glad to see it here.

18 I especially wanted to give my thanks to Mr.  
19 Ahtelik and Mr. Hughes, the fathers of the LEV program  
20 here in California and largely responsible for the great  
21 leadership California has shown in bringing ultra clean  
22 vehicles to the marketplace.

23 Thank you.

24 CHAIRPERSON NICHOLS: Thank you. Thanks for that  
25 recognition as well.

1           Steven Douglas.

2           MR. DOUGLAS: Thank you, Chairman Nichols,  
3 members of the Board. I have a presentation as well.

4           Good morning. I'm Steve Douglas with the  
5 Alliance of Automobile Manufactures. And we submitted  
6 written comments. And I've talked to many Board members,  
7 so I'll be brief here.

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

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

18           For our recommendations, given all the demands we  
19 must meet and the limited resources that we have, we  
20 simply cannot duplicate effort. We have to work together.  
21 The Board's recognized the importance of harmonizing the  
22 federal and California programs for greenhouse gases. And  
23 we now ask you for the same commitment to harmonize the  
24 criteria emission requirements, including the standards,  
25 the test procedures, the fleet averages, the fuels, and

1 the certification requirements. This will require an  
2 additional rulemaking.

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

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

16 Finally, the vehicles of today are not vehicles  
17 of the 2017 time frame. It's going to be different. So  
18 while we support the three milligram per mile standard at  
19 2017, we can't support the one milligram per mile standard  
20 in 2025. Right now, neither industry nor the agencies  
21 know how to measure PM at such low levels. And automakers  
22 simply can't design, develop, certify, validate, and  
23 produce vehicles to a standard they can't measure.

24 We, therefore, recommend a formal review of the  
25 PM standard, the measurement, technology, and the

1 alternatives. This could probably be completed in the  
2 next three to four years or sometimes around there. I  
3 appreciate your time, and I'd be happy to answer any  
4 questions.

5 CHAIRPERSON NICHOLS: Thank you.

6 Any questions at this time? Yes.

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

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

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

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

25 But this one measurement issue on PM, which is

1 something we're working on already, is something that we  
2 have to look at in that time frame. And if we don't have  
3 an answer before then, we would include it in the mid-term  
4 review.

5 CHAIRPERSON NICHOLS: Thank you.

6 BOARD MEMBER BALMES: Chairman?

7 CHAIRPERSON NICHOLS: Yes, Dr. Balmes.

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

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

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

21 But we have a Plan B. The Plan B is if we can't  
22 measure it in mass, then we would take a very serious look  
23 at an alternative approach, which is particle number. And  
24 believe it or not, we can count ten to the 14th particles  
25 very accurately, while we can't measure one milligram very

1 accurately yet. So we're going to work with the industry  
2 and EPA and try to solve this in the next few years.

3 CHAIRPERSON NICHOLS: Mrs. Riordan.

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

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

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

23 Other areas of difference, like we have different  
24 rules than the rest of the county. So we want our test  
25 fuel to be like our fuel, but we figured out a way that

1 manufacturers can take one or two fuels and give us  
2 equivalent results so it wouldn't result in double  
3 testing. So there's things like that. But there are  
4 probably half a dozen things that we purposely made  
5 different because we couldn't get support for air quality.

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

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

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

25           BOARD MEMBER RIORDAN: I think that would be

1 helpful. And maybe you can convince them of our wisdom.

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

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

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

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

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

17 As you saw this morning, Volkswagen on the screen  
18 there, we were an intermediate volume manufacturer. But  
19 even under the current regulation, we expect to exceed  
20 60,000 sales for '10, '11, '12 model year. And that would  
21 put us on the pathway to be a large volume manufacturer in  
22 2018. So with the changes coming with the reduced volume,  
23 we would certainly also be a large manufacturer in 2018.

24 At issue with us is there is regulatory language  
25 that says if you acquire another company, you may be



1 subject to a four-year lead time. And it's possible that  
2 Volkswagen Group may acquire a smaller company in the next  
3 year or two. And we want planning certainty that we will  
4 have the large volume manufacturer obligation in 2018.

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

10 And I'm happy to take any questions.

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

13 MR. STUART: Yes, it is.

14 CHAIRPERSON NICHOLS: Thanks.

15 MR. STUART: Thanks very much.

16 CHAIRPERSON NICHOLS: Michael O'Brien.

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

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

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

25 Due to the limited time available, I'd like to

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

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

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

23           In addition, we are actively preparing our  
24 electric vehicle program and already have a fleet of I10  
25 EVs launched prior to the G20 summit in Korea as well as

1 our award-winning Elontra electric vehicle we showed  
2 recently at the North American National Auto Show a few  
3 weeks ago. We view this flexibility as a hedge which, if  
4 necessary, we will be able to use only through  
5 overcomplying with the very stringent national greenhouse  
6 gas standards.

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

19 Thank you.

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

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

1 here. Good morning.

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

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

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

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

19 MR. CASSIDY: Great. Thank you, Tracy.

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

24 One deals with the ZEV regulation. We completely  
25 support the staff's 45-day notice. We're especially

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

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

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

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

25           With respect to the rest of our testimony, Madam

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

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

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

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

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

16 California represented almost 4500 of those  
17 10,000 sales to the state, represents almost 50 percent of  
18 the national volume.

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

24 In our next steps now, of course, get our  
25 assembly plant in Tennessee up and running. That does

1 allow our capacity to triple. So that plant at full  
2 capacity will be able to build 150,000 vehicles a year and  
3 200,000 battery packs. So I know the staff shared that  
4 slide of production cost versus volume. That's what we're  
5 going for. This is a mass market launch and we're moving  
6 rapidly through mass market production.

7 Welcome any questions.

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

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

21 The wait times now are down to 90 to 120 days.  
22 Every vehicle is built to order. That's about the length  
23 of the logistics pipeline. It takes about 90 days for us  
24 to receive an order, build the car, ship it, and deliver  
25 it. That's the kind of pipelines we're working with now.

1 It's getting faster and faster. Local production, we'll  
2 shrink that even quicker. Maybe 30 days.

3 CHAIRPERSON NICHOLS: Just need a plant in  
4 California.

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

7 CHAIRPERSON NICHOLS: We can do better.

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

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

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

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

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

20 Toyota also supports the roles of the ZEV program  
21 and the ARB's continuing efforts to accelerate the  
22 commercialization of advanced technology vehicles, and in  
23 particular, the certainty of the proposed changes to the  
24 clean fuels outlet that can provide some certainty for  
25 hydrogen infrastructure.



1           Toyota is pursuing a variety of ZEV vehicles. We  
2 currently have a fuel cell vehicle that can do greater  
3 than 300 miles range on one fill and ready for fuel cell  
4 commercialization in 2015.

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

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

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

21           It's on this subject that we differ with your  
22 staff. We believe that these plug-in Prius can and should  
23 play a large roll in the ZEV regulation. They should not  
24 be viewed as transitional. They will be a key part of  
25 electrification for the fleet for the foreseeable future

1 because it can reach a broader public due to the ability  
2 to cover all customer driving use at a lower cost.

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

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

17           Not only is the overall requirement -- so we  
18 would like actually to have a larger share of the  
19 regulation to be covered by the hybrid electric vehicles.

20           And thank you very much for your time.

21           CHAIRPERSON NICHOLS: Questions, yes.

22           BOARD MEMBER D'ADAMO: Could staff respond to the  
23 issue of greater flexibility on the minimum?

24           CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: On  
25 the -- we show that line that has the distribution of

1 range from ten miles all the way out to many hundred mile  
2 fuel cell vehicle. That really was symbolic as well as  
3 the specific regulation is symbolic of the belief that we  
4 need vehicles in the long term that will run on low carbon  
5 fuels, like electricity or hydrogen to be most of the  
6 vehicles.

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

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

20           And because these vehicles with the lower range  
21 often have to turn their gasoline engine on like when you  
22 go more than 62 miles an hour or more than half throttle  
23 acceleration and things like that, we don't want them to  
24 be so weak that people don't know -- they can't sense  
25 they're getting the benefit from the electric part and

1 therefore have no incentive to actually plug the vehicle  
2 in.

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

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

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

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

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

20           MR. LORD: We feel that if we look linearly from  
21 the current Prius to the future, maybe this isn't an  
22 issue. But if we consider the expansion of hybrid  
23 technology to different types of vehicles, larger vehicles  
24 or maybe vehicles smaller, more cost-sensitive vehicles,  
25 this is an unnecessary barrier, unnecessary decision at

1 this point in time as we're all trying to figure out what  
2 the market is and address the market demands. And my  
3 colleague Mike Love is going to make a presentation on why  
4 we think that this type of --

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

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

10 As Mike Lord mentioned, we have a wide variety of  
11 vehicles that Toyota is working on. This is to make the  
12 point this is not -- Toyota is just not about plug-ins.  
13 We have two electric vehicles that will enter the market  
14 this year. And we've also made announcements that we will  
15 be ready to have a retail available fuel cell vehicle in  
16 2015. We showed a show car of what it might look like at  
17 the recent Tokyo motor show last month. We still believe  
18 that hybrid vehicles have a big role to play.

19 Next slide, please.

20 --o0o--

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

1 U.S.

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

11 --o0o--

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

18 Next slide.

19 --o0o--

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

24 Next slide.

25 --o0o--

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

5           Next slide.

6                               --o0o--

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

12           The third slide shows -- please, next slide.

13                               --o0o--

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

18           Next slide, please.

19                               --o0o--

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

1 into the market, which we all think is a CARB goal.

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

4 CHAIRPERSON NICHOLS: Thank you very much.

5 Yes?

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

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

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



1           CHAIRPERSON NICHOLS: Mr. Cross.

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

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

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

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

21           I, as a consumer, probably wouldn't be inclined  
22 to plug it in. I would let it drain like a regular Prius.  
23 So that brings us to what it's assuming is that the  
24 vehicle's plugged in all the time. And that's the big  
25 assumption, I think as you get to vehicles that have very

1 limited capability. And the other ones we're talking  
2 about, you have to drive electric before it runs out of  
3 charge before the engine starts.

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

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

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

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

25 You can have a ten-mile range or 13-mile range,

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

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

20 I guess that's it as far as questions are  
21 concerned. We have a few more minutes before the break,  
22 and we have several people who I'd like to call on who I  
23 know have to leave. I am going to insert them ahead of  
24 you. Dr. Vinetz, Dr. Ong, and Dr. Lloyd, all people with  
25 Ph.D.s I guess. I don't think they're all MDs. But they

1 seem to want to be a group. So if we could get you guys  
2 and gals up here.

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

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

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

18 The parable exemplifies values. And I'd like to  
19 focus on those values now. From my perspective, the  
20 values are that in a human society we care for the  
21 vulnerable and that we value this planet and the  
22 environment we inherit and altered by our presence.

23 But the parable also represents a dilemma of  
24 choice: Rescuing victims or preventing harm in the first  
25 place. I think we have to do both.

1           My words or my work and that of my colleagues is  
2 downstream, trying to rescue and care for those with  
3 conditions caused by toxic air. Intrauterine poisoning,  
4 premature births and deaths, brain injury and permanent  
5 lung damage in children, asthma, COPD, lung cancer, heart  
6 disease, and many, many other diseases. We also have as  
7 our work to alert everyone to the harm that we see.

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

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

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

16           CHAIRPERSON NICHOLS: If everybody would just do  
17 that.

18           Dr. Ong and then Alan

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

23           As a physician and especially a physician living  
24 in Los Angeles County, I'm deeply concerned about the air  
25 pollution and lung health. Southern California is home to

1 one of the most entrenched air pollution problems in our  
2 nation that affects million of our residents living with  
3 asthma, heart and lung disease, and our chronic health  
4 conditions.

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

15           From a public health and air quality perspective,  
16 this is one of the most important regulations our state  
17 will pass this decade. A strong clean cars program that  
18 cuts smog, soot, and climate pollution and increases air  
19 emission transportation is strongly supported by  
20 California's public health community. Forty leading  
21 public health organizations endorsed the California Clean  
22 Cars campaign, including the American Lung Association of  
23 California and the California Chapters of the American  
24 Cancer Society, American Heart Association, the American  
25 Academy of Pediatrics, the California Thoracic Society,

1 the California Academy of Family Physicians, as well metro  
2 societies and animal coalitions throughout the state.

3           So we have submitted a petition signed by nearly  
4 150 authors, nurses, respiratory therapists, and other  
5 California health professionals with several hundred more  
6 clean air supporters calling on you to support the  
7 strongest possible standards.

8           Further, this letter from health and medical  
9 organizations ask that you go forward with a strong  
10 package of clean car standards. These organizations  
11 support the work of staff to bring about this opportunity  
12 to improve public health by setting strong smog and  
13 particulate standards to be implemented no later than  
14 2025.

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

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

25           The public health community stands ready to

1 support and work with your staff as these programs move  
2 forward to improve our air and the health of our patients.

3 Thank you for the opportunity to speak with you  
4 today.

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

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

11 DR. LLOYD: Sorry I got confused.

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

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

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



1 responsiveness.

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

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

6           (Laughter)

7           CHAIRPERSON NICHOLS: Our former Chair as well.

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

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

15           The California program retains critical value as  
16 a unique floor for ZEV technology development in face of  
17 uncertainty. The creation of an upward trajectory post  
18 2018 creates an important pathway to commercialization of  
19 vehicles that are critical to meeting clean air and  
20 climate change goals.

21           ICC also recognizes the need for hydrogen  
22 refueling infrastructure to support the commercialization  
23 of fuel cell vehicles and strongly supports CARB's effort  
24 to explore both voluntary and regulatory options to ensure  
25 adequate supply.

1 California is no longer alone addressing electric  
2 drive vehicles and in the battery vehicles and in the last  
3 few weeks plans separately joined Japan and Korea, China  
4 and Germany in establishing partnerships between vehicle  
5 and fuel providers with fuel cell vehicles.

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

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

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

14 Moving the credits for the neighborhood electric  
15 vehicles;

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

20 We commend CARB for continuing the leadership on  
21 reducing emissions. Its critical for the leadership to  
22 address public health in California and sets an important  
23 precedent for the nation and the world. However, we feel  
24 the reductions schedule for PM emissions is not  
25 commensurate with the previously successful implementation

1 of technology-forcing standards.

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

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

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

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

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

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

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

1 So thank you very much.

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

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

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

19 It also is critical for meeting consumer demand  
20 for cleaner cars in states across the nations. Consumers  
21 understand the benefits and consistent voiced support for  
22 leadership on clean car standards. In fact, CFA's latest  
23 pole found that more than 70 percent of Americans support  
24 states being able to allowed to continue setting tailpipe  
25 emission standards. In addition to CFA survey results,

1 CFA consumer reports found that 81 percent of respondents  
2 in California agree that the state should require all  
3 automakers to significantly reduce emissions.

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

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

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

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

1 Thank you very much.

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

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

7 (Where upon a lunch recess was taken.)

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1 zero-emission vehicles into commercialization. It does a  
2 disservice to the citizens of California by denying them  
3 the incremental air quality benefit that would be lost,  
4 creates an unlevel playing field by providing a select  
5 group of manufacturers a significantly lower cost of  
6 compliance, and slows down the market acceptance of  
7 electric drive vehicles.

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

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

24           Our net on this is that the Board should just not  
25 adopt this particular provision of the proposed rules.



1 Thank you for your attention.

2 CHAIRPERSON NICHOLS: Okay. Thank you.

3 A question, yes.

4 BOARD MEMBER SPERLING: Question for staff.

5 Didn't I hear in the presentation that only  
6 34,000 -- the over-compliance provision would result in  
7 only a reduction of 34,000 vehicles a year? Here,  
8 Chrysler is saying it's 350,000.

9 AIR POLLUTION SPECIALIST WONG: This is Anna  
10 Wong.

11 It's 38,000 -- if there's manufacturers  
12 representing 20 percent of California sales. In our  
13 analysis, if they're fulfilling their pure ZEV category  
14 and letting additional credits fill up to what they can in  
15 their PHEV category, then it's 160,000 vehicles if  
16 100 percent of manufacturers take it. We don't think  
17 that's going to be the case.

18 I think that the 350,000 number comes from if  
19 you're using all those credits to take away your PHEV part  
20 of your requirement. But I don't see that happening only  
21 because usually in the past manufacturers have taken  
22 credits to offset their most expensive vehicles which  
23 usually are their ZEV vehicles. So our numbers say closer  
24 to 160,000. But in theory, yes, you could probably lose  
25 more depending on how you use your credits.

1 BOARD MEMBER SPERLING: And what about the other  
2 Section 177, the other ten states? Our number is only --

3 AIR POLLUTION SPECIALIST WONG: Is only  
4 California, correct.

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

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

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

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

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

23 Regarding the lab program, Ford has worked with  
24 staff to develop a program to target its near-zero  
25 emissions, while allowing the introduction of new fuel

1 economy technologies. In particular, the proposed PM  
2 phase-in allows us to introduce fuel efficient engines and  
3 provides time for us to make further engine improvements  
4 to achieve the long-term PM targets, while on parallel,  
5 improving the testing to provide reliable and repeatable  
6 measurements.

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

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

22           The goal of the ZEV program is to commercialize  
23 zero-emission vehicle technology. At some point, the ZEV  
24 mandate goes beyond its usefulness and market forces have  
25 to take over.

1           Similar to their approach taken by the Board when  
2 P ZEVs and ATP ZEVs became commercial, Ford requested that  
3 the Board incorporate the ZEV technologies into the  
4 performance-based LEV III emission and greenhouse gas  
5 program and in the post 2025 time frame.

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

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

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

22           That concludes my comments.

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

25           MS. RUDY: Any questions?

1           CHAIRPERSON NICHOLS: No.

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

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

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

18           The two points we would like to leave today, the  
19 first is with regard to the midterm review of the  
20 particulate matter standard in or around 2017 time frame  
21 as a concept. We're highly supportive of and strongly  
22 encourage the Board to include alongside review of the GHG  
23 standards. And also as many previous witnesses have  
24 stated, strongly encourage the Board to continue working  
25 with your federal counterparts to get the Tier 3 program

1 enacted to create a renewable standard and help the  
2 friends at the federal level along with the California's  
3 leadership.

4 Thank you very much. Thank you, Chairman  
5 Nichols.

6 CHAIRPERSON NICHOLS: Robert Babik.

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

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

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

24 For example, this other regulation ideally  
25 encourages vehicles that maximize electric vehicle miles

1 traveled. While pure BEVs are limited to trips in their  
2 immediate range, extended range EVs like the Volt can be  
3 driven on all trips and can be a household's only car.  
4 Extended range EVs like Volt will be driven most of the  
5 time on grid electricity. And we know this based on real  
6 world data. Therefore, we ask that the BEVx criteria be  
7 modified by changing the minimum electric range  
8 requirement to 50 miles to align it with the ZEV category  
9 and by allowing unlimited range on APU, auxiliary power  
10 unit.

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

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

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

1 bring to market what consumers can't refuel.

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

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

13 CHAIRPERSON NICHOLS: Yes.

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

17 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.  
18 This is similar to the discussion on the Toyota vehicle in  
19 a way. The BEV --

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

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

24 The BEVx concept, as you've learned about it, is,  
25 in our view, very much a battery electric vehicle. So



1 that most of the time, almost all the time, maybe even  
2 more the vehicle will run on the electric mode. And the  
3 APU will be more of a backup for those unintended chances  
4 when you run out of juice.

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

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

23           So Volt with unlimited APU range looks to us in  
24 between BEVs and the lightest plug-in vehicle like a  
25 Prius. And with a BEVx, there is really a category that

1 says "I'm a BEV and I'm a slight variant of it," but it's  
2 going to have all of its mileage on electricity. That's  
3 the difference.

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

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

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

25 Yes?

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

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

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

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

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

25           BOARD MEMBER LOVERIDGE: Thanks.

1 BOARD MEMBER RIORDAN: Madam Chair, quick  
2 question.

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

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

14 BOARD MEMBER RIORDAN: So you can verify?

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

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

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

24 The GM vehicle basically can be driven on gas.  
25 So it has limited electric range, if you as a consumer or

1 new adopter or whatever chose to use it as an electrically  
2 helped vehicle, and it will be. But if you as the third  
3 owner or even somebody who is satisfied with the car who  
4 doesn't want to charge it, you can drive it on gasoline.  
5 I think that's the distinguisher. If you have a higher  
6 range criteria, and so the fact that the vehicle really  
7 isn't designed to be run on gasoline.

8 CHAIRPERSON NICHOLS: And my point here -- let me  
9 just try to restate this one more time.

10 We're not passing judgment on who's good, better  
11 or less good, or who's going to win and who's not going to  
12 win in the marketplace. We can't know that. We don't  
13 know that.

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

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

24 DIVISION CHIEF CROSS: I'm trying to match the  
25 credit up with where the technology is.

1 BOARD MEMBER SPERLING: Can I ask?

2 I agree with everything you said, but you would  
3 add to it that we also want to stimulate innovation and  
4 investment and encourage experimentation. As you say,  
5 this is really the marketplace. So we want to be careful  
6 how we create these credits that we do it in a way that  
7 does encourage innovation and experimentation. Because  
8 this is really just to get things started. We're counting  
9 on ZEVs dominating the market. And so --

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

14 Diarmuid O'Connell.

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

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

22 As many members of the Board are aware, Tesla  
23 Motors is a California-based corporation with headquarters  
24 in Palo Alto and a large manufacturing facility based in  
25 Fremont, California. We're a California company dedicated

1 to the innovation, production of world-class hybrid  
2 vehicles in California, US market, and for the rest of the  
3 world. Tesla Motors is committed to large emission  
4 reducing, high performance, high utility, long range  
5 electric vehicles at ever increasing prices, thereby  
6 expanding the mass market.

7 Tesla's businesses strategies follows a two-prong  
8 approach. First, we produce our own vehicles like  
9 groundbreaking first of a kind Tesla Roadster with zero to  
10 60 in 3.7 seconds and a range of 245 miles on a single  
11 charge. I think at this point, there is little argument  
12 that the launch of this vehicle in 2006 catalyzed the  
13 current generation of EVs.

14 We're quickly moving toward the start of  
15 production of our second vehicle, the Model S, which will  
16 begin customer deliveries by July of this year. The Model  
17 S is a premium EV that has seating for five adults and up  
18 to two children. Zero to 60 times of as little as 4.4  
19 seconds and a range up to 300 miles on a single charge.  
20 The Model S will be offered at a base price of less than  
21 \$50,000 after federal tax credit, costing less than half  
22 the Tesla Roaster.

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

1 point of Tesla EVs.

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

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

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

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

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

25           We continue to build our powertrain supply



1 business both with existing and new customers. Both our  
2 own vehicles and the vehicles we're developing with our  
3 strategic partners, Daimler and Toyota demonstrate the  
4 market and technology leadership that Tesla has been able  
5 to establish in this brief period of existence.

6 I'm about to run out of time.

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

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

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

23 I would also note that the option will also  
24 reduce demand for ZEV credits, the sale of which Tesla  
25 uses to support its operations and growth, including the

1 further development and production of EV and EV  
2 powertrains.

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

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

9 Okay. Barbara Nocera.

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

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

23 Mazda is very similar to the remaining IBMs that  
24 should be similarly defined as a IVM. Mazda's approach  
25 for the short- to medium-term is to develop fuel-efficient

1 technologies that can be applied across our broad line and  
2 made available to all of our customers at an affordable  
3 cost.

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

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

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

22           In addition to the significant level of resources  
23 required to develop advanced technologies for EVs, it's  
24 necessary vehicles be not only produced but solve in  
25 numbers to meet the annual credit requirements.

1           However, where companies with limited resources  
2 such as Mazda, marketing such vehicles is another  
3 significant burden. In the proposed revisions to the ZEV  
4 program, there is no difference in annual minimum  
5 percentage requirements between the LVM and IVM  
6 categories. The only difference between the two  
7 categories are additional limited compliance flexibilities  
8 available to IVMs. Flexibilities that are essential to  
9 Mazda.

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

18           Thank you for considering our views.

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

22           Robert.

23           Mr. BEINENFELD: Chairman Nichols and members of  
24 the Board, I never thought I would be testifying after Reg  
25 Modlin who advocates for more -- or less flexibility in

1 the ZEV mandate. So it's a little awkward. But we  
2 proceed.

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

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

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

1 battery electric, and plug-in electric vehicles in  
2 significant volumes.

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

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

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

18           CHAIRPERSON NICHOLS: Thank you.

19           Andreas Klugescherd.

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

22           My name is Andreas Klugescherd. I'm Vice  
23 President of Governmental Affairs for BMW group. And we  
24 appreciate the opportunity today to comment on the  
25 proposed regulations. We focus our comments on the Auto

1 Alliance, but I would like to focus now on three topics of  
2 particular interest for BMW.

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

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

17           For GHG, ARB also supports the inclusion of  
18 emissions and the compliance calculation for automakers  
19 through the entire time frame of the regulation. And this  
20 contradicts the federal approach. As it is our  
21 understanding that a single national standard has lead to  
22 almost harmonization of standards and procedures, CARB  
23 should no longer set standards or comparables to the  
24 federal laws but also incorporate the same fundamental  
25 structure for achieving these standards.

1           What is more of the agency's responsibility for  
2 development of efficient vehicles with extremely low or  
3 zero tailpipe emissions with the OEMs, but manufacturers  
4 have absolutely no control over the CARB content of the  
5 upstream. And we are not responsible, and I would like to  
6 stress that we are not responsible for the decisions made  
7 that California, for example, can lead X times as early as  
8 1901, which is the oldest station in California still in  
9 operation.

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

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

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

24           The regulatory process should evaluate new test  
25 procedures and facility requirements, consistency of group



1 capability of measuring PM at extreme low levels, as well  
2 as (inaudible) of particulate testimony method.

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

9 CHAIRPERSON NICHOLS: Thank you. David Paterson.

10 MR. PATTERSON: Good afternoon. Thank you.

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

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

17 Next slide.

18 --o0o--

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

25 One of the big goals that we have is our

1 commitment of 20 percent EV production worldwide by the  
2 year 2020. So we have concerns when it comes to the ZEV  
3 regulation, and that's what I'm going to address here  
4 today.

5 Next slide.

6 --o0o--

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

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

16 Next slide.

17 --o0o--

18 MR. PATTERSON: But we have these concerns. When  
19 you look at the concerns, they basically -- we have ended  
20 the classification for independent low volume  
21 manufacturers. And when that classification was ended  
22 when I spoke with staff about this, they said that we were  
23 going to move the classification towards the same  
24 requirements because those are the small companies and we  
25 are going to have a separate set of requirements for the

1 smaller companies. But somehow that doesn't happen.

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

9 That gets me to my second concern, is the Section  
10 177 pooling and the optional compliance path. In general,  
11 I've seen a draft of this and Mitsubishi is generally  
12 supportive of this idea but brings up the same kind of  
13 concern. We were not included in that process to discuss  
14 that to discuss that compliance path. So we really can't  
15 make a judgment one way or another whether that's going to  
16 be beneficial or not for our company.

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

23 In the third concern, it goes deeper into more  
24 technical. These are things we'd like to resolve with the  
25 staff. But we do not have a travel provision before 2017.

1 So we have no capability to move forward to 2018 with a  
2 compliance plan.

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

7 Thank you very much.

8 CHAIRPERSON NICHOLS: Thank you.

9 Eileen Tutt.

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

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

17 But I want to focus my comments on the price  
18 reflection in the CARB staff report, because CalETC is  
19 conducting its own macro-economic assessment of the impact  
20 of electric vehicles on our economy here in California.  
21 We have a different idea of what some of those prices will  
22 be. There is a huge difference between electric vehicle  
23 and a combustion engine vehicle and the opportunities that  
24 affords people who buy an electric vehicle. And those  
25 benefits go beyond just the fuel cost savings. There are

1 other benefits to electric vehicles that can be monetized,  
2 and we have done so. I'm just going to provide a quick  
3 example.

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

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

13 And then I'll finally mention the reduced  
14 maintenance cost for electric vehicles which is around  
15 \$1200 per vehicle. So these are real cost savings for  
16 consumers who buy these vehicles. And we'd like to see  
17 them reflected when we consider prices.

18 I'll move quickly onto the ZEV mandate. We are  
19 not supportive of the over-compliance, the allowing  
20 over-compliance with the LEV III mandate to meet the --  
21 greenhouse gas over-compliance to meet the ZEV obligation.  
22 And the reason for us is we see the ZEV mandate as much  
23 more than a greenhouse gas mandate. It is a key policy  
24 driver getting us off our dependence on oil. And this  
25 dependence is strangling our economy. Our kids are going

1 overseas fighting in unstable countries that have a lot of  
2 oil. And it's damaging our environment. We need to  
3 reduce the dependence that's very important.

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

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

20 Thank you.

21 CHAIRPERSON NICHOLS: Thank you.

22 Tyson Eckerle.

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

1 developments.

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

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

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

23           Additionally, we strongly support the staff  
24 proposal that said the need for plug-in infrastructure. I  
25 think it's very appropriate as Eileen just talked about

1 right now as far as we don't know where the market is  
2 going, but data collection can play a tremendous role in  
3 figuring out how to use a potential mandate to expand the  
4 battery electric vehicle infrastructure market.

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

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

23           And so regardless of what happens with the MOA, I  
24 think the CFO is absolutely critical to keep driving the  
25 process forward. The MOA provides a preferable way to



1 deploy infrastructure and the CFO provides the certainty  
2 needed to make sure the infrastructure is there when we  
3 need it.

4           So thank you very much.

5           CHAIRPERSON NICHOLS: Okay. Thank you.

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

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

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

14           To the members of CARB, first of all, I want to  
15 take this opportunity to thank each and every one of you.  
16 And I want to offer my strongest support for the full  
17 suite of clean vehicle fuel policies that are under  
18 consideration today. I have the good fortune of  
19 representing what I would say the most diverse legislative  
20 district on planet earth, believe it or not. We are right  
21 in the middle of that district. Have the good fortune of  
22 representing all of Chinatown, which is to the right of  
23 me; Koreatown, which is to the southwest of me; Thaitown,  
24 Little Armenia, Little Tokya, Pico Union/McArthur Park,  
25 which has the largest concentration of Central Americans

1 outside of Central America, and Boyle Heights and East  
2 L.A. which has the largest concentration of Mexican  
3 immigrants outside of the republic of Mexico. It is an  
4 amazingly diverse tapestry of diversity.

5           At the same time, this is a district that,  
6 without question, this beautiful mosaic, this tapestry is  
7 being choked like a serpent because it is home to six of  
8 the busiest freeways in the country: The 2, 5, 10, 101,  
9 110, as well as the 710 freeway. So obviously, the  
10 children in my district are disproportionately impacted by  
11 emissions, whether it's stationary or mobile in my  
12 district.

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

19           These rules include obviously stronger standards  
20 to reduce smog, stronger standards to increase the  
21 environmental efficiency of new vehicles, thereby reducing  
22 heat trapping gases that cause global warming, a  
23 forward-looking clean fuels requirement and the very  
24 important zero emission vehicle program to help bring  
25 about truly advanced vehicles to the market.

1 California, without a doubt, has led the nation  
2 and the world protecting public health. Obviously, AB 32  
3 came to fruition. We had the Kyoto plan. There was a lot  
4 of concern with scientists and throughout the world what  
5 was California going to do, especially given the fact that  
6 the Kyoto plan and the speed within the George W. Bush  
7 administration was not moving forward. Obviously,  
8 California has been a trend setter, not just in the  
9 nation, but obviously throughout the world.

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

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

1 advanced vehicles.

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

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

25 And therefore, Madam Chair Mary Nichols, as well

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

7 With that, I want to thank you, Madam Chair.  
8 Again, I thank you very much.

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

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

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

21 SENATOR DE LEON: Thank you.

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

1 know.

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

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

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

9 I want to start off with absolute praise. The  
10 success of the Air Board in reaching the milestone this  
11 year of over 18,000 plug-in vehicles, to compare this, in  
12 2001, we had 5500 Priuses. This is really -- when  
13 everybody starts saying the market is not here or this is  
14 an issue where there's so few of them sold, we sold more  
15 than three times as many plug-in vehicles this year. I  
16 think that is really a testament to what the ARB Board has  
17 done in the past. And creating the ZEV program really has  
18 driven us to be true.

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

25 And let's all keep our eye on the goal, which is

1 80 percent greenhouse gas reduction by 2050. The cars  
2 that we put on the road today are very, very important and  
3 the cars we put on the road tomorrow. So the sooner that  
4 we get the cars on the road, the better off it will be.

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

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

20 The other thing I wanted to quickly address is  
21 wimpy plug-in hybrids. We really think that wimpy plug-in  
22 hybrids are a bad idea. Ten miles of electric range is  
23 ridiculous. We basically -- you know, Toyota is  
24 advocating for this, and today they go 15 miles. So why  
25 are they advocating for something in a standard in 2018

1 that only goes ten. We think that's critical.

2           Finally, in terms of clean fuel outlets, I think  
3 the other thing we should consider is if we are talking a  
4 million dollars an outlet, Nissan has just announced a  
5 \$10,000 fast charger. Why don't we put two or three of  
6 those and spend one or two or three percent of that money  
7 into each one of those clean fuel outlets and really make  
8 them a clean fuel outlet so there is multiple fuel types  
9 there.

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

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

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

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

22           Our mission when we were started in 1992 was to  
23 enable the development of a clean transportation  
24 technologies industry, and then we worked to accelerate  
25 the growth of the industry.



1           As Chair Nichols noted in her opening comments,  
2 we have, indeed, seen very significant technological  
3 process in our two decades in our organization's history  
4 and since that first was created. Today, Cal Start has  
5 more than 145 member companies, including car, truck, bus  
6 manufacturers, as well as start-up vehicle manufacturers,  
7 utilities, part suppliers, non-profits, agencies, venture  
8 capitalists, and banks.

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

15           I don't have time to go through the whole list,  
16 but quickly I'd like to read off a few of the California  
17 companies that I think will benefit. Two start-up  
18 companies, Santa Clara has a chip that will help engines  
19 run. Power Genex in San Diego has a better battery for  
20 mile hybrids. KD's (phonetic) Power has a next generation  
21 internal combustion engine. Coda and Tesla obviously are  
22 two promising electric vehicle start-ups. Coulon and  
23 ClipperCreek have electric vehicle chargers. Simple  
24 Materials out in the Coachella Valley area is developing  
25 lithium from geothermal wells. They will become one the

1 biggest lithium suppliers, and it will be bold. And of  
2 course, we have Quantum developing a plug-in hybrid pickup  
3 truck and EVI and Vision Industries developing  
4 all-electric trucks.

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

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

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

24 MR. PROVENZANO: Madam Chair, Mr. Mayor, the rest  
25 of the Board, thank you for this opportunity to talk to

1 you today. Very exciting day, by the way.

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

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

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

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

1 among the public from air pollution.

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

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

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

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

24           CHAIRPERSON NICHOLS: You can submit written  
25 testimony.

1 MR. PROVENZANO: Keep on this track. It's  
2 wonderful. Thank you.

3 CHAIRPERSON NICHOLS: Mark Abramowitz.

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

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

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

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

25 Our OEM members have expressed concern even in

1 the limited FCEV instruction so far that their vehicles  
2 have sat unused for extended periods of time while  
3 awaiting infrastructure. As volumes increase, it is  
4 essential that infrastructure be planned in advance of and  
5 in coordination with planned introduction of fuel cell  
6 vehicles. Without good public policy, we will forever be  
7 struck in neutral.

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

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

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

24 CHAIRPERSON NICHOLS: Thank you.

25 MR. LAND: Madam Chair and Board members, I'm

1 Klaus Land with Mercedes-Benz. It's an honor to be here  
2 today.

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

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

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

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

23 Second topic, need for public fueling  
24 infrastructure. The clean fuel are recommend that to  
25 assure that we have clean fuels such as hydrogen available

1 to meet the demands by the commercialization of fuel cell  
2 vehicles and proposed amendments to the self regulation.

3 Mercedes has a plan for high volume production in  
4 years 2015 to 2017. But the goals of the fuel cell  
5 vehicle market is highly dependent on area-wide  
6 availability of population hydrogen fueling stations. We  
7 request you lower the threshold trigger from 10,000 to  
8 2,000. The lower trigger ensures infrastructure will be  
9 there when these are delivered.

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

20 CHAIRPERSON NICHOLS: Thank you.

21 Yes.

22 BOARD MEMBER BERG: From a previous speaker, we  
23 heard that the PM standards for Europe are, in fact,  
24 stricter than the ones we have in our regulation today.  
25 Could you may be make a comment on that?



1 MR. LAND: Yes. When we consider PM standards,  
2 we have to consider the test siting, which is behind. In  
3 Europe, we have our certified new driving site, which is  
4 less aggressive than the FTP side. What we further  
5 deveoped was the FTP side use the PM standard for ten  
6 milligrams to three milligram and one milligram. What I'm  
7 talking about is the very special aggressive U.S. test  
8 site which is just for the U.S.

9 BOARD MEMBER BERG: Thank you.

10 CHAIRPERSON NICHOLS: Okay. Thank you.

11 Elaine O'Grady.

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

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

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

22 While I'm here today speaking on behalf of  
23 Vermont, many of Vermont's interests are shared by the  
24 other Section 177 states in the northeast. We strongly  
25 support California's proposed advanced clean car

1 rulemaking. And in particular, we support the new  
2 optional Section 177 compliance path.

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

13 The new optional Section 177 ZEV compliance path  
14 complements these ongoing effort to follow California's  
15 lead and transform our vehicle fleets in the northeast.

16 Vermont urges the Board to adopt this new option  
17 and allow 177 states to establish and grow BEV markets  
18 sooner.

19 Staff's initial proposal delayed the requirement  
20 to place new BEVs in Section 177 states until model year  
21 2018 by extending the travel provision. The new  
22 compliance path requires manufacturers that select this  
23 option to place a reasonable number of battery electric  
24 vehicles in Section 177 states in model year 2017 and  
25 model year 2017. Thus, this new compliance path will

1 establish BEV markets in the Section 177 states two years  
2 earlier than the initial proposal.

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

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

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

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

22           Unlike California, other states are preempted  
23 from establishing emission standards under the Clean Air  
24 Act. Consequently, the Board is uniquely positioned to  
25 either enhance or impede our efforts to transform

1 light-duty vehicle fleets in the northeast and to meet our  
2 long-term climate change goals.

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

5 CHAIRPERSON NICHOLS: Thank you.

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

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

17 (Applause)

18 CHAIRPERSON NICHOLS: And now our neighbors to  
19 the north.

20 MR. GINSBURG: Good afternoon, Chair Nichols and  
21 members of the Board. I'm Andy Ginsburg, the Air Quality  
22 Administrator for Oregon Department of Environmental  
23 Quality representing the western Section 177 states.

24 I'm here to comment on the proposed ZEV 2.0 rules  
25 and express Oregon's support for the optional Section 177

1 compliance path as proposed by staff.

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

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

15 We currently have well over 100  
16 publicly-available charging stations with more planned in  
17 the coming year. Our Public Utilities Commission is  
18 established procedures for utilities to assess tariffs for  
19 electric vehicle charging. Our Building Codes Division is  
20 developing requirements for new construction to  
21 accommodate electric vehicle charging. And our local  
22 governments are developing incentives to stimulate  
23 electric vehicle use. So we're ready for the electric  
24 vehicles that will be required in our state under the  
25 optional requirement path. We just need more vehicles.

1 I want to highlight a couple of key provisions in  
2 the proposal that we urge you to include in the final  
3 rule.

4 First, it's important to the 177 states who  
5 automakers choose the optional compliance path must meet  
6 all of its elements until it ends in 2021. The gradual  
7 phase-in of credit percentages and the pooling of credit  
8 obligations as described by Ms. Wong would only be  
9 available to manufacturers who opt in by September 1st,  
10 2014, and provide the additional ZEVs to 177 states in  
11 model years 2015 and 2016, as Elaine just mentioned.

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

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

25 We also agree to trading between the two pools at

1 a 30 percent premium to provide automakers with added  
2 flexibility, while maintaining a strong incentive for ZEVs  
3 to be distributed to each of the pooled regions.

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

10 Thank you very much for the opportunity to  
11 comment.

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

18 Cathy Reheis-Boyd.

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

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

23 I'm going the talk about the CFO rule in  
24 particular and then start with that and then move and talk  
25 to the collaborative process that's been referred to.

1           So WSPA and our members, we've been actively  
2 involved in the clean fuels outlet regulatory amendment  
3 workshops and all of the meetings over the past two years.  
4 We strongly oppose the CFO regulation. It imposes an  
5 obligation to refiners and importers of gasoline and  
6 diesel fuels as the regulated parties responsible for  
7 building and operating facilities statewide to dispense  
8 hydrogen fueled retail. Forcing CFO infrastructure  
9 investments from non-interested parties will likely result  
10 in legal challenge.

11           Now I do want to talk about what I've personally  
12 been involved in and commend Tom Cackette, Analisa, all of  
13 the partnership, the automakers. And what we have been  
14 involved in is a productive participant in the hydrogen  
15 infrastructure stakeholder work group. We've diligently  
16 worked together to try to understand technology,  
17 equipment, funding challenges necessary to make an  
18 efficient business case for early deployment of hydrogen  
19 infrastructure. And we all want to avoid stranding any  
20 investments for those interested in voluntarily engaging  
21 in this. I think you'll hear from the COIMA  
22 representative next. In fact, our industry hired Ken  
23 Gunn to help that collaborative process to develop a  
24 business case and offered that over a year's period to  
25 make sure investments would deliver a positive result.



1           So there have been great discussions on roll-out  
2 plans and feedback loops and voluntary capital investments  
3 to position this appropriately. And we've been very  
4 encouraged by some of the discussions of using the  
5 existing programs like 118 and certainly we've been  
6 involved in other collaborations, like the Carl Moyer  
7 Program. But to insist on adopting a CFO mandate for  
8 refineries and importers will only stifle collaborative  
9 discussions. Potential litigation would delay incentives  
10 for early deployment of hydrogen at retail and won't  
11 provide the certainty we're all looking for.

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

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

21           We urge ARB to withdraw the CFO amendment  
22 provision on refiners and importers and instead continue  
23 to support the collaborative efforts within the hydrogen  
24 collaborative framework to progress the installation of  
25 hydrogen infrastructure in the state in a voluntary

1 cost-effective manner.

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

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

8           MS. REHEIS-BOYD: Yes.

9           CHAIRPERSON NICHOLS: I think that will do it  
10 then.

11           Okay. Jay McKeeman.

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

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

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

24           Most importantly, this work establishes a  
25 business case focused on marketers who would most likely

1 enter this emerging market and it creates a much more  
2 efficient and transparent mechanism for funding. However,  
3 if litigation on the CFO happens, all this good work stops  
4 and we lose the important and broad coalition needed to  
5 obtain the funding to make the MOU work.

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

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

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

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

21           But as I think the staff has laid out, we also  
22 have an obligation here to try to keep faith with people  
23 who are producing the cars that need this fuel. And we  
24 have simply got to have a structure that makes sure that's  
25 going to happen.

1 MR. MCKEEMAN: And you have that. You have that  
2 in the MOU. It's very carefully worded. The metrics have  
3 been carefully established to allow understanding of  
4 progress and success. It's all there. I'm just saying,  
5 if you go forward, it's going to create a big problem.  
6 That's what I'm observing. I'm not predicting lawsuits.  
7 I'm just saying it's going to create a problem.

8 CHAIRPERSON NICHOLS: Thank you.

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

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

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

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

24 CHAIRPERSON NICHOLS: You're the one who stood up  
25 and made the comments.

1 BOARD MEMBER SPERLING: It was intended more to  
2 WSPA.

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

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

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

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

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

1 it's been identified as that for the last eight years  
2 running.

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

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

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

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

24           So my request -- or our coalition's request is  
25 that as part of your adoption and your resolution today

1 that you ask the staff to work with our industry and take  
2 a look at the life cycle emissions again for natural gas,  
3 for renewable natural gas, and compare it to where we  
4 think these other fuels and technologies are going. And  
5 we do that work this year.

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

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

15           Katherine.

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

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

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

24           California communities must have retail hydrogen  
25 stations available before customers can chose to buy or

1 lease a fuel cell car. Automakers have invested billions  
2 to make fuel cell vehicles a commercial reality,  
3 commercial product, and many of them plan volume  
4 production in the 2015 time frame.

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

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

22           Now, last July, I was asked to convene a group of  
23 stakeholders to find a collaborative approach as an  
24 alternative to require regulated parties to build hydrogen  
25 stations. Oil companies, auto companies, industrial gas



1 companies, government agencies and environmental  
2 organizations have met seven times and made significant  
3 progress in developing a common understanding of the needs  
4 as well as innovative mechanisms to support success.  
5 While there is no agreement yet, the stakeholders continue  
6 to meet in small teams to work on specific tasks and we  
7 have scheduled large group meeting in February.

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

11 Thank you very much.

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

20 MS. DUNWOODY: I think that the mechanism that  
21 the staff has proposed is a very elegant solution. It  
22 kind of enables there to be options going forward.  
23 Certainly, it sets forth the regulation that the staff is  
24 recommending, but also provides an alternative approach if  
25 the stakeholders come to an agreement and find a

1 collaborative pathway forward. So it's kind of an  
2 opportunity to have really the best solution come forward.

3 CHAIRPERSON NICHOLS: Okay. Thank you.

4 Julian Canete.

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

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

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

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

19 Our members, like all small businesses throughout  
20 this great state, are still suffering from the effects of  
21 the recession. Business is still down. Costs are still  
22 going up. And access to capital continues to be an issue.  
23 The government is asking us to pay more taxes at a time  
24 when we can least afford it. Consumers are facing similar  
25 challenges with their own families.

1           We already experiencing or facing significant  
2 increases in energy costs due to regulations like the  
3 renewable portfolio standard, cap and trade, and the  
4 pending low-carbon fuel standard. The billions of dollars  
5 in costs from the clean fuel outlet rule will inevitably  
6 be passed along to consumers' businesses as well as adding  
7 to this burden. Yet, this regulation would be a windfall  
8 for companies that sell hydrogen fuel and hydrogen  
9 vehicles without having to pay for a delivery system for  
10 their product and for a handful of consumers who can  
11 already afford a hydrogen vehicle.

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

20           Thank you.

21           CHAIRPERSON NICHOLS: Thank you.

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

25           MR. CANETE: Our staff is still looking at that

1 and they've been meeting with other auto manufacturers, et  
2 cetera, and discussing that. I would just -- Ford Motor  
3 Company and GM earlier this month assessing those issues.  
4 We hope to have that over to you soon.

5 CHAIRPERSON NICHOLS: Thank you.

6 Dr. Jackson.

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

9 My name is Dr. Joseph Jackson. I'm here today  
10 representing the Carson Black Chamber of Commerce.

11 When our chamber looks at regulation, we're  
12 interested in knowing a few specific things. How much is  
13 it going to cost? Who's going to pay for it? And what  
14 benefit will it bring to our community?

15 We've looked at this rule and have determined  
16 that it's going to cost millions of dollars. Those costs  
17 will ultimately find a way into businesses and consumers.  
18 As for benefits concerned, we do not see any for the most  
19 part, not for the environment, not for the economy, and  
20 not for the businesses that are going to have to lay out  
21 the investment to build these fueling stations.

22 We certainly do not see any benefit from our  
23 members in our community. We also do not support the  
24 premise that without forcing certain gas stations to  
25 install hydrogen fueling pumps, the hydrogen vehicle

1 market will die.

2           To update an old saying, you can fill the trough  
3 with water, but if there is no horses to drink it, you  
4 will have wasted the price of the trough and the water.  
5 Ultimately, this exercise will be an extremely expensive  
6 lesson.

7           On a personal note, I'm highly supportive of the  
8 development of new technology. Having been issued six  
9 U.S. patents in the area of telecommunications: One for  
10 the programmable television receiver controller -- that  
11 remote that you use every day. But experience has taught  
12 me that if you have a good product that meets an unmet  
13 need, private investors will be willing to risk their  
14 capital on the expectation of future profits. That's how  
15 rich venture capitalists get richer.

16           In this case, there is no viable product, i.e.  
17 hydrogen vehicles. And forcing millions to be spent on  
18 infrastructure won't make them be there any time sooner.  
19 Our members would spend their precious dollars to open  
20 stores with empty shelves. The gas stations shouldn't be  
21 forced to install equipment to provide fuel for which they  
22 have no customers. Therefore, the Carson Black Chamber of  
23 Commerce oppose this regulation.

24           Thank you.

25           CHAIRPERSON NICHOLS: Thank you.

1 Tara Lynn Gray.

2 MS. GRAY: Good afternoon.

3 My name is Tara Lynn Gray. I'm with the Solano  
4 County Black Chamber of Commerce and also sit on the Board  
5 of the California Black Chamber of Commerce.

6 We find it troubling that this will not be a  
7 voluntary program and that gas stations will be required  
8 to install nitrogen fueling equipment, whether they want  
9 it or not, whether they can afford it or not. And even if  
10 the rule shifts that investment to major refiners, that  
11 cost will still eventually be passed along to consumers.

12 We support the goal of reducing vehicle  
13 emissions, but we firmly believe that the policies to do  
14 this must be both cost effective and provide the greatest  
15 reductions possible. And we feel that this regulation  
16 fails these two tests.

17 First, cost effectiveness; your staff has  
18 estimated each hydrogen fuel outlet will cost up to \$2.4  
19 million. For 100 stations, that works out to about a  
20 quarter of a million -- quarter of a billion dollars.  
21 They also project that by 2017 market penetration of  
22 hydrogen vehicles will be less than two percent of all  
23 cars on the road in California.

24 But there's no guarantee that even that many  
25 vehicles will be produced, let alone sold. So we could

1 easily wind up with lots of hydrogen stations gathering  
2 dust and longer lines and higher prices at the regular gas  
3 pumps.

4           Second test, emissions reductions. Concerning  
5 this, we will have no impact whatsoever on global warming  
6 and taking into account continuously decreasing  
7 smog-forming emissions from conventional vehicles. Thanks  
8 to other existing regulations, it's doubtful that we will  
9 see a meaningful net reduction from this program.

10           The Legislature has directed that emissions  
11 reductions in programs provide maximum benefit at the  
12 least possible cost. This regulation does just the  
13 opposite. In fact, promising minimum benefits at maximum  
14 costs. Hydrogen fuel outlets are better left to those  
15 voluntary development by those who actually want to be in  
16 that business. And it's time to seriously consider  
17 repealing this regulation all together.

18           Thank you.

19           CHAIRPERSON NICHOLS: Ms. Gray, before you  
20 leave -- sorry. But what in the regulation that you've  
21 seen leads you to believe that any particular station  
22 would be forced to have hydrogen or that hydrogen would be  
23 required in advance of vehicles that actually need to use  
24 the hydrogen? I'm asking you that, because it's the  
25 direct opposite of what I read in the staff report. So

1 I'm expecting your view here. I'd like to know why you  
2 think that's the case.

3 MS. GRAY: I did a quick read of some  
4 information. And as I read it, it appeared not to be a  
5 voluntary program. And as a businesswoman, I have a  
6 problem with anything that involves a business like mine  
7 that is not a voluntary program.

8 CHAIRPERSON NICHOLS: Okay. Thanks.

9 Mr. Lombard.

10 MR. LOMBARD: Good afternoon, Madam Chair and  
11 staff.

12 My name is Edwin Lombard. Today, I'm  
13 representing the Sacramento Black Chamber of Commerce and  
14 the Black Business Association. Collectively, we do not  
15 support the CFO ruling and encourage you to reconsider it.

16 We have had the electric vehicle mandate in  
17 California since 1990. We've subsidized cars, suppliers,  
18 and infrastructure. But although all Californians have  
19 paid for those subsidies, the benefits have largely gone  
20 to the wealthy.

21 After 21 years, it was recently reported that the  
22 average annual income of the Chevy Volt buyer is \$170,000.  
23 And buyers of the Fisker, Karma, and Tesla Roadster earn  
24 more than \$250,000 a year.

25 Prime spots reserved for EV parking at shopping



1 malls and airports are rarely occupied. And EV market  
2 penetration is not nearly what it was predicted to be.  
3 Now you want to mandate the installation of hydrogen fuel  
4 station in southern California's wealthiest neighborhoods  
5 at a cost of hundreds of millions of dollars when hydrogen  
6 cars aren't even commercially available. Unlike the ZEV  
7 mandate, you're not requiring automakers to sell specified  
8 numbers. So it's even less likely there will be customers  
9 for those fueling stations.

10 From the perspective of our small business  
11 members who have to scramble to make the rent and payroll  
12 each month, we think it's just fine that people who can  
13 afford Volts, Teslas and Karmas want to spend their money  
14 on hydrogen vehicles and if the folks who sell them those  
15 vehicles want to invest in fueling stations.

16 But we strongly oppose arbitrarily forcing anyone  
17 to install fueling stations at a cost that is bound to be  
18 passed along to the rest of us. We have no problem  
19 whatsoever in fuel-efficient cars. In fact, we think the  
20 future is based on this technology. But we would rather  
21 see it happen not on the backs of small minority business  
22 owners.

23 Thank you.

24 CHAIRPERSON NICHOLS: Ronald Stein.

25 MR. STEIN: Chairman Nichols, members of the

1 Board, I'm Ronald Stein, Vice President of Business  
2 Development for a small family-owned business that does  
3 staffing for technical and professional people related to  
4 energy industries in southern California.

5 I want to thank you for your previous actions  
6 that have significantly cleaned up our air to the point  
7 that California on an international basis contributes less  
8 than one percent of the world's greenhouse gases.

9 This progress has, however, come with a financial  
10 cost. It seems we're spending more and more to achieve  
11 less and less in incremental emission reductions. We've  
12 seen the ZEV mandate, which, after decades on the books,  
13 and enormous publicly-funded subsidies has consistently  
14 failed to meet market share projections or offer vehicles  
15 that can compete with conventional vehicles in cost and  
16 performance.

17 The CFO role is an extreme example of this  
18 paradigm. If implemented as planned, conventional fuel  
19 providers and ultimately California businesses and their  
20 37 million citizens will be paying hundreds of millions of  
21 dollars to directly or indirectly subsidize fueling  
22 infrastructure for hydrogen vehicles that are not yet  
23 commercially available and even more likely to be  
24 prohibitively expensive when they are.

25 It's painfully obvious the cost/benefit ratio to

1 further reduce California's minuscule contribution to the  
2 world's greenhouse gases and projected one percent of the  
3 32 million vehicles out on the road to be hydrogen fuel  
4 cell vehicles.

5 I support diversifying the fuel supply and  
6 vehicle fleets. I'm in a green business myself, but it's  
7 impossible for me to support a policy that spends hundreds  
8 of millions, if not billions, of California consumers'  
9 money and infrastructure for cars not yet on the market  
10 and that most of us will never be able to afford or more  
11 likely not chose to purchase.

12 I suggest you give serious consideration to the  
13 impact on businesses and our California unemployment to  
14 developing a more fair and cost effective means of  
15 subsidizing emission reductions by our fragile California  
16 economy.

17 Thank you.

18 CHAIRPERSON NICHOLS: Thank you.

19 Steven Turner. Mary Scott. Jake Alarid. Erick  
20 Verduzco. Sorry. Here you are.

21 MR. ALARID: Good afternoon, Madam Chair, Board  
22 members.

23 My name is Jack Alarid. I'm the Past National  
24 Commander of the American GI Forum. I'm here today on  
25 behalf of the American GI Forum of California, the

1 American GI Forum's National Hispanic Veterans  
2 Organization with chapters throughout the nation and the  
3 state of California.

4 I reside in Whittier, California, Los Angeles  
5 County, and I'm wearing my veterans cap today because I'm  
6 representing American GI Forum and I'm proud to be a  
7 veteran.

8 I also own a small business. The California Air  
9 Resources Board is proposing to require the installation  
10 of hydrogen fueling stations on existing businesses that  
11 do not currently sell hydrogen and some have no desire to  
12 sell it.

13 This proposal requires these businesses to spend  
14 millions of dollars to install the hydrogen fueling  
15 equipment either out of their own pockets or from public  
16 funds.

17 The question is: What is the demand for hydrogen  
18 in the future? Are automakers going to be required to  
19 sell these vehicles? If these cars are manufactured, will  
20 they be affordable to the population middle class? Will  
21 the costs justify the demand or will the taxpayers have to  
22 subsidize automakers?

23 The American GI Forum of California is opposed to  
24 the legislation that would require this installation of  
25 hydrogen fueling stations on existing businesses. As a

1 veteran advocate, I don't see any realistic opportunities  
2 for job creation for our men and women who have the worn  
3 the uniform and are now returning home from warm's way.

4 As a small businessman, I would oppose the  
5 installation of such equipment in my business. Our  
6 struggling economy needs a shot in the arm. And the  
7 resources that will go to finance the proposed fueling  
8 stations would must better be used in repairing our  
9 infrastructures and creating jobs. We don't need to  
10 inconvenience businesses to provide a service for product  
11 when we don't have a demand for it.

12 Thank you for your time and allowing me to make  
13 these comments.

14 CHAIRPERSON NICHOLS: Thank you, sir.

15 Erick Verduzco.

16 MR. VERDUZCO: Good afternoon, Madam Chair, Board  
17 members.

18 My name is Erick Verduzco. I'm the President and  
19 CEO of the South Bay Latino Chamber of Commerce. Our  
20 members are primarily hispanic-owned small businesses.  
21 They're interested in responsible economic growth and job  
22 creation in the state of California. And on top of that,  
23 we're also very concerned with our communities. We want  
24 to grow, but we want to grow responsibly.

25 Now, as a representative of over 300 businesses

1 and as a business owner myself, the clean fuel outlet  
2 regulation just doesn't really make sense. What you're  
3 doing is asking refiners who are not in the business of  
4 making hydrogen-fueled vehicles to spend millions of  
5 dollars on a delivery system for those products.

6 But what we're not doing along with this is  
7 mandating a quota of hydrogen fueled vehicles. A more  
8 realistic business model for this regulation would be for  
9 the automakers and hydrogen fuel producers to invest in  
10 the infrastructure to support their products. They're the  
11 ones that are going to benefit the most from this, so let  
12 them pay for it.

13 A good example is the development of the cell  
14 phone industry. When the cell phones were developed, the  
15 phone companies were the ones that went out, they leased  
16 the land and they paid to build towers so they could  
17 provide a good product, a good service to their customers.  
18 They did all this without government quotas and mandates  
19 and they've done extremely well.

20 Meanwhile, we really can't afford regulation  
21 that's going to siphon millions of dollars out of the  
22 economy and force companies to engage in business ventures  
23 with really no tangible returns on their investments for a  
24 long time or even ever. This is not good for the  
25 environment -- for the business environment. It's not

1 good for job creation, and it's really not good for our  
2 communities.

3           The South Bay Latino Chamber of Commerce opposes  
4 this rule.

5           CHAIRPERSON NICHOLS: I do want to correct one  
6 point I think is a misunderstanding about the rule. And  
7 that is there is no requirement that anybody furnish the  
8 fuel unless and until there is a certification on the part  
9 of the company that actually builds these vehicles they  
10 will be placing a certain number of vehicles in a  
11 particular area. And the penalties for misstating that  
12 information are quite high.

13           So while we may have a philosophical  
14 disagreement, I don't know about how this should operate.  
15 It's not the case that there's going to be hydrogen being  
16 pushed out into communities where there aren't any  
17 vehicles that need that fuel, at least not if the  
18 regulation were to go into effect as it was proposed.

19           But, obviously, we're all hoping, as staff  
20 indicated, we'll be able to do this with a voluntary  
21 agreement. And that would be the preferred option if we  
22 can get there. So thank you.

23           MR. VERDUZCO: Thank you, Madam Chair.

24           CHAIRPERSON NICHOLS: Andrew Barrera.

25           MR. BARRERA: Good afternoon, Madam Chair and

1 honorable members.

2           My name is Andrew Barrera, and I'm here today  
3 representing the Los Angeles Metropolitan Hispanic Chamber  
4 of Commerce. We are concerned that this Board is  
5 considering diverting millions of dollars from our economy  
6 to provide infrastructure for vehicles that essentially  
7 are not available in the commercial market, at least not  
8 in any mass quantity. When they do become available, they  
9 will only be affordable to the very wealthiest among us.

10           The fact is that the targeted location for these  
11 fueling stations will be placed in places and cities like  
12 Santa Monica and the west side where they instructed --  
13 basically meaning that we're probably looking at millions  
14 of dollars for a program to promote a technology that  
15 won't be accessible to small businesses, the middle class,  
16 or low income communities for the foreseeable future.

17           It reminds me what Mr. De La Torre said about the  
18 solar roofing program. This is not a direct quote, but  
19 constituents of South Gate that have a few thousand  
20 dollars to spend will probably spend it on new roofs and  
21 not on solar panels. And it turns out that in Malibu  
22 where there is approximately 13,000 residents,  
23 approximately \$1.5 million in solar panel rebates were  
24 actually paid out. However, in cities like Compton where  
25 there's 140,000 residents, only one solar subsidy was for



1 over slightly \$2,000 was paid out. Only one. And this is  
2 for an existing technology that is available in the  
3 market.

4 Your own staff's projections for fuel cell  
5 vehicles state that in the next five years these types of  
6 vehicles will make up less than two percent of all the  
7 cars on the road today. Clearly, it will be the millions  
8 of people who cannot afford this technology that will be  
9 subsidizing less than 100,000 people who can.

10 The simple point is that a lot of money is going  
11 to be spent in this program, but very few people or  
12 companies will benefit from them.

13 We support the right for companies to voluntarily  
14 invest in hydrogen fuel outlets. However, we strongly  
15 oppose this and any other type of legislation or  
16 requirement that is mandatory on small businesses. We  
17 simply feel that these costs are going to be passed down  
18 one way or another to small businesses and to the  
19 consumers. Even though we want to be part of the green  
20 movement and we want to be in front of technology and we  
21 would like opportunities for our small businesses to have  
22 contract opportunities, we don't see that really  
23 developing as well.

24 So I want to thank you for your time and  
25 consideration.

1           CHAIRPERSON NICHOLS: Okay. I think Mr. De La  
2 Torre deserves at least an opportunity to respond.

3           BOARD MEMBER DE LA TORRE: It's to this last  
4 batch of comments because I think they're all related.

5           I do remember that conversation. I think the  
6 difference was that on solar panels you were talking about  
7 a subsidy that every utility customer was going to pay for  
8 on their bill. So there was a subsidy issue there that I  
9 don't see in this case.

10           And second, I didn't say they were more likely to  
11 fix their roof with the money. I said they would more  
12 likely be the ones installing the systems than getting  
13 them on their own homes, which in this case I think  
14 accrues to the benefit of the consumers the middle class,  
15 working class folks in the Latino community, African  
16 community, et cetera, because they are most likely the  
17 ones that are going to be installing these facilities at  
18 these gas stations that are for all intents and purposes  
19 pretty static.

20           There isn't any improvement going on at a gas  
21 station nowadays. So this would be a new amount of work  
22 to install these facilities. And going forward, once it's  
23 there, you have to truck the stuff to bring it in. It's  
24 another kind of fuel that has to come from somewhere to  
25 these facilities. Those are jobs. The fuel itself, fuel

1 whether it's oil or these others, is not a very  
2 labor-intensive system.

3           So I think these jobs will benefit the folks that  
4 you're representing and the others are representing. And  
5 I do see a distinct difference here, because it is a  
6 question of who is using these facilities to pump that  
7 fuel, not what was going on with the solar panels, which  
8 was everybody subsidizing the panels through their  
9 electric bills.

10           MR. BARRERA: We understand that, Mr. De La  
11 Torre. It's just that we feel we're not going to be the  
12 people buying and purchasing these vehicles. And we see  
13 that as a bad precedent to require businesses to install  
14 these types of things, these types of high-tech fuel cell  
15 fuel pumps.

16           BOARD MEMBER DE LA TORRE: I don't want to get  
17 into a dialogue.

18           But I will close within comment, which is that  
19 the same folks who are asking us not to make them do it  
20 are asking us, the government, to fund it, which gets us  
21 back to the model from the solar panels, which is  
22 everybody subsidizing the very few people who are going to  
23 use it. So you cannot have it both ways. Not you, but  
24 oil companies.

25           CHAIRPERSON NICHOLS: Well, I think the

1 underlying premise here -- and this is unfortunately I  
2 think we get caught up in analogies like the analogy about  
3 the cell phone, which undoubtedly was a technology that  
4 took off because it met a need that consumers had. No  
5 question about it. People wanted to have cell phones.

6 MR. BARRERA: If these cars could be affordable  
7 like that, it would be great.

8 CHAIRPERSON NICHOLS: We're not at that point  
9 yet, but we will be. Thanks for coming.

10 Matt Myasato.

11 MR. MYASATO: Thank you, Madam Chair.

12 I think you put me in the wrong batch.

13 Madam Chair, Mayor Loveridge, and members of the  
14 Board, I'm Matt Myasato, the Assistant Deputy for  
15 Technology Advancement at the South Coast Air Quality  
16 Management District. I'm here to support the clean fuels  
17 outlet regulation and the staff of AQMD offers strong  
18 support.

19 Let's take a minute and take a breath. This is  
20 an exciting time. You've got three very exciting  
21 regulations before you that are critically important. And  
22 for the first time, I think we have a regulatory framework  
23 to ensure that we have clean fuel, coupled with the  
24 vehicle to be deployed in the South Coast basin. As you  
25 know, we suffer from the worst air quality in the nation.

1 As Chairman Nichols knows, if you flew into L.A. or  
2 Ontario, you saw the brown cloud; that's what's what our  
3 residents breath every day, 100 days out of the year. We  
4 need the deployment and acceleration of these clean  
5 technologies. As my colleague Henry Hogo testified, we  
6 need them at an accelerated pace, even faster than what's  
7 proposed in the ZEV regulation.

8 I'm sure you're aware at South Coast AQMD, we  
9 funded hydrogen stations to the tune of about  
10 13-and-a-half million dollars over the past ten years.  
11 Many times we've been partnering with the staff of ARB,  
12 the California Energy Commission, and even the Department  
13 of Energy to deploy hydrogen stations throughout our  
14 region. But we can't continue to fund stations with  
15 public moneys. If we are going to have mass deployment,  
16 we need to have the CFO. It's incredibly important. If  
17 we're going to have mass deployment in our region, we  
18 certainly support that lower trigger of 10,000 vehicles.

19 We did submit written continues. I just want to  
20 make one highlight here. That's really to carefully  
21 examine the sunset provision. I think James Provenzano  
22 mentioned in the South Coast comments, let's put this in  
23 perspective. The original CFO estimated ten percent of  
24 all retail fueling markets had to be a clean fuel outlet.  
25 The staff is proposing five percent. So it's about 10,000

1 stations. That's 500 stations. And now the MOA  
2 hibernation language is suggesting that after 100  
3 stations, so one percent, the CFO would go away.

4 We ask you simply not to set a cap prematurely  
5 now. We have a monitoring process where we go back and  
6 ensure the market penetration is sufficient before you  
7 essentially give away the store, before the market is even  
8 open.

9 So, in summary, I want to reiterate our strong  
10 support for the CFO and look forward to working with you  
11 and your staff and helping clean the air in California.

12 CHAIRPERSON NICHOLS: Maybe you need to form your  
13 own Chamber of Commerce.

14 Next, Eunic Nutac (phonetic). I apologize if  
15 you've butchered your name.

16 Aaron Sladek.

17 MR. SLADEK: Good afternoon, Chair Nichols and  
18 the rest of the Board.

19 My name is Aaron Sladek. I'm a 21-year-old  
20 college student studying political science with a minor in  
21 sustainability. I'm President and co-founder of the  
22 Sustainability Club at Cal State University at North  
23 Ridge.

24 I'm here today not to express technical jargon to  
25 you, but rather what college students' insights are and

1 importance of clean cars and essential need the put forth  
2 strict standards on zero-emission vehicles.

3 First, let me commend all of you with working  
4 with PDPA and the Department of Transportation to create  
5 strong national standard on vehicle emissions. This is a  
6 great opportunity for California to continue its  
7 leadership role on air and climate policy and lead the  
8 rest of the country towards the best standard possible.

9 ARB has already proven the need to reduce all  
10 California emissions, standard, leads, and national  
11 progress. As a college student and president of the  
12 Sustainability Club, setting forth zero-emission vehicle  
13 standards is of the utmost importance.

14 In the Sustainability Club, we have many  
15 discussions about zero-emission vehicles. And if we had a  
16 choice of a zero-emission vehicle, what we would pick as  
17 our dream vehicle and why?

18 For myself, I picked a Tesla because I like  
19 sports cars personally and I drive a little bit fast.

20 And so the point of bringing up this conversation  
21 though is to show the enthusiasm amongst college students  
22 and a demand for zero-emission vehicles and you setting  
23 the strong standards today brings the idea to fruition for  
24 us as students.

25 So obviously there were huge environmental,

1 economic, and social health benefits of setting stricter  
2 clean car standards. But there's an overall social change  
3 that's being impacted. So when setting today's standards,  
4 you are making that ever-lasting change in the right  
5 direction for future generations.

6 I would love to see the day where I would be --  
7 when all vehicles are zero-emission or using other energy  
8 resources and I would be telling my grandkids about the  
9 day where I built a car that was ran on something called  
10 gas and they look at me like, "What are you talking about?  
11 What's gasoline?"

12 So as you're probably all thinking, so this is  
13 what this college student's thinking right now. But what  
14 does he want from us?

15 My answer is simple. I support President Obama's  
16 goal of one million electric vehicles on the road by 2015  
17 and believe that the Air Resources Board in collaboration  
18 with EPA Department of Transportation should be setting  
19 the same kind of technology-forcing standards that would  
20 create that trajectory.

21 So as a resident of the beautiful state of  
22 California, I trust that you enforce the strictest  
23 standards possible to make this whole country. Thank you.

24 CHAIRPERSON NICHOLS: Thank you.

25 He's actually -- although he's a mayor, he's also



1 a professor.

2 BOARD MEMBER LOVERIDGE: What university or  
3 college are you with?

4 MR. SLADEK: Cal State University North Ridge.

5 BOARD MEMBER LOVERIDGE: What are you majoring  
6 in?

7 MR. SLADEK: Political science.

8 BOARD MEMBER LOVERIDGE: How did you hear about  
9 the event today?

10 MR. SLADEK: I heard about it from the Coalition  
11 for Clean Air.

12 CHAIRPERSON NICHOLS: Thank you. Good job.

13 Lloyd Tran.

14 Emily Schneider.

15 MS. SCHNEIDER: Good afternoon. I'm Emily  
16 Schneider on behalf of the Professional Engineers in  
17 California Government, or PECG.

18 I write in support of the advanced clean car  
19 standards. We represent 13,000 State-employed engineers,  
20 500 of those being ARB members, air pollution specialists,  
21 and air resource engineers. So we are very proud of them  
22 and congratulate the Board as well as the staff members  
23 and all ARB employees.

24 Those employees are improving California's air  
25 quality, public health. And they are assisting to address

1 the threat of climate change. And we appreciate that.

2 We strongly support ARB's energy and  
3 environmental standards. By approving these three  
4 different programs, we understand that it will continue  
5 California's leadership role in the United States, growth  
6 of the economy, and job market, and also the movement  
7 towards a more diversified transportation sector, which we  
8 appreciate.

9 We have reviewed ARB's clean car standard and  
10 support the updates and amendments to the programs. And I  
11 understand that helps to achieve the climate change goals  
12 that we have and transition it to a clean energy future.

13 We also fully support the collaboration with  
14 federal agencies, the U.S. EPA, and staff. We offer our  
15 help any way that we can.

16 We urge you to adopt those amendments to these  
17 three programs. We can't afford to wait. So let's do  
18 this. Thank you for the opportunity. And I'm here for  
19 any questions.

20 CHAIRPERSON NICHOLS: Thank you, Ms. Schneider.  
21 Thank you for coming.

22 Lance Tunick.

23 MR. TUNICK: Good afternoon. My name is Lance  
24 Tunick, and I'm here today on behalf of Aston Martin,  
25 Lotus, and McLaren.

1           We support the CARB LEV III and GHG proposals.  
2 Each of these three manufacturers is classified as a small  
3 volume manufacturer, SVM, under CARB regulations. And  
4 they manufacture a very small number of vehicles.

5           All three manufacturers also understand the very  
6 important need to control criteria pollutants as well as  
7 GHG.

8           The three companies further believe that SVMs  
9 must do their fair share to reduce vehicle pollution.  
10 Fair share includes SVMs being on the leading edge in  
11 developing advanced vehicle construction, light weight  
12 materials, especially the use of carbon fiber, and new  
13 technology.

14           For LEV III and also for GHG, CARB is proposing  
15 specific requirements for the SVM category. The specific  
16 SVM requirements were proposed in recognition of SVM's  
17 limited model lines with which they can comply with fleet  
18 averaging requirements. In addition, the proposal  
19 recognized the more limited investment in engineering  
20 resources that small volume companies have.

21           In closing, we have submitted written comments  
22 addressing a few issues on SVM timing, mainly to seek some  
23 clarification. But again, we support the LEV III and GHG  
24 proposals and look forward to seeing the finalization of  
25 the rules. Thank you.

1           CHAIRPERSON NICHOLS: Thank you very much.  
2           Rudy Tapia.

3           MR. TAPIA: Thank you for having me today. I'm  
4 Rudy Tapia, Vice President of Business Development for  
5 Vision Motor Corp. We just recently moved from El Segundo  
6 to Long Beach. And we design and manufacture  
7 zero-emission hydrogen fuel cell Class A trucks.

8           We recently just received our biggest order  
9 today, which is 400 order from a company called TTSI. We  
10 hope to deliver it over the next year and a half.

11           I'm here today to request that the ARB Board  
12 direct staff to develop a mechanism that would allow  
13 Vision Motor Corp to receive ZEV credits under the current  
14 ZEV program.

15           To date, our efforts in going forth in this  
16 direction is that I've met numerous times with CARB staff.  
17 I've met with a number of the ARB Board members. We've  
18 submitted written comments, and I was directed by the ARB  
19 staff to discuss this concept with OEMs. And I have done  
20 so, and I have received some interest from a number of the  
21 OEMs.

22           In short, we believe that commercial hydrogen  
23 fuel cell vehicles will lead the way in commercialization  
24 due to the fact you can actually build a business case  
25 that actually benefits not just the OEMs, the trucking

1 firms, but also possibly effect the citizens who these  
2 heavy-duties trucks operate in their neighborhoods. So I  
3 just once again ask the Board to please take this into  
4 heavy consideration.

5 Thank you.

6 CHAIRPERSON NICHOLS: On the list of issues that  
7 we'll be talking about I'm sure.

8 Michael Strada.

9 MR. STRADA: Thank you, Chairman Nichols and  
10 Board members for allowing me to speak.

11 I'm a student at Cal State LA, graduate in  
12 industrial technology with a focus in alternative power  
13 and energy and transportation.

14 Dr. Blackman is the Professor I'm studying under.  
15 And our class right now is the alternative power --  
16 electric hybrid and alternative fueled vehicles. And we  
17 currently have a hydrogen fueling station we're building  
18 on campus that is going through its commissioning stage.  
19 And we just had a 350 car fill two weeks ago.

20 I came here today to urge you to approve these  
21 clean car regulations and tell you why they're so  
22 important to me.

23 The first is I'm fortunate to be at a college  
24 that is looking towards the future and is aligned with my  
25 interests. I'm passionate about what I'm studying because

1 I think electric and alternative-fueled transportation and  
2 zero-emission vehicles are the future. They have to be  
3 the future because our air pollution is poor in  
4 California. And when people think of L.A., they think  
5 Hollywood, beaches, and the smog you fly into every day.

6           Hopefully, it will affect the way that my  
7 children live and they don't have to worry about the poor  
8 air quality.

9           Second is I'm devoted to this study. And with  
10 the uncertain economy, I believe that alternative fuels  
11 and vehicles are the future and can lead to more  
12 employment for engineers and other technologists, as  
13 myself.

14           That is why what you are guys are doing here  
15 today is so important. With this regulation, California  
16 is setting the future direction for vehicles. And your  
17 actions will benefit all of society. I think we've made a  
18 good choice. I think I've made a good choice with my  
19 chosen profession, and I'll be ready to fill any jobs that  
20 may come up through this industry. I hope you will adopt  
21 this regulation and send a signal to the industry and the  
22 rest of the world that we need to be prepared for the  
23 future. Thank you.

24           CHAIRPERSON NICHOLS: Thank you for coming to  
25 testify.

1 Don Anair.

2 MR. ANAIR: Good afternoon, Ms. Chair, members of  
3 the Board.

4 My name is Don Anair. I'm a Senior Engineer with  
5 the un Union of Concerned Scientists.

6 In addition to my own comments today, I'm also  
7 happy to present to the Board a letter of support from  
8 nearly 160 scientists and engineers from across California  
9 with expertise in climate change, its impact, or  
10 solutions.

11 Along with this letter, we also have submitted a  
12 letter from over 100 Ph.D. economists in support of clean  
13 car standards. And we submitted these letters along with  
14 supportive comment letters from over 4200 UCS members  
15 across the entire state of California. UCS strongly  
16 supports the clean car standards under consideration which  
17 will help clean our air, reduce global warming pollution,  
18 protect public health, while saving consumers money,  
19 creating jobs in California.

20 We also strongly support California's  
21 coordination with the federal agencies in developing  
22 greenhouse gas standards. This will mean consumers will  
23 have a greater clean car choices, not just in California  
24 but across all 50 states.

25 The proposed greenhouse gas standards are

1 expected to cut greenhouse gas emissions by 50 percent,  
2 offering consumers an average \$4,000 savings over the life  
3 of the vehicles sold in 2025.

4 I do want to raise one concern that could revoke  
5 some of the expected emission benefits. These standards  
6 are based on footprint of the vehicle, meaning that the  
7 sales mix of vehicles sold in the years under  
8 consideration could change compared to the projections  
9 that staff has made. These projections assume about 60  
10 percent of vehicles sold will be cars and 40 percent  
11 trucks. However, this shift could -- this mix could shift  
12 based on market forces or through compliance strategies  
13 that automakers may take advantage of. And there is  
14 potential for auto manufacturers to re-classify cars as  
15 trucks or as vehicle footprints to qualify for the  
16 relatively meager standards for trucks. And that would  
17 result in failure to meet the 166 gram per mile standard.

18 It's quite easy to make some cars into trucks  
19 basically by adding four-wheel drive capability on cross  
20 over vehicles, the Honda CRV, for example. The four-wheel  
21 drive version is a truck. Two-wheel driver version is a  
22 car. Four-wheel drive version emits two to three percent  
23 more than the two-wheel drive. However, the gap between  
24 the standards is more than five times this amount. So we  
25 see this as potential loophole that could erode the



1 benefits.

2           We are strongly supportive of staff who have  
3 recognized this issue. They've estimated potential 16  
4 percent loss in the benefits of the program. It's  
5 possible, and that is why we strongly support staff's  
6 proposal to include auto manufacturers report to the Board  
7 their compliance information, even if you accept federal  
8 standards, as well as reporting back to the Board on this  
9 issue.

10           The one ask I do have is this information be made  
11 publicly available. It's a challenge because you can get  
12 this information from private companies, but it can cost  
13 tens of thousands of dollars. And we don't think this  
14 information should be available only to people with means.  
15 So to close, bravo.

16           BOARD MEMBER RIORDAN: Thank you. And you have  
17 the written testimony.

18           Thomas Jordan.

19           BOARD MEMBER DE LA TORRE: I know we're going to  
20 get a chance to speak later, but since it's just come up,  
21 this car versus truck issue, I think is a very important  
22 one. I think you talk to a man on the street and they  
23 know the difference between a car and a truck. It's got a  
24 bed in the back that's uncovered, it's a truck. If it's  
25 an SUV, it's a car. Difference in passenger to go around

1 no matter what you can fit in the back.

2           So I think we need to keep very clear, regardless  
3 of what Washington is doing on this issue, which is pretty  
4 much nothing -- that we need to be very clear. And I  
5 think at very least, what's in the resolution is great in  
6 terms of how it covers these issues. But the issue of  
7 making that information the data that we get publicly  
8 available I think is a good first step that might down the  
9 road influence what's going on in Washington.

10           BOARD MEMBER RIORDAN: Okay. Yes.

11           BOARD MEMBER YEAGER: And at least tied into that  
12 is the mid-term review of looking at that mix and whether  
13 it's changing, and also issue about vehicle size and how  
14 that sort of factored what you're looking at and making  
15 sure you're trying to reach the targets that you're  
16 initially setting.

17           BOARD MEMBER RIORDAN: Mr. Cackette, you want to  
18 respond?

19           CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.  
20 This is an issue that we identified. We were having  
21 discussions with the federal government, and it's a  
22 concern of the staff. And we would probably like to look  
23 at this in 2016 so we kind of see what's happened in the  
24 market at the end of one and look at them at the end of  
25 the mid-term review as we start seeing and look at what

1 the trends are when we have some insight into the business  
2 plans that suggest that we should worry about this.

3 BOARD MEMBER YEAGER: And certainly will that  
4 information be made public and can we require that the  
5 automobile manufacturers release that information? Or how  
6 might we know understanding which direction we are headed?

7 CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, I  
8 think we can probably report on the expected trend, but  
9 not in a public way. In other words, we couldn't say  
10 which manufacturer, because that's going to be their  
11 business plans for two or three years downstream. But  
12 once the cars are produced, then we can report actual  
13 facts or how many are sold, which categories they were in.  
14 And that would be public.

15 BOARD MEMBER RIORDAN: Madam Chair, Mr. Jordan is  
16 available to speak.

17 MR. JORDAN: Thank you, Madam Chair.

18 I'm Tom Jordan, Senior Policy Advisor to the San  
19 Joaquin Valley Air District. And I'm here today to speak  
20 in support of the advanced clean cars package regulation.

21 Chairman Nichols, as you mentioned at the  
22 beginning this morning, we have come a long way. In the  
23 San Joaquin Valley, since the early 1980s, we've reduced  
24 emissions from stationary sources of pollution by about 80  
25 percent. We've also seen a reduction in emissions from

1 automobiles. And it's quite remarkable because during  
2 that time, vehicle miles traveled has increased by over  
3 300 percent. So it's quite a feat that we've been able to  
4 accomplish. But as you're all aware, we still have a lot  
5 to do. We have big challenges ahead.

6           The San Joaquin Valley is in a situation where  
7 we're an extreme non-attainment area, so we're still  
8 trying to identify control measures to meet the existing  
9 standards. Mobile sources are now about 80 percent of the  
10 emissions in the valley. So the Advanced Clean Cars  
11 Program is vitally important for us to continue to make  
12 progress to meeting the national ambient air quality  
13 standards.

14           I thank you for the regulation and we look  
15 forward to working with you in the future to bring clean  
16 areas to the residents of the San Joaquin Valley and the  
17 rest of the state. Thanks.

18           CHAIRPERSON NICHOLS: Thank you, Mr. Jordan.  
19 Thank you for coming down to join us today.

20           I'm calling for a very short break here until  
21 4:30. And looking ahead the testimony, I see a large  
22 number of people who have taken the time and trouble to  
23 come and support us here today. I guess there's one on  
24 the list that shows as a neutral or not taking a position  
25 and one who's oppose on the CFO. But other than that,

1 these are all people who are supporters, which is really  
2 wonderful. But I do want to just let people know that  
3 we're going to need to shut this down today at about 5:30.  
4 So if people don't want to come back tomorrow -- and I  
5 hope you don't because I think tomorrow we're going to  
6 need the time to work through the discussion -- I'm going  
7 to ask you to consider either shortening your testimony or  
8 possibly allowing somebody else to make the statement that  
9 you were planning to make so that we can give, you know, a  
10 chance for everybody's views to get heard.

11 And with that, we'll take a break. Court  
12 reporter can take a break, et cetera. And let's just get  
13 back here in ten minutes.

14 (Whereupon a recess was taken.)

15 CHAIRPERSON NICHOLS: I understand there are a  
16 few people who have decided to merge their testimonies and  
17 others agreed that a two-minute time limit would be  
18 sufficient to say what they feel like they really need to  
19 say. So I'm going to impose a two-minute time limit  
20 starting with our next witness who is our dear friend,  
21 Shankar Prasad. I know Shankar is a fast talker.

22 MR. PRASAD: Thank you, Chairman Nichols and  
23 members of the Board.

24 It is a pleasure to be here. Bravo. And I also  
25 express my personal gratitude to the two fathers of the EV

1 program and the two others in the staff and Bob as well  
2 and all the staff who are working with you.

3 Now, overall, we support the program, all the  
4 three regulations. We have one concern. I just want to  
5 highlight that part.

6 We feel giving additional time for the gasoline  
7 technology to improve is contrary to the Board's wishes of  
8 being technology neutral, technology forcing, and being  
9 driven. All of you are very well aware of the fact  
10 related to the regulatory proposal for fine particle air  
11 pollution. I don't have to give you the numbers.

12 We acknowledge there is a problem with the  
13 monitoring technology, but we feel given that giving  
14 ten years lead time is sufficient for the technology to  
15 catch up. And also one could decide that there is  
16 additional need to be provided or whether one could change  
17 his particle number standard as has been talked about  
18 since we are due to accelerate the PM emission reduction  
19 and start phasing in the PM one milligram per mile  
20 standard beginning in the model year 2018. Thank you.

21 CHAIRPERSON NICHOLS: Thank you very much.

22 Will Barrett.

23 MR. BARRETT: Good afternoon. My name is Will  
24 Barrett with the American Lung Association of California.

25 The American Lung Association of California

1 strongly supports moving forward with the strong advanced  
2 clean cars package.

3           To be brief, I will focus on the LEV III portion  
4 as well. And basically, we strongly support the proposed  
5 one milligram standard for particulates, but we do  
6 encourage you to move the time frame forward for  
7 implementation.

8           We urge the Board to amend the proposal, begin  
9 the phase-in to one milligram standard starting in 2022,  
10 with full implementation in 2025.

11           We also appreciate the need for development lead  
12 time and understand the limits of today's compliance  
13 measurement technologies.

14           Similar concerns were raised regarding the SU LEV  
15 standard during the LEV II amendments. And these  
16 technologies are now commonplace. So the time and  
17 technology develops, and we think this will be a similar  
18 issue.

19           As proposed, the one milligram standard would not  
20 be fully implemented across the new car fleet until 2028,  
21 16 years from now. And basically, there is a 2021 and  
22 2025 holding pattern for the standard.

23           So we believe there is ample time to address --  
24 assess the development of the improved testing and  
25 certification procedures as well as emission control

1 technologies, including, for example, the levels to which  
2 gasoline particulate filters are deployed throughout  
3 Europe to comply with their standards.

4           So to wrap up, the American Lung Association  
5 fully supports the stringency levels that you have  
6 proposed. We recommend eliminating this holding pattern  
7 on the PM and look forward to working with you and your  
8 staff as the work is finalized to improve California's air  
9 quality and public health.

10           And I'd like to thank all of you and the staff  
11 who has worked very hard on these standards. Thank you  
12 very much.

13           CHAIRPERSON NICHOLS: Thank you. Thank to the  
14 Lung Association for all your support.

15           Elizabeth Jonasson.

16           MS. ARGUELLO: I'm Martha Aguello with Physicians  
17 for Social Responsibility. We're switching, because I  
18 have to leave very soon.

19           So we want to commend the Board. Physicians for  
20 Social Responsibility in Los Angeles, together with our  
21 sister chapters in Sacramento and the Bay Area, strongly  
22 support the most stringent standards.

23           We cannot ignore the long-term entrenched health  
24 inequities in low-income communities of color. Black  
25 women have for decades been twice as likely as white women



1 to give birth to babies with low birth weight and more  
2 elevated risk. And these babies then, in turn, are at  
3 increased risks of developmental disabilities. These  
4 differences cannot be attributed to the existing known  
5 factors, such as prenatal care.

6 But what we do know now is that women living in  
7 close proximity to heavy traffic freeways with elevated  
8 pollutions are more likely to give birth to low birth  
9 weight children. These children are under lifetime  
10 disadvantaged for learning.

11 We also know that children of asthma is the  
12 number one reason children miss school. Asthma is not  
13 just a respiratory disease. If you're missing school,  
14 you're missing learning. You're less ready to learn when  
15 you're in school. So we know that to handle these things,  
16 most physicians have to step out of the clinical setting.  
17 And as Dr. Vinetz said earlier, we have to go upstream.

18 Where we live matters. The air we breathe  
19 matters. And what we drive matters. People who live in  
20 communities of color and low-income communities have the  
21 worst pollution and environmental health problems.

22 The advanced clean cars will clean up the air and  
23 protect public health. Despite progress in recent years,  
24 California still has a long way to go to protect the most  
25 vulnerable from air pollution.

1           I think with the communities that live just south  
2 and east of here and people that live near freeways and  
3 heavy traffic arteries where is poverty and makes it  
4 impossible for them to move. So I think of Boyle Heights  
5 and I think of the clean car campaigns. And I also think  
6 that in Boyle Heights, we need more housing. Where can we  
7 build that housing? Next to freeways. Well, the only  
8 thing we can do is act right now is clean up those  
9 roadways. When fully implemented, the California standard  
10 could annually avoid hundreds of premature deaths, heart  
11 attacks, and thousands of asthma attacks. We urge you to  
12 adopt the most stringent standards. Thank you.

13           CHAIRPERSON NICHOLS: Thank you.

14           Elizbeth.

15           MS. MOREHOUSE: Erica Morehouse on behalf of  
16 Environmental Defense Fund's more than 700,000 members  
17 nationwide.

18           And we applaud California and CARB on their  
19 decades-long bipartisan leadership on the issues of clean  
20 cars and urge the adoption of this package of standards.

21           Basically, we think that California and CARB has  
22 done an admirable job in collaborating with EPA and NHTSA  
23 on developing these standards. The 2012/2016 model year  
24 standards are also saving consumers dollars at the pump  
25 and increasing our energy security. And the 2017 to 2025

1 standards under consideration are an important step  
2 towards our nation's path to a low-carbon economy and  
3 protecting against the most disastrous consequences of  
4 global climate change.

5           So I had a lot of great inspiring statistics I  
6 was going to share. I'll leave those to my written  
7 comments in the interest of time. But we wanted to  
8 particularly thank California for its continued leadership  
9 in the area of criteria pollutants reductions from cars.  
10 And thank you and continue the great work.

11           CHAIRPERSON NICHOLS: Thank you.

12           Bonnie Holmes-Gen.

13           MS. HOLMES-GEN: Chairman Nichols and Board  
14 members, Bonnie Holmes-Gen with the American Lung  
15 Association.

16           I'm just thrilled to be here in support of strong  
17 as possible advanced clean car standards. And I wanted to  
18 note that we have about 500 live volunteer advocates that  
19 submitted letters. And you've heard from physician  
20 volunteer with our Lung Association, and we have of course  
21 letters and petitions that we've submitted in support of  
22 strong action today.

23           And we believe these standards are not an option,  
24 but frankly they're a necessary step to protect public  
25 health in California and to protect the millions of

1 individuals who are suffering from lung ailments in the  
2 state.

3 I want to get to the essence of the comments.  
4 The American Lung Association of California has released  
5 two reports that confirm the health and economic benefits  
6 of a clean car future in California. And this is based on  
7 different mixes of clean vehicles in our state. And if  
8 you look for a minute at the benefits of turning over all  
9 the cars in California to a zero emission fleet, we can  
10 see that California could avoid over 13 billion in annual  
11 health, societal, and energy damages compared to a future  
12 where vehicles were operating at today's standards.

13 So these avoided costs translate to reduced  
14 deaths and illnesses in California. Each year, California  
15 could avoid over 230,000 respiratory symptoms. Could  
16 avoid 50,000 lost work and school days, 10,000 asthma  
17 attacks and could avoid over 500 premature deaths. This  
18 is every year.

19 We think it's really important again to put the  
20 face on what exactly are we going to achieve with these  
21 clean car programs and what public health benefits. And  
22 here, we have concrete evidence that California will  
23 dramatically reduce the toll on public health from dirty  
24 cars today.

25 We want to call special attention to the

1 importance of the zero-emission vehicle program and  
2 protecting the mandate on car companies. So there's  
3 provisions that will be presented by our colleagues to  
4 limit the automakers' ability to reduce their obligation  
5 through the over-compliance provisions and to strengthen  
6 the threshold to qualify for zero-emission vehicle  
7 reduction over-compliance provision.

8 Thank you for maintaining your strong leadership.

9 CHAIRPERSON NICHOLS: Bravo. Now Elizabeth's  
10 turn.

11 MS. DRUFFEL: Good afternoon, Chairman Nichols  
12 and Board members and CARB staff.

13 My name is Allis Druffel, and I'm the Southern  
14 California Outreach Director for California Interfaith  
15 Power and Light. And our organization works with the  
16 interfaith community in California on energy efficiency,  
17 renewable energy, education, and advocacy. And California  
18 is one of 38 states with an Interfaith Power and Light.

19 I'm here on behalf of California Faith Community.  
20 We submitted a faith letter that was signed by ten  
21 organizations which represent thousands of congregations  
22 in the state. And we urge you to pass these clean car  
23 standards.

24 We also submitted an electric letter signed by  
25 159 of our faith advocates.

1           We believe that this is a matter of faith,  
2 because practicing our faith means that we are working for  
3 better air quality and health, working for a health  
4 economy, transitioning to a clean energy future, and  
5 mitigating climate change.

6           And I just want to point out one thing. I'd like  
7 to point out a sense of urgency. The International Energy  
8 Agency on November 9, 2011, put out an analysis that  
9 stated that by 2017, which is a mere five years from now,  
10 if we have not drastically reduced our carbon emissions  
11 globally, we will have doomed the earth to at least a two  
12 degrees Celsius warming. And it's just going to go up  
13 from 2017. So by 2017, we're at two degrees already. So  
14 we need to have a sense of urgency and do everything we  
15 can to fight climate change.

16           Thank you very much.

17           MR. SHEARS: Good afternoon, Chair Nichols  
18 members of the Board.

19           And my name is John Shears. I'm a Research  
20 Coordinator for Center for Energy Efficiency and Renewable  
21 Technologies. Appreciate the opportunity to testify  
22 before you this afternoon on this momentous occasion.

23           First like to thank the staff for all their hard  
24 work, express our broad overall support for the program,  
25 although we do have couple suggestions that are in our

1 submitted comments in terms of ways that we think the  
2 program could be improved.

3 Support the CFO. Support the PM standard. And  
4 thanks to Steve, Paul, and the El Monte staff for all  
5 their work on that.

6 We appreciate keeping the one milligram standard  
7 in there, although we think we'd like to see the hiatus  
8 period removed so we can accelerate that and urge you to  
9 look at it a little more closely.

10 Also, we actually oppose the greenhouse gas  
11 compliance provision as currently constructed. And my  
12 colleague, Simon Mui, will go into more detail.

13 That's just some ideas that we've all been  
14 working on.

15 Today, I want to talk specifically about the BEVx  
16 for X ZEV 1.52X. We worked with a representative from  
17 industry, provided some resolution language and also some  
18 regulatory framework language to staff and a few of the  
19 Board members. We think it's very important that there be  
20 a monitoring and verification program for how these  
21 vehicles are used. Given in its early days the criteria  
22 and how creative the manufacturing engineers can be, we're  
23 not sure what the applications nor the uses of these  
24 vehicles would be like. What a lot of these companies  
25 will be doing their own consumer research and ARB can take

1 advantage of accessing that data.

2           So we would like to urge you to consider  
3 including monitoring and verification program as part of  
4 that X ZEV component. Thank you very much.

5           CHAIRPERSON NICHOLS: Okay.

6           MS. JONASSON: I'm Elizabeth and I traded. Thank  
7 you for that.

8           And thank you for the opportunity to speak and to  
9 staff and the Board for working so diligently on this.

10           My name is Elizabeth Jonasson. I'm with Coalition  
11 for Clean Air. We are a statewide advocacy organization  
12 for clean air. I work out of the Fresno office, and I  
13 want to focus my testimony on the importance of these  
14 regulations for the San Joaquin Valley and how that  
15 importance has manifested itself in widespread support.

16           The Valley, as I'm sure all of you are aware, has  
17 really bad air quality, which burdens our communities with  
18 significant health issues. Passenger vehicles play a  
19 significant part in this, with two major corridors  
20 traveling through the valley, the 99 and the I-5 with the  
21 pollution being left behind.

22           Low-density planning has also led to residents  
23 having to travel higher vehicle miles traveled than other  
24 areas in the state. This makes reductions in emissions  
25 from passenger vehicles an important part of achieving



1 clean air in the valley and protecting our economic base,  
2 mostly agriculture, from climate change.

3           The importance of this was understood by a number  
4 of organizations and governmental agencies. To name a  
5 few: The Central California Hispanic Chamber of Commerce,  
6 Fresno Metro Black Chamber of Commerce, City of Fresno,  
7 Livingston, Mendota, Merced, Reedly, Riverbank, San  
8 Joaquin, Visalia, and the counties of Kern, Kings, and  
9 Madera. Also, the California Partnership of the San  
10 Joaquin Valley, the San Joaquin Valley Air Pollution  
11 Control District and numerous other faith and  
12 environmental groups, just to name a few.

13           Thank you very much. And with this, I urge you  
14 to adopt the most health protective program possible.  
15 Thank you very much.

16           CHAIRPERSON NICHOLS: Thank you.

17           Darrell Clark.

18           MR. CLARK: Should I be saying good evening?

19           I'm Darrell Clark, national co-lead of the Sierra  
20 Club's Beyond Oil campaign.

21           I almost feel like there were two different  
22 worlds. There's the world in here that gets it, and  
23 there's the world out there that doesn't. But I would  
24 like to reinforce that the world out there that are glued  
25 to their TV sets watching our proceedings, three critical

1 reasons to be reducing oil use that these regulations will  
2 take us toward.

3 First is, of course, the reality of global  
4 warming already manifesting in record temperatures in  
5 unprecedented drought in Texas. Okay. I'll tell my  
6 story. Biblically, God spoke through the burning bush to  
7 Moses. Now God is speaking through a burning state to its  
8 Governor, but I don't know if the Governor is listening.  
9 So much for levity.

10 Second, health impacts of air pollution, your own  
11 excellent brochure, the AQMD page that says to meet the  
12 NOx standard, we have to heavily electrify. And of  
13 course, the national and economic security risks of  
14 importing over 60 percent of our oil. Global production  
15 is flat. Demand is rising. We can't replace the big  
16 fields running down. And half of our oil is used for cars  
17 and light trucks. Yes, we must be doing this. Fuel  
18 economy standards are important. That's the first part of  
19 what you're doing.

20 But as staff already so vividly emphasized this  
21 morning, ZEVs and plug-in hybrids are critical to meeting  
22 the standards we must meet from mere thousands in 2011, to  
23 President Obama's goal of a million in 2015 to a major  
24 fraction of fleet by 2030.

25 CHAIRPERSON NICHOLS: Two minutes goes fact.

1 MR. CLARK: And I encourage you to, if anything,  
2 strengthen the ZEV mandate to drive the market forward.  
3 Thank you very much.

4 CHAIRPERSON NICHOLS: Simon Mui.

5 MR. MUI: Good evening, Chairman Nichols, members  
6 of the Board. And I'm Simon Mui with the Natural  
7 Resources Defense Council. Thank you for the opportunity  
8 to testify. This is a real pressure.

9 We support this package driving forward. These  
10 standards are good for the environment, good for public  
11 health, and good for the economy. In a single word,  
12 bravo.

13 What's more, the landmark BEV standards are --  
14 the staff's proposed BEV targets are a strong start, are  
15 reasonable, and achievable and need to go further. NRDC  
16 is strongly committed to working collaboratively with  
17 state agencies and local government, auto makers,  
18 utilities, and infrastructure providers to make  
19 electrification a success. But let's be clear. A strong  
20 ZEV program still remains the state's strongest policy  
21 tool for commercialization. That's why we're very  
22 concerned and oppose the inclusion of a special carve-out  
23 in ZEV for some manufacturers that over-comply with GHGs  
24 and recommended some simple changes that could improve the  
25 situation. This is more than the risky business of losing

1 unknown amounts of ZEV vehicles. It's about sending the  
2 wrong signal to those that want to continue kicking the  
3 ZEV can down the road.

4 As you've heard from many stakeholders today,  
5 it's also about fairness and certainty for the many  
6 companies that are already launching vehicles today and  
7 committed to making electric drive a success.

8 We would support the Board adding sensible  
9 protections, such as an industry-wide limit, a cap on  
10 manufacturers, making the exchange rate higher. The  
11 wonderful thing is that compared to past hearings, the  
12 large majority of stakeholders today are rolling up their  
13 sleeves to work collaboratively to make this work, but we  
14 need to move forward with a strong ZEV program. We need  
15 to move forward with a strong ZEV program. Let's tune up  
16 things with ZEV and drive forward with these landmark  
17 clean car standards.

18 Thank you very much.

19 CHAIRPERSON NICHOLS: Thank you.

20 Max.

21 MR. BAUMHEFNER: Thank you, Madam Chair, Board  
22 members, for the opportunity to speak.

23 My name is Max Baumhefner. I'm an attorney with  
24 the Natural Resources Defense Council. Yesterday, in our  
25 nation's Capitol, members of the Congressional House

1 Oversight Committee called into question safety of the  
2 electric vehicle technology with hopes of undermining  
3 adoption of a strong national fuel economy standard. The  
4 naysayers and the critics are relying upon the same tired  
5 and empty rhetoric employed by their predecessors. We  
6 can't do it. It's too expensive. We can't have cars that  
7 are both safe and efficient.

8           The package of regulations before you today for  
9 your consideration articulates a very different message;  
10 that California knows that we can and must move decisively  
11 towards a cleaner, less oil dependent future. Your  
12 predecessors new this to be true when they created the ZEV  
13 program which laid the foundation for today's electric  
14 vehicles which are increasingly common on California's  
15 streets.

16           In their first year, Chevy and Nissan sold 17,000  
17 Volts and Leafs, not bad for the first year of a new  
18 technology by any imagination.

19           In 2012, you will see the introduction of a  
20 myriad of plug-in electric vehicles, including sedans,  
21 compacts, sub-compacts, SUVs, and luxury and performance  
22 vehicles.

23           Over the next few years, you will see between 30  
24 and 40 plug-in electric vehicle models hit California and  
25 America's streets.

1           A strong ZEV program will ensure this  
2 proliferation of consumer choice continues by providing a  
3 long-term regulatory certainty necessary for investments  
4 in the next generation of automotive technology. A strong  
5 ZEV program will save consumers thousands of dollars at  
6 the pump. A strong ZEV program will move us beyond oil.

7           We are presently witnessing the most dramatic and  
8 important transformation of the automobile since we  
9 ditched the steam engine.

10           Your vote today in favor of a strong ZEV program  
11 will ensure that California places its thumb firmly on the  
12 more promising side of that technological evolution.

13 Thank you.

14           CHAIRPERSON NICHOLS: Wendy.

15           MS. JAMES: Good evening, Madam Chair and members  
16 of the Board. Thanks to so many of you who are volunteers  
17 and devoted so much time for meeting with stakeholders on  
18 this issue.

19           My name is Wendy James. I'm a coordinator with  
20 the California Clean Cars Campaign. The Advanced Clean  
21 Cars Program has a broad and diverse set of supporters and  
22 not just in California.

23           First, I want to highlight a letter that was  
24 submitted this week -- you should have received a copy --  
25 this was from 23 organizations across the U.S.

1 representing not just our partners in the Section 177  
2 states, but also states where they want to protect the  
3 right to join the California program in the future.  
4 Collectively, these organizations represent literally  
5 millions of Americans standing strongly behind your  
6 actions today.

7           Closer to home, the California Clean Cars  
8 Campaign represents a broad cross section of Californians.  
9 Our campaign co-chairs reflects some of the strongest  
10 sectors who support the Advanced Clean Cars Program. Ken  
11 McEldowney, Executive Director of Consumer Action,  
12 represents consumers. Bruce Klafter, Managing Director of  
13 Worldwide Operations for Applied Materials represents  
14 business. Jane Warner, President and COE of the American  
15 Lung Association of California, representing public  
16 health. And right here in Los Angeles, Wendy Greuel  
17 representing local government.

18           People came to this campaign for different  
19 reasons, but they all came because they care deeply about  
20 this issue. For some, it was personal. For some, it was  
21 about their business. For many, it was about their belief  
22 in California's leadership. They include the mayor of a  
23 small rural town in northern California who became a  
24 one-woman speakers bureau in her area.

25           The California chapters of the three largest

1 health organizations in the country, the American Cancer  
2 Society, the American Heart Association, the American Lung  
3 Association of California, practically every IEW local in  
4 the state -- we had several here today who didn't have  
5 time to testify -- from mom and pop businesses, to clean  
6 tech and blue chips, in the spirit of true coalition, we  
7 have unparalleled community and environmental group  
8 support.

9           It's impossible to mention everyone who played an  
10 integral roll in this campaign, but we provided you with a  
11 notebook that tries to summarize it. You should receive  
12 this today. As you proceed to this vote, know that you  
13 have a lot of support behind you. In L.A., we say, it's a  
14 wrap. Thanks.

15           CHAIRPERSON NICHOLS: David Chase.

16           MR. CHASE: Good afternoon. My name is David  
17 Chase for Small Business Majority. We are a  
18 California-based nonpartisan small business advocacy  
19 organization both founded and run by small business  
20 owners. We represent the 28 million Americans who are  
21 self-employed or own businesses of up to 100 employees.  
22 Our organization uses scientific opinion and economic  
23 research to understand and represent the interests of all  
24 small businesses.

25           The rising cost of fuel is a key area where the



1 government can help small businesses. We released a  
2 national opinion pole in September of last year that found  
3 87 percent of small business owners believe it is  
4 important to take action now to increase fuel efficiency  
5 in cars and light trucks. A 59 percent majority described  
6 this as very important.

7 Moreover, small business owners in influential  
8 automotive states of Michigan, Ohio and here in California  
9 demonstrated equally strong support for these standards.

10 Our survey also found that 71 percent of small  
11 business owners believe American car companies do not  
12 innovate enough, and 73 percent told us that government  
13 should do more to make them innovate. Therefore, it's not  
14 surprising that 80 percent of business owners support  
15 requiring the auto industry to increase fuel efficiency to  
16 60 miles per gallon by 2025.

17 Small business owners know they'll benefit from  
18 these strengthened fuel economy standards. The proposed  
19 rules are right on par with what business owners told us  
20 they want: Improved fuel standards that have the power to  
21 cut long-term business costs.

22 Stronger standards are a sure-fire way to help  
23 small business owners save money on fuel and invest in  
24 their companies and higher.

25 Through higher standards, the money small

1 business owners and consumers will save on gas will better  
2 equip Californians to foster economic growth by  
3 patronizing businesses everywhere. We support raising  
4 fuel economy standards, because it will be a boom to our  
5 small businesses and our economy. Thank you.

6 CHAIRPERSON NICHOLS: Thank you.

7 Danny Altman. Sean Carroll.

8 MR. CARROLL: Thank you, Mr. Chair. Thank you,  
9 members of the Board.

10 My name is Sean Carroll with Environment  
11 California. And I'm here to represent our 50,000 members  
12 across the state of California. We are a statewide  
13 citizen-based environmental advocacy group. We strongly  
14 applaud everything that the Air Resources Board has done  
15 so far and are here today to ask you to continue to lead  
16 the way and push the envelope for ZEV vehicles and for  
17 California's clean cars rules.

18 Just want to quickly highlight we know that as  
19 Californians, a deep part of our identity is connected  
20 with our environment. Places like the beaches and  
21 Yosemite are near and dear to our hearts, city centers.  
22 We've heard many speakers today highlight the threats of  
23 these areas, from smog in our cities to the long-term  
24 effects of global warming. And it is I think worth  
25 mentioning that this month marks the 23rd anniversary of

1 the Santa Barbara oil spill, which at the time was the  
2 largest oil spill in the county. Is now the third  
3 largest.

4 We know that these are major threats to these  
5 areas. We also know that with these challenges California  
6 has shown great leadership on this issue already, from  
7 being the first state to pass a cap on global warming  
8 pollution to our investments in rooftop solar power to, of  
9 course, our being the first state to pass a statewide  
10 clean cars law of its kind.

11 And when we look at those issues, it's very clear  
12 that when we do something here in California, that's what  
13 enables other states and the federal government to follow.

14 So for those reasons, we applaud everything that  
15 has been done so far. Ask to continue to adopt the  
16 strongest standards going forward. And we'll be leaving  
17 with you 10,000 signatures from citizens across the state  
18 that are saying exactly that. So thank you very much.

19 CHAIRPERSON NICHOLS: Thank you.

20 Jessica Lopez. Emily Taylor. Joe Lyou.

21 MR. LYOU: Hi. Joe Lyou, Coalition for Clean  
22 Air, also the Governor's appointee to the South Coast AQMD  
23 Governing Board.

24 When I come to work every day, there is a point  
25 at which I can see downtown Los Angeles and virtually all

1 of the South Coast air basin. And yesterday and again  
2 today, I was coming in and I got to witness perhaps the  
3 cleanest, clearest skies I've ever seen in Los Angeles. I  
4 have to admit, my first inkling, I have to call Barry  
5 Wallerstein and tell him to order some smog for tomorrow.  
6 I was thinking we really needed a more representative day  
7 to frame the debate over these regulations.

8 But the more I thought about it, I realized, you  
9 and I know better. In California, we know, on average, we  
10 have the worst air quality in the country. So I came to  
11 realize that mother nature and 50 years of regulation over  
12 air quality gave us this opportunity to have a preview of  
13 where we could be and where we can go to, and if we're  
14 successful.

15 So in more than one way today, this is the day  
16 Coalition for Clean Air envisioned when we co-sponsored AB  
17 1493, the Pavely Bill in 2002. Thank you for developing  
18 these regulations. Put California and the rest of the  
19 country on the path to achieving clean air and preventing  
20 climate change.

21 That said, the regulations aren't perfect. Both  
22 Coalition for Clean Air and AQMD staff have some concerns.  
23 I'm most concerned about the possible ZEV over-compliance  
24 issue and the one milligram per mile PM standard. Urge  
25 you to fix those problems.

1           To conclude, congratulations on moving this ball  
2 forward. It's an important achievement. Please consider  
3 improving it. And again, enjoy today as an example of the  
4 kind of air quality that we want and need in California  
5 every day. Thank you.

6           CHAIRPERSON NICHOLS: Thank you. I don't think  
7 most of us have been outside to look at it. Maybe there  
8 will still be a little daylight left when we get done.

9           Diane Whitenburg. David Friedman.

10          MR. FRIEDMAN: Thank you. My name is David  
11 Friedman, and I want to thank the Board, Chairman Nichols,  
12 and all the staff on behalf of the Union of Concerned  
13 Scientist, our members across California and the nation  
14 for proposing strong advanced clean car standards.

15          And as an engineer by education and working for a  
16 group named the Union of Concerned Scientists, I want to  
17 say I've been incredibly impressed by the thoroughness of  
18 research, analysis and the public process involved with  
19 these advanced clean car proposals. This is how  
20 regulations should be done.

21          The Union of Concerned Scientists strongly  
22 supports the Advanced Clean Car Program and especially the  
23 Zero-Emission Vehicle Program. But we do ask for the  
24 elimination for the significant modification to the  
25 greenhouse gas zero emission vehicle over-compliance

1 provision. This provision creates a strong economic  
2 incentive for car companies to avoid selling up to 40  
3 percent of their electric car requirements from 2018 to  
4 2021 in return for overcomplying with greenhouse gas  
5 standards by just one percent, a 40-to-1 exchange rate.

6 But let me look at it in terms of dollars and  
7 cents. Auto companies using this provision would have to  
8 invest just 2- to \$3,000 into off-the-shelf technology  
9 they were going to do anyway to avoid selling 10- to  
10 \$15,000 worth of truly advanced technology. That's not a  
11 good deal for California, especially in critical years of  
12 the program for infrastructure development and market  
13 ramp-up for battery electric and fuel cell vehicles.

14 The clock is ticking on global warming pollution  
15 and dangerously unhealthy air. So please adopt the  
16 strongest BEV program.

17 A quick sidenote. I may go over really quick on  
18 this, but I want to make an observation about the hearing  
19 today, which is there is a lot of people here working hard  
20 to try to slow and stop climate change. But what we've  
21 seen here and at EPA and NHTSA hearings around the nation  
22 has been the kind of climate change we need with auto  
23 companies stepping up and committing to produce cleaner  
24 cars. We need to see that same commitment from a lot of  
25 the other industries involved.

1           So just to put the clean fuels outlet in  
2 perspective, the first two years of the clean fuels outlet  
3 are simply asking oil companies to invest one half hour of  
4 profits -- one half hour of profits, an investment that  
5 will lead to long-term profits in the hydrogen industry.  
6 We need the oil companies to step up and change the  
7 climate as well in a positive way. Thank you.

8           CHAIRPERSON NICHOLS: Thank you, David. I think  
9 that's the first time I've ever seen anybody read  
10 testimony off of their smart phone.

11           Shannon Baker-Branstetter.

12           MS. BAKER-BRANSTETTER: Thank you, Chairman  
13 Nichols, members of the Board.

14           I'm Shannon Baker-Branstetter. I'm Policy  
15 Council for Consumers Union, the policy division of  
16 Consumer Reports.

17           I appreciate the opportunity to convey Consumer  
18 Reports' support for the proposed advanced clean cars  
19 rules. Consumer Reports tests and rates approximately 80  
20 new vehicles every year which we buy honestly at retail.  
21 We do not accept outside advertising and we have more than  
22 eight million subscribers.

23           We believe that improving consumers' choice is  
24 very important. It is our view that the Advanced Clean  
25 Cars Program will increase vehicle choices by providing

1 cleaner vehicles and alternative fuel options that will  
2 save consumers money and lower monthly fuel costs.

3           In November 2011, Consumer Reports conducted a  
4 nationally representative survey and found significant  
5 consumer interest in alternative-fueled vehicle.  
6 According to the survey, over half of car owners would  
7 consider a hybrid, pure electric, or hydrogen pure cell  
8 vehicle for the next vehicle purchase. If availability  
9 improved over the next 15 years, 72 percent of consumers  
10 would consider an alternative powertrain.

11           We also surveyed California residents to find out  
12 their views on the three key elements of the Advanced  
13 Clean Cars Program, all three received at least 75 percent  
14 support. In fact, 81 percent of Californians agree that  
15 the state should require all automakers to significantly  
16 reduce greenhouse gas emissions from new vehicles.  
17 Seventy-five percent agreed that California should require  
18 automakers to build fleets that include increasing numbers  
19 of zero-emission vehicles.

20           Indeed, in our owner satisfaction survey, fuel  
21 efficient and all-fuel vehicles dominated the list. The  
22 Chevy Volt topped the list with 93 percent of buyers  
23 saying they would buy the car again. The Toyota Prius,  
24 Ford Fusion hybrid, VW DTI, and Jetta TI all rank the top  
25 or near the top of class for customer satisfaction.



1 Californians also recognize the importance of  
2 coordinating alternative fuel infrastructure to match  
3 clean vehicle deployment. According to our survey, 77  
4 percent agree that California should require oil companies  
5 to make cleaner fuels like hydrogen or electricity  
6 available for public consumption.

7 California's driving the rest of the country to  
8 follow improving the cleaner cars, possible, affordable,  
9 and desirable. Thank you for your leadership on clean  
10 cars.

11 CHAIRPERSON NICHOLS: Thank you. Thanks for your  
12 help.

13 Edward Ose. Jay Vitgaria. Jessica Tovar.

14 If none of them are stepping forward, then that's  
15 our last witness on this item. And I can announce we're  
16 going to carry over through tomorrow. This will conclude  
17 the public testimony portion of the discussion.

18 But tomorrow, when the Board assembles, we will  
19 begin with the Board member comments, questions, and any  
20 amendments any Board members wish to offer at that time.

21 I know many people have been -- well, everybody  
22 has been listening. And many people have also been taking  
23 notes on things they want to talk about. And I'm sure it  
24 will be a lively and interesting discussion.

25 We all share the common goal of getting to a

1 final product, which is as good as we can make it. And I  
2 know that it's going to be -- that there are some things  
3 that we all think we might be able to do. I'm very much  
4 looking forward to that.

5 I would like to say that I omitted to do  
6 something I should have done earlier today, which is when  
7 we came back from lunch, we had a closed session at lunch  
8 to be briefed on litigation. No action was taken, but I  
9 needed to put that on the record because, otherwise, it  
10 would not be proper for the Board to engage in a closed  
11 session meeting. But there was no discussion. It was a  
12 briefing by our legal staff on pending litigation.

13 Other than that, I need to know, do we have to  
14 call for an open public comment on other issues while the  
15 hearing is still pending before we adjourn for the day?

16 CHIEF COUNSEL PETER: Madam Chair, are you  
17 closing the public testimony?

18 CHAIRPERSON NICHOLS: Yes, on this item. The  
19 record is now closed.

20 CHIEF COUNSEL PETER: So then you can proceed to  
21 discuss it tomorrow and then bring your other -- you have  
22 the discretion to either if somebody has signed up and you  
23 want to hear it today or else you can defer it to  
24 tomorrow.

25 CHAIRPERSON NICHOLS: Do we have anyone signed up

1 for open comment?

2 BOARD CLERK MORENCY: I do not have anyone signed  
3 up.

4 CHAIRPERSON NICHOLS: We're clear on that. Okay.

5 I believe we're allowed to leave papers here  
6 overnight since we're coming in first thing in the  
7 morning. You don't need to worry about whatever you need  
8 to leave behind tonight. We made our proposed deadline.  
9 I want to thank everybody for their cooperation. And we  
10 will resume at 8:30.

11 (Whereupon the Air Resourced Board recessed  
12 at 5:30 P.M.)

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