MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

ZOOM PLATFORM

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

BYRON SHER AUDITORIUM

1001 I STREET

SACRAMENTO, CALIFORNIA

THURSDAY, JUNE 22, 2023

9:03 A.M.

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

APPEARANCES

BOARD MEMBERS:

Liane Randolph, Chair

John Balmes, MD

Hector De La Torre

John Eisenhut

Senator Dean Florez

Eric Guerra

Davina Hurt

Gideon Kracov

Tania Pacheco-Werner, PhD

V. Manuel Perez

Bill Quirk, PhD

Senator Henry Stern

Susan Shaheen, PhD

Diane Takvorian

Supervisor Nora Vargas

STAFF:

Steve Cliff, PhD, Executive Officer

Edie Chang, Deputy Executive Officer, Planning, Freight, and Toxics

Edna Murphy, Deputy Executive Officer, Internal Operations

APPEARANCES CONTINUED

STAFF:

Rajinder Sahota, Deputy Executive Officer, Climate Change and Research

Ellen Peter, Chief Counsel

Matt Botill, Division Chief, Industrial Strategies Division (ISD)

Linda Echegaray, Senior Attorney, Legal Office

Rhead Enion, Senior Attorney, Legal Office

Bonnie Holmes-Gen, Chief, Health and Exposure Assessment Branch, Research Division (RD)

Quinn Langfitt, PhD, Air Resources Engineer, Program Assessment Section, ISD

Carolyn Lozo, Chief, Oil & Gas and Greenhouse Gas Mitigation Branch, ISD

Chris Ruehl, Air Pollution Specialist, Climate Change Mitigation and Emissions Research Section, RD

Elizabeth Scheehle, Division Chief, RD

HAAGEN-SMIT AWARDEES:

Daniel Albritton, PhD, represented by Eliz Albritton, Susan Solomon, PhD

Prashant Gargava, PhD

Allen Goldstein, PhD

Bill Magavern

Shankar Prasad, MBBS

Jonathan Samet, MD

Peggy Shepard

APPEARANCES CONTINUED

ALSO PRESENT:

Jon Costantino, California Independent Petroleum Association

Riley Duren, Carbon Mapper

Ian Faloona, University of California, Davis

Elise Fandrich, Environmental Defense Fund

Kayla Karimi, Center on Race, Poverty, and the Environment

Ms. Morgan, The Originaldra

The Originaldra

Karen Urso, California Nurses for Environmental Health

Jasmine Vazin, Sierra Club

Christine Luther Zimmerman, Western States Petroleum Association

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PROCEEDING

CHAIR RANDOLPH: Okay. Good morning. The June 22nd, 2023 public meeting of the California Air Resources Board bill will come to order.

Board Clerk will you please call the roll?

BOARD CLERK HARRINGTON: Thank you.

Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK HARRINGTON: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Here

BOARD CLERK HARRINGTON: Mr. Eisenhut?

BOARD MEMBER EISENHUT: Here.

BOARD CLERK HARRINGTON: Senator Florez?

BOARD MEMBER FLOREZ: Florez here.

BOARD CLERK HARRINGTON: Assemblymember Garcia?

Mr. Guerra?

BOARD MEMBER GUERRA: Guerra here.

BOARD CLERK HARRINGTON: Ms. Hurt?

BOARD MEMBER HURT: Hurt present.

BOARD CLERK HARRINGTON: Mr. Kracov?

BOARD MEMBER KRACOV: Here

BOARD CLERK HARRINGTON: Dr. Pacheco-Werner?

BOARD MEMBER PACHECO-WERNER: Here.

BOARD CLERK HARRINGTON: Mr. Perez?

Dr. Quirk?

BOARD MEMBER QUIRK: Here.

BOARD CLERK HARRINGTON: Senator Stern?

Dr. Shaheen?

BOARD MEMBER SHAHEEN: Here.

BOARD CLERK HARRINGTON: Ms. Takvorian?

BOARD MEMBER TAKVORIAN: Here.

BOARD CLERK HARRINGTON: Supervisor Vargas?

Chair Randolph?

CHAIR RANDOLPH: Here.

BOARD CLERK HARRINGTON: Madam Chair, we have a quorum.

CHAIR RANDOLPH: Thank you. Alright, we will start with our housekeeping items. We are conducting today's meeting in person as well as offering remote options for public participation both by phone and in Zoom.

Anyone who wishes to testify in person should fill out a request to speak card available in the foyer outside the Board room. Please turn it in to a Board assistant prior to the commencement of the item. If you are participating remotely, you will raise your hand in Zoom or dial star nine if calling in by phone. The Clerk will provide further details regarding how public participation will work in just a moment.

For safety reasons, please note the emergency

exit to the rear of the room through the foyer. In the event of a fire alarm, we are required to evacuate this room immediately and go down the stairs to the lobby and out of the building. When the all-clear signal is given, we will return to the auditorium and resume the hearing.

A closed caption feature is available for those of you joining us in the Zoom environment. In order to turn on subtitles, please look for a button labeled "CC" at the bottom of the Zoom window, as shown in the example that's on the screen now. I would like to take this opportunity to remind everyone to speak clearly and from a quiet location, whether you are joining us in Zoom or by phone.

Interpretation services will be provided today in Spanish. If you are joining us using Zoom, there is a button labeled "Interpretation" on the Zoom screen. Click on that interpretation button and select Spanish to hear the meeting in Spanish. If you are joining us here in person and would like to listen to the meeting in Spanish, please speak to a Board assistant and they will provide you with further instructions.

I want to remind all of our commenters to speak slowly and pause intermittently to allow the interpreters the opportunity to accurately interpret your comments.

(Interpreter translated in Spanish).

CHAIR RANDOLPH: Thank you. I will now ask the Board Clerk to provide more details regarding public participation.

BOARD CLERK HARRINGTON: Thank you, Chair Randolph.

Good morning, everyone. I will be providing additional information on how public participation will be organized for today's meeting. We will first be calling on any in-person commenters who have turned in a request-to-speak card. And then we'll be calling on commenters who are joining us remotely. If you are joining us remotely and wish to make a verbal comment on today's Board item, or during the open comment period at the end of today's meeting, you must be using Zoom webinar or calling in by phone. If you are currently watching the webcast on CAL-SPAN, but you wish to comment remotely, please register for the Zoom webinar or call in. Information for both can be found on the public agenda for today's meeting.

To make a verbal comment, we will be using the raise-hand feature in Zoom. If you wish to speak on a Board item, please virtually raise your hand as soon as the item has begun to let us know you wish to speak. To do this, if you are using a computer or tablet, there is a raise-hand button. And if you are calling in on the

telephone, dial star nine to raise your hand. Even if you previously indicated which item you wished to speak on when you registered, you must raise your hand at the beginning of the item, so that you can be added to the queue.

And for anyone giving verbal comments today in Spanish and requiring an interpreter's assistance, please indicate so at the beginning of your testimony and our translator will assist you. During your comment, please pause after each sentence to allow for the interpreter to translate your comment into English.

When the comment period starts, the order of commenters will be determined by who raises their hand first. We will call each commenter by name and will activate each commenter's audio when it is their turn to speak. For those calling in, we will identify you by the last three digits of your phone number. We will not show a list of remote commenters, however, we will be announcing the next three or so commenters in the queue, so you are ready to testify -- so you are ready to testify and know who is coming up next. Please note, you will not appear by video during your testimony. I would also like to remind everyone to please state your name for the record before you speak. This is especially important for those calling in by phone to testify on an item.

We will have a time limit for each commenter and we'll begin the comment period with a two-minute time limit, although this could change at the Chair's discretion. During public testimony, you will see a timer on the screen. For those calling in by phone, we will run the timer and let you know when you have 30 seconds left and then when your time is up. If you require Spanish interpretation for your comment, your time will be doubled.

If you wish to submit written comments today, please visit CARB's send-us-your-comments page or look at the public agenda on our webpage for links to send these documents electronically. Written comments will be accepted on each item until the Chair closes the record for that Board item.

If you are experiencing any technical difficulties, please call (805)772-2715 so an IT person can assist. Thank you.

I'll turn the microphone back to Chair Randolph now.

CHAIR RANDOLPH: All right. Thank you. The first item on the agenda is Item number 23-6-1. The proposed Eastern Kern 8-hour Ozone Plan. If you are here with us in the room and wish to comment on this item, please fill out a request-to-speak card as soon as

possible and submit it to a Board assistant. If you are joining us remotely and wish to comment on this item, please click the raise hand button or dial star nine now.

We will first call on in-person commenters followed by any remote commenters when we get to the public comment portion of this item.

Dr. Cliff, would you please introduce the item.

EXECUTIVE OFFICER CLIFF: Thank you, Chair Randolph. Before you today is the proposed Eastern Kern 8-hour Ozone Plan. Over the past decade, ozone levels in the Eastern Kern non-attainment area have improved in response to nitrogen oxides and reactive organic gas emission reduction strategies adopted by the District and CARB. The CARB strategies have provided reductions not only in Eastern Kern, but also in the upwind contributing areas namely San Joaquin and South Coast. The 2023 plan includes a CARB emission reduction commitment as part of the 2022 State SIP Strategy. The 2023 plan, along with CARB's commitment, will provide the reductions needed for attainment of the 75 ppb and 70 ppb ozone standards in Eastern Kern by 2026 and 2032 respectively.

The Eastern Kern Air Pollution Control District adopted the 2023 plan on May 4, 2023. CARB staff concluded that the 2023 plan meets the requirements of the Clean Air Act. Staff recommends that the Board adopt the

2023 plan along with CARB's emission reduction commitment and forward it to U.S. EPA as a revision to the California SIP.

This concludes my summary of the item.

Thank you.

CHAIR RANDOLPH: Thank you.

It's time for public comment on this item. Board Clerk, are there any public commenters?

BOARD CLERK HARRINGTON: Yes, thank you. We have currently one person signed up to speak. Ian Faloona.

DR. IAN FALOONA: Thank you.

Hi. My name is Ian Faloona. I'm a University of California at Davis scientist and an atmospheric scientist. I'd like to -- I wrote up a weight of evidence that indicates that the SIP modeling for this -- the region in Southern California is probably faulty to a significant extent. I know I only have a few seconds, so I'm going to go through the seven lines of evidence I have outlined in my written comments.

In 2015, Oikawa et al., showed in a study of direct measurements and then modeling consequently that the high temperatures of Southern California produced soil NOx emissions that were at least an order of magnitude larger than what was defaulted in their -- in their model. In 2017, Parrish et al., developing and empirical model of

ozone trends. So if you look at ozone decreases with time over the past couple decades showed that there was plateauing behavior occurring in the San Joaquin Valley and in the Imperial Valley. This he pointed to controls that were not being -- that were not successful -- something -- some emissions that were not being controlled by standard regulatory procedures and pointed to the intensive agriculture in these regions.

2018, Almaraz et al., was a study I was heavily involved with, which involved both modeling from -- of soil NOx emissions as well as airborne studies doing budgeting -- careful budgeting in the region around Fresno. And we showed that there was approximately 215 tons per day during that study being emitted by -- overall, and the CARB inventory had something of the order of 100 tons per day. So we're not talking about a small 5 or 10 percent correction. We're talking about a factor of two.

Then Guo et al., from this -- from ARB produced their own soil and -- okay. Well, that was -- that was the end, but I have four more studies Wang, et al., 2021, Sha et al., 2023.

BOARD CLERK HARRINGTON: Thank you.

CHAIR RANDOLPH: You can submit those in writing to the clerk.

DR. IAN FALOONA: Right. I only have it on digital. Can I submit it digitally?

CHAIR RANDOLPH: Yeah, you can talk to the clerk and she'll let you know how to do that.

DR. IAN FALOONA: Marvelous. Thank you so much.

CHAIR RANDOLPH: Okay. Are there any other commenters?

BOARD CLERK HARRINGTON: Yes. We have one person on Zoom with their hand raises, and it looks like their username is Originaldra. I have activated your mic. You can unmute.

THE ORIGINALDRA: Yeah. All of these things that you guys are doing with the zero emissions, I mean, ozone is in our own lungs. And so if you guys are set out to go to like a zero, you know, emissions type of thing, we as human beings emit all the things that you're trying to stop, just like plants, everything living does. So in your pursuit to try and stop all of this stuff, every living thing would have to die in order for you to get to that number, including you guys.

I mean, it's like I don't understand. This is a whole push for a UN agenda and you guys are punitively taxing or punishing people just to get this done. And, you know, it's like they're bringing in, you know, vehicle miles traveled, so you're like tracking and tracing people

in order to see, you know, what's going on, but you're going to start -- you know, people are beginning to bring forward taxes, or fees, or whatever in order to push this whole agenda. And it's to get us into densely populated areas, and where we need to go. It's bigger than just the environment. You guys are using that as a guise, but this is a plan for -- with globalists, and you guys are all engaging in it.

And, you know, it's a very dangerous thing, because the people are believing that you guys are doing this to help the environment, when in reality it's a bunch of smoke and mirrors, and it's to get people into a new way of life. And that's why you have to punish them in order to get them to comply with this new way of living. And it's all under the guise of saving the environment.

And in your pursuit to do that, if you got down to zero, you would kill every living thing, so it doesn't make any sense, and people need to pay attention, because this is bigger than just what they claim it is. This is a globalist agenda period.

BOARD CLERK HARRINGTON: Thank you. And can you state your name for the record, please.

THE ORIGINALDRA: The Originaldra.

CHAIR RANDOLPH: Do we have any other commenters?

BOARD CLERK HARRINGTON: That concludes the

in-person and Zoom commenters.

CHAIR RANDOLPH: All right. Thank you. I will now close the record on this agenda item. The Board has before them Resolution number 23-17. Do I have a motion and a second?

BOARD MEMBER HURT: Move approval.

BOARD MEMBER BALMES: Could I ask a question of staff?

CHAIR RANDOLPH: Sure.

BOARD MEMBER BALMES: Thank you. So I just want to know if -- could we get a response to Professor Faloona's?

EXECUTIVE OFFICER CLIFF: So we recognize that there's a difference of opinion regarding the subject of soil NOx. And in response, and I know we've heard from professor Faloona on several occasions on this issue, we're actually undertaking a contract to look at all the studies and to help us propose what to do going forward. I mean, certainly we establish the best available inventory, given all of the data that we have available to us, but there's more science to be done and we recognize that. So we think establishing a contract to help us look at all those studies is the best path forward.

BOARD MEMBER BALMES: Thank you, Dr. Cliff.

BOARD MEMBER KRACOV: This issue came up, Chair,

real quickly at south coast as well. And I thought EPA is studying this a little bit too, I thought, as well, someone had told -- at the South Coast had told me, I thought.

CHAIR RANDOLPH: Do I have a second?

BOARD MEMBER BALMES: Second.

BOARD MEMBER QUIRK: Second.

CHAIR RANDOLPH: All right. Clerk, would you call the roll.

BOARD CLERK HARRINGTON: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Aye.

BOARD CLERK HARRINGTON: Dr. Balmes?

BOARD MEMBER BALMES: Yes.

BOARD CLERK HARRINGTON: Mr. Eisenhut?

BOARD MEMBER EISENHUT: Yes.

BOARD CLERK HARRINGTON: Senator Florez?

BOARD MEMBER FLOREZ: Florez aye.

BOARD CLERK HARRINGTON: Mr. Guerra?

BOARD MEMBER GUERRA: Guerra aye.

BOARD CLERK HARRINGTON: Ms. Hurt?

BOARD MEMBER HURT: Aye.

BOARD CLERK HARRINGTON: Mr. Kracov?

BOARD MEMBER KRACOV: Yes.

BOARD CLERK HARRINGTON: Dr. Pacheco-Werner?

BOARD MEMBER PACHECO-WERNER: Yes.

BOARD CLERK HARRINGTON: Mr. Perez?
BOARD MEMBER PEREZ: Supervisor Perez aye.
BOARD CLERK HARRINGTON: Dr. Quirk?
BOARD MEMBER QUIRK: Aye.
BOARD CLERK HARRINGTON: Dr. Shaheen?
BOARD MEMBER SHAHEEN: Aye.
BOARD CLERK HARRINGTON: Ms. Takvorian?
BOARD MEMBER TAKVORIAN: Aye.
BOARD CLERK HARRINGTON: Supervisor Vargas
BOARD MEMBER VARGAS: Vargas, yes.
BOARD CLERK HARRINGTON: Chair Randolph?
CHAIR RANDOLPH: Yes.
BOARD CLERK HARRINGTON: Motion passes.
CHAIR RANDOLPH: Alright. Thank you. The next item on the agenda is Item number 26-6-2[SIC], proposed amendments to the greenhouse gas emission standards for crude oil and natural gas facilities. If you are here with us in the room and wish to comment on this item, please fill out a request-to-speak card as soon as possible and submit it to a Board assistant. If you are joining us remotely and wish to comment on this item, please click the raised hand button or dial star nine now. We will call on in-person commenters first followed by any remote commenters when we get to the public comment portion of this item. Reducing short-lived climate

pollutants like methane is a key part of our climate strategy.

We know that in California as well as elsewhere, oil and gas production and transport are responsible for significant releases of methane. While our primary long-term strategy remains to phase out oil and gas dependency in California to reduce these emissions, we have also been working closely with air districts, the California Department of Conservation, U.S. EPA, and others to identify and address methane leaks from oil and gas activities that are occurring now.

The proposed amendments will help us strengthen our existing Oil and Gas Methane Regulation, which works as a complement to existing air district rules controlling volatile organic compounds. The amendments also make modifications to conform with U.S. EPA guidelines and requirements. Dr. Cliff, would you please introduce the item.

EXECUTIVE OFFICER CLIFF: Thank you, Chair Randolph. In 2018, CARB included the Oil and Gas Methane Regulation in the State Implementation Plan submittal to U.S. EPA because the regulation included emission control requirements that are necessary in ozone non-attainment areas. U.S. EPA reviewed the regulation and in October of 2022 provided CARB with a list of regulatory changes that

CARB is required to address prior to April 2024. CARB must move expeditiously to make these amendments before any potential sanctions are initiated.

This is also an exciting time for the development of new tools to remotely measure methane emissions. CARB will soon begin receiving satellite based data enabling detection of large methane plumes in the state. To fully utilize these data, today's proposed amendments include provisions to put data into action to achieve methane and co-pollutant emission reductions.

These proposed amendments would make this regulation the first proposed in California to require action to reduce methane emissions based on satellite data, and it will serve as a demonstration of what's possible for other CARB regulations and other jurisdictions.

In addition to the changes already discussed, staff have gained valuable experience over the course of implementing this regulation. This experience has led to additional proposed changes to streamline the regulation, increase clarity, and improve the uniformity of implementation. I will now ask Dr. Quinn Langfitt of the Industrial Strategies Division to begin the staff presentation.

Dr. Langfitt.

(Thereupon a slide presentation).

ISD AIR RESOURCES ENGINEER LANGFITT: Thank you, Dr. Cliff. And good morning, Chair Randolph and members of the Board. I'm pleased to be presenting staff's proposed amendments to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities, also known as the Oil and Gas Methane Regulation.

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ISD AIR RESOURCES ENGINEER LANGFITT: In this presentation, I'll start by providing the big picture on oil and gas efforts in California, and background information on the existing Oil and Gas Methane Regulation. I will then present an overview of staff's proposed amendments, including the motivations for this rulemaking and a summary of the proposed changes. Next I'll discuss the costs and benefits of these proposed amendments. And finally, I'll cover the need for 15-day changes that staff have identified and staff's recommendation for the Board.

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ISD AIR RESOURCES ENGINEER LANGFITT: Although we're here today to talk about the Oil and Gas Methane Regulation, I'd like to start with the broad climate policy approved by the Board last year and how our efforts to address methane emissions from oil and gas sources

support California's efforts to achieve carbon neutrality.

Last year, the Board approved CARB's 2022 Scoping Plan update, which presents the pathway to achieve targets for carbon neutrality and reduce greenhouse gas emissions. The plan calls for dramatic reductions in total fossil fuel use, by transitioning to clean energy. As the Board heard back in December of last year, implementing the 2022 Scoping Plan would result in a 94 percent reduction in liquid petroleum demand in California and an 86 percent reduction in total fossil fuel use in California. That's in 2045 relative to 2022.

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ISD AIR RESOURCES ENGINEER LANGFITT: As we all know, transportation is a key sector for reducing our reliance on petroleum fuels. CARB's regulations, such as Advanced Clean Trucks, Advanced Clean Cars, and Advanced Clean Fleets complemented by regulations like the Low Carbon Fuel Standard are accelerating the transition to zero-emission vehicles and also reducing our reliance on fossil fuels.

And so the long-term trajectory for California is to phase down use of fossil fuels, which means that there will be less need for wells, storage tanks, production components, and other infrastructure that leak methane into the atmosphere. But even with this transition away

from fossil fuels, we expect that we will continue to have oil and gas production infrastructure operating in California for some time, so we need to continue to work to reduce methane emissions from oil and gas activity.

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ISD AIR RESOURCES ENGINEER LANGFITT: Because methane is more efficient at trapping heat in the atmosphere than carbon dioxide over a short time frame, reducing methane emissions can have an outsized impact in the near term. Methane accounted for approximately 10 percent of the greenhouse gas emissions in California in 2019, based on a 100-year global warming potential.

Oil and gas sector activities collectively accounted for 14 percent of methane emissions in the state in 2019. Many sources of methane emissions in the oil and gas sector also emit volatile organic compounds and toxic air contaminants as co-pollutants. Because oil and gas facilities are disproportionately located near vulnerable communities, reducing emissions from the oil and gas sector can bring not just climate benefits, but also community air quality improvements.

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ISD AIR RESOURCES ENGINEER LANGFITT: Federal, State, and local agencies are applying emission reduction strategies in a number of ways to address these sources of

leaks. For example, local air districts throughout California have been regulating the oil and gas sector to control volatile organic compounds for decades and they continue to improve their rules to drive down emissions.

At the State level, the Natural Gas Leak Abatement Program implemented by the California Public Utilities Commission, with assistance from CARB, requires utilities to implement best practices to reduce emissions from pipelines and associated facilities. A recent multi-agency effort launched about a year ago is the Methane Task Force convened by the request of Governor Newsom to address leaks from the oil and gas sector near communities. The Task Force includes representatives from CARB, the California Geologic Energy Management Division, the California Natural Resources Agency, and the California Environmental Protection Agency.

The Task Force holds quarterly public meetings to gain community insights and are joining local air districts to perform field inspections and repairs. At the federal level, the United States Environmental Protection Agency, or U.S. EPA, issues emission control guidelines that states must incorporate into their regulations. U.S. EPA proposed emission guidelines last year that would require states to put forth plans to meet certain requirements for regulating the existing oil and

gas sector and we anticipate that U.S. EPA will finalize those guidelines later this year.

Finally, we're proposing amendments to strengthen and improve CARB's Oil and Gas Methane Regulation. We expect several of the efforts shown on this slide to result in recommendations and additional requirements to consider and potentially incorporate into the methane regulation or to address through other avenues.

Because these efforts are currently underway, namely the Methane Task Force, and issuance of U.S. EPA's Emissions Guidelines, CARB will consider making further regulatory changes in the future.

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ISD AIR RESOURCES ENGINEER LANGFITT: As a reminder, the Oil and Gas Methane Regulation was adopted by the Board in March 2017 to address methane emissions from both new and existing oil and gas facilities. Adoption of the regulation served as an early action measure for AB 32, California's Global Warming Solutions Act. The regulation builds off of existing local air district rules that are targeted at reducing volatile organic compounds and also includes additional sectors and equipment that are not covered by local programs, usually, because those sectors and equipment emit primarily methane. And local air district rules are focused on

different pollutants that have a stronger effect on local air quality rather than climate change.

The regulation went into effect in January 2018. Over the past five years, CARB and the local air districts have been working together to implement the regulation. On-the-ground enforcement is typically the primary responsibility of local air districts due to their proximity and expertise with the facilities within their districts. CARB, however, does retain authority to enforce all aspects of the regulation.

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ISD AIR RESOURCES ENGINEER LANGFITT: This regulation applies to specific portions of the oil and gas sector, which I'll walk through here one segment at a time. The regulation applies to the oil and gas production and processing sector, including well sites and related equipment, storage vessels, natural gas gathering and boosting stations, and natural gas processing plants, both offshore and on land within California's borders.

The regulation applies to certain portions of the natural gas transmission and storage sector as well, which includes the natural gas transmission compressor stations and natural gas underground storage facilities. However, the regulation does not apply to natural gas transmission pipelines. It also does not apply to the natural gas

distribution segment, in which gas is moved from the city gate through to end uses, like homes and businesses.

Although, the regulation does not apply to transmission pipelines or the distribution segment, there is separate efforts to reduce emissions from those segments, such as the Natural Gas Leak Abatement Program that I mentioned earlier.

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ISD AIR RESOURCES ENGINEER LANGFITT: I'll now give a brief overview of the main requirements in the current regulation. Leak detection and repair, or LDAR, is required for components that are not already subject to local air district LDAR requirements and are not otherwise exempt. Operators are required to conduct quarterly inspections and repair leaks that are found in those inspections. Vapor control is required for uncontrolled tanks that emit methane above an annual threshold.

For other types of equipment that vent methane as part of their normal operation, if they're emitting above a specified threshold, either vapor collection or equipment replacement or repair are required. These include seals and compressors, certain pneumatic controllers, and pneumatic pumps. Emissions from some source types must be measured and reported annually.

The current regulation also imposes additional

monitor requirements for natural gas underground storage facilities, including at least daily leak screening at wellheads and continuous ambient monitoring both upwind and downwind of the facilities. Lastly, there are record keeping and reporting requirements.

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ISD AIR RESOURCES ENGINEER LANGFITT: Now, I'll move into the process for these proposed amendments. During the development of the proposal, staff engaged with the public, individual stakeholders, and other agencies. In September 2022, staff introduced the need for the proposed amendments and discussed changes under consideration in a virtual public workshop. In January 2023, we released draft regulatory text and held a second virtual public workshop to discuss the draft changes. Following both workshops, CARB staff held individual meetings as requested by stakeholders from industry, and environmental advocacy groups. Throughout the development process, staff also held discussions with U.S. EPA and with local air districts.

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ISD AIR RESOURCES ENGINEER LANGFITT: Staff are proposing amendments to the Oil and Gas Methane Regulation for three primary reasons. First, CARB is required to make changes to the regulation to comply with U.S. EPA

standards related to California's State Implementation Plan, or SIP. The SIP is a collection of CARB's and local air districts' plans and adopted rules and regulations that are designed to attain and maintain compliance with the National Ambient Air Quality Standards. I'll discuss this in more detail on the next slide.

Second, CARB expects to soon start obtaining remote emission plume detection data from methane-sensing satellites. This presents a substantial opportunity to identify large emission sources earlier than they otherwise would be discovered, and to mitigate those emissions. Finally, numerous minor changes, mostly to clarify and streamline the regulatory text, are proposed throughout the regulation.

These changes include items such as clarifying potentially ambiguous passages, removing time periods from the past, and adjusting record keeping and reporting to improve compliance verification and emissions estimates. I'll now discuss the State Implementation Plan and remote emission plume monitoring items in more detail.

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ISD AIR RESOURCES ENGINEER LANGFITT: In 2016, U.S. EPA issued Control Techniques Guidelines for the oil and natural gas industry, referred to as the CTG. The CTG establishes requirements for specific oil and gas sector

volatile organic compound, or VOC, emission sources that states must implement in ozone non-attainment areas. Although our regulation targets methane emission, VOCs are often emitted together with methane in the oil and gas sector. So controlling methane emissions also controls VOC emissions as a co-benefit.

To demonstrate controls as stringent as the CTG, CARB submitted the Oil and Gas Methane Regulation into the SIP in 2018. Because the Oil and Gas Methane Regulation references some local air district rules for certain requirements, those rules were also evaluated by U.S. EPA as part of their review.

If October of last year, U.S. EPA finalized analysis of our methane regulation and issued a limited approval, limited disapproval of CARB's SIP submittal. This means that some aspects of the regulation meet the CTG, but there are some inconsistencies that preclude full approval.

U.S. EPA listed the specific deficiencies in their decision, which you'll get a feel for on the next slide, when I go over changes that we're proposing in response to that decision. To achieve approval, all deficiencies identified by U.S. EPA must be addressed and the regulation resubmitted into the SIP before April 30th, 2024. The result of not achieving U.S. EPA's approval by

that date is federally imposed State sanctions.

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ISD AIR RESOURCES ENGINEER LANGFITT: Numerous amendments are being proposed to meet the level of stringency required by the CTG. Operators would be required to develop and maintain leak detection and repair plans for each of their facilities. And that would be to guide the inspections that operators are already required to perform under the current regulation.

Vapor collection systems and control devices that are used to comply with this regulation would need to meet additional requirements, such as more detailed inspections, sizing analyses, and performance testing. Separator and tank systems controlled pursuant to the regulation would also need to comply with additional requirements.

In some cases, owners or operators are not able to repair leaks or defects within the standard allowable time frames, and as a result, they request approval for delay of repair. The proposed amendments would add more rigorous requirements for obtaining a delay of repair approval in those cases. Some equipment and components are exempt from certain provisions if they're covered by local air district requirements. U.S. EPA's decision stipulates that these exemptions can only be based on

rules and not on requirements, so staff are proposing to make this change.

Staff are proposing to list the qualifying rules for ozone nonattainment areas, which U.S. EPA is requiring so that they can assess those rules. Finally, there are many additional minor proposed changes, such as those listed under the last item on this slide.

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ISD AIR RESOURCES ENGINEER LANGFITT: Now, I'll move on to the proposed provision to require oil and gas operators to take action upon notification of remotely detected methane plumes.

Within the next year, a public-private coalition, in which CARB is a partner, plans to launch two methane detecting satellites, and CARB will be receiving data from these satellites starting in 2024. The State of California has invested in obtaining even more satellite data into the future through a competitive bid process using a $100 million appropriation from the Legislature.

Together, these efforts will provide CARB with access to high quality frequent remote monitoring data to locate large methane emission plumes. To prepare for the availability of satellite-based data, staff are proposing to add a provision to the regulation that would require owners or operators to go into the field and investigate

the source of emission plumes that are reported to them by CARB based on that satellite data.

If, during the field investigation, the operator finds the leak, they would then be required to repair the leak. The operator would also be required to report back to CARB, regardless of whether the emissions source is found. By including these new provisions in the regulation and utilizing satellite data, we expect that the State and operators will be able to more quickly identify and address leaks than if we just relied on quarterly inspections alone.

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ISD AIR RESOURCES ENGINEER LANGFITT: I'll now discuss the costs and benefits associated with the proposed amendments. Staff estimates that over the course of a five-year analysis period, the proposed amendments would cost approximately $6.6 million with roughly 20 percent of the costs attributable to responding to remote emission plume detections and roughly 80 percent of the costs for all remaining items. To give an idea of magnitude, these costs correspond to approximately two hundredths of a percent of the total California industry sales from oil and gas production and natural gas transmission and storage over an equivalent period.

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ISD AIR RESOURCES ENGINEER LANGFITT: The proposed regulatory changes provide several types of benefits. The changes are necessary to achieve approval of the regulation in the SIP and therefore to avoid federal sanctions. The changes help to better assure compliance with the regulation through increased clarity, design analysis, testing, inspections, record keeping, and reporting. Additions to the required reporting data will also help enable more accurate calculations of total emissions by source type and associated emission reductions.

Finally, the remote emission plume response provision will improve regulatory implementation and reduce the time it takes to identify and address leaks.

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ISD AIR RESOURCES ENGINEER LANGFITT: Now, to wrap up with staff's recommendations. When U.S. EPA issued their SIP decision on the Oil and Gas Methane Regulation, they also identified deficiencies in local air district rules that are cited and relied upon in CARB's regulation. Local air districts, including the South Coast Air Quality Management District, the San Joaquin Valley Air Pollution Control District, and the Ventura County Air Pollution Control District, either recently updated or will soon be updating some of their rules to

comply with the U.S. EPA decision.

Because those rules are being changed after the release of the 45-day notice package, CARB staff anticipate a 15-day change will be necessary to refer to the latest version of each air district rule in the Oil and Gas Methane Regulation to achieve U.S. EPA's SIP approval.

Staff propose to do this under the resolution's direction for the Executive Officer to make appropriate conforming 15-day modifications, given the pending deadline for approval of the amendments to avoid sanctions from U.S. EPA.

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ISD AIR RESOURCES ENGINEER LANGFITT: With that, staff recommend that the Board adopt Resolution 23-18 and update the SIP accordingly.

Thank you. And that concludes staff's presentation

CHAIR RANDOLPH: Alright. Thank you very much. We will now hear from the public who signed up to speak on this item, either by submitting a request to speak card or by a raised hand in Zoom. I will ask the Board clerks to begin calling the public commenters.

BOARD CLERK HARRINGTON: Thank you, Madam Chair. We currently have seven commenters who wish to speak on

this item. If you wish to verbally comment on this Board item, please raise your hand or dial star nine now. I also apologize in advance if I mispronounce your name. I would like to also remind all commenters to please speak slowly and clearly for our interpreters and the court reporter. Also, just a friendly reminder that speaker comments will close 30 minutes after the public comment portion of an item has begun at 10:15. Please keep your hand raised Until you are called upon. I will now pass it to John Moore for the in-person commenters.

BOARD CLERK MOORE: Thank you.

Our first commenter is Jon Costantino.

JON COSTANTINO: Hi. Good morning. Jon Costantino on behalf of the California Independent Petroleum Association, a non-profit, non-partisan association that represents oil and gas producers here in the state of California. CIPA would like to thank staff for the process that we went through. It was clear, and as they said, they walked through the amendments. And so there were no real surprises. We understand that this is being done for EPA's necessity, but we appreciate that staff took the opportunity to make amendments that, as they said, streamline and reduce duplicative implementation. So we really appreciate that aspect of what staff was trying to do.

And then also on the remote sensing, we understand that it's coming and that changes were made based on the first draft, which we thought were not quite up to the rigor of what needed to be done in a State regulation, so we appreciate that. We look forward to working with staff on both the implementation of the new remote sensing and the implementation of the updated rulemaking.

And then finally, it wouldn't be a CIPA comment if we didn't say that adding additional requirements on State production and can cause leakage and leakage is when that production occurs elsewhere and comes into the state. And the Scoping Plan, and Quinn mentioned it, that we're going to have production for a while in the state. And if you -- if you produce -- if you need more production and you're reducing it in-state, then it has to be imported. And that produces emissions at the port. And we know that California's regulatory system is more Stringent than other foreign entities in the -- oh, that's it. So thank you and appreciate the time today.

BOARD CLERK MOORE: Okay. The next commenter is Christine Luther Zimmerman.

CHRISTINE LUTHER ZIMMERMAN: Good morning, Chair Randolph and members of the Board. As it says up there, my name is Christine Luther Zimmerman and I work in

Regulatory Affairs at the Western States Petroleum Association.

I wanted to start this morning by thanking CARB staff. We met and worked with Carolyn Lozo, with Jim Nyarady, and with Dr. Langfitt. And that made the process of understanding what needed to be accomplished in getting there that much easier, so I just wanted to commend your staff for their excellent work throughout this process.

WSPA agrees with most of the amendments, including the incorporation of the SIP-approved rules and EPA's Control Technique Guidelines. And we just had a couple of key issues that we wanted to point out this morning that we're concerned about.

We're concerned about the addition of SIP-approved prohibitory rules and the exclusion of non-prohibitory rules creating duplicative requirements for certain separator and tank systems. There are similar issues in the LDAR section of the language that are also of concern to us.

We believe that the alignment of implementation timelines between COGR and the regional air districts is essential and we hope to see that that moves forward smoothly. Our only final concern is that in the case of EPA's -- not that we know that this would happen, but should, EPA give a partial or complete disapproval of any

of the updated district rules from being SIP approved, we're not sure how the rules-dependent COGR revisions would be handled. So we just wanted to highlight that is a concern that we have and like to thank you for your time and consideration this morning.

Thanks.

BOARD CLERK MOORE: Thank you.

Our next commenter is Kayla Karimi.

KAYLA KARIMI: Good morning, Board and members. My name is Kayla Karimi here representing the Center on Race, Poverty & the Environment. CRPE is committed to environmental justice and uplifting underrepresented communities in the San Joaquin Valley. As CRPE, we work closely with local communities to advocate for their needs and public health. Our communities are low-income communities of color with neighborhoods in close proximity to oil and gas wells and they depend on California agencies to protect them.

We at CRPE are extremely concerned about the leaking wells in the Arvin-Lamont areas that were recently discovered. These wells surrounding our communities pose a huge health risk to health and safety. Any leaks from these wells for any period of time are unacceptable.

Many of our communities suffer from effects of living near oil and gas wells including asthma, chronic

headaches, cancer, and more. CRPE hopes these amendments include enhanced requirements for sites within 3,200 feet and are handled with extreme care. There should be increased leak detection and repair inspections at these sites, more than required at others. These inspections should include testing for co-pollutants that are the culprit for health harms our communities suffer from, in order to mitigate the harm as quickly as possible.

Lastly, reports from these inspections should be public and communities within 3,200 feet should be notified as soon as possible. No communities deserve to be sacrifice zones with the harm these communities have already unfairly suffered.

Thank you.

BOARD CLERK MOORE: Thank you. That concludes our in-person commenters. I will now pass it back to Christine for Zoom.

BOARD CLERK HARRINGTON: Thank you, John.

We currently have four people signed up with their hands raised in Zoom and they are Karin Urso, Jasmine Vazin, Riley Duren, and Ms. Morgan.

I will start with Karin Urso. I have activated your microphone. Please unmute yourself and you can begin.

KARIN URSO: Hello. I am a nurse in Bakersfield

and I'm a member of the California Nurses for Environmental Health and Justice.

We applaud CARB's efforts to reduce methane emissions, which protects our most vulnerable populations, the very young, the very old, and pregnant persons. Before a baby takes it first breath, it is already exposed to air pollution in many places in California, as these pollutants can pass the placental barrier. We submitted written comment, but I would like to add one further point. We request that CARB plan and implement a more robust community notification policy.

Recently, we had the unfortunate situation in which a South Kern high school held an outdoor graduation ceremony on June 2nd. Three major methane leaks had been identified within a thousand feet of the school. The school claims it wasn't notified, although CARB stated in a comment in a public meeting that it had notified the school, so there is some confusion there. The community members were not notified, so their right to make decisions impacting their health and the health of their families was violated.

Please close the communication gap to assure that community members are informed in a timely manner to any threat to their health and safety. Thank you.

BOARD CLERK HARRINGTON: Thank you.

Next, we will have Jasmine Vazin. Jasmine, I have activated your microphone, you can begin.

JASMINE VAZIN: Thank you. My name is Jasmine Vazin, and today I'm providing comment on behalf of the Sierra Club. I would just like to highlight and support the recommendations submitted via June 12th in a letter signed by 13 environmental and public health organizations to strengthen these updated regulations, specifically: the current exemptions for heavy crude oil wells and separator and tank systems that receive an average of less than 50 barrels of crude oil or condensate per day, leave huge gaps in monitoring that will impact communities, heavy crude wells were the type of wells that were found to be leaking methane outside of homes and a school a year ago in the Morning Star Neighborhood in Bakersfield, and 98 percent of producing wells in the state produce less than the 50 barrel per day threshold meaning that all tanks within community drilling sites would be exempt the way the regulation is currently written and would place communities at risk for undetected leaks.

We also recommend that both of these exemptions are taken out of the final regulation. And also the regulation, as others have mentioned, doesn't set out any requirements for community notification or testing for co-pollutants, which we heard earlier in the staff

presentation are quite common when methane is leaking from these sites. And so we want to recommend that when sites are found to be leaking within 3,200 feet of sensitive receptors, that there is a robust notification and health testing regime set out in these regulations explicitly.

We've seen kind of this lack of notification and testing right now over the last month with the 27 wells that are leaking in Arvin, and so we really want to urge CARB to include standards of community level response and notification in the final regulation.

With that, just please see our full letter submitted via the written comment period for our full list of recommendations. And thank you for the opportunity to provide comment.

BOARD CLERK HARRINGTON: Thank you.

Next is will be Riley Duren followed by Ms. Morgan, and then Elise Fandrich.

Riley, I have unmuted -- or I have activated your microphone. You can please unmute and begin.

RILEY DUREN: Great. Good morning, Chair Randolph and Board Members. I'm Riley Duren, CEO of Carbon Mapper, a non-profit organization focused on delivering transparent and precise methane data to guide mitigation action.

In 2016 and 2017, while at NASA's Jet Propulsion

Lab, I led the first California methane survey that used advanced remote sensing aircraft to conduct a comprehensive assessment of methane point sources in the state. We found it less than 0.2 percent of oil and gas operations, landfills, and other facilities represent over a third of the state's total methane emissions. In short, a small number of leaky sources are responsible for a large fraction of emissions. This is a trend we continue to see with follow-up airborne surveys, including the one we're doing for CARB right now. During these pilot studies, we found that when armed with precise and timely data, operators often take quick action to stop unnecessary and wasteful methane emissions.

Our team and CARB staff communicated observed methane plume data to facility operators in California. As summarized in a recent released CARB report, operators indicated that nearly half of methane emissions detected by our overflights were previously unknown and leaks were quickly repaired with many of the reductions verified by subsequent overflights. Carbon Mapper has since expanded these pilot efforts across other U.S. jurisdictions with similar feedback.

It was the success of these pilot projects that motivated me and our philanthropic sponsors to found Carbon Mapper and establish partnerships to scale up

operational methane monitoring with satellites. Remote sensing enables us to precisely and unambiguously locate high emission methane sources, in many cases at the level of individual components. Empirical field studies like these, and publications in the open scientific literature provide overwhelming evidence that remote sensing methods can offer important contributions to methane mitigation.

We applaud California's continued climate leadership and look forward to supporting implementation of this important program. Thank you.

BOARD CLERK HARRINGTON: Thank you.

Next will be Ms. Morgan. I have activated your microphone. You can unmute and begin.

MS. MORGAN: Yes, I would like to give a shout-out to Nora. She is very, very good friend of mine. But Nora, as a friend, I wanted to say you shouldn't be posting on Instagram while people are speaking. I think it would behoove you to listen to what they have to say.

But so you guys, wow, $100 million for satellites and you can't even quantify what the reductions would be. So you don't even know if it would be worth that $100 million of the people's money. And I'm not saying that we should be having leaks, but with the things that you guys are pushing into trying to get rid of this type of resource, you know, the way to do it, because you're

basically saying if they have a leak that you've detected through a satellite, they have to shut down and go find it. So, I mean, whether or not there is a leak, they still have to report to you, but it's a good way to get them to shut down and not be, you know, producing any supplies for people.

And you guys have to make more and more, stricter and stricter rules and requirements as time goes on, because you're afraid of federal sanctions, because it's like the top down. Everybody has to enforce this in order for it to work, because if you don't have this kind of stuff, you can't force people into this new way of living. Just like with driving, if you don't start taxing people, Nora, right, then you're not going to get them to stop driving like you guys want.

So everything you do, there's a punitive fee, or regulation, or something that comes along with it, because you have to push this. And I find it very dangerous that you could just tell these people that they have to shut down whether or not there is a leak, but you supposedly found one with the satellite. And you guys are never going to get to a zero reduction. It's impossible. It is absolutely impossible. You guys leak methane. And some of you probably are right now. What are you going to do about that? Are we going to start doing this for people

and telling them that they can't, you know, pass gas? I mean, it's ridiculous, the earth is self-healing and you guys are manipulating it so it can't be.

BOARD CLERK HARRINGTON: Thank you. Our last commenter is Elise Fandrich. I have activated your microphone. You can unmute and begin.

ELISE FANDRICH: Thank you. Good morning.

BOARD CLERK HARRINGTON: Sorry. Go ahead.

ELISE FANDRICH: Can you hear me now?

BOARD CLERK HARRINGTON: Yeah. Sorry, I accidentally deleted you.

ELISE FANDRICH: No problem. No problem.

Good morning. I'm here representing Environmental Defense Fund. And I work for TrattenPrice Consulting. They're one of our clients. So these comments elaborate on EDF's written comments and address the proposed remotely detected emissions plume provision put forth by CARB. EDF is an international member organization with more than three million members and activists worldwide, many of whom are deeply concerned about the pollution emitted from oil and natural gas development and operations.

So we appreciate CARB's leadership with respect to eliminating or reducing methane and other harmful emissions from oil and gas facilities. The current

proposal furthers CARB's leadership role and will aid the State in achieving carbon neutrality by 2045. We specifically want to offer suggestions to achieve additional reductions through the remotely detected emission plumes provision.

Specifically, we urge CARB to: One, expand the provision and allow CARB to use other types of remote detecting technology capable of identifying super emitters rather than limiting the proposal to satellites, two; require operators to investigate all detected super emitters, even those that may occur due to authorized maintenance activities; and three, publicize the data identified and reported to CARB as part of the Remotely Detected Emissions Plumes Program, so that community members are updated while these events are occurring. In particular, EDF is requesting CARB make this provision applicable to leaks detected by other types of remote sensing technology as well, not just satellites.

We recommend this course of action because multiple types of remote sensing technology can detect methane. And doing so is consistent with EPA's proposed Super-Emitter Response Program. So we appreciate CARB's consideration of these comments and welcome the opportunity to share with them today.

Thank you.

BOARD CLERK HARRINGTON: Thank you. That concludes all the public commenters.

CHAIR RANDOLPH: Alright. Thank you. Unless there's any issues staff would like to respond to that were raised in the comments, I will go ahead and close the record on this agenda item.

Okay. Closing the record. However, if it is determined that additional conforming modifications are appropriate, the record will be reopened and a 15-day Notice of Public Availability will be issued. If the record is reopened for a 15-day comment period, the public may submit written comments on the proposed changes, which will be considered and responded to in the Final Statement of Reasons for the regulation. Written or oral comments received after this hearing date but before a 15-day notice is issued will not be accepted as part of the official record on this agenda item. The Executive Officer may present the regulation to the Board for further consideration, if warranted. And if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

Board members, do you have any questions or comments on this item?

Board Member Takvorian.

BOARD MEMBER TAKVORIAN: Thank you, Chair.

I just noted that several of the commenters requested I believe improved reporting and publicization of the data, as reported to CARB as part of community reporting and kind of transparency. So I kind of wondered -- I didn't talk about that during my briefing, so I don't know what the response to that is. I wonder if you all could respond, please.

EXECUTIVE OFFICER CLIFF: Yes. Thank you, Board Member Takvorian. So our goal here is to be as transparent as possible and get data out as quickly as we can. To the extent that it's satellite data, we'll be making those available according to the agreements that we have in place with the operator of those instruments. And as well, there's a methane task force that includes other agencies and an opportunity to provide information to the public as part of that work, but I'll ask Matt Botill if he wants to add anything to that, specifically on what we're planning to do here.

ISD DIVISION CHIEF BOTILL: Thank you, Dr. Cliff. And Matt Botill, Division Chief of the Industrial Strategies Division. And thank you, Board Member Takvorian for the question. As Dr. Cliff mentioned, the State has initiated a Methane Task Force, and this comes in response to a letter that the Governor sent to Chair

Randolph in July last year to have improved coordination across State agencies, the California Air Resources Board, CalGEM, CNRA, and CalEPA on addressing methane leaks from oil and gas activity. And so the Task Force has met three times. The fourth meeting is actually coming up next week.

And as part of the Task Force activities, we've been communicating with community members and taking in feedback as well as conducting additional field inspections across State agent -- and local agencies to understand and identify potential leaks. So in the most recent action that the Task Force took, the -- there was some inspections done in the Arvin-Lamont area. You heard from some commenters today about that. And the Task Force put out information about the results of those inspections publicly. And as that work continues with the Task Force, we expect more public communication on the results of additional inspections and information gathered on potential leaks. So it's been a good forum to be able to disseminate information on activities that the state is doing and inform community members about potential issues that have been found through actions.

BOARD MEMBER TAKVORIAN: Okay. Thank you very much.

DEPUTY EXECUTIVE OFFICER SAHOTA: Good morning,

Board Member Takvorian. This is Rajinder Sahota --

BOARD MEMBER TAKVORIAN: I'm sorry.

DEPUTY EXECUTIVE OFFICER SAHOTA: -- Deputy Executive Officer. I wanted to add a little bit more on the satellite piece, because I think it's important to note that in last year's budget, there was $5 million encumbered to help with community grants to help build capacity to see the satellite data once it's provided on the websites at CARB. And that will be statewide data with location throughout -- for all of the methane plumes that are noticed not just on the oil and gas infrastructure. So there's already plans to make sure that we have funding for the community engagement piece as well.

BOARD MEMBER TAKVORIAN: Thank you. Thank you, all. Does that include consideration of direct notification of residents within nearby -- the nearby neighborhoods with oil and gas wells? Is there -- is that part of the consideration that would be taken on?

DEPUTY EXECUTIVE OFFICER SAHOTA: So we are currently working with our sister agencies to build processes and structures to take the data in and disseminate that data. And we can definitely have the conversation what tools do we have today, what venues do we have today to get notifications out, but it will be

publicly available to everybody, and we want to make sure that the public knows that they can check daily to see what the updates on the rates of the plumes and any action on those plumes.

BOARD MEMBER TAKVORIAN: So do the people who live within a certain distance of these facilities know that? Have they received direct notification?

DEPUTY EXECUTIVE OFFICER SAHOTA: So we haven't gotten satellite data from the satellites yet. We have research contracts that have been underway to collect that data.

BOARD MEMBER TAKVORIAN: Um-hmm.

DEPUTY EXECUTIVE OFFICER SAHOTA: And that is what we're starting to practice right now, which is how do we take that data that we get in the research effort. We know we're going to get larger sets of data when we have continuous data with satellites, how do we get that out quickly, how do we make sure that the right agencies, including the air districts, are notified, and then what are the subsequent pushing out of information and data?

The $5 million is really going to go a long way to make sure that communities that are living near some of this infrastructure know about the website, know how to help interpret the data. And if there's certain things that they're interested in, we want to make sure that

we're making those data products available in the process.

BOARD MEMBER TAKVORIAN: Okay. Thanks. I think -- I think we know a lot about public notification now. We know a lot from our emergency response systems. We know a lot about what works and what doesn't work. And so I really appreciate your efforts and I think the community organizations that are in relationship with folks in these neighborhoods are a really good resource for you as well. So thank you for all you're doing. Appreciate it.

CHAIR RANDOLPH: Thank you.

BOARD Member Hurt.

BOARD MEMBER HURT: Thank you, Chair. I think I was going along the same lines as Board Member Takvorian as far as public information. So I will look forward to seeing how we translate all this information that we're gathering for the community to understand.

My first question here. You know, there's been an assertion of duplicative requirements and incompatible implementation timelines of these rules with the district. We certainly want efficiency and transparency. And so can staff explain in what ways we're addressing these concerns?

ISD OIL AND GAS AND GHG MITIGATION BRANCH CHIEF LOZO: Yes. Thank you for the question. Carolyn Lozo

Chief of the Oil and Gas Branch here at CARB.

Yeah, staff worked very closely with U.S. EPA, with local air districts, and also had many discussions with industry to work out these problems. It is not our intent to have duplicative requirements, duplicative work. So for most of those instances, where there could have been some confusion and duplicative work, we worked through it with EPA. EPA is very specific about the language that we need to incorporate into the regulation. So as I said, most of those instances, we were able to work through. For those few instances that are left where there might be some duplicative work that it appears might be required, we're committed to working with industry, with local air districts, and with EPA to work through those through the implementation process.

BOARD MEMBER HURT: Thank you for that. I think we have to realize that there's -- this is kind of an organic process, and there's a lot of partnerships, and that we're living and learning on how to do this better and be more efficient together.

I -- maybe just a comment, which is I really think this is a decisive decade for the world to confront climate change collectively and be bold locally for air quality, climate action, and environmental justice. So maximizing technology innovation and tightening our

requirements as well as extending our data gathering for oil and gas sector makes a lot of sense to meeting our State goals. So I want to applaud staff for moving this forward and creating those partnerships and talking through what we need to do in this sector and area.

And I'm definitely sensitive to the underground facilities and quantifying leakage. So I hope we have a really steady eye and hand on that, because of its impact in communities. And sometimes when we bury things, we forget about them and -- until something really bad happens. So I hope we continue to do that data gathering, because at the end of the day, the health of our communities needs to be protected. And that's what I see in these rule amendments.

So I've had many different meetings with stakeholders. And I said, you know, business as usual or status quo is no longer an option, and so let's work together into the future. And so I'll be supporting these amendments.

Thank you.

CHAIR RANDOLPH: Thank you.

Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Chair. First off, I want to thank Ms. Sahota for clarifying about the public communication effort. I really agree with Ms.

Takvorian and Ms. Hurt about how that's important. But I wanted to say as a scientist who uses satellite data in my own research - it's not for methane. It's PM2.5 for the most part - it really has been a great boon to my own research to cover areas where there is not ground monitoring. So, you know, the satellite data that's available for PM2.5 around the world now, I'm collaborating with folks in Africa where I can get PM2.5 data where there are no monitors.

I just really think this is an important step that we're taking with regard to methane emission monitoring by satellite. So I just -- you know, it's really exciting. You know, we've got to make sure it works at multiple levels. And I agree that public communication is key, but I'm really thankful that staff is moving in this direction.

CHAIR RANDOLPH: Alright. Dr. Pacheco-Werner.

BOARD MEMBER PACHECO-WERNER: Thank you. Thank you to staff and thank you to all the commenters both in person, online, and written. I wanted to kind of pull in this thread around the public information, and as that continues to be involved -- evolve, and the Task Force that you're talking about, because I definitely want to -- I feel like when we were dealing with this last year, there was a little bit of frustration from folks in terms

of what the fire departments could classify as, you know, a danger versus, you know, what's just -- what is leaking, but maybe not a public health danger. And so I just want to see if you could talk to us more about how the -- when you're talking about the monitoring and the public information, how we're weaving in that kind of like clinical significance of what you're finding and how that can best be communicated to the public.

ISD DIVISION CHIEF BOTILL: Thank you, Board Member Pacheco-Werner. So again, Matt Botill with the Industrial Strategies Division. I do think that the work that we have been doing with the other agencies, the -- with the Task Force has been really helpful here. And I say that, because, you know, as part of that work, we've been discussing how different leaks have different characteristics. So a leak of higher concentration indoors maybe poses more of a safety risk or a fire risk if it is really in a concentrated small space or confined space versus a leak that maybe is less concentrated, outdoors diffuses rapidly is a climate concern, because of the methane emissions that are being released versus another leak that maybe has co-pollutants in it that could, in conjunction with other exposure risks, result in health risks.

And so we've been working through how to

communicate the differences in the leaks and in potential risks as part of the Task Force and in making sure that other agencies, as they're doing inspection work, are notifying appropriate authorities, for instance, the fire department if it looks like we might be in a safety risk for instance.

BOARD MEMBER PACHECO-WERNER: And I think I would recommend, you know, as the public engagement happens on that and the workshops, that some of that gets laid out for folks in terms of some -- understanding some of the clinical versus the other safety risks that you talked about.

Thank you.

CHAIR RANDOLPH: Okay. Any other questions or comments?

Board Member Guerra.

BOARD MEMBER GUERRA: Just one comment. I wanted to again thank you again. I think this movement towards satellite information is important, and more so, because I do think that it's going to allow, even as we saw in the previous item, I think other researchers to help us and have more eyes on what we're seeing. And then finally, just anecdotally, I know in my time in the last four years of chairing the Sacramento Metro Air Quality Air District, what I found that the public -- particularly,

unfortunately, we had terrible smoke issues, but the satellite view and being able to visually show concerns has helped the public engagement more than just talking about the numbers.

And so I just do feel that there is a different connection once we start using that. I mean, even in -- when you -- on the daily news, people look at the weather map. That's -- that is one of the most common ways to engage the public. So with that, I just wanted to thank staff. And also, I think there's just an extreme amount of benefit by having an opportunity for more researchers and more eyes on potential situations that could happen, not that they're happening immediately. But when they do, it puts everyone else to join us on -- in our effort.

Thank you, Madam Chair, and I'll support the item.

CHAIR RANDOLPH: Alright, thank you.

Senator Stern.

SENATOR STERN: Thank you, Madam Chair. Apologies for my delay here. Just got out session and walked over, but was watching this proceeding with great interest. Appreciate the diligence of staff and the work on this. We've been working in the Legislature for quite a while on the impacts of oil and gas production in this State on sensitive receptor sites, disadvantaged

communities, as well as people all over the state of California. So I'm excited to see some work getting done here.

I would -- I would say that I believe more needs to get done and some beyond the scope of this regulation. When we're talking about methane pollution, I think, you know, there's been a lot of attention given to the pressures around production say or in the 1383 context, people are saying slow down and stop making an effort on methane when it comes to waste. I think those are all -- those are misguided. But even if we take this step today, our role as the largest gas consumer in the country remains. And our complicity in this methane pollution puzzle that really escapes our borders, to me, is still outstanding. And I'm really hoping with the vote and with the level of diligence done on oil and gas facilities, that we can also recommit ourselves to understanding the true carbon, methane, and public health impact of methane gas in this state.

We consume a lot more than most states do. We think of ourselves as very green and we like to pat ourselves on the back often. I think in this case, as well as in oil consumption, we don't have a lot of reason to be, you know, too proud. You know, you're talking about 60 some odd percent of California households heat

them -- heat their homes on gas. And in the south, that number is down at 20, 15, 30 percent. We use more gas here. We just don't produce a lot of that gas here. So the meth -- this methane rule will be, I think, very important, especially for those with oil wells behind their -- you know, in their backyards. We have a gas storage site, so I'm sensitive around gas issues. But most people in this state aren't living behind a fracking well that's completely unregulated at the wellhead, or fugitive emissions are rampant, where gas really starts to look like coal by the time it gets here.

Alright, so I'm hoping that we can really in the future, either you know, legislatively or here at the Board, take a look at the hidden part of the gas puzzle, that hidden part of methane that's embedded in the gas we consume every day, in the power plants we're extending or it looks like we're extending, and then the stoves that are burning it, much to the detriment of our children and elderly, and start to say what is the true cost of that methane? Let's not lie to ourselves and pretend this is natural gas. It's methane gas. Natural gas is marketing. It's methane gas.

And so the work is not done. I'm very supportive of the measure today and appreciate you all doing it, but I would just -- I would urge that consideration going

forward -- and if it's appropriate, I'd love to hear anything from staff just about what's going on in the broader methane context around the fugitive emissions in natural gas. The concern is, yes, we don't import coal, but if gas looks a lot like coal, aren't we just doing the same thing? So any thoughts on that would be appreciated gratefully.

DEPUTY EXECUTIVE OFFICER SAHOTA: Those were some really great points, Senator Stern, and a lot of that was covered as part of 2022 Scoping Plan. The first thing I'd like to say is that we just absolutely need to get away from combustion of fossil fuels everywhere, including fossil gas. You're also correct that we import almost all of the gas, fossil gas, that use in this state. And so the actions to build out clean renewable energy to electrify homes, electrify transportation, go to zero emission vehicles through hydrogen, and decarbonize industry will go a long way into reducing the demand for that fossil gas, which means less leaks in the infrastructure, because we can start to decommission some of that.

I think the challenges here are how do you move off of that gas and -- without building out the new energy to displace it? And so one of the things that we keep running into is the permitting issues on building out

clean energy to then be able to turn off the dirty energy that's coming into the state. And so that is an area where there's a lot of focus. As you're aware, Governor Newsom had that Executive Order on permitting for clean energy and infrastructure. There's efforts across State agencies to figure out how to help on getting clean energy infrastructure sited. There's regs here at CARB that I know you've sat in on to actually deploy clean non-combustion technology in the transportation sector.

As we look at the regulations moving forward to align with the Scoping Plan, we'll be looking at how to get away from combustion in the industrial sectors. And I know there's a measure coming forward in the SIP context for zero emission appliances in homes. So we're trying to hit both the upstream side in terms of building out clean energy and the downstream end uses of that fossil technology today.

SENATOR STERN: If I could just ask one follow-up, Madam Chair? I think those are the right goals. We're with you 200 percent on it. But if we concede, as the Scoping Plan itself does, that there will be gas in our future, at least gas power, it's in there, we're going to be bringing in gas to this state. And we've transformed, you know, national practices before, right? Our clean air policies have triggered a global

automotive revolution. For all those wellheads out in the Permian Basin or deep in Pennsylvania in the Marcellus or wherever else where they're flaring, where they're not paying attention to VOCs, for the gas we're bringing in shouldn't we be looking at some kind of standard, or some kind of life cycle analysis, where at least, you know, we're not treating all methane gas as equal, that somehow there's sort of -- there's a lifting process, or a certification, or some kind of standardization, so that the industry beyond our borders will want to compete and say let's deliver, you know, gas that's compliant and cutting edge, and new market transformative work in that way that doesn't exceed our jurisdictional authority by any means, but at least starts to look at the supply side, right, not just cutting that demand side. I guess, how do we tackle that supply side?

CHAIR RANDOLPH: Oh, go ahead.

DEPUTY EXECUTIVE OFFICER SAHOTA: So there -- again, there's two points here. One is you mentioned 1383 and so that means getting more of the fugitive emissions in the State captured and put into end uses where we need some kind of gas for energy. So we have to do better on getting that fugitive emission into the gas supply. That will help on 1383 goals and help on the goals for 2030 and 2045. So that also has to be part of the consideration in

terms of displacement of fossil gas.

For the upstream piece, I think there is a couple of considerations there, one has to be cost -- what's the cost to ratepayers and what is the cost for that infrastructure. The second part is how do we accurately capture sources and systems outside of the state of California? And so I think there's some work being done on this. We know that there is a voluntary standard out there and we're looking into this, but I think right now we have to focus on -- well, here's what we're focused on is what's going on within the State for 1383 for RNG bringing that online, and then how to actually make sure that demand goes down.

To the extent that gas persists, I think we do want to look at options for how to make sure that that gas -- fossil gas is as clean as possible, and clean being low carbon intensity as possible, but I think that has to happen in time, because first we need to push out as much as we can. So maybe it becomes a resource capacity. I'm not sure, but it has -- we can't do all of it at once, and so we're trying to organize across the State agencies on how to take the low-hanging fruit, with just can we just get out of this fossil source as much as possible.

SENATOR STERN: I want to be there with you, but we just ordered a billion two for gas plants to keep

running that we're supposed to close, right? Like, we're eating this gas for decades to come. So it's a -- I know it's not -- I want to be applauding, but it's -- we should just sober ourselves and let's find a way to find that capacity, I would say, because it's an ugly truth that I think we all -- we all share, but I appreciate staff's remarks and thank you for letting me dialogue for a moment.

CHAIR RANDOLPH: Alright. Thank you so much. Do we have any other questions or comments from the Board members.

Okay. The Board has before it a motion, Resolution 23-18. Do I have a motion and a second?

BOARD MEMBER PACHECO-WERNER: Move to approve.

BOARD MEMBER HURT: Second.

CHAIR RANDOLPH: Okay. Clerk, would you please call the roll.

BOARD CLERK HARRINGTON: Dr. Balmes?

BOARD MEMBER BALMES: Yes.

BOARD CLERK HARRINGTON: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Aye.

BOARD CLERK HARRINGTON: Mr. Eisenhut?

BOARD MEMBER EISENHUT: Yes.

BOARD CLERK HARRINGTON: Senator Florez?

BOARD MEMBER FLOREZ: Aye.

BOARD CLERK HARRINGTON: Mr. Guerra?
BOARD MEMBER GUERRA: Aye.
BOARD CLERK HARRINGTON: Ms. Hurt?
BOARD MEMBER HURT: Hurt aye.
BOARD CLERK HARRINGTON: Mr. Kracov?
BOARD MEMBER KRACOV: Yes.
BOARD CLERK HARRINGTON: Dr. Pacheco-Werner?
BOARD MEMBER PACHECO-WERNER: Yes.
BOARD CLERK HARRINGTON: Mr. Perez?
BOARD MEMBER PEREZ: Supervisor Perez yes.
BOARD CLERK HARRINGTON: Dr. Quirk?
BOARD MEMBER QUIRK: Aye.
BOARD CLERK HARRINGTON: Dr. Shaheen?
BOARD MEMBER SHAHEEN: Aye.
BOARD CLERK HARRINGTON: Ms. Takvorian?
BOARD MEMBER TAKVORIAN: Aye.
BOARD CLERK HARRINGTON: Supervisor Vargas?
BOARD MEMBER VARGAS: Vargas yes.
BOARD CLERK HARRINGTON: Chair Randolph?
CHAIR RANDOLPH: Yes.
BOARD CLERK HARRINGTON: Madam, the motion passes.
CHAIR RANDOLPH: Alright. Thank you.
Okay. Our next item on the agenda will be the Haagen-Smit Clean Air Awards. We are going to take a

10-men break, get ourselves together, and then we will have the awards presentation. So we will be back at 10:38.

(Thereupon a recess was taken.)

(Thereupon a slide presentation).

CHAIR RANDOLPH: I'd like to begin our last agenda for today, which is item number 23-6-3.

Yes, oh, sorry.

Okay. We are ready for our last agenda item, number 23-6-3, the 2022 Haagen-Smit Clean Air Awards.

If you are here with us in the room and wish to comment on this item, please fill out a request-to-speak card as soon as possible and submit it to a Board assistant. If you are joining us remotely and wish to comment on this item, click the rise hand button or dial star nine now. We will call on in-person commenters followed by remote commenters when we get to the public comment portion.

For over 20 years, the Board has annually bestowed the distinguished Haagen-Smit Clean Air Awards upon extraordinary individuals whose career accomplishments in air quality and climate change have been exceptional, transformative, widespread and novel.

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CHAIR RANDOLPH: The awards are named in honor of

Professor Haagen-Smit because of his important contributions to air pollution science and the significance of his career as the first Chair of the Air Resources Board. Dr. Arie Haagen-Smit was a professor at the California Institute of Technology in Pasadena for 16 years. In 1948, he embarked on air pollution research when he was asked by the County of Los Angeles to investigate the chemical nature of what we now call smog. His research found that most of California's smog resulted from photochemistry, when emissions react with sunlight to create ozone. This breakthrough provided the scientific foundation for the development of California's and the nation's air pollution control programs. The impact of his work can be seen in air pollution control efforts throughout the world.

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CHAIR RANDOLPH: Dr. Haagen-Smit continued working in the field of air pollution research, and upon becoming CARB's first Chair in 1968 directly addressed the smog problem in Los Angeles. In 1973, Dr. Haagen-Smit received the National Medal of Science, this country's highest scientific honor. Although Dr. Haagen-Smit passed away in 1977, his work continues to inspire scientists and policymakers alike.

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CHAIR RANDOLPH: Over the last 21 years, 72 acclaimed scientists and policymakers have received the prestigious Haagen-Smit Award for their contributions to clean air. Seven recipients are being added to the illustrious list today, the 21st year of the Haagen-Smit Clean Air Awards.

I will now ask Dr. Cliff to announce each 2022 Haagen-Smit Clean Air Awardee, along with the Board member who will introduce the awardee.

Dr. Cliff.

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EXECUTIVE OFFICER CLIFF: Thank you, Chair Randolph. We're very pleased to honor the recipients of the 2022 Haagen-Smit Clean Air Awards today. As you noted, each of the winners will be introduced by a Board member and each winner will have an opportunity to provide a few remarks at the podium before being handed their award. After the close of the Board meeting, we will gather for a few photographs, including a group photo with the Board. Additionally, after the meeting, the Haagen-Smit Clean Air Leadership Talks will be held in this room this afternoon at 1:30, where the awardees will be given -- will give brief presentations about their work.

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EXECUTIVE OFFICER CLIFF: With that, the first 2022 Haagen-Smit Clean Air Award winner today is Dr. Prashant Gargava in the category of International Leadership. Unfortunately, Dr. Gargava is unable to attend or provide a video. Board Member Guerra will discuss Dr. Gargava's significant accomplishments.

BOARD MEMBER GUERRA: Thank you, Dr. Cliff and Madam Chair, and members of the Board here. I'm honored here to discuss Dr. Prashant Gargava's selection here and accomplishments. He's been with the Central Pollution Control Board of India since 1991, and served as a member in the leadership capacity of Secretary since 2018. He was also a Scholar in the Fulbright-Nehru Environmental Leadership Program. Dr. Gargava has helped initiate many critical air quality programs in India, including the Air Quality Index, the National Air Quality Standards, and the National Clean Air Program.

He's also an internationally recognized air quality scientist having co-authored many papers describing air quality in India, including those describing a source apportionment study in six Indian cities that guided future air quality action plans.

Dr. Gargava has been a longtime advocate for democratization of environmental data. For example, he helped create a website, UrbAirIndia, which makes detailed

information related to air quality monitoring availability to the public.

He also developed the country's first publicly accessible environmental data -- database. Dr. Gargava's impact has been felt well beyond India. He co-authored a guiding -- he co-authored a *Guiding Framework for Better Air Quality in Asian Cities* for Clean Air Asia -- Asian cities for -- that will support -- that supported the UN Environmental Program, the Asian Development Bank, and the World Bank. The framework has helped promote increased attention to air quality issues in neighboring countries such as Nepal, Sri Lanka. And CARB here is pleased to honor Dr. Prashant Gargava with the Haagen-Smit Clean Air Award in the category of International Leadership.

Congratulations, Dr. Gargava. Let me pass this over back to Dr. Cliff.

EXECUTIVE OFFICER CLIFF: Thank you, Vice Mayor Guerra.

The second Haagen-Smit Clean Air Award recipient today is Mr. Bill Magavern in the category of Policy. Mr. Magavern will be introduced by Board Member De La Torre.

BOARD MEMBER DE LA TORRE: Thank you. And I'm very sorry, Bill, that I'm not there for your big day. I greatly apologize for that, but glad we were able to meet last week and talk. It is a great privilege to introduce

Bill Magavern as our Policy winner in the Haagen-Smit Awards.

He is dedicated to clean air, to renewable energy, to climate protection, in fact, everything we do at CARB. He is soft spoken, but tough. He is analytical and strategic and has gotten so much done in the area of clean air and climate protection in the state of California. He has been -- he is currently Policy Director at the Coalition for Clean Air, where he's been for 10 years. Previously, when I met him, he was Policy Director for the Sierra Club. Before that, he was Director of the Critical Mass Energy Project for Public Citizen. And before that, he was a staff attorney at U.S. PIRG.

I met him in my first year in the State Legislature, when due to some really bad outcomes, we created Green California, a coalition of environmental groups that united in support of important legislation and continued throughout my time -- tenure in the Legislature and beyond. He has been a leader over the decades, AB 32, California's innovative climate legislation, SB 210, the Smog Check for Trucks legislation. He has worked on reducing short-lived climate pollutants and has supported CARB's efforts in this regard, particularly with methane, referencing the item we just considered before this one.

He is a champion of environmental justice legislation throughout his tenure, including a big proponent of SB 535, which required a significant portion of the climate investments to benefit underserved and disadvantaged communities.

There is no one, no Governor, no legislator, no regulator, who has been involved in every air quality and climate policy accomplishment in California of the last three decades. Bill has and that is why we are honoring him today. CARB is honored to present Mr. Bill Magavern with the Haagen-Smit Clean Air Award in the category of policy.

Congratulations, Bill.

(Applause).

BILL MAGAVERN: Alright. You'd think I'd know how to do that.

Thank you so much for that introduction, Hector. When I saw Hector last week I said you've said such wonderful things about me, I can only hope to live up to them.

I warned the staff I may need more than my usual three minutes, because I have a lot people to thank, and starting with my wife Sara Nichols, who's moved --

(Laughter).

BILL MAGAVERN: -- and is right there now, who

has been incredibly supportive of my career, is one of the best organizers that you'll ever meet, and also finds very creative ways to charge our electric car when we're on vacation. I also want to thank the Board and staff of the Coalition for Clean Air, which has been my home now for the last 11 years, and especially our CEO Joe Lyou, who always has my back.

DR. JOE LYOU: Here. Right behind you.

BILL MAGAVERN: And in addition to Joe, the people who nominated me for this incredible honor, are Mary Nichols, Hector De La Torre, and V. Johne White. And I thank them not only for that, but also for so much that I've learned from them over many, many years. I also wanted to thank Senator Fran Pavley, who I was privileged to help her on some of the climate laws that she authored, which have really formed the foundation of California's climate program. And then also lesser known, when Fran was in the Assembly, I helped her on some bills they she authored that we sponsored at Sierra Club California to get toxic mercury out of products in California.

And I really want to thank the Board and staff of the California Air Resources Board. You are the most effective body that I've ever practiced before during my 35-year career. You're dedicated to your mission of protecting public health. And actually one of my favorite

parts of my job is standing at this podium and taking the three minutes, or two minutes, however much you give me for public comment. And it's not only because the podium does rise to the level of my height - I do like that - but I feel like when I talk, you actually listen to me, and most importantly, working together we're able to protect the air and climate for the benefit of the people of California.

I also want to thank the environmental and environmental justice communities here in California, my brothers and sisters in this work that we do together, people that are dedicated to it, not because it's the most lucrative career that they could find, but because it's the right thing to do. And we're looking out for the current and future people of California.

We're in this auditorium that's named after Byron Sher, who also was in the first class of recipients of the Haagen-Smit Award. And he was actually the most important legislator on environmental issues until Fran Pavley came on the scene. And when I first met Senator Sher and I introduced myself as the new representative for Sierra Club California, he said, "Well, you'll find your rewards in a future life".

But I have to say, to me, it's never felt like any kind of sacrifice to do the job that I do. I love the

work that I do and I plan to continue doing it for some time to come. Thank you.

(Applause).

CHAIR RANDOLPH: Dr. Cliff.

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EXECUTIVE OFFICER CLIFF: The third Haagen-Smit -- 2022 Haagen-Smit Clean Air Awardee today is Dr. Allen Goldstein in the category of Science and Technology. Dr. Goldstein will be introduced by Dr. Quirk.

BOARD MEMBER QUIRK: I'm highly honored to introduce Dr. Allen Goldstein, Professor at the University of California at Berkeley. For over 30 years -- for over 30 years, first at Harvard and then at Berkeley, Dr. Goldstein has established himself as one of the top atmospheric chemists in the world. His publications have been cited over 49,000 times. He has been recognized by his fellow scientists by being elected a Fellow of the American Association for the Advancement of Science, which covers all the sciences done in the United States, the American Geophysical Union, and the American Association for Aerosol Research.

His research, which focuses on volatile organic compounds has informed critical air quality issues, such as ground level ozone and particulate matter. His work

has been used to explain outstanding regional air quality questions, such as the anthropogenic impact on fog formation in the Central Valley of California and the formation of particulate matter in the Southeastern United States. His laboratory has developed advanced sampling techniques that have allowed the characterization of the most complex material in the atmosphere, and he has continuously acted as a scientific bridge, allowing theories developed under controlled laboratory conditions to be applied to real-world atmosphere.

Many scientists do great research, but few see that research make life better for the health of people around the world. This is why CARB is honored to bestow upon Dr. Allen Goldstein the Haagen-Smit Clean Air Award in the category of Science and Technology. Congratulations, Dr. Goldstein.

(Applause).

DR. ALLEN GOLDSTEIN: Thank you very much for your kind words. I'm deeply honored to receive the Haagen-Smit Clean Air Award today. It's very humbling to be recognized for my research contributions to clean earth, science, and technology. And CARB is has supported my work extensively over the last three decades and enabled me to contribute impactful research for the people of California. And I simply thank CARB for the

recognition of my accomplishments today.

Air pollution is a richly diverse and exciting field, at the intersection of earth system science, climate, natural biogeochemical processes, and human influences. While individual researchers certainly make important contributions, the major advances in our field today are mainly achieved through thoughtful and unselfish cooperation and research, and particularly in research designed to inform societal opportunities for improving air quality. This is particularly true when it comes to major field campaigns that involve a large number of research teams from California, the United States, and around the world to bring together and amazing array of people, instrumentation, models, and expertise to advance understanding.

I've been privileged to play a role in many national and international large-scale scientific teams conducting collaborative research, including many here in California. And sincerely thank all my wonderful colleagues who have supported and enabled my ability to contribute to those collaborative efforts.

I love the process of scientific research and discovering working with a team. My creative juices flow best when inventing measurement technology, enabling a novel view into the complexity of organic chemistry

occurring in our environment, applying these new tools to investigate sources and transformations, and interacting with my research group and colleagues to gain knowledge from the data. My biggest scientific thrills have been those precious moments when we've discovered something not previously understood.

I'm confident that in the coming decades, our society will continue the much needed massive transportation from fossil fuels towards renewable energy with accompanying reductions in air pollution. As an atmospheric chemist, I look forward to continuing to lead research on how our atmosphere and earth systems respond. For example, the spectacular declines in transportation emissions and increasing adoption of electric vehicles are game changers, and we are currently working hard on research documenting the effects on urban air pollution.

Simultaneously over the past decade, the growing frequency and magnitude of wildfires in North America, and particularly in California, have created a new and persistent threat to air quality. Much of my research is currently funded by CARB and NOAA focused on understanding emissions from wildfires, controlled burns of vegetation, and structure fire emissions at the wildland urban interface.

I'm passionate about my work and am extremely

grateful to all the people who have mentored and inspired me along the way. I specifically want to mention I'm grateful to my undergraduate advisor at UC Santa Cruz, Ken Bruland, who led me towards environmental and analytical chemistry, and my PhD advisor at Harvard, Steve Wofsy, who led me into the field of atmospheric chemistry. The opportunity to make my career at UC Berkeley doing scientific research and teaching has truly been a privilege. And I deeply appreciate all my colleagues there who have made it such a wonderful and thoughtful provoking environment.

In particular, I want to thank all my colleagues who have collaborated with me extensively including Dennis Baldocchi, Ron Cohen, Joost deGouw, Delphine Farmer, Mary Firestone, Ian Galbally, Rob Harley, Susanne Hering, Jose Jimenez, Nathan Kreisberg, Bill Nazaroff, John Seinfeld, Jonathan Williams, and many others.

A special thanks to Barbara Finlayson-Pitts for nominating me for this award, and to John Burrows, Alex Guenther, Kim Prather, Paul Shepson, and Doug Worsnop who graciously supported my nomination.

I also want to thank all the program managers and agencies who have supported and enabled my research, especially CARB. I'm particularly indebted to my long-term lab managers Megan McKay, who now works for

CARB, and Robin Weber, and the more than 60 graduate students and post-docs who have been members of my lab at UC Berkeley and engaged with me in advancing science and technology for improving air pollution. Mentoring you in building successful careers and lives to has been extremely gratifying and enriching and is my favorite part of the job.

Finally, I want to thank my life -- my wife Lauren Goldstein, who is here in the audience, my children Ari and Noah, my parents, Howard and Sheila, and the rest of my family for all their support and encouragement. Without them, my life and career would be far less meaningful.

Thank you.

(Applause).

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EXECUTIVE OFFICER CLIFF: The fourth Haagen-Smit Clean Air Award winner today is Dr. Jonathan Samet, the Dean and Professor at the Colorado School of Public Health. Dr. Samet will be introduced by Dr. Pacheco-Werner.

BOARD MEMBER PACHECO-WERNER: Thank you. It is my great honor today to introduce Dr. Jonathan Samet, trained as a pulmonary physician and epidemiologist. Dr. Samet is the Dean and Professor at the Colorado School of

Public Health. Previously, Dr. Samet has worked at the University of New Mexico, Johns Hopkins University and the University of Southern California. In every role, Dr. Samet has a -- had a widespread and profound impact on environmental health research. He led the National Morbidity, Mortality, and Air Pollution Study, and subsequently produced a groundbreaking national cohort study using the Medicare database to characterize the health effects of particulate matter. He has co-authored over 400 scientific papers, several of which have provided support for the National Ambient Air Quality Standards for ozone and particulate matter. Dr. Samet has played a pivotal role in assuring that these standards are based on science.

He is also an expert in tobacco and public health and made important contributions to tobacco control. In addition to his scientific work, Dr. Samet has provided leadership to many critical, national committees, such as the U.S. EPA's Clean Air and Scientific Advisory Committee.

CARB is honored to present Dr. Jonathan Samet with a Haagen-Smit Clean Air Award in the category of Environmental Health Research. Dr. Samet is currently in Japan at a meeting of the Board of the Radiation Effects Research Foundation and has sent this pre-recorded

acceptance speech.

DR. JONATHAN SAMET: California Air Resources Board members and colleagues, I'm honored to receive the 2020 Haagen-Smit award in the category of Environmental Health Research. And as a former Californian, I offer my admiration for CARB's pioneering contributions for decades. You have pushed the cutting edge for air pollution control. I started my career with a plan that I would combine medicine, public health, and research, wanting to make a difference with the devastating environmental problems that were so visible in the 1950s and 1960s, as I grew up, black skies, the burning Cuyahoga River, epidemic lung cancer, dying workers, and visible racism and its health consequences.

Early on, I learned about the social determinants of health, hands on with the patients I cared for as a resident at the University of Kentucky and then the University of New Mexico, many made ill by what they inhaled into their lungs, coal dust, radon, tobacco smoke, and air pollution. I had the hope and expectation that research findings would make a difference. At the time, naively thinking that there was a linear path from science to action.

Looking back, my plan worked, at least for some problems to have a career that would make a difference,

one that began in New Mexico and now will end in Colorado. I had the good fortune to have the right mentors, Ben Ferris, who should be -- rightfully be considered the first respiratory epidemiologist in the United States, and Frank Speizer, a mentee of Ben, and a pioneering respiratory epidemiologist as well. Together, Ben and Frank with the original principal investigators for the Harvard *Six Cities Study*.

Along the way, there have been many key colleagues in the teams needed to carry out contemporary epidemiological research on the environment. Jack Spengler, Scott Zeger, Francesca Dominici, Michelle Bell, Pat Breysse and more. Some of our findings did make a difference, the National Morbidity, Mortality, and Air Pollution Study, or NMMAPS, for example. Research can make a difference if it is the right research and the processes to move to evidence-based action work. While air pollution researchers will lament their frustrations with policy processes, the paths to action or clearer for ambient air pollution than for many other environmental threats.

The framework provided by the Clean Air Act has worked. I've had the opportunity to enhance these processes for ambient air pollution through the six years of the Committee on Research Priorities for Airborne

Particulate Matter of the National Academies and then during my four years as Chair of the Clean Air Scientific Advisory Committee, or CASAC. The Committee on Research Priorities put together a strategic research agenda to address critical uncertainties. And while I was CASAC Chair, we collaborated with EPA in moving to the current evidence-based schema for revising the National Ambient Air Quality Standards.

While I'm honored to receive the Haagen-Smit award, the most important award for all of us is the cleaner air that we breathe today. Looking to the early smog episodes that drove Haagen-Smit's work, we have made tremendous progress in having cleaner air in many, but not all the world's cities. There is work to be done as the gains have not been shared equally. For more than 10 years I've been working in Eastern Africa in cities where particulate pollution remains well above the WHO air quality guidelines. And there is climate change, perhaps the most serious air pollution problem yet and called the greatest health problem of this century.

We've exceeded the atmosphere's capacity to deal with what we dump into it. At this point in my career, my most important legacy for continuing to advance air pollution control is the many former trainees who are making significant contributions on air pollution and

climate change. They will make a difference and no doubt be among the future winners of this award.

Thank you for this great honor.

(Applause).

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EXECUTIVE OFFICER CLIFF: The fifth Haagen-Smit Clean Air Award Winner today is Dr. Shankar Prasad in the category of Environmental Justice.

Dr. Prasad will be introduced by Dr. Balmes.

BOARD MEMBER BALMES: Thank you, Dr. Cliff. So I just want to go back to my first dealings with the Air Resources Board, that's how I met Shankar. He was my project officer for a research project that I had as a junior faculty member at UCSF in the late 80s. And I've continued to work with Dr. Shankar on many different issues as his -- as both of our careers advanced.

So it's really a personal honor to be introducing Dr. Shankar Prasad who's worked on environmental justice issues at CARB, the South Coast Air Quality Management District, CalEPA, the Office of Environmental Health Hazard Assessment, as well as at the national level with the U.S. EPA. Dr. Prasad's training initially was as a physician in India. Then he and his wife, Usha, another physician, worked in Guyana and then came to the U.S., where Shankar decided not to practice as a physician,

because basically he'd have to start all over again. We have these rules where even though he was a trained physician from India, he'd have to start as a intern and resident.

His wife Usha did this, but he decided to go into inhalation toxicology and U.C. Irvine. And though his science at U.C. Irvine was good, I think he felt he wasn't getting the reward in terms of policy impact that he wanted, so we were fortunate at the Air Resources Board many years ago to hire him.

And over his career, he increasingly focused on the environmental justice aspects of air quality. He helped initiate CARB's Environmental Justice Program despite encountering a lot of resistance at the time. Later, at CalEPA, he was instrumental in the development of CalEnviroScreen, which I think most of you in the audience know is an important mapping tool that we use to both understand the impacts of both pollutant exposures, and not just air pollutants, as well as the social determinants of health that Dr. Samet talked about. He really fought for the development of CalEnviroScreen. And when we was at the Office of Environmental Health Hazard Assessment, he actually contributed to revising the program.

You know, so this program is the really first of

its kind to identify communities in California that are disproportionately impacted by pollution. But he went further to try to see -- to try to address the disparities that are related to -- that are identified by CalEnviroScreen, so he was the prime mover of the effort to get SB 535 passed, which ensures greenhouse gas reduction funds will go to disadvantaged communities.

His influence has extended far beyond California, especially with regard to his work in India. There, he helped the Center for Science and Environment convert the New Delhi public transit fleet from diesel to natural gas.

So CARB is pleased to honor Dr. Shankar Prasad the Haagen-Smit Clean Air Award in the category of Environmental Justice.

(Applause)

DR. SHANKAR PRASAD: Thank you, Madam Chair, Board Member Dr. Balmes. So nice of you to say so many good things about me. I don't know. It's been a long journey. And also, it is a privilege and honor to accept this coveted award. He went to this first generation immigrant citizen in this land of opportunities and in this Golden State. This is the second time I'm receiving a recognition from this Board. May 17th of 2005 this Board presented me with a resolution thanking me for the EJ policies and actions that this Board adopted. At that

time, I was in CalEPA. And this time, you are recognizing me again. Thank you to everyone on the Board and the people who supported me all the years.

My father was also a civil servant for 35 years and often said you can fight a person, but not a system. And in a bureaucratic hierarchy, as the hierarchy raises, they're almost inseparable. But I'm glad in my 40-year career I've been able to influence on a few occasions either the person or the system.

I would not be standing here today if it were not to be the (inaudible) of my support, my wife Usha who is here, and our son Dejus. Thank you.

Similarly, we are very thankful to my sister Guytry and my brother Elesry for hosting us when we came to this country and supporting us over the years. And we are so glad that they have been able to participate on this occasion. They all have a big share in this award.

In addition, I often remember, and I'm grateful to a long list of people over my career to -- I hope you'll bear with me, but they're -- all their names deserve to be mentioned and to be in this Board meeting proceedings, in my opinion: Bob Falon, Dean Mesidol, Carolyn Sabinsky, Alan Lloyd, John Balmes, Mike Nazemi, Carlos Boras, Jane Williams, Diane Takvorian, Barbara Lee, Charles Lee, Linda Adams, Daniel Dean, Margaret Gordon,

Henry Clark, Rachel Morello-Frosch, Tim Carmichael, Nidia Batista, Cliff Rekshaffen, Romel Pasqual, Vien Trung, Arsenio Martaka, Martha Guzman, Anamitara Chaudry, Deldi Reyes, Alvaro Alvarado. And a special mention to George Alexeeff. He gave me a life line with a job at the time I was unemployed after working for SB 535 for four years. Many may not be aware of it.

I can also never forget the support provided by two of my staff members Steve Huey and Brent Takimoto. Lots of names, yes, but they played a role at different times of my career that's being recognized, and they all deserve a share of -- in this honor.

I might have left a few. I'm sorry for that. Many were responsible collectively to get the SB 535 passed, but the original concept was mine, and it was strongly supported by Danielle Deane. She was, at the time at the Hewlett Foundation. It was Tim Carmichael and I who first wrote the original language for AB 1405, which eventually evolved into SB 535. It's a tidbit of reality for people who may not know its history.

This afternoon I'll be sharing the untold story of SB 535, its origin, the tough ordeal we had to go through, and how it is now law of the land. This is a world famous institution and I am proud to have been a part of it. And often the heads turn, even now they turn,

when anyone is at a meeting or in a conference and say I'm from California Air Resources Board. It's true and it -- we are -- I am really proud of it. And to be recognized by this institution's highest level of honor is definitely a privilege and it's very humbling.

I also want to request the Board to change the culture here from considering environmental justice not as an ..... program, but to recognize it as important as reducing VMT, aspiring for the pure electric transportation. I request the Board and the executive staff to take that type of a leadership role and push for environmental justice as was done during the years of adopting EJ policies and actions by this Board.

Thanks to the selection committee. Thanks to the nominator and supporters, and again, thank you, Dr. Balmes, and Chair, and the Board. Thank you.

(Applause).

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EXECUTIVE OFFICER CLIFF: The 6th 2022 Haagen-Smit Clean Air Award recipient today is Ms. Peggy Shepard in the category of Environmental Justice. Ms. Shepard will be introduced by Board Member Hurt.

BOARD MEMBER HURT: Thank you, Chair. And congratulations to all the award winners.

In this moment, it's an honor and privilege to

introduce Ms. Peggy Shepard, the co-founder and executive director of We ACT, a pioneering organization in the environmental justice, or EJ, movement for over three decades. Ms. Shepard helped create the principles of EJ at the first People of Color EJ Summit in 1991. In 2008, she led the creation of the EG -- EJ Leadership Forum, a coalition of 54 EJ organizations working together to advance climate justice and advocate for the protection and promotion of communities of color, and low-income communities throughout the United States.

More recently, Ms. Shepard has provided leadership to important national committee, having been named Co-Chair of the White EJ Advisory Council, and Chair of the National EJ Advisory Council to the U.S. EPA. Ms. Shepard has advocated for many climate-related policies in her home state of New York, including the Climate Leadership and Community Protection Act, which will cut greenhouse gas emissions by 85 percent from 1990 to 2050.

It was a honor to speak with you at the reception last night, your intelligence and grace. Thank you for being a role model, where you've just devoted your life to what you call sacrifice zones, areas where children and adults alike suffer from disproportionately high rates of disease due to pollution. CARB is honored to present Ms. Peggy Shepard with a Haagen-Smit Clean Air Award in the

category of Environmental Justice.

(Applause).

PEGGY SHEPARD: Well, Woman Power. You COULD start there.

(Laughter).

PEGGY SHEPARD: So thank you so much. California Air Resources Board, when I got this letter from you all, you all are seen as the arbiter of air quality in this country and probably around the world. And I couldn't believe that this progressive organization would be reaching out the New York City to acknowledge the work that we've been doing there. So thank you very much. It was just such a wonderful surprise. But, you know, I would say that this is also a recognition of the work that environmental justice organizations like Diane Takvorian's Environmental Health Coalition. I've known Diane for over 30 years. Working with groups like that around this country has been such an opportunity and such a privilege to meet and work with people so committed to ensuring that our communities are safe and sustainable.

You know, when we first got started 35 years ago this year in West Harlem, the first issues were around air quality and they continue to be. We know that over 70 percent of Latino residents in this country live in non-attainment areas as well as over 60 percent of African

Americans. So it was no surprise during COVID when the Harvard studies discovered that more black people in New York and other places were dying of COVID at higher levels because they were living in air polluted communities. That's a very important finding and it's one that I hope we're going to be able to put into practice in terms of policies in the way we address public health in our communities.

There's so many people to really thank for being in a position to be acknowledged in this way. I think back to Dr. Kenneth Olden, who was the executive Direct of the National Institute of Environmental Health Sciences, who basically said there are issues with environmental justice and research, and that the inn NIEHS was going to address that. And they began to pull in environmental justice organizations. They began to fund those organizations. And I believe that I would not be a strong environmental health advocate today without having had that support and that mentorship from Dr. Olden. And Dr. Olden also made sure that he was funding community outreach and education through the research centers at the NIHS. As a result, I was able to work with Dr. Joseph Graziano and Dr. Regina Santella at the NIHS Center for Environmental Health in Northern Manhattan.

I was able to work with Frederica Perera, who was

the PI for the Columbia Children's Environmental Health Center, whose work was such a perfect nexus with the concerns of the Harlem community with her backpack air monitoring study with pregnant women looking at the impact of diesel on those women and on the fetus and the developing children. It was that air quality data that gave us the ammunition to hammer the Metropolitan Transit Authority for 18 long years to begin to transform the bus fleets, the largest in the country. Why was that important? Because in uptown neighborhoods in Manhattan, we housed over one-third of the largest diesel bus fleet in the country.

And so, yes, it took us a very long time, even with the data. And we all understand that we understand that science, we have the data, and still policy does not always change fast enough to keep up with the chronic problems and concerns that our communities are experiencing.

Certainly, as a community-based organization, I could not be effective without an incredible team. You know, a lot of people say, well, do you work with young people? And I think, well, gee, we don't sort of do that anymore, until I realized that over half of my staff are under 30 years of age.

(Laughter).

PEGGY SHEPARD: And so, yes, I am working with young people, and we have really trained emerging leaders who are now leading so many different agencies. We've got several trained staff out here in California. The Senior Director for Environmental Justice for The White House was our first director of our DC office. We've had one of our staff be head of the Mayor's office in New York City of Sustainability and Environmental Justice. So we have done or part in training the next leaders who will need to come along after us, because some of us here, a lot of our honorees, are older, some are retiring, and so we've got to ensure that we have young people trained to take our places.

And I would also say that as a community-based organization, we could not be effective without community residents who are empowered, who we support to able to tell their story to policymakers that really makes the difference.

So again, I want to thank CARB and my nominators for this honor, this recognition, of environmental justice, and the work that we're doing to sustain healthy safe communities. Thank you all very much.

(Applause).

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EXECUTIVE OFFICER CLIFF: The 7th and final

Haagen-Smit Clean Air Awardee today is Dr. Daniel Albritton in the category of policy. Sadly, Dr. Albritton passed away earlier this year. We are honored to have Dr. Albritton's daughter Eliz and his long-time colleague, Dr. Susan Solomon here in Sacramento today to accept the award on his behalf. Dan's posthumous award will be introduced by Dr. Susan Shaheen.

BOARD MEMBER SHAHEEN: Thank you, Dr. Cliff and Madam Chair for the opportunity to present this award. I want to extend my warmest congratulations to all of the award winners here today and personally thank you for your tireless dedication and work to support all the efforts on behalf of the environment.

I'm so delighted to honor Dr. Daniel Albritton and to recognize Eliz Albritton and Susan Solomon, who will accept the ward on his behalf. Dr. Daniel Albritton was the Director of the Chemical Sciences Division of National Oceanic and Atmospheric Administration, NOAA. He researched both stratospheric and atmospheric -- or ground level ozone as part of his work. And he's perhaps best known for that work on ground level ozone.

As one of the two founding Co-Chairs of the Scientific Assessment Panel for the United Nations Environment Program, Dr. Albritton helped provide the scientific basis for the United Nations Montreal Protocol

on substances that deplete the ozone layer.

Later, Dr. Albritton served as coordinating lead, in later assessments called co-chairs, of the Science Working Group I of the 2001 Intergovernmental Panel on Climate Change Assessment Reports. Dr. Albritton is well known as an effective communicator of science and, in fact, NOAA has named its award for science communication after Dr. Albritton.

CARB is deeply honored to bestow upon Dr. Daniel Albritton a Haagen-Smit Clean Air Award in the category of Policy. Accepting the award on behalf of Daniel Albritton is his daughter Eliz and his longtime collaborator Susan Solomon.

(Applause).

ELIZ ALBRITTON: On behalf of my brother, sister, and myself, and our dear family at the Aeronomy Lab, I wanted to say how appreciative we are for you honoring our dad with this award. I'd also like to share what a truly special person he was as a father, the unbelievable patience and kindness he had with raising us gave us such a launching pad to go tackle the world in each of our own ways.

The strange thing was that we thought we actually had all of his time helping with our never-ending science and math homework, coming to all of our high school swim

meets, and then going to our small rural home place in Alabama. So I want to leave you with an appreciation of how beloved he was as our father and how deeply thankful we are as a family of this organization of honoring his lifetime professional work, which he was so deeply committed.

Thank you.

(Applause).

EXECUTIVE OFFICER CLIFF: That concludes the very distinguished and highly deserving of Haagen-Smit Clean Air Award recipients. I'm really looking forward to hearing more from each winner during the Clean Air Leadership Talks this afternoon. And I would also be remiss if I didn't point out that there's a new logo this year that our very capable Communications staff put together. And I want to thank them for that. I think it very much captures the spirit of what we're trying to achieve as well as coordinates well with the CARB logos that we developed a few years ago. So thank you very much.

CHAIR RANDOLPH: Thank you.

This is an informational item, but it is a Board item, which means that we want to make sure and provide an opportunity for any members of the public who would like to speak on this item. So I will ask the Board Clerk if

we have any public commenters.

BOARD CLERK HARRINGTON: Thank you. We currently do not.

CHAIR RANDOLPH: Alright. And Board members, do you have any words that you would like to express?

Dr. Balmes.

BOARD MEMBER BALMES: Well, I want to thank the selection committee for picking four people that I know well this year. In addition to my dear friend Shankar Prasad, I've known John Samet for 30 plus years as a fellow pulmonary physician and epidemiologist who studies air pollution. In fact, he tried to recruit me to Johns Hopkins. I didn't go.

(Laughter).

BOARD MEMBER BALMES: And, of course, Bill Magavern, I want to say, has taught me a lot about effective communication of scientific information to the point where I ask him to teach in my -- I was -- I had a career development course -- career pathway course at -- for environmental science graduate students at Berkeley. And for a couple years, I brought Bill to teach them how to communicate effectively.

You know, Allen Goldstein I currently collaborate with, so I have a conflict, but when he -- when it was that he is one of the world's top atmospheric scientists,

that's true. And while he's benefited from a lot of CARB funding over the year, we -- years, we benefited from his research. So it's just great to see this class of Haagen-Smit awardees.

CHAIR RANDOLPH: Board Member Takvorian.

BOARD MEMBER TAKVORIAN: Thank you, Chair. I just wanted to take a minute to express my gratitude to all the recipients for all the amazing work that you've done. And I just wanted to congratulate everyone for those contributions. I did want to note that I think the awards provide this opportunity not only for recognition of the remarkable individuals that are receiving the awards, but they really do recognize the environmental justice and environmental policy history that undergirds the policies that CARB has the privilege -- as Board members that we have the privilege of adopting. So I just wanted to note, Peggy Shepard and West Harlem Environmental Action appropriately noted the national environmental justice work that we -- many of us were really beneficiaries of, and the Executive Order, and working with federal agencies that really allowed environmental justice communities to find each other and connect with each other.

You have to know that in communities folks they were -- thought they were struggling alone, that this was

the only thing -- only place that this was happening. And so if it wasn't for that national movement, we really wouldn't have found each other. So I really appreciate finding Peggy and many others in the movement. That really allowed the national environmental justice movement to be built I think.

And the Shankar who opened the California doors really for the environmental justice work, to advance environmental justice, and become the leading voice that we are, among many of your accomplishments, really 535 and CalEnviroScreen have changed the landscape. We cannot say that California has not advanced because of those things. There are concrete examples across the state that you can take pride in and way too many to list. So huge gratitude to you for that.

And I want to note Bill Magavern, who has reached across what I think sometimes was an enormous chasm between the environmental and environmental justice communities and advocates. And, Bill, you demonstrated the respect and collaboration that has enabled these movements to work together effectively. And that cannot be said that often. So huge appreciation to you and gratitude to all of you.

Thank you.

CHAIR RANDOLPH: Okay.

(Applause).

CHAIR RANDOLPH: Any other comments?

Okay. I just wanted to -- I really appreciate Board Member Takvorian's point that all the work we do builds on all the work you all have done. And it's so meaningful to have you here and to be able to hear your words later this afternoon. As Dr. Balmes alluded to, you know, these nominations are made by the public and then the awards are vetted by an advisory committee. And I just wanted to give a shout-out to former Board Chair Dr. Alan Lloyd, who has worked on the advisory committee for many years and this is his last selection as the Chair of that committee. And his wisdom and thoughtfulness around this process has been very, very, very much appreciated. And I appreciate all the members of the Committee for the work that you all do to bring the awards selections to life. So thank you very much.

(Applause).

CHAIR RANDOLPH: So we will be doing our open public comment, but I'll remind everyone again that the Haagen-Smit Clean Air Leadership Talks will be beginning at approximately 1:30 here in this room.

And it will also be livestreamed. So Clerk, do we have any open public comments?

BOARD CLERK HARRINGTON: We have zero.

CHAIR RANDOLPH: Okay. So we will now be adjourning into closed session and then we will see all of you at 1:30 for the Clean Air Talks.

See you then.

(Off record: 11:37 a.m.)

(Thereupon the meeting recessed into closed session.)

(Thereupon the meeting reconvened open session.)

(On record: 12:57).

CHAIR RANDOLPH: The meeting will please come to order. The meeting of the Board is now in session. The Board met in closed session to confer with legal counsel and no action was taken by the Board.

The June 22nd, 2023 CARB Board meeting is now adjourned. I would like to invite anyone that is interested in hearing the Haagen-Smit Clean Air Leadership Talks to please stay with us in the auditorium as we transition. If you are joining us remotely and would like to watch the Clean Air Talks, you can find the link to the livestream via the public agenda.

(Thereupon the Air Resources Board meeting adjourned at 12:57 p.m.)

CERTIFICATE OF REPORTER

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 5th day of July, 2023.

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