MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

CALEPA HEADQUARTERS

BYRON SHER AUDITORIUM

SECOND FLOOR

1001 I STREET

SACRAMENTO, CALIFORNIA

FRIDAY, SEPTEMBER 25, 2015

8:36 A.M.

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

A P P E A R A N C E S

BOARD MEMBERS:

Ms. Mary Nichols, Chair

Mr. Hector De La Torre

Supervisor John Gioia

Mr. John Eisenhut

Ms. Judy Mitchell

Mrs. Barbara Riordan

Supervisor Phil Serna

Dr. Alexander Sherriffs

Professor Daniel Sperling

STAFF:

Mr. Richard Corey, Executive Officer

Dr. Alberto Ayala, Deputy Executive Officer

Ms. Edie Chang, Deputy Executive Officer

Mr. Kurt Karperos, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Ms. La Ronda Bowen, Ombudsman

Mr. Steve Adams, Assistant Chief Counsel, Legal Office

Mr. William Brieger, Senior Attorney, Legal Office

Mr. Jim Duffy, Manager, Alternative Fuels Section, ISD

Ms. Anne Hebert, Chief, ECARS

Mr. Jack Kitowski, Assistant Division Chief, ISD

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

STAFF:

Mr. Allen Lyons, Staff Air Pollution Specialist, On-Board Diagnostics Program Development Section, Emission Compliance, Automotive Regulations, and Science Division(ECARS)

Mr. Mike McCarthy, Vehicle Program Specialist, ECARS

Mr. Lex Mitchell, Emerging Technology Section, Industrial Strategies Division(ISD)

Mr. Anil Prabhu, Manager, Fuels Evaluation Section, ISD

Ms. Leela Rao, Manager, On-Board Diagnostics Program Development Section, ECARS

Mr. Mike Regenfuss, Chief, On-Board Diagnostics Branch, ECARS

Ms. Elizabeth Scheehle, Chief, Oil & Gas and GHG Mitigation Branch, ISD

Mr. Floyd Vergara, Division Chief, ISD

Mr. Samuel Wade, Branch Chief, Transportation Fuels

Mr. Alex Wang, Senior Attorney, Legal Office

ALSO PRESENT:

Mr. Will Barrett, American Lung Association

Mr. Steven Douglas, Alliance of Automobile Manufacturers

Mr. Henry Hogo, South Coast Air Quality Management District

Mr. Bill Magavern, Coalition for Clean Air

Ms. Julia Rege, Global Automakers

Mr. John Shears, Center for Energy Efficiency and Renewable Technologies, Union of Concerned Scientists, Sierra Club California

I N D E X

I N D E X C O N T I N U E D

P R O C E E D I N G S

CHAIR NICHOLS: Good morning, ladies and gentlemen. Welcome. This is the September 25th, 2015 public meeting of the Air Resources Board. And before we take the roll and start the meeting, we will begin with the Pledge of Allegiance to the flag.

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

CHAIR NICHOLS: I have to say that whenever I say the Pledge of Allegiance to the flag, it always reminds me of elementary school.

But this morning I am recently back from a trip to Europe and spent time in Hungary and Czechoslovakia, or the Czech Republic, and Slovakia, and Poland, and I have never been prouder to be an American than I was as a result of having watched how the refugees in that part of the world were being treated. So anyway, just a small personal note here.

Madam Clerk, would you please call the roll.

BOARD CLERK JENSEN: Dr. Balmes?

Mr. De La Torre?

Mr. Eisenhut?

BOARD MEMBER EISENHUT: Here.

BOARD CLERK JENSEN: Supervisor Gioia?

BOARD MEMBER GIOIA: Here.

BOARD CLERK JENSEN: Ms. Mitchell?
BOARD MEMBER MITCHELL: Here.
BOARD CLERK JENSEN: Mrs. Riordan?
BOARD MEMBER RIORDAN: Here.
BOARD CLERK JENSEN: Supervisor Roberts?
Supervisor Serna?
BOARD MEMBER SERNA: Here.
BOARD CLERK JENSEN: Dr. Sherriffs?
BOARD MEMBER SHERRIFFS: Here.
BOARD CLERK JENSEN: Professor Sperling?
BOARD MEMBER SPERLING: Here.
BOARD CLERK JENSEN: Vice Chair Berg?
Chair Nichols?
CHAIR NICHOLS: Here.
BOARD CLERK JENSEN: Madam Chair, we have a quorum.
CHAIR NICHOLS: Great. Well, thanks, everybody. And thanks for those of you who were with us yesterday who have come back today.
A couple of announcements. Again, anybody who wishes to testify on the items are available to testify on should please fill out a request form. There's a card out in the lobby or at the clerk's desk here prior to the start of the meeting. A reminder that we do impose a three minute time limit on speakers, and we'd appreciate

if people use their time effectively by not just reading from a statement that they've already submitted for the record.

For safety reasons, we point out that there are exits, both in the back of the room and on the other side of the podium, which we will use in the event of a fire alarm, in which case we're required to evacuate the room immediately and to go downstairs and leave the building until an all-clear signal is given.

And I think that that is all that I need to do in the way of preliminary remarks. We will be taking up the consideration and vote on the two items that we heard yesterday at about 9:45, it looks like. But we have a couple of other important matters to deal with now, starting with the consent calendar, which is -- relates to the appointment of new members to the Environmental Justice Advisory Committee.

And unless, there's anyone who wants to take that item off of the consent calendar, I think we can go ahead and just move it for adoption.

BOARD MEMBER MITCHELL: I'll move it for adoption.

BOARD MEMBER SERNA: Second.

CHAIR NICHOLS: And a second.

All in favor, please say aye.

(Unanimous aye vote.)
(Mr. De La Torre not present for vote.)
CHAIR NICHOLS: Any opposed?
Any abstentions?
BOARD MEMBER SHERRIFFS: Second
CHAIR NICHOLS: Okay. That's great.
The next item, which is a public hearing item, is to consider the technical status of and proposed revisions to on-board diagnostics systems requirements and the associated enforcement provisions for passenger cars light-duty trucks and medium-duty vehicles.
And for this item we are going to be taking testimony. Under the cleaner and cleaner standards that the Board has put into place, the Vehicle I, II, and III programs, California light- and medium-duty vehicles are required to meet very strict emissions standards. Our on-board diagnostics program is important because it ensures that vehicles and engines meet these standards in use and remain clean for their entire life. When emissions problems are detected, drivers are alerted by a warning light and repair technicians can access diagnostic information to identify the nature of the problem and verify that the problem has been correctly fixed.
The Board regularly receives updates on the progress of the OBD regulations, including the one that we

will here today.

Mr. Corey, would you go ahead and introduce this item please.

EXECUTIVE OFFICER COREY: Yes. Thank you, Chair Nichols.

As directed by the Board, staff has been evaluating manufacturers' progress in designing and implementing light- and medium-duty OBD II systems. Since the OBD II regulations was last amended in 2012, staff has identified several changes to improve the effectiveness of the regulations. The proposed amendments include changes related to Low Emission Vehicle III applications, and to monitoring requirements for gasoline and diesel vehicles.

Modifications to the OBD II enforcement provisions are also proposed to align it with these other proposed revisions.

I'll now ask Allen Lyons of ECARS Division to begin the staff presentation.

Allen.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST LYONS: Thank you, Mr. Corey.

Good morning, Chair Nichols and members of the Board. Today, I'll present a proposal to amend ARB's

on-board diagnostic regulations for light- and medium-duty vehicles.

--o0o--

AIR POLLUTION SPECIALIST LYONS: I will start today's presentation by providing some history and background on California's on-board diagnostic program, known by the acronym OBD, before giving you an overview of the proposed changes to the existing regulations.

--o0o--

AIR POLLUTION SPECIALIST LYONS: OBD systems are designed to monitor the performance of vehicle emission controls systems from malfunctions that can develop with time and use. Their purpose is to reduce in-use emissions from vehicles by quickly alerting the vehicle owner when a malfunction occurs, and by providing information that helps technicians fix the problem right.

The OBD system is compromised of software -- comprised, excuse me, of software in the vehicle's on-board computer, and it uses sensor that, in most cases, are already on the vehicle to measure engine parameters, such as temperature, pressure, and air flow. The sensor data is used, directly or indirectly, to evaluate the performance of emission control systems and other emission related parts.

As such, the OBD system generally does not

measure emissions directly. Rather, the system evaluates the function of each emission control system individually. During the vehicle engineering process, vehicle emissions can generally be correlated to sensor or component deterioration, through emission testing of vehicles with deteriorated components installed.

When the OBD system has determined that the component or system being monitored is malfunctioning, a warning light, commonly referred to as the check engine light, is illuminated on the vehicle instrument panel. Additionally, information about the malfunction and the driving conditions at the time the fault was detected are stored and can be downloaded from the vehicle using a standardized hand-held scan tool. The fault information are important for vehicle inspections and repairs.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Apart from reducing in-use emissions, the OBD system provides other benefits to vehicle owners. First, OBD systems identify emission-related failures for the life of the vehicle, including during the warranty period.

Therefore, vehicle owners are made aware of emission control system problems that occur early in a vehicle's life allowing the owner to have the problems repaired while they are free of charge. Further, because

the OBD system identifies the failed component, repairs can be conducted quickly and efficiently reducing unnecessary repairs that can result from guesswork. This lowers vehicle repair costs outside of the warrantee period.

Second, comprehensive on-board emissions system monitoring has increased the incentive for manufacturers to build more durable vehicles in order to avoid customer dissatisfaction resulting from the frequent detection of faults, and also to reduce warranty costs.

Third, early detection of faults by OBD systems can prevent secondary malfunctions from occurring. For example, the early detection and repair of an engine misfire problem will protect the vehicle's catalyst system from damage due to overheating.

--o0o--

AIR POLLUTION SPECIALIST LYONS: OBD II has been in place since model year 1996 for light- and medium-duty vehicles. Nationally, over 150 million cars on the road today are equipped with OBD II systems, which equates to over 80 percent of the in-use fleet.

Thirty-one states are currently using OBD II for their inspection programs, including the Smog Check program in California. The OBD program has been quite effective and is now the primary mechanism used in the

Smog Check program to identify and address vehicles in need of emission repairs.

Experience with OBD II systems indicates that they are able to detect a much wider range of emission related malfunctions than other traditional inspection methods, and can do so with shorter inspection times and at lower costs.

--o0o--

AIR POLLUTION SPECIALIST LYONS: So why are we here today?

First, changes are needed to address OBD system implementation on vehicles designed to meet LEV III emission standards. OBD will help to ensure that the emission reductions from the LEV III program are met through the warranty period and to the end of life through the Smog Check program as discussed in the previous slides.

Additionally, ARB's OBD regulations are technically complex and technology forcing. Requirements are set based on an assessment of the technical feasibility and cost effectiveness to minimize excess emissions through comprehensive and early detection of nearly every vehicle component or system that can impact emissions when malfunctioning.

Consistent with the Board's long-standing policy

when setting stringent standards, the staff has continued to closely follow manufacturers' progress towards meeting the requirements and to propose adjustments as necessary.

Further, as more stringent emission standards and new vehicle technologies continue to evolve, the OBD II requirements need to be revisited to ensure that they will continue to provide for system designs that are effective in detecting emission related problems. Today's amendments reflect the outcome of these efforts. The changes presented today are directed at the light- and medium-duty vehicle classifications.

--o0o--

AIR POLLUTION SPECIALIST LYONS: To begin, the OBD II regulation requires malfunctions to be detected before they can cause vehicle emissions to exceed threshold levels that are based on the standards the vehicle is certified to. With California's LEV III program adopted in 2012, both the structure and stringency of vehicle emission standards have changed.

Previous standard categories, like LEV II, have separate standards for NMOG and NOx emissions. However, the LEV III tailpipe standards combined NMOG and NOx emission into a single standard.

Secondly, LEV III creates new lower emission vehicle categories, specifically, the ULEV70, ULEV20 and

SULEV -- sorry ULEV50 and SULEV 20 standards.

Third, LEV III also adopted lower PM standards. The standards dropped from 10 milligrams per mile to 3 milligrams per mile, and ultimately dropped to 1 milligram per mile for light-duty vehicles. The PM standards for medium-duty vehicles dropped from 120 or 60 milligrams per mile to 10 or 8 milligrams per mile. And working with the vehicle manufacturers, the staff has concluded that the structure and stringency of the OBD II emission threshold requirements also need to be adjusted to ensure continued effectiveness and technical feasibility at these extremely low emission standards.

--o0o--

AIR POLLUTION SPECIALIST LYONS: There are some areas for which staff is proposing enhancements to the regulatory requirements, including those for crankcase ventilation system and evaporative system leak monitors. For crankcase system monitoring, there are a couple of issues with the current requirements for detection of host disconnections within the system.

First, the current requirements target monitoring of the connections, but not the overall system integrity.

Second, manufacturers are permitted to request exemption from the hose disconnection detection requirement, if they use robust hose connections. Staff

believes that potentially significant system failure modes, such as broken hoses, are being missed by OBD system in use currently. Further, experience indicates that some robust connections may actually hinder crankcase ventilation system servicing, because the connections are too difficult for technicians to reasonably remove.

The proposed revisions are designed to address these issues by removing the robust connection design compliance option, and instead requiring OBD systems to detect hose failures, such as disconnections and breaks, and all -- on all 2023 and subsequent model year gasoline vehicles, and all 2025 and subsequent model year diesel vehicles.

The long lead time allows for changes to the base engine where needed during the normal timing for engine redesigns for the most cost effective implementation. Another amendment staff is proposing will provide for better validation of the evaporative system leak monitor, specifically the monitor designed to detect 0.020 inch leaks in the evaporative system. Before they can get OBD system certification manufacturers are required to test the major monitors and submit the test results to ARB verifying that these monitors are able to detect faults before the specified thresholds are exceeded.

The evaporative system leak monitor is current --

is not currently part of this testing, because it is not tied to a specific emission threshold. Instead, the monitor is required to detect a specific leak size, in this case, a leak equivalent to a 0.020-inch diameter hole.

Recently, U.S. EPA adopted their Tier 3 requirements. And while their OBD requirements are closely aligning with ARB's requirements, they added small evaporative system leak detection to the list of monitors for which test results are required for certification. To maintain alignment with EPA's regulations, we are now proposing to require the same testing as part of the certification to the manufacturer's OBD systems.

--o0o--

AIR POLLUTION SPECIALIST LYONS: As manufacturers continue to roll out technologies to meet the progressively more stringent criteria and greenhouse gas emission standards for advanced clean cars, vehicle design and emission controls are becoming increasingly complex with the emission control systems more heavily integrated with the powertrain.

As such, a more objective way of determining what components and systems should be subject to monitoring under the OBD II regulation would help to clarify and streamline the process for introducing OBD compliant

advanced vehicle designs.

To this end, staff is proposing several amendments to the OBD regulation that would provide more objective criteria for determining when a component or system is exempt from the OBD requirement based on their being little or no emission benefits with their inclusion.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Today's proposal also includes changes to the standardized data provided by OBD systems. Consistent with the goals of the OBD program, the main purpose for standardized data is to provide technicians and inspectors with ready access to information necessary to diagnose and repair emission related malfunctions.

However, access to other data is also crucial for other air quality efforts like Smog Check inspections, new vehicle certification, and compliance testing. Over the years, as these other programs have identified the need for access to particular vehicle data, ARB has taken on regulatory amendments to include the needed data within the OBD regulation. While data to support these other ARB needs may not be directly related to OBD, housing these requirements in the OBD regulation was a request by the vehicle manufacturers themselves many years ago to ensure consistency in how the data would be accessed and to

encompass all of the required standardized data into a single regulation.

Simply said, today's proposal reflects more of the same. That is, some of the proposed data will help continue to ensure vehicles are repaired effectively and correctly, while other proposed data will help ARB in areas such as certification, and verifying real world performance of the emission control system.

Of significant note, however, is that for the first time, today's proposal includes data to help verify real-world performance with respect to greenhouse gas emissions, such as carbon dioxide.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Standardized data is a valuable tool for understanding real-world performance of emission controls, particularly in situations where real-world performance seems to differ from test-cycle performance without apparent valid reasons. ARB currently uses these data today when investigating real-world criteria emissions and will use the proposed GHG data for similar purposes.

Given the aggressive GHG emission reduction goals California is facing, ensuring current and future GHG standards actually deliver the necessary in-use reductions will be paramount in reaching those goals. To this point,

the recent National Academy of Sciences report on fuel economy technologies, which was commissioned by the National Highway Traffic Safety Administration, to inform the mid-term review of the national fuel economy and GHG standards, called special attention to the need to study and better understand real-world fuel economy relative to certification testing results in order to accurately quantify actual benefits and determine the appropriate stringency of future standards.

Today's proposal is a key step to provide access to minimal, but critical, data to verify real world GHG benefits and inform future proposals and decision making. Given that, I would like to take the next few slides to highlight some of the proposed data.

--o0o--

AIR POLLUTION SPECIALIST LYONS: First, I'll discuss the data that would apply only to plug-in hybrid electric vehicles. The intent is to have data that would accurately quantify how these vehicles are performing in the real world with respect to greenhouse gas emissions, due to the combination of energy consumption from gasoline usage and electricity from wall charging.

Specifically, the data would separately identify the total gasoline and electricity usage, as well as the miles traveled using each of these energy sources. Such

data will help ARB verify that current and future regulations properly account for the real-world emission benefits of these vehicles.

The data could also be critical in accurately projecting real-world benefits for future vehicles as ARB continues various scenarios to reach our greenhouse gas emission reduction targets.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Broadening to other vehicle technologies, some of the proposed data are related to vehicles equipped with off-cycle technologies. As part of the national GHG program, manufacturers can earn credits towards meeting the standards by equipping vehicles with technologies that significantly reduce GHG emissions in the real world, but may have minimal benefit on the certification test itself. These are known as off-cycle technologies, and examples include active grill shutters, as shown in the bottom right corner of the slide, that effectively alter the air flow through the front grill to reduce aerodynamic drag, or so-called haptic feedback accelerator pedals, as shown in the bottom life, that vibrate on harder accelerations to encourage more fuel-efficient driving.

Further examples, include echo modes that are selectable by the driver by using a button, like that

shown in the upper left of the slide. Off-cycle credits provide important flexibility for vehicle manufacturers to take advantage of innovative technologies that result in real-world benefits. It will likely play an increasing role as GHG standards become more stringent in the future. Thus, it is critical that the technologies actually do create real-world benefits, even though in some cases, it will be difficult to estimate the magnitude of the benefits.

Accordingly, the proposal would include data to help quantify the real-world usage of the technology. For Simpler technologies, the data would simply identify the total time of usage. For other technologies, such as those that are reliant on the driver responding to achieve the benefit, the data would identify the number of successful activations due to actual driver response.

It's important to note that under the current regulations, these data could not be used by regulatory agencies to retroactively alter credit levels awarded at the time of certification for particular technologies. However, these data would be very informative both to the agencies and to vehicle manufacturers to ensure future credits are appropriately awarded.

Additionally, manufacturers may find a role for this data to aid in demonstrating benefits for novel GHG

reduction technologies for which they are seeking new credits.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Lastly, some of the new parameters would provide valuable information about real world GHG emission levels for all new vehicles by looking at cumulative fuel consumption.

The left of the slide shows a list of the proposed parameters and what example data might look like. The right side of the slide shows examples of actual dashboard displays on current vehicles, because many of today's vehicles already generate and report information that is the same or similar to that included in staff's proposal. What these vehicles don't do today, however, is to provide that data in a standardized format through the OBD II data link.

I would like to make a couple of points regarding the proposed data on the left-hand side of the slide. As you can see, the proposal only identifies cumulative totals, such as just over 738 gallons of fuel consumed. Structuring the data in this way provides two benefits. First, it includes a sufficient amount of aggregated data to be useful in a single download. Second, the data cannot be disaggregated or broken out to isolate any individual driving event that has occurred in the past,

such as the number of idle events on the last trip or how long they lasted.

Using these data, ARB will be able to better quantify CO_2 emissions in the real world. While these data could not be used to directly evaluate compliance with the GHG standards, they can alert the agency to vehicle models that appear to be underperforming with respect to the standards they were certified to, and could be used to trigger follow-up testing to confirm their performance.

Beyond simply gallons of fuel consumed and miles traveled to get average miles per gallon, the proposed data provide key context that allows some normalization of the data. For instance, idle time, city driving time, and highway driving time accumulations allow more valid comparisons between the vehicle that spends a significant amount of time stuck in traffic versus one that cruises at highway speeds most of the time.

Likewise, positive kinetic energy and torque data allow correlation between trucks that are used for varying amounts of work without having to know if the differences were due to towing, cargo carrying, operation over mountain passes, or another factor.

Though the combined use of these data parameters, ARB will be able to better understand how the GHG

regulations are translating to benefits in the real world.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Staff has discussed these proposed parameters with industry throughout the regulatory development process. One of the initial concerns raised by industry was that the proposed data would provide information about individual driver's habits and thus raise driver privacy concerns.

In response, staff worked with several industry representatives, including Global Automakers' designated data privacy expert, to modify the original workshop proposal. Today's proposal reflects key changes including a paring down to the minimum data needed, and, as you saw from the previous slide, storage of only aggregated totals to eliminate any ability to parse out individual trip or event data.

Further, the data focuses on identifying vehicle and engine characteristics to quantify the GHG emissions, not any characteristics related to driver behavior. And to be clear, the proposal does not include any location data about where a car has been, nor any data that could be used to infer past or current location, nor does the data contain any personally identifiable information about the driver or the registered owner of the vehicle.

--o0o--

AIR POLLUTION SPECIALIST LYONS: A second concern that has been raised by industry is specific to how the proposed data would be obtained from vehicles, and whether the data can be taken without the permission of vehicle owners.

First, a physical connection to the car is needed to access this or any other data required by the OBD II regulation. Specifically, there is a connector inside the car that a tool has to be plugged into in order to download any data. The data must be -- the key must be in the ignition and turned to the on position. As such, access to the data would almost assuredly involve the owner's permission.

Nonetheless, staff has stated publicly, including in the staff report, that we would only collect these data from voluntary participants. Such a commitment is consistent with past and current practice by ARB when soliciting the use of vehicles from private citizens for various ARB programs, including compliance or inventory testing.

ARB's standard process includes soliciting voluntary participation by mail, informing interested owners of the plan data collection or testing and compensating owners for their participation.

--o0o--

AIR POLLUTION SPECIALIST LYONS: A third concern raised by industry is that these proposed data could be stolen or otherwise misused. To put such current concerns into perspective, I'd like to make a couple points.

As noted earlier in the proposal, OBD has always provided for standard -- standardized data access. And the data requirements in the regulation have been updated many times. In all cases, data access is through the in-vehicle OBD connector, and thus, no new access point is being created. Further, for many vehicles, much of the proposed data are already available in the vehicle, going back to the dashboard fuel economy displays as an example.

Lastly, while I noted that we were -- that we have already taken steps to ensure that the data itself would not include any personally identifiable information or driver-specific habits, we have committed to an additional level of protection for any data we would collect from voluntary participants.

For any collected data, the fuel economy-related data will not be stored with any information identifying the specific vehicle that it came from. By preventing the data from being linked back to an individual vehicle or owner, staff's proposal adds another level of protection in the event that data maintained by ARB were inappropriately accessed.

--o0o--

AIR POLLUTION SPECIALIST LYONS: Now, I'll briefly cover costs. In general, the amendments proposed today would only have a minor impact on vehicle costs. Specifically, the total increase in cost to vehicle manufacturers is estimated to be $5.11 per vehicle, while the total increase in cost to the consumer would be $5.43 per vehicle. For consumers, this is less than 0.02 percent of the average retail cost of the new vehicle.

Along with the general consumer benefits of OBD systems that were discussed at the beginning of this presentation, the proposed amendments would serve to preserve the emission benefits of the LEV III program, for which an effective OBD II and Smog Check program was assumed in the benefit analysis.

--o0o--

AIR POLLUTION SPECIALIST LYONS: In concluding today's presentation, the proposed amendments to the existing OBD II regulations are necessary to ensure continued success of California's OBD program and to maximize the emission benefits associated with the LEV III program. Staff proposal reflects a balance of changes intended to streamline OBD certification, while strengthening and clarifying the requirements in some areas.

Staff recommends the adoption of the proposed amendments with 15-day changes. The 15-day changes include a number of technical clarifications to the regulation, and do not affect the stringency of the proposal. Summary of the most significant proposed 15-day changes drafted by the staff is currently available for review by the Board and interested parties.

This concludes the staff's presentation, and I thank you for your attention.

CHAIR NICHOLS: Great. Thank you very much. Before we turn to public testimony, do Board members have any initial questions?

Yes.

BOARD MEMBER GIOIA: Just a couple questions. Just to be clear, the diagnostics on all vehicles will both be accessible through this port that you described, plug-in port, or to the driver directly on board, right? All will be -- so all will have the feature where the driver can view it or will each manufacturer be different in terms of how that's viewable the driver?

VEHICLE PROGRAM SPECIALIST McCARTHY: So we are standardizing the data that you will get through the connector, but we are still leaving it totally up to the manufacturer as to whatever he chooses -- he or she chooses to include or not include on any sort of display.

Most --

BOARD MEMBER GIOIA: That will be up to the manufacturer?

VEHICLE PROGRAM SPECIALIST McCARTHY: Right. As you -- we gave a couple examples there of a couple different brands.

BOARD MEMBER GIOIA: Right.

VEHICLE PROGRAM SPECIALIST McCARTHY: You see they displayed slightly different stuff.

BOARD MEMBER GIOIA: Right.

VEHICLE PROGRAM SPECIALIST McCARTHY: Their interior people and marketing people decide what to put there. We don't put that --

BOARD MEMBER GIOIA: I wondered, because oftentimes the viewing this type of information is useful to the driver in changing driving patterns and behaviors oftentimes. So it could be helpful in that regard, but there's no requirement that it has to be viewed by the driver?

VEHICLE PROGRAM SPECIALIST McCARTHY: Correct. Yeah, we've not -- we and EPA have talked, but not pursued anything. There is a much higher percentage of cars that have that now. So I think even with -- absent any requirement to do it, they are recognizing there's consumer value.

BOARD MEMBER GIOIA: Right. Right.

So there's been a lot of discussion statewide about replacing the gasoline tax for transportation purposes with a metric that's based on vehicle miles traveled. If that occurs, would this new system be -- make it easier -- obviously, there's going -- a lot of -- a lot of technology needs to occur to sort of get to that point. Just can you comment about how having this now with 2019 models going forward, right, it's 2019, whether this system could be utilized in some ways in achieving that goal?

DEPUTY EXECUTIVE OFFICER AYALA: Maybe I can answer that.

BOARD MEMBER GIOIA: It's not intended to, I get it, but I'm just trying to understand given that there's a move toward measuring vehicle miles traveled to compute a transportation tax.

DEPUTY EXECUTIVE OFFICER AYALA: Right. So a couple of points. In principle, could we use this with modifications? I think the answer is yes. What we are proposing is not intended to do that.

BOARD MEMBER GIOIA: Correct.

DEPUTY EXECUTIVE OFFICER AYALA: Because I think the structure of collection of total miles traveled would be slightly different. But in principle, you could use

the system.

BOARD MEMBER GIOIA: Right.

CHAIR NICHOLS: As a matter of the technology, yes, but you can't do it without further regulatory action, I think.

BOARD MEMBER GIOIA: No, no. No, I understand. I'm just trying -- sort of looking at what's the policy and the legislative action that gets there, and then what's the technology that gets you there.

CHAIR NICHOLS: Yes, this could be that.

BOARD MEMBER GIOIA: And I'm just saying does this technology -- this technology obviously could -- helps get you there.

DEPUTY EXECUTIVE OFFICER AYALA: And just --

BOARD MEMBER GIOIA: It's not intended.

DEPUTY EXECUTIVE OFFICER AYALA: Right. And another reminder, sometimes analog is better than digital. Right now, you can track your odometer. That's what you have to do for your insurance company.

BOARD MEMBER GIOIA: Right.

DEPUTY EXECUTIVE OFFICER AYALA: And that's just a simple check of when you go in and get service, they write down the odometer --

BOARD MEMBER GIOIA: Right, right.

DEPUTY EXECUTIVE OFFICER AYALA: -- and that's

basically what they do. So there may be other means --

BOARD MEMBER GIOIA: Right.

DEPUTY EXECUTIVE OFFICER AYALA: -- of getting to the miles driven.

BOARD MEMBER GIOIA: Right, right. I know a lot of it is also how the data is transmitted from the vehicle to wherever it needs to be transmitted if you're going to computer it, right?

CHAIR NICHOLS: Dr. Sperling.

BOARD MEMBER SPERLING: You know, actually this question by Supervisor Gioia is even more relevant than I think a lot of people realize, because there was a law passed last year specifically to create a pilot program for the State of California to do exactly that. And so it does seem like there should be some thought or effort to align with some of the thinking. And I think it's the California Transportation Commission that's running the pilot.

BOARD MEMBER GIOIA: Right.

BOARD MEMBER SPERLING: And, I mean, actually the Governor, I think, is hoping, expecting that this is going to go statewide in three or four years. So I'm not quite sure exactly where I'm going, but I think maybe a little bit more thought should be given to seeing if and when this OBD change could be aligned with what they're

thinking there. I mean, it's easier to make changes now than later.

DEPUTY EXECUTIVE OFFICER AYALA: I guess the only other point about that is, yes, the OBD platform is available for that, but it's not the only platform. We mentioned that the OEMs are already using different data streams to display on the dashboard. I can envision a new -- a different approach that actually doesn't even go to the OBD. So we agree, we need to look into that.

BOARD MEMBER RIORDAN: Mrs. Mitchell, you have a --

BOARD MEMBER MITCHELL: Thank you.

One of the biggest concerns we've seen in opposition to this is the concern about privacy. And from the presentation, I gather that this data will be available only when the owner of the vehicle voluntarily participates in such a program. Am I correct in that assumption?

DEPUTY EXECUTIVE OFFICER AYALA: Yes.

BOARD MEMBER MITCHELL: And how do you think that will -- can you give me sort of a scenario on how that will happen? I mean, we -- changes will come into being, and then ARB will conduct studies with people that volunteer to participate?

DEPUTY EXECUTIVE OFFICER AYALA: We anticipate

taking exactly the same approach that we do now. As you know, we have a very active in-use compliance program, and we regularly bring in vehicles from private owners to test. We don't anticipate this changing that.

We are going to be asking specifically for permission and we will have written permission for us to be able to do this.

Do you guys want to add anything?

VEHICLE PROGRAM SPECIALIST McCARTHY: Right. Right. That's -- as Alberto has indicated, the -- when we recruit cars, perhaps there's a new model or new engine and we want to go target that one for enforcement or compliance testing, we will identify owners of those vehicles, solicit their participation by mail for those that are interested. And then we'll go through another process through us or a contractor to inform them of what we'll be doing with their vehicle, whether it would be just plugging in and collecting data, whether we'd actually bring their car to our lab and test it.

And so that same mechanism exists, so that people who choose not to participate can ignore our solicitation or can send it back, no thank you. It's as simple as that, and we target -- you know, there's 300 or 400 different models certified every year. We might target as few as four or five, or as many as 20 or 30 a year,

depending on what's come out that year and what our resources are in that -- in our budget.

BOARD MEMBER MITCHELL: Okay. Thank you.

DEPUTY EXECUTIVE OFFICER AYALA: There's another point I think that it would be important for the Board to consider, and that is as we move forward, I do expect people to get more familiar and more comfortable with this approach, because as the staff presentation mentioned, our Smog Check program is already transitioned to be an OBD-based program, like many other states in the nation.

So when people come in and bring their car to the station, it will no longer be a tailpipe test. It will essentially be an OBD test. So people are going to grow accustomed to the fact that now the way to track cars is going to be through plugging in through the OBD, so eventually I think people are going to be more comfortable with the approach.

BOARD MEMBER RIORDAN: Thank you.

Dr. Sperling.

BOARD MEMBER SPERLING: You know, I'm convinced that the OB -- you know, the privacy protections are really very strong and sound. But just for a little more transparency on that, so like with -- if we have smog inspections using OBD, are we thinking we're going to get downloads at all of the smog inspections, you know, with

permission, of course?

DEPUTY EXECUTIVE OFFICER AYALA: No, because again, what we are proposing strictly --

BOARD MEMBER SPERLING: Why not?

(Laughter.)

DEPUTY EXECUTIVE OFFICER AYALA: -- to support our -- it would be a lot of work. There's a lot of stations around the State, and I'm not -- I don't think that we're anticipating -- again, this is just an add on to the current program that we run at our lab in El Monte. We're not anticipating going to Smog Check stations and downloading this information. This is going to be a control program.

Like you said, we agree that we need to protect privacy, and we've done exactly that working with industry. So, at this point, and this is again just an add on to the current program we have.

BOARD MEMBER SPERLING: Well, in this modern world, it seems like it's awful easy for data to be transmitted. And so it is an aggregate form after it's downloaded. You know, there's no GPS identifiers or anything like that, why not have station -- why not have arrangements with stations where they do just transform it -- transfer it digitally. It would save ARB lots of money, and it will just be much better quality data and

much more useful.

VEHICLE PROGRAM SPECIALIST McCARTHY: So for the -- for our primary purposes to see how new technologies are doing, we want to know early in their life, you know, in the first one or two, three years they're out there, right? If a manufacturer introduces a new technology that scores really well on fuel economy tests and the greenhouse gas standards, those might be the ones we want to go target early in their life and see if they're really delivering.

As you know, with Smog Check, it's a six-year delay before we see the cars first in the program. So if we're talking 2019 model to start kind of putting this data in and then six years after that, it puts it at lot farther out there before we see the vehicles. And frankly, as somebody trying to regulate new vehicles and adopt new standards, I want to know sooner than six or seven years after the cars are out on the road. I want to know when the first two -- one or two years they're out on the road. So is it possible we could collect something through Smog Check?

We would have to change the tooling and Smog Check now. We would have to set something up for consumers to be able to opt in or out of this at the time of Smog Check. It's all doable, but it's at least 10 or

12 years out in the future as well. And I don't know what the shape of Smog Check will even look like. What it looked like 10 or 12 years ago is not what it looks like today.

So I agree it's a possibility, and we could figure out a way to do it with consumer consent, but it's -- in the near term what we want to do with this data is collect it on newer vehicles early in their life, which is -- as Alberto said, would be targeting specific I vehicle models in their first one or two years of life.

BOARD MEMBER RIORDAN: Supervisor Gioia.

BOARD MEMBER GIOIA: Just to get back to one of the points I mentioned earlier, has there been -- and I know looking to our -- the P, professors, on this Board -- you missed our five, six P's, Judy, yesterday. We talked about all the P's on the Board. We'll explain that to you later.

(Laughter.)

BOARD MEMBER GIOIA: So has there been -- have there been studies to show how driver -- feedback to drivers about these types of -- this type of information, and how it can positively affect driver behavior? Have there been studies on this? And so I'll let you answer that first.

DEPUTY EXECUTIVE OFFICER AYALA: The short answer

is absolutely. I mean, the concept is known as eco-driving, right?

BOARD MEMBER GIOIA: Right.

DEPUTY EXECUTIVE OFFICER AYALA: And it's been applied in many places, not only in the light-duty but the heavy-duty sector as well. And that's exactly the concept is providing feedback to the user, so the user can then respond.

BOARD MEMBER GIOIA: So given that, I'm -- and this -- it takes time to get to this point, but how we may want to think about using that to encourage or require more of this type of diagnostic system to be visible to the driver on vehicles, which I realize some models have this. But with this new information, I know this is a step forward, but is the sense of considering whether this is eventually required in some way or encouraged or incentivized so that more vehicles provide this.

DEPUTY EXECUTIVE OFFICER AYALA: I think again the answer to that is going to be OEM specific as we mentioned.

BOARD MEMBER GIOIA: Do we have the authority --

DEPUTY EXECUTIVE OFFICER AYALA: Many of them are actually doing that and the purpose is again --

BOARD MEMBER GIOIA: No, I understand that. Just let me ask a legal question. Do we have the authority to

require that the diagnostics be visible in some meaningful way to the driver?

CHIEF COUNSEL PETER: As I always say in these situations, it's a complicated question. We need to look at it. I think that there --

BOARD MEMBER GIOIA: Safe answer.

(Laughter.)

CHIEF COUNSEL PETER: I think I'll just leave it at that, because I -- it's a really complicated issue. We are -- we only require things as we need them. And so in terms of this particular, you know, question --

BOARD MEMBER GIOIA: Right.

CHIEF COUNSEL PETER: -- as Mr. McCarthy pointed out, we're further down the road in terms of requiring it. I think that --

BOARD MEMBER GIOIA: The question is also how we can, on maybe a separate track, incentivize manufacturers to have this be visible to drivers.

CHIEF COUNSEL PETER: It would not be a legal question, because it's voluntary.

BOARD MEMBER GIOIA: I understand. So I was asking -- there's two questions.

CHIEF COUNSEL PETER: Right.

BOARD MEMBER GIOIA: A regulatory question of whether we can require it, and a separate question of what

steps we think we can take to incentivize it.

CHIEF COUNSEL PETER: Correct. And we can look at the required elements of it and we will do so. Obviously, there's another federal agency involved, you know, in terms of the requirement that vehicles sold in California or nationwide.

BOARD MEMBER GIOIA: Right, right.

CHIEF COUNSEL PETER: We'll look at that and get back to you on the requirement. The incentivization, there are -- the manufacturers are listed on -- as -- on the comment list right here, both the Global Automakers and also the Auto Alliance. So you might want to ask them directly if they would be responsive --

BOARD MEMBER GIOIA: Okay. No, we'll ask them. That's great.

CHIEF COUNSEL PETER: -- to incentives or -- they'd probably have a few on the regulatory --

BOARD MEMBER GIOIA: Yeah, it will be interesting to hear what they say.

BOARD MEMBER RIORDAN: I think that would be wise for us to move on to those who are commenting today. A number of people are obviously forward thinking, but I think we should deal with what is before us at the moment. And if the commenters want to take a moment to respond to these ideas within your three minutes, I think you can do

that.

Madam Chairman, I'm glad you're back, because we're just ready to hear our first commenter, Dr. Henry Hogo, if he would come forward.

CHAIR NICHOLS: Perfect. Perfect timing.

MR. HOGO: Good morning again, Chair Nichols and members of the Board. Henry Hogo with the South Coast Air Quality Management District. The South Coast Air Quality Management District staff strongly supports the OBD II technology as a very good compliance tool, enforcement tool. But in addition to that, we believe that in the discussions that you had this morning, it is a good tool in the future to look at real world emissions. And as we continue to look at the emissions inventory that we use for attainment demonstration, we're finding every year that the emissions are not what we think they are in the real world. So having more of this information will help.

I think the first step with 2019 provisions actually is a good step forward. And so we fully support staff's proposal as proposed today and urge your adoption.

CHAIR NICHOLS: Thanks. Thank you very much.

MR. HOGO: Thank you.

CHAIR NICHOLS: Steven Douglas.

MR. DOUGLAS: Good morning, Madam Chair.

CHAIR NICHOLS: Do you have a new title here,

Auto Alliance Driving Innovation? Is that --

MR. DOUGLAS: That's from a business card. It's the Alliance of Automobile Manufacturers.

(Laughter.)

CHAIRPERSON CHAIR: I thought maybe you changed the name again.

MR. DOUGLAS: I guess I'll be driving innovation today.

(Laughter.)

MR. DOUGLAS: Good morning. I'm Steve Douglas with the Alliance of Automobile Manufacturers.

BOARD MEMBER GIOIA: I know one way you can innovate.

(Laughter.)

MR. DOUGLAS: I have your ideas. And I appreciate it. It's a pleasure to be here, and I appreciate the opportunity. We support on-board diagnostics. In fact, auto makers, vehicle manufacturers started installing computers on vehicles to monitor the systems in the 1980s before we had OBD regulations. And these systems have become incredibly complex over the years.

Today, they monitor, as staff has said, every component, every system that could cause emissions to increase over virtually every driving cycle. We've been

big supporters of using OBD to replace the conventional Smog Check program. And today, in virtually every state that has a Smog Check program, that uses, at least in some part, the OBD system, and primarily in most states.

With that said, I should say up front that we do not support the vehicle operations tracking requirements, and we recommend removing those. However, if the Board does approve those regulations, we have provided in our written comments recommended changes that we think address some of our concerns, and -- and in terms of defining what the data -- putting the data in context as well as how ARB will use the data.

Moving on beyond the three pages associated with vehicle operations tracking, we've spent the last 18 months working with ARB staff on the other 215 pages of this regulation. And throughout this, the staff, they've been available, they've been transparent, and they've been professional. We've had hundreds of phone calls, emails, conference calls, in-person meeting, web meetings, and -- with the ARB staff.

And throughout it, they've tried to understand our systems, our recommendations, our concerns, and alternatives. And we sincerely appreciate it. We understand they'll make the decision they will make, but in every case they tried to truly understand what the

issue was, what the alternatives were before they moved forward. So again, we appreciate that.

And with the recommendations in our letter, we support the changes to the traditional OBD requirements. As I've said, these are incredibly complicated regulations and systems, and they have to be very precise, the regulatory language, so we would want to continue working with ARB staff to finalize the regulatory language and to ensure that it meets the intent and our combined understanding.

With that, I'd be to happy answer any questions.

Thank you.

CHAIR NICHOLS: Yes, Dan.

BOARD MEMBER SPERLING: What is the concern -- so you say you're opposed to the vehicle -- tracking vehicle operation. The vehicle operations are not specific to the individual nor to the location. So what is your concern about that?

MR. DOUGLAS: Well, they are specific to the vehicle. So there's two elements of vehicle tracking, there's the overall -- the aggregated data that's been described. And so that's over the life of the vehicle. And then there's also the other part of that, which is a short term, so it's over the last 50 hours of the vehicle operation.

So that's on the vehicle. It's stored with -- and, of course, the OBD system also has the VIN and that's passed, because the VIN is necessary so you can get the vehicle make and model. So the data is, as it's recorded, recorded with the VIN. And when you downloaded that information, it would be downloaded with the vehicle identification number. So you would have the VIN and you would have the long-term aggregated requirements, your data, and then you would have the short-term, over the last say month of vehicle driving.

And there's no -- and you could collect it at repair shops. Repair shops could collect it. So with that -- if they collected your data at a repair shop with your VIN, is that okay? Could that repair shop sell that date to someone else if they collected it on every vehicle? I don't think the regulations address that issue.

BOARD MEMBER SPERLING: So you're not concerned about it from the perspective of the automaker, but from the perspective of the privacy of the consumer?

MR. DOUGLAS: Right. I mean, we do have requirements that automakers provide - we provided that in our letter - the privacy principles. The industry got together in, I believe it was September of last year, and adopted a set of privacy principles on disclosure

requirements what we collect how we provide that to the customer.

BOARD MEMBER SPERLING: Well, I think we'll hear from the staff.

The other thing is this question that Supervisor Gioia started probing on, and that is there's all this data. So speaking as a professor, not as a politician, you know, there's so much data here, and, you know, we're ARB. We're kind of siloed. We think about what we think about.

But there's a lot of different applications. I mean, it is -- it does go in terms of feedback on eco-driving, in terms of VMT fees. There's -- you know, you can just think -- I mean, insurance companies are using it now. Are we thinking too narrowly here? Are the car companies thinking so narrowly also?

MR. DOUGLAS: You know, it's hard to say. This is -- just like you said, it's a vast quantity of data that will be collected -- it will be recorded on every vehicle, and in all likelihood on every vehicle around the country. And it's -- and it's valuable, and it's the state that it is.

And it's kind of hard to guess how this data might be used, you know, in the future, how it may be combined with other data to be used for good or evil.

CHAIR NICHOLS: This is an interesting speculative discussion, but I think I'm going to shut it down. And one of the reasons why I'm going to shut it down is because, let's face it, at the moment, the real likelihood of what the data that's collected is going to be used for is to better understand the gap between what the regulations require and what the cars are doing in the real world.

And we're in the midst of a situation at the moment, which is getting a lot of public attention. I don't want to talk about it, because it is an enforcement action that is pending, but I think it's important to realize that the principal benefit, from my perspective, is that we will know more. We will have the ability to know more about what our regulations are actually accomplishing. We can say with confidence that we've accomplished a lot, because of testing we've already done, but this gives us a more precise tool.

There are issues about future uses of the data and what could happen to it, but I think it's a little premature at this point to speculate about it.

And I don't mean to -- I mean, I'm just saying I think we could -- we could have an interesting conversation about this and I hope we will, but I think right now we've got focus on the issue at hand.

BOARD MEMBER SPERLING: Point taken. Let me just suggest that at some point in the future -- because this is for heavy duty -- applies, in a general sense, for heavy duty, that there be a discussion with other agencies and other groups about this whole issue of data, and how it can be used for the public interest.

CHAIR NICHOLS: That's a real issue. Thank you, Mr. Douglas.

MR. DOUGLAS: Thank you.

CHAIR NICHOLS: Julia Rege.

MS. REGE: Good morning. Julia Rege with Global Automakers. Thanks for the opportunity to provide comments this morning. We're going to address our comments really in two parts. And the first are those traditional OBD changes, which Steve spoke quite a bit about. That's really the bulk of this proposal.

And we -- as Steve had noted, we've been working with ARB and the Auto Alliance for over a year and a half now to provide technical input into this part of the regulations. We have provided some recommended changes for this part of the -- for this part of the regulation. And assuming those go forward with the 15-day notice, we support this part of the proposal.

The second piece are the proposed vehicle operations tracking, or standardized data elements. And

when we first heard about these, it raised a lot of concerns for our Association about consumer privacy, how the consumer would be protected, as well as how it would align with the industry privacy principles that were mentioned earlier.

The vehicle operations tracking data does contain some elements of consumer behavior data, and that can easily be coupled with personally identifiable information like the VIN, which can also be downloaded through the OBD.

We have been working ARB through a series of conversations, as well as on some recommended language that would address a lot of our concerns about privacy. But since the proposal came out, we do have a few additional concerns. Our primary concern is the proposal, as it was proposed, does not adequately address consumer privacy or personal privacy and data security, as well as cyber security.

As I noted, we've been working on some language with ARB that we think that will be helpful. And the way these were originally addressed in this proposal was through explanatory text of the ISOR rather than in the regulatory text. And we think it needs to be in the regulatory text in order to provide some legally binding requirements, as well as regulatory precedence for how

other parties might consider collecting this data.

So we are committed to continuing to work with ARB to address that. But that leads to the second concern that came up with this proposal, and that's that we're concerned there's still no effective way to prevent the unauthorized data collection by third parties.

Many third-parties have shown interest in this date, and standardizing it through the OBD system does make it easily accessible to anyone that wants to purchase an inexpensive tool to download the data.

So we know that the language we're providing will provide a regulatory precedence for how these third parties might consider downloading the data. The problem is it doesn't provide a regulatory assurance. The only assurance we have is that ARB will, in fact, work hard to put in place good measures to protect consumer privacy and implement best practices for collection and storage. And we're pleased with that piece that ARB is going to help protect the data to the extent possible. It's just we're still concerned about these third parties and think that needs to be considered further.

We remain committed to working with ARB going forward. Thank you.

CHAIR NICHOLS: Thank you.

Will Barrett.

MR. BARRETT: Good morning. I'm Will Barrett with the American Lung Association in California.

On behalf of our organization, I'm speaking in strong support of the staff proposal. We consider this to be good medicine for California. We have a long track record of advocacy and support of the strongest possible vehicle emission standards to protect our fellow Californians and all Americans against traffic pollution that leads to illness and early death. Our volunteer physicians, lung surgeons, pediatricians have all come before you to testify about the importance of our strong policies as good medicine for their patients as well.

The health benefits of ARB's cutting edge regulations has been verified over and over by research, including just this week the strong policies set forward have cut cancer risk in our State by 70 percent over the last two decades. We strongly support continued focus on really cutting the health risks of our traffic pollutants.

Today's proposal helps us really to ensure that the good-medicine policies, like LEV III, are really delivering as promised. We view the data -- the staff data streaming proposal as an important step to ensure that the emission and consumer benefits are actually delivered and public health is actually being improved and protected.

The proposal represents a common sense and a voluntary approach to detecting any lost benefits when new technologies or models are introduced.

We urge the Board and staff also to continue to review and tighten the OBD critieria failure thresholds, as the -- as quickly as feasible. We recognize that there are challenges in the testing procedures and verification, but we feel like especially the particle pollution standard should be tightened or is being tightened over time and the threshold should track more closely with those as soon as possible.

We do -- we take strong issue with the on-line ad campaigns that were run against the data streaming proposal by the Auto Alliance. The media campaigns by the oil industry we viewed those as alarmist attempts to really undermine ARB's ability to continue to protect health, and really felt like we need these proposals to ensure that the medicine that we're giving California's air is working and is really pulling through for us.

With every measure that ARB has adopted on the way to reducing pollution and health -- and our health risks from our vehicles and fuels, there's been strong industry push-back. We're urge you to continue to focus on the health benefits, the good medicine that you're providing to Californians, and helping those who can least

afford dirty air and climate impacts.

So we do urge you to adopt the proposals today. We urge you to move quickly to identify, investigate, and mitigate any threats to the effectiveness of these life-saving policies, like LEV III.

In closing, we really, you know, believe that the proposal today reinforces ARB's certification and testing expertise and the need to catch potential emission and fuel economy problems early.

Like everyone, we're shocked by the VW cheating scandal. We think that this proposal is a good step in moving us forward to a more robust, real world, in-use testing system to protect public health.

Thank you very much.

CHAIR NICHOLS: Thank you.

Mr. Magavern.

MR. MAGAVERN: Good morning, Madam Chair and Board members. Bill Magavern with the Coalition for Clean Air in support of the proposal. On-board diagnostics have played an important role in reducing emissions from vehicles in use. And I was particularly struck by the number of times that the staff presentation used the phrase, "real world", and the Chair also echoed that.

And I think that we're all, of course, painfully aware that Volkswagen intentionally created a huge gap

between emissions when tested and real-world performance. But I think that even aside from that really flagrant abuse, we have a problem, as Dr. Hogo said, of seeing this gap between emissions under a testing situation and what we're actually seeing on the road.

So I think that ARB is absolutely on the right track here in using these diagnostics to try to reduce emissions in a real-world situation.

So again, we urge your approval.

CHAIR NICHOLS: Thank you.

Mr. Shears.

MR. SHEARS: Good morning again, Chair Nichols and members of the Board. John Shears with the Center for Energy Efficiency and Renewable Technologies. I'm also representing Union of Concerned Scientists and Sierra Club California. Along with Coalition and American Lung, we submitted a joint letter on the rule-making.

We're here to support the adoption of this regulation, noting also there are still some fine points to be resolved, which are the subject of the 15-day changes. And again, just stressing as I was stressing yesterday, caution on PM issues. You know, and to put a finer point on our comments and addressing the tightening of the failure thresholds, and, of course, we'd also like the in-use monitoring thresholds to eventually get tighter

as technology evolves, avoiding the, what John Storey, at Oak Ridge National Lab, refers to as the PM paradox, where we're reducing our diesel particulates. But with more and more GDI, gasoline direct injection, equipped vehicles being introduced into the market, we may, in fact, be increasing our PM inventory on that side of the ledger with some different and maybe more problematic issues there, if we don't use appropriate control technologies, particulate filters being one of the simplest and most robust.

I'd also like to speak in favor of your adopting this regulation, because I think overall this is a great way to help not only CARB more effectively do its work, but also help the industry regain public trust. I think right now the current situation we're dealing with has really put the -- you know, the image of the whole industry in question and the public's mind. And these kinds of regulations, industry working together with the regulator, I think can really show that together collaboratively everyone is working to assure -- ensure and assure the public that these vehicles are really performing as advertised, and that California is continuing directionally to, you know, as Will put it, keep providing Californians with good medicine.

So thank you.

CHAIR NICHOLS: Okay. That concludes list of witnesses that we had that is signed up. Seeing no one else coming forward, I think we can close the record at this point and move to Board discussion and a vote.

Before we do that, I guess I'd like to give the staff an opportunity to respond to any of the critical points that you think were made during the hearing.

VEHICLE PROGRAM SPECIALIST McCARTHY: Yeah. Regarding the -- Julia brought up the concern about the VIN. So, yes, the VIN is in the vehicle, both physically and electronically, right? You can still read it on the windshield tag. You can read it electronically. So it is there. And it's turned out, in Smog Check, we do use that VIN. It's been very powerful in identifying inspector fraud. It turns out if you plug into somebody else's car, it's really easy to identify that now.

But we did two things, right, first we structured this data in the first place so that it would be aggregate data that we don't believe contains sensitive information about the driver, right? It's total -- it's cumulative totals that just don't provide much insight into anything you've done on any individual trip.

And the second thing we've said is even beyond that, we've agreed and committed that when we collect this data, any records that we maintain, we will not capture or

include the VIN in there. So if we collect this data and have records and somehow those records get out or get unauthorized access to them, they cannot be linked back to the specific vehicle they came from.

CHAIR NICHOLS: So this is sort of the equivalent of the American Cancer Society taking out the individual names of people that they track in their epidemiology studies? It's a similar kind of an issue. It's personal information that's not needed, and therefore you can just delete it.

VEHICLE PROGRAM SPECIALIST McCARTHY: Or what we often call belts and suspenders in the engineering world.

CHAIR NICHOLS: Right, right. Great.

Yes, Ms. Mitchell.

BOARD MEMBER MITCHELL: On that same point, one of the concerns that Julia Rege expressed was the unauthorized access to the OBD data. So, I mean, you can take your car to a car repair shop, and I assume they can access it. How do we respond to that?

VEHICLE PROGRAM SPECIALIST McCARTHY: Well, so a couple things. One, when you give permission to people -- you know, people to access their car, right, you do have to somewhat vigilant in what they do. Right now, they could look at your dashboard display without any special tools and see what fuel economy has been on the majority

of cars, right? They don't need to download this data.

If you give them access, if they want to, they could go look at your navigation system and see where you probably have been, right? If you -- once you give people access to your car, that can happen. But there's still -- that doesn't absolve them of that -- those wrong doings.

We can't -- we don't have the authority to regulate the authority of those people. And when we -- early on, we met with Julia and their privacy expert and we talked about the idea of third parties and what happens if they do bad things? And they agreed, that is incumbent on the third party to not do bad things. It's incumbent on them to disclose to consumers what they are going to do.

If a consumer wants to buy a device and plug it in their car, it's incumbent on that third-party manufacturer to explain what data they're going to take from that consumer. You know, but again, the consumer still has to give access to somebody to their car to allow them to plug in. So I understand it's not the best answer, because we can't -- you know, if people want to do bad things and you give them access to your car and let them plug in -- but I don't -- we don't -- there's -- this data doesn't create a new loophole for them to get anything -- any new data.

DEPUTY EXECUTIVE OFFICER AYALA: And just one more point, if I may add for Ms. Mitchell, and remind the Board that, as we mentioned, next year it will be 20 years of OBD in our cars. So I think we can all agree that we haven't really seen any catastrophe in terms of unrestrained access to information for anybody.

BOARD MEMBER MITCHELL: Thank you.

CHAIR NICHOLS: Other Board member questions, comments? You should be excited about the ability to look at electric miles on the hybrids.

(Laughter.)

BOARD MEMBER SPERLING: I was -- I actually was going to comment on exactly that.

(Laughter.)

BOARD MEMBER SPERLING: Go ahead.

BOARD MEMBER SHERRIFFS: Yeah, I'm going to go first, because he'd going to have so much wisdom to impart. That's the last note you should here, not me.

You know, I'm a physician. Privacy is very important. That's an issue I face with every patient every day, every time I write a prescription, every time I order a lab test, every time I push a button on the computer.

You know, I've got an all-electric car, and every time I start it a little screen comes up and wants to know

if I'll share the data. And I will confess my answer has been no. Now, I want the manufacturers to have the information to do better, but, you know, there's not enough of an explanation there about what happens. So it is a real issue for people.

You know, I think if I was approached separately and this is what's going to happen with the data, and -- I would probably say yes. But, boy, that blanket -- but again, I'm given the choice. I'm given the choice. The manufacturer is giving me the choice, and that's very important.

Boy, unauthorized access. We know -- I mean, I don't think it's an urban legend, teenagers hacking into computer systems and controlling brakes on cars. You know, the manufacturer unfortunately has a huge responsibility to protect those computer systems in their cars. And likewise, we have a huge responsibility to do well with the information that we're collecting. And I just would want to be sure that we do move forward with other agencies to do a better job of protecting that, thinking about the privacy issues, and the second that -- would want staff to come back to us with some kind of report, best information, looking at the issue of, okay, how does that display change driver behavior? Is that so much -- so beneficial that we really want to think about

both incentive and regulatory ways of moving that forward?

So thank you.

CHAIR NICHOLS: Yes.

BOARD MEMBER SPERLING: I'll reiterate or respond to what Dr. Ayala said that, you know, this OBD has been great. It's -- you know, it's reduced fraud. It's helped -- you know, it's a great invention. And, you know -- and, you know, I made the earlier comment that we ought to be thinking about how we use this well for the public interest, but -- and the vehicle miles, you know, I want to commend the staff, and I think that was Mike McCarthy, in particular, for kind of thinking through how can we use this in a useful way.

And with respect to that, I did have the question -- the general question and it might be a legal question is that there was a lot of comments in the presentation about we can't use this for enforcement. We can't use it, you know, in -- what can -- I mean, obviously, we can use it as information. But like the miles part of it, for instance, we get -- here, we're going to get the electric miles from the PHEVs, how can we use that, other than just as it's good information for a research project, which is not bad.

(Laughter.)

CHAIR NICHOLS: We're all for research.

DEPUTY EXECUTIVE OFFICER AYALA: It certainly has value for many of the very current policies that you personally have directed us to look into. As Chair Nichols said, specifically the electric miles driven by plug-in technology.

But the way I think about what we're doing is really a -- and what we were trying to communicate to you in the staff presentation is this is a screening tool, right? This is going to allow us to collect a lot of very useful information from cars that are out in the real world.

To the extent that we find something of interest, right, so then we are going to bring in -- bring back the car and run it through the battery of tests that we are currently doing today as we speak. So this is just another tool that it will provide very useful and new information that without this change to the OBD requirements, we will not be able to gather.

Can we get it in another way? Absolutely, but it's not going to be as effective or as efficient as we -- as we are proposing.

BOARD MEMBER SPERLING: Last question. To what extent is this aligned with EPA? We -- I know, ARB has always been the leader in OBD technology. Is this going to be perfectly aligned with them? Are they following us

on this?

DEPUTY EXECUTIVE OFFICER AYALA: We're hoping that they will follow us, because again one of the -- to me, one of the most valuable elements of what we're proposing is the whole concept of the off-cycle credits, the fact that we can work with the OEMs for them to innovate, to bring us new technology that we cannot capture the benefit of, when we put it in the lab.

This will allow us to actually promote that type of development that goes back to what Supervisor Gioia said, there is real benefit. So we're hope that we can work with our partners at the federal government, so that we can have a national fleet that is tracked in this way, so that we can all know how effective our collective polices are.

CHAIR NICHOLS: Any other Board members want to make a comment or ask a question at this time?

If not, I think we should move towards a decision on this item. I think what we've heard is an interesting -- an interesting discussion about the many uses and possibilities of data, but I think the overwhelming point here is that we as an agency that does regulate and enforce our regulations have an overwhelming responsibility to be open about what we're doing and to evaluate our programs all the time.

And this has proven to be one of the most successful tools ever created for measuring the effectiveness of a government action. And so for that reason alone, I would be inclined to move forward, but I think we've heard also many other reasons why this is going to be a valuable program.

So I'm hoping that we can move forward. And I would welcome a resolution.

BOARD MEMBER SPERLING: So Moved.

CHAIR NICHOLS: Moved by Dr. Sperling.

BOARD MEMBER DE LA TORE: Second.

CHAIR NICHOLS: Seconded by Mr. De La Torre.

All in favor, please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Opposed?

Abstentions?

Okay. Thank you very much everyone. That was a good discussion. And we're going to take a 10-minute break. We'll blame it on the court reporter, but we could probably all use a 10-minute break while we regroup, and we'll be back at 10 past 10:00.

Thanks

(Off record: 9:57 AM)

(Thereupon a recess was taken.)

(On record: 10:08 AM)

CHAIR NICHOLS: If we can get the sound system back, and get the Board back, and get the staff in place.

I'm just going to go over the procedural aspects of what we're doing here as we're getting everybody back into their seats again. Our next item is the proposed regulation of the commercialization of Alternative Diesel Fuels, which we initially heard in February, and which was presented yesterday as a final proposal. The Board received public comments on this item yesterday. I am today reopening the record for the sole purpose of receiving the staff's responses to those comments.

Staff will present to the Board a summary and responses to comments received at the Board meeting yesterday. These will include, under this item, comments related to the proposed Alternative Diesel Fuels regulation, as well as comments on the joint Environmental Analysis prepared for this regulation and readoption of the Low Carbon Fuel Standard. So there's a single joint Environmental Analysis, which is in both of the records. And that item will follow immediately after this one.

After the staff presentation, the Board will consider two separate resolutions. The first resolution provides for approval of responses to environmental comments and certification of the joint Environmental Analysis. The second resolution provides for adoption of

the Alternative Diesel Fuel Regulation.

And again, I would remind people that this is only -- the regulation that we will be acting on is just the Alternative Diesel Fuel Regulation. That will be followed then as a separate item by the Low Carbon Fuel Standard discussion and decision. And so we will reserve comments on the LCFS until we get to that second item.

Okay. Mr. Corey, would you please take over here.

EXECUTIVE OFFICER COREY: All right. Thanks, Chair. As you noted, we received oral and written comments in yesterday's meeting on Alternative Diesel Fuel and the Low Carbon Fuel Standard items. And since then, as you noted, staff has prepared and develop responses to those comments. And at this point, staff is going to summarize for your consideration the comments received yesterday on the Alternative Diesel Fuel proposal and provide responses, as well as comments on the joint Environmental Analysis prepared for this regulation and the Low Carbon Fuel Standard regulation.

And please recall that the comments staff will summarize and respond to shortly will cover only those comments on the joint Environmental Analysis and comments received yesterday.

The written comments and staff responses to

comments leading up to the February hearing through the 15-day comment periods were provided to the Board before yesterday's proceeding and publicly.

I'll now ask Elizabeth Scheehle of the Industrial Strategies Division to begin the staff presentation.

Elizabeth.

OIL & GAS AND GHG MITIGATION BRANCH CHIEF SCHEEHLE: Thank you, Mr. Corey. Good morning, Chair Nichols and members of the Board.

After yesterday's hearing, staff reviewed, summarized, and responded to both oral and written testimony for the Environmental Analysis, or EA.

The Alternative Diesel Fuel Regulation and the Low Carbon Fuel Standard. The written responses were shared with the Board before today's proceeding, and were made available just outside the Board room. I will be talking about the comments received at yesterday's meeting on the EA and ADF. After the Board votes on the resolution for those two items, Sam Wade will discuss and provide responses to comments received at yesterday's meeting on the LCFS.

We received one voluminous comment package submitted on behalf of Growth Energy that related to all three items, the Environmental Analysis, ADF and LCFS.

The comment Package consisted of a CD with over

800 documents and a comment letter. The vast majority of that material consisted of previously provided comment letters and materials, scientific articles, or ARB presentations and documents, which we responded to in the materials we provided to you before yesterday's hearing, and posted publicly.

For the Environmental Analysis, comments are related to a variety of issues which were largely duplicative of previously submitted comments, and have been responded to on the record. Comments related to the rule-making files and NOx emissions analysis include the allegation of an undisclosed agreement with the biodiesel industry, claims of a lack of evidence in the rule-making file, and claims that the record lacks the technical basis to support why the NOx control level changed between July 2014 and February 2015.

Also called into question was the adequacy of the analysis of new technology diesel engines. In addition, several comments were related to the coverage of the EA, including the use of a 2014 baseline, the scope and adequacy of the EA, the broader impacts of the regulation, double counting emission reductions, the adequacy of responses to environmental comments, and the alternatives analysis.

The proposed ADF regulation is not a

behind-the-scenes agreement with biodiesel industry, but, in fact, was developed using an open public process involving numerous meetings and workshops with various stakeholders, including petroleum refiners, biofuel producers, government agencies including the air districts, engine manufacturers and community and public health non-governmental organizations.

Workshop material, test data and reports, and other ADF related materials are publicly available on our website.

The proposed ADF regulation is based on sound, robust, and peer-reviewed scientific and technical information. Our conclusions are supported by both an internal and an independent statistical analysis of biodiesel's NOx impacts.

The proposal before you today is the result of additional staff analysis, and establishes in-use specifications that will ensure that NOx emissions from biodiesel do not increase from current levels and will decrease emissions over time. It does not reflect revised conclusions on biodiesel's NOx impacts, but includes the impact of offsetting factors.

On the issue of new technology diesel engines, or NTDEs, the commenter asserts that staff should consider emission studies related to retrofit engines, since these

engines fit the definition of an NTDE. Staff believes our analysis are robust and consistent with actual use of NTDEs.

The comments on the baseline suggest that the use of 2014 baseline constitutes piecemealing, in other words, inappropriately splitting the project into smaller pieces. And it also includes -- suggests the use of the baseline is not applied consistently and would not account for NOx increases due to biodiesel use since 2009.

ARB is not piecemealing, but is properly considering the readoption of LCFS as a project along with the proposed ADF, consistent with CEQA requirements, and the writ in the POET case.

The current conditions baseline is recognized in CEQA as the appropriate approach. There is also a consistent baseline for the CEQA analysis. The comment confuses the use of the word baseline in designing the LCFS with the CEQA baseline. On the NOx attribution issue, as noted in the EA, it is unclear and unknowable what portion of the NOx increase from biodiesel since 2009 is attributed solely to the LCFS versus other regulations or incentive programs.

In addition, the ADF regulation will lead to progressive reductions in NOx emissions over time. As I just described, the use of the 2014 baseline is most

appropriate to this rule-making. Staff believes the EA has appropriate scope and includes a robust analysis, including the consideration of broader impacts of the regulation, if they are considered likely or foreseeable responses. The EA also clarified project benefits with and without complementary programs

On our response to environmental comments, staff believes our responses are robust, specific, and compliant with CEQA.

Finally, the alternatives comment asserts that ARB should give additional explanation for the rejection of the Growth Energy alternative to the ADF regulation. Staff believes that ARB has explained the technical and economic reasons for the rejection of the alternative. There was also a comment on the completeness of the rule-making file, which will be addressed in a few minutes by our legal staff.

This covers the main comments on the EA submitted during yesterday's Board hearing, and more detail is provided in the written responses that you are provided.

For the Alternative Diesel Fuel Regulation, in addition to the written comments submitted on behalf of Growth Energy, we also heard oral testimony from eight commenters. As you heard, the vast majority of those comments were supportive. Of the remaining comments, a

number of those on the ADF regulation were EA related comments.

In total, staff identified three topics that required more detailed responses. One topic is related to the importance of continuing to evaluate diesel deposit additives. As Chair Nichols mentioned yesterday, we will continue to work with stakeholders on diesel deposit control additives.

The other two topics are related to the completeness of the rule-making file and compliance with the Health and Safety Code, CEQA, and the APA.

Steve Adams, Assistant Chief Counsel from our Legal Office will respond to these last two items.

Steve.

ASSISTANT CHIEF COUNSEL ADAMS: Thank you, Ms. Scheehle.

The written responses to comments contained responses to the more specific comments regarding the sufficiency of ARB's rule-making file for the ADF proposal, as well as other issues involving the environmental analysis, but I wanted to respond orally to two -- one or two general comments from the lectern yesterday.

A comment that the rule-making file for the ADF regulation is incomplete, that the Environmental Analysis

does not comply with CEQA, and that the ADF rule-making process does not comply with the Administrative Procedure Act.

ARB's legal staff and to some extent the Attorney General's office has worked closely with staff on these matters. We are satisfied that the ADF rule-making file is complete, that the Environmental Analysis is both thorough and compliant with CEQA and with ARB's certified regulatory program for CEQA, and that the ADF rule -- and that the ADF rule-making process and documentation complies with the Administrative Procedure Act.

I might add that the Environmental Analysis is one of the most thorough and complex environmental documents ever prepared by ARB, and the accompanying responses to environmental comments were easily the most voluminous and time-consuming set of environmental responses ever undertaken by ARB.

And in a housekeeping matter to conclude, I'd also like to point out that staff noticed some minor discrepancies between the titles of the supplemental response documents that you were -- that were prepared yesterday and provided to you, and the titles for these documents in the draft resolutions, or the Environmental Analysis and the ADF.

Staff will correct the resolutions to the actual

titles of those documents when the resolution is finalized.

Thank you. Ms. Scheehle will conclude with staff's presentation.

OIL & GAS AND GHG MITIGATION BRANCH CHIEF SCHEEHLE: Thank you. That concludes our summary. Staff recommend that the Board adopt the EA resolution, which is Resolution number 15-51, and then the ADF resolution, Resolution 15-41.

Thank you.

CHAIR NICHOLS: Thank you, Ms. Scheehle. So we will now close the record formally here, and move on to any questions that Board members have. I believe Ms. Mitchell has a statement.

BOARD MEMBER MITCHELL: Yes. I want to mention that unfortunately I was unable to be here yesterday, but I had the opportunity to review the transcript of the proceedings, and I have thoroughly reviewed those and am prepared for today's vote. So thank you.

CHAIR NICHOLS: Thank you. Happy to have you participate.

If there are no other questions on this particular item, I think we can move to a vote then.

So the Board has before it Resolution number 15-51 providing for the approval of responses to comments

on the joint Environmental Assessment, as you just heard, for the Alternative Diesel Fuels Regulation and readoption of the Low Carbon Fuel Standard. The resolution also provides for certification of the Environmental Assessment.

Do I have a motion.

BOARD MEMBER SPERLING: Just a clarification. So we're voting on both the LCFS and --

CHAIR NICHOLS: No, we are not. The LCFS is going to come up next. So this is just on the Alternative Diesel Fuel. And there are two separate resolutions, first on the Environmental Assessment and then on the actual regulation itself. This is the process that we have determined is the clearest way to respond to our overall requirements for consideration of the environmental impacts of our actions.

BOARD MEMBER SPERLING: So I'll move adoption of both resolutions.

BOARD MEMBER DE LA TORRE: Second.

CHAIR NICHOLS: Second?

Second here. Anyone cares to second?

BOARD MEMBER MITCHELL: I'll second.

CHAIR NICHOLS: All right. Ms. Mitchell seconds. So I think we don't need a roll call. We can do this by our usual voice vote.

All in favor, please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Any, opposed?

No.

Okay. So we have had the vote on the first resolution. And we now need to do the same thing for the second also relating to this Alternative Diesel Fuel, but this is the actual regulation itself. So again, we need a motion.

BOARD MEMBER SERNA: I'll move.

CHAIR NICHOLS: Thank you.

BOARD MEMBER RIORDAN: Second.

CHAIR NICHOLS: And we have a second.

All in favor please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: Any opposed?

None.

No abstentions.

Okay. Thank you. I think we have made it through the process in good form.

And we now need to move to our last item, which is the Board's consideration of the proposed readoption of the Low Carbon Fuel Standard.

During yesterday's Board hearing, staff presented to the Board updates to the proposed regulation reflecting

the proposed 15-day changes and other modifications that had been suggested by this Board. The Board also received public comment on the item. And again, we're going to reopen the record now for the purpose of receiving the staff's responses to those comments.

As part of our last item, the Board also approved responses to environmental comments and approved the Environmental Analysis for the proposed Low Carbon Fuel Standard, and the Alternative Diesel Fuel Regulation.

So at this point, the staff is going to present to the Board a summary of other comments on the Low Carbon Fuel Standard received at yesterday's hearing, as well as responses to those comments before the Board actually considers and acts on the proposal.

Mr. Corey, would you please introduce this item?

EXECUTIVE OFFICER COREY: Yes, Chairwoman. Very excellent summary. I'm going to go right to -- I'm going to ask Sam Wade of the Industrial Strategies Division to begin the staff presentation.

TRANSPORTATION AND FUELS BRANCH CHIEF WADE:

Okay. Thank you Mr. Corey, and Chair Nichols. Good morning, members of the board.

Similar to the ADF item, after yesterday's hearing, staff evaluated, summarized, and responded to both oral and written testimony on the LCFS. The written

responses were shared with the Board and are available just outside the Board room. We received 26 oral comments and 4 written comments -- comment letters yesterday on LCFS, including one large written submittal from Growth Energy mentioned in the ADF item.

The majority of these comments offered general support for the program, and we will not cover those in our summary today.

The Western State Petroleum Association stated concerns about various aspects of the program, including the transparency of the program's performance. With respect to transparency, staff has committed to return to the Board for a program progress report in 2017 and a full program review in 2018.

We're also intrigued by WSPA's concept of a performance dashboard, especially one that offers greater transparency about each individual refiner's contribution toward achieving the program's targets. This is something we'll be discussing further with WSPA and other stakeholders.

Alon questioned the eligibility of their Bakersfield facility for the low complexity, low energy use provision. Staff will continue to meet with Alon and discuss their opportunities to produce low carbon fuels at their facility. But we note that our current

understanding is that the proposed configuration of that facility is closer to the other more complex refineries in the State than it is to a low -- the low complexity, low energy use refineries.

Two commenters requested we consider crediting the use of low carbon fuels in aircraft. Staff will carefully review the potential to add this type of crediting and bring this issue back to the Board as part of the program review scheduled for 2018.

With respect to Growth Energy's submittal, the package was largely duplicative of their prior submissions. One portion of their comments questioned the methodology used to construct staff's illustrative scenario and focused on the amount of natural gas fuel and electricity included in this scenario.

The basis of staff's scenario including the methods used to substantiate the possible penetration of the fuels in question is explained in detail in the Initial Statement of Reasons and the written responses to comments.

Further, staff's scenario is only -- is one -- is only one of many possible outcomes that would achieve the program's targets. The advantage of a flexible program, such as LCFS, is that it offers many possible paths to compliance, rather than establishing volumetric

requirements for individual types of fuels.

The Growth Energy package also questioned the crediting of electricity used in any fixed guideway system or electric fork-lifts that predate the rule. Staff's proposal and written responses clearly outline the treatment of such systems. Our proposed crediting offers less credit to existing systems than to newly constructed system. And we note that low carbon electricity used in existing systems continues to reduce greenhouse gases relative to the petroleum fueled alternatives. And these systems have ongoing operating costs that can be partially offset by LCFS credits.

Growth Energy also raises concerns about equity of crediting for ethanol relative to other fuels, such as electricity. To address this issue, they request that ethanol be removed from the baseline used to set the targets on the gasoline side of the program. Staff strongly disagrees with this assertion of inequity. All fuels are compared to the same program targets and ethanol is not at a disadvantage relative to other fuels due to the choice of where the target curve starts.

In fact, the proposed rule continues the fuel neutral carbon intensity based treatment that has been a hallmark of the LCFS program to date. Further, we note that ethanol has produced more than have of the credits in

the program so far, and we expect continued contribution toward future targets from this fuel in the future.

Growth Energy also claims that staff's methods for crediting electricity will produce fictitious LCFS credits due to the lack of direct metering requirements for electric vehicles. Installing a separate dedicated meter for residential EV charging was initially viewed as feasible, and was required in the prior rule post-2014. However, because meters remain costly for EV customers, and the majority of -- the majority of EV owners have elected not to install dedicated meters at their residents.

Therefore, staff plans to continue the practice of crediting for EV use based on calculations that do not require separate meeting -- metering. Staff notes that similar to the proposed treatment of EVs, direct metering at the retail fuel pump is not required for ethanol blends. ARB staff believes this method -- the method of crediting for residential EV charging continues to be as robust as the crediting for all other fuels.

Finally, and similar to the ADF item, Growth Energy also questioned the completeness of the rule-making file and compliance with various legal requirements. Will Brieger from our Legal Office will respond to these issues.

Will.

SENIOR ATTORNEY BRIEGER: Thank you. Good morning. First, I'd like to add the same housekeeping issue. We're going to correct the resolution to get the exact title of the document. I want to dress one point that the record is incomplete, the rule-making record.

I want you to know this that record is complete. The Administrative Procedures Act prescribes a host of documents, a notice, an Initial Statement of Reasons, there's a process for adding material to the record, there's a Final Statement of Reasons and so forth. All those documents have been prepared. They're on the internet actually.

The Initial Statement of Reasons is the document where we explain the rationale for our proposal, and we identify the studies and the basis for the proposal.

I brought my copy. It's 295 pages. I didn't bother to bring the 9 fulsome appendices, although those too are in the record, as are the 700 plus references to scholarly reports and articles.

I don't want you to think for a minute, however, that staff has confused quantity with quality. I'd like to share a comment from one of our peer reviewers, who -- a Professor at Carnegie Mellon University, who was charged with looking at the scientific basis for the LCFS. And he

said quote, "This is one of the most impressive academic efforts I have seen in my career".

Mr. Wade will now conclude the matter.

TRANSPORTATION AND FUELS BRANCH CHIEF WADE:

Thanks, Will. That does conclude our summary. Staff recommends that the Board adopt the LCFS resolution, which is Resolution 15-36.

Thank you.

CHAIR NICHOLS: Thank you, Mr. Wade. And I will now close the record at this point, firmly nail it shut.

(Laughter.)

CHAIR NICHOLS: And we will move on to action by the Board. As we heard once again yesterday, and as we've seen now over a period of years, the Low Carbon Fuel Standard is working. We have seen compliance, and, in fact, overcompliance with the early stages of this rule. There are credits in the bank. We've seen that the Low Carbon Fuel Standard is spawning cleaner and safer fuels in California, and, in fact, that the idea is spreading beyond California.

And I also would remind all of us that the Low Carbon Fuel Standard is a key pillar of our longer term program to address the problem of greenhouse gases in California, along with our emissions control standards for vehicles, which in and of themselves have already had the

effect of reducing use of petroleum in California, as well as our work under SB 375, which is working with local communities, regional transportation agencies to reduce the growth in VMT that has -- break the link with between California and vehicle miles traveled that had been a part of our lives for so many years in the past.

So the fact is we are on a path to reduce our dependence on petroleum, and this program is a key piece of that action.

The transportation sector is, and will remain, the largest source of air pollution and greenhouse gases in the State of California. But we've made some serious strides, and we need to continue to build on those actions.

As the staff report has indicated, we have seriously considered the input and comments and suggestions of a very wide range of stakeholders. And the proposal that we are now looking at today includes a number of features to strengthen the Low Carbon Fuel Standard even further, and to protect the consumers of the State of California against any untoward impacts of this rule.

So I think we can say that the LCFS will continue to be a part of the program. But with the action that's before us today, we have the opportunity to make it even

better and stronger and to send a signal that California is committed to building a low carbon future that will include a very significant role for clean fuels.

So with that, I will invite Board members to make any statements that they wish to make at this point, but I'd like to have a resolution and a second first, so we can actually act on this item.

BOARD MEMBER SPERLING: I so move.

BOARD MEMBER GIOIA: Second.

CHAIR NICHOLS: Great. Any comments from the Board before we vote?

Mr. Serna, we'll start at your end there.

BOARD MEMBER SERNA: Thank you, Chair Nichols.

I just want to state what I suspect my colleagues will also say, and that is extend substantial appreciation to the staff for not just the last day quickly responding to comments, but throughout this whole process. I think, as was clearly indicated in the theme of the presentation by staff, there was a very laser-like focus on being extremely thorough, and that gives, at least this member of the Board, a great deal of confidence that we have gone over and above to make sure that we listen to various constituencies on an extremely important arrow in our quiver to reduce carbon emissions in the State of California.

CHAIR NICHOLS: Thank you.

Mr. Gioia.

BOARD MEMBER GIOIA: I know everyone said it all, but I'll just sort of summarize. I think there'a quadruple win here, reducing greenhouse gas emissions, improving air quality, improving public health, and improving the resiliency of our economy. So a great quadruple win.

CHAIR NICHOLS: Thank you. Moving in this direction, any other comments? Any -- yes, Dr. Sperling, maker of the motion.

BOARD MEMBER SPERLING: So I do want to reaffirm the role that staff has done, you know, not only -- well, not only, but over the last few years just continually improving and refining and working with stakeholders and really coming up with an LCFS that originally was conceptually very appealing and has turned it into something that really works well and has continued to improve it, and I think the new amendments are important enhancements to it.

And then, of course, there was last night with a lot of pizza and I suspect a lot of caffeine to, you know, respond to the concerns. So that -- and I do want to, you know, just as a, you know, reminder to all of us, the LCFS -- you know, to echo what Chair Nichols was saying,

this is a really important policy regulation we put in place. And the fact that we've been doing it well is impressive. You only have to look to Washington and the nightmare they've had with the Renewable Fuel Standard, and the problems in how they designed it, in how they're implementing it, and the politics of it, you know, how much more straightforward and effective, you know, the LCFS has been in moving towards low carbon fuels.

And so I just -- and I do want to comment that the enhancements are important ones, the cost containment, you know, sometimes the, you know, so-called credit clearance one, price cap, the streamlining of it. And that's been important also because it's going to enable us to integrate better with other states, because the whole point of the LCFS is not just for California to do a good job. It's for everyone.

And Oregon is joining, you know, specifically with this in the future, and British Columbia is doing their version, but we're hoping to see -- over time, we'll see, I know, more and more joining up. And so it really is -- these are important improvements and may -- to make it more easy to integrate and coordinate with others.

And so I just think great job. Thanks to staff and thanks to everyone that's participated in this.

CHAIR NICHOLS: Great. Any other additional

comments?

If not, I'm going to call for the vote.

We have again two separate votes here or just one because we approved the --

CHIEF COUNSEL PETER: One.

CHAIR NICHOLS: Okay. Great. That makes life much simpler. Then this is the vote on the amendments to the low carbon fuel standard -- or the adoption of the Low Carbon Fuel Standard.

All in favor, please say aye?

(Unanimous aye vote.)

CHAIR NICHOLS: All opposed?

Hearing none.

Any abstentions?

None.

This is it. We did it. Thank you very much. Thanks, everybody. Congratulations.

(Applause.)

CHAIR NICHOLS: Care to disclose what kind of pizza it was or --

(Laughter.)

CHAIR NICHOLS: That could be one for the record books.

Okay. We have one more thing to do and that is to hear from the public, if there are any public comments

on items that were not noticed for today. And I know that Mr. Magavern signed up for public comment.

So welcome again

MR. MAGAVERN: Thank you. And I think first --

CHAIR NICHOLS: Microphone.

MR. MAGAVERN: There. Thanks.

I think this is the first time I've ever used the public comment section of the agenda. But because of the magnitude of the assault by the Volkswagen Corporation on the health and air of hundreds of millions of people around the world, I thought that I should say something. I know that you can't talk about it right now, so I can.

(Laughter.)

MR. MAGAVERN: So just a few thoughts on that. And, of course, this assault continues, because on the road, nothing has yet been fixed. And we have buyers who were defrauded, and most importantly our air has been polluted in California, across the country, and across the world by the world's biggest automaker.

And I would point out that among the victims also are the other auto manufacturers, because for one thing when one company isn't playing by the rules, that puts at a competitive disadvantage the companies that are playing by the rules. And also, some of them could suffer the fallout in the public eye from what's been done by

Volkswagen.

But I want to especially thank the investigators at the International Council on Clean Transportation, West Virginia University, and the Air Resources Board for their extremely diligent work in uncovering this massive fraud that was a great service to the public that they did.

In terms of what should be done now, and I'm addressing some areas that are not necessarily within the province of the ARB, but just wanted to lay out some of the things that I think should be done. First of all, Volkswagen actually should have to buy back all of the dirty cars that it sold. The buyers should not have to bear the burden. It's the company that has that responsibility.

Secondly, they should be prosecuted to the full extent of the law, and that should include criminal prosecutions where available. It's -- you see that auto companies have actually used these defeat devices in the past. And the fact that it's happened yet again, probably indicates that the penalties were not stiff enough before.

I'll remind you that about 10 years ago when CalEPA did a review of environmental enforcement, one of the main findings of that review was that there need to be more criminal prosecutions for the most egregious violations of our environmental laws. And this certainly

falls into that category.

And then finally, going back to the conversation we had earlier about the on-board diagnostics, I think it's important that ARB continue the excellent progress that you've been making in terms of more testing, and testing in the real world situation, as compared to just the laboratory.

So thank you for listening.

CHAIR NICHOLS: Thank you very much for your participation. Thanks to all of you.

This meeting is now adjourned.

(Thereupon the Air Resources Board meeting adjourned at 10:43 AM)

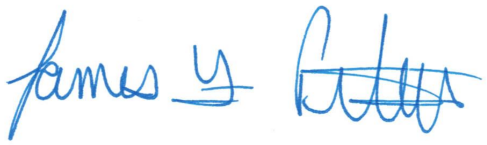
C E R T I F I C A T E OF R E P O R T E R

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

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

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

IN WITNESS WHEREOF, I have hereunto set my hand this 30th day of September, 2015.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063