

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

ZOOM PLATFORM

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
BYRON SHER AUDITORIUM
1001 I STREET
SACRAMENTO, CALIFORNIA

THURSDAY, SEPTEMBER 28, 2023
9:07 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

Senator Dean Florez

Eric Guerra

Davina Hurt

Gideon Kracov

Tania Pacheco-Werner, PhD

V. Manuel Perez

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

Chanell Fletcher, Deputy Executive Officer, Environmental
Justice

Annette Hébert, Deputy Executive Officer, Southern
California Headquarters & Mobile Source Compliance

Edna Murphy, Deputy Executive Officer, Internal Operations

APPEARANCES CONTINUED

STAFF:

Rajinder Sahota, Deputy Executive Officer, Climate Change and Research

Sydney Vergis, PhD, Deputy Executive Officer, Mobile Sources & Incentives

Ellen Peter, Chief Counsel

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

Cheryl Laskowksi, Branch Chief, Transportation Fuels Section, ISD

Dillon Miner, Air Pollution Specialist, Alternatives Fuel Section, ISD

Gabriel Monroe, Attorney, Legal Office

Jordan Ramalingam, Manager, Alternative Fuels Section, ISD

Kate Wilkins, Air Pollution Specialist, Alternative Fuels Section, ISD

ALSO PRESENT:

Hector Alfaro, Service Employees International Union

Fariya Ali, Pacific Gas & Electric

Gloria Alos, Service Employees International Union United Service Workers West

Christina Alvarez, Service Employees International Union United Service Workers West

Barry K. Anderson, Defensoras

Patricia Ramos Anderson, Defensoras

Oscar Antonio, Service Employees International Union United Service Workers West

APPEARANCES CONTINUED

ALSO PRESENT:

Maria Arevalo

Alfredo Arredondo, Low Carbon Fuels Coalition

Suncheth Bhat, EV Realty

Neil Black, California Bioenergy

Michael Boccadoro, Ag Energy, Dairy Cares

Andre Brasil, Brasil Dairy

Shannon S. Broome, Highly Innovative Fuels, USA

Adam Browning, Forum Mobility

Tony Brunello, U.S. Energy

Todd Campbell, Clean Energy

Frank Cardoza, Verway Farms

Adriana Carroasco, Service Employees International Union

Daniel Chandler, 350 Humboldt, Climate Action California

Daniel Chiu, Service Employees International Union United
Service Workers West

Henry Chiu, Service Employees International Union

Nicolas Cisneros, Greenfield

Amanda Coeey

Patrick Couch, Gladstein Neandross Associates

Casey Coward, Service Employees International Union United
Service Workers West

Andrew Craig, California Bioenergy

Richard Dahal, Asian Pacific Environmental Network

APPEARANCES CONTINUED

ALSO PRESENT:

Peter Dahling, Neste U.S.

David De Groot, 4 Creeks

Tania Derivi, Western States Petroleum Association

The Original Dra

Amanda Parsons DeRosier, Global Clean Energy

Nestor Dolde, Service Employees International Union

James Duffy, PhD

Russel Dyk, BTR Energy

Amara Eger, CR&R

Mikayla Elder, Electric Vehicle Charging Association

Alma Enciso, Service Employees International Union

Melvoy Vance Ewing, Jr., Service Employees International Union

Ignacio Fernandez, Socal Edison

Natalie Findlay, Global Clean Energy

Chad Frahm, Brightmark

Quentin Foster, H Cycle, LLC

Noah Garcia, EVgo

Dallas Gerber, Growth Energy

Sara Gersen, Earthjustice

David Goddard, Service Employees International Union
United Service Workers West

Asher Goldman, Generate Capital

APPEARANCES CONTINUED

ALSO PRESENT:

Carlos Gutierrez, California Advanced Biofuels Alliance

Kyle Heiskala, Environmental Health Coalition

Miles Heller, Air Products

Cristina Hernandez, Service Employees International Union
United Service Workers West

Elido Hernandez, Service Employees International Union

Jesse Hernandez, California BioEnergy

Harvey Hettinga, Rockview Dairies

Jovan Houston Service Employees International Union United
Service Workers West

Hannah Huffines, Maas Energy Works

Gary Hughes, Biofuelwatch

Betsy Hunter-Binns

Danielle Illig, Clean Energy

Jason John, Sierra Club California

Karyn Jones, Gevo

Adam Jorge, SoCalGas

Kimberly Jorritsma, Clauss Dairy Farms

Denny Kamphanthong, Asian Pacific Environmental Network

Jamie Katz, Leadership Counsel for Justice and
Accountability

Ryan Kenny, Clean Energy

Amelia Keyes, Communities for a Better Environment

Tom Knox, Valley Clean Air now

APPEARANCES CONTINUED

ALSO PRESENT:

Neil Koehler, Renewable Fuels Association

Kathryn Kuchta

Katherine Lee, APEIV

Julia Levin, Bioenergy Association of California

Katie Little, California Farm Bureau

Tyler Lobdell, Food and Water Watch

Monaye Lyman, Service Employees International Union United
Service Workers West

Robbie Macias, Aemitas Biogas

Bill Magavern, Coalition for Clean Air

Armando M., Service Employees International Union United
Service Workers West

Jane Martin, Service Employees International Union

Maria Martina, Service Employees International Union

Leslie Martinez, Leadership Counsel for Justice and
Accountability

Lisa McGhee, Tom's Truck Center

Austin McHenry, Western States Petroleum Association

Kimberly McCoy, Central California Asthma Collaborative

Sherrie Merrow, NGVAmerica

Matt Miyasato, PhD, First Element

Oscar Monterosa, Service Employees International Union

Cathy Moreno, Def. for Clean Air

Luis Munoz

APPEARANCES CONTINUED

ALSO PRESENT:

Shelby Neal, Darling Ingredients

Brent Newell, Leadership Counsel for Justice and
Accountability

Sean Newsum, Airlines for America

John O'Donnell, Rondo Energy

Maria Olivera

Kristin Olsen-Cate, California Strategies, Monarch
Bioenergy

Jane O'Malley, International Council of Clean
Transportation

Kevin Orange, Service Employees International Union United
Service Workers West

Carmen Ovevedo, Service Employees International Union
United Service Workers West

Carla Oviedo, Service Employees International Union

Grace Pratt, Electric Hydrogen

Minerva Ramirez

Zaray Ramirez, Leadership Counsel for Justice and
Accountability

Laura Renger, California Electric Transportation Coalition

Dan Ress, Center for Race, Poverty and the Environment

David Ribeiro, Rib-Arrow Dairy

Nicole Rice, California Renewable Transportation Alliance

Whitney Richardson, Electrify America

Guadalupe Rivas, Service Employees International Union
United Service Workers West

APPEARANCES CONTINUED

ALSO PRESENT:

Faraz Rizvi, Asian Pacific Environmental Network

Nina Robertson, Earthjustice

Salvador Rodriguez, Bar 20 Dairy

Victoria Rodriguez, Milk Producers Council of California

Mario Romero, Service Employees International Union

Taylor Roschen, California Dairies

Stephen Rosenblum, Climate Action California

Armanda Ruiz, Def. for Clean Air

Sasan Saadat, Earthjustice

Jenna Saefong, Asian Pacific Environmental Network

Orguidea Sandoval, Service Employees International Union

Christina Scaringe, Center for Biological Diversity

Phoebe Seaton

Julia Sebastian, Jobs with Justice

Bonney Shehadey, Bar 20 Dairy

Martina Simpkins, Anew Climate

Akashdeep Singh, Union of Concerned Scientists

Mikhael Skvarla, California Hydrogen Coalition

Maryann Smith, Service Employees International Union

Mary Solecki, World Energy

Davonni Sturdivant, Service Employees International Union
United Service Workers West

Karen Tate, Class Dairy Farms

APPEARANCES CONTINUED

ALSO PRESENT:

Dean Taylor, California Electric Transportation Coalition

Emmanuel Torres, Bar 20 Dairy

Sean Trambley, American Biogas Council

Patricia Valazquez, Service Employees International Union

Madison Vanderklay, Silicon Valley Leadership Group

Peter Vander Poel, Supervisor, Tulare County

Floyd Vergara, Clean Fuels Alliance America

Sam Wade, Coalition for Renewable Natural Gas

Michael Wang, PhD, Argonne National Laboratory

Jan Warren

Krysta Wanner, Western Propane Gas Association

Wendell Wesley, Jr., Leadership Counsel for Justice and
Accountability

Peter Whitfield, Sidley Austin Law

Grant Zimmerman, Amp Americas

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PROCEEDINGS

1
2 CHAIR RANDOLPH: All right. Good morning. The
3 September 28th, 2023 public meeting of the California Air
4 Resources Board will come to order.

5 Board Clerk, will you please call the roll.

6 BOARD CLERK MOORE: Thank you, Chair, Randolph.
7 Dr. Balmes?

8 BOARD MEMBER BALMES: Here.

9 BOARD CLERK MOORE: Mr. De La Torre?

10 Mr. Eisenhut?

11 Senator Florez?

12 BOARD MEMBER FLOREZ: Florez here.

13 BOARD CLERK MOORE: Assemblymember Garcia?

14 ASSEMBLYMEMBER GARCIA: Present.

15 BOARD CLERK MOORE: Mr. Guerra?

16 BOARD MEMBER GUERRA: Guerra here.

17 BOARD CLERK MOORE: Ms. Hurt?

18 BOARD MEMBER HURT: Present.

19 BOARD CLERK MOORE: Mr. Kracov?

20 Mr. Kracov?

21 BOARD MEMBER KRACOV: Here.

22 BOARD CLERK MOORE: Dr. Pacheco-Werner?

23 BOARD MEMBER PACHECO-WERNER: Here.

24 BOARD CLERK MOORE: Mr. Perez?

25 BOARD MEMBER PEREZ: Here.

1 BOARD CLERK MOORE: Senator Stern?

2 Senator Stern?

3 Dr. Shaheen?

4 BOARD MEMBER SHAHEEN: Present.

5 BOARD CLERK MOORE: Ms. Takvorian?

6 BOARD MEMBER TAKVORIAN: Here.

7 BOARD CLERK MOORE: Supervisor Vargas?

8 Chair Randolph?

9 CHAIR RANDOLPH: Here.

10 BOARD CLERK MOORE: Madam Chair, we have a
11 quorum.

12 CHAIR RANDOLPH: All right. Thank you.

13 Before we get started today, I just wanted to
14 announce that yesterday, the Governor Appointed Cliff
15 Rechtschaffen to our Board. I was fortunate enough to
16 work with Cliff in the Brown administration and at the
17 Public Utilities Commission and he has spent a lifetime
18 working on environmental issues and will be a wonderful
19 advocate for clean air here at the Air Resources Board.
20 He will not be joining us today, but we will see him in
21 October for his first Board meeting.

22 Okay. I will now cover a few housekeeping items
23 before we get started this morning. We are conducting
24 today's meeting in person as well as offering remote
25 options for public participation both by phone and in

1 Zoom.

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

10 For safety reasons, please note the emergency
11 exit to the rear of the room through the foyer. In the
12 event of a fire alarm, we are required to evacuate this
13 room immediately and go down the stairs to the lobby and
14 out of the building. When the all-clear signal is given,
15 we will return to the auditorium and resume the hearing.

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

24 Interpretation services will be provided today in
25 Spanish and Tagalog for both in-person and Zoom attendees.

1 If you are joining us using Zoom, there is a button
2 labeled "Interpretation" on the Zoom screen. Click on
3 that interpretation button and select Spanish or Tagalog
4 to hear the meeting in your selected language. If you are
5 joining us here in person and would like to listen to the
6 meeting in Spanish or Tagalog, please speak to a Board
7 assistant and they will provide you with further
8 instructions. I want to remind all of our commenters to
9 speak slowly and pause intermittently to allow the
10 interpreters the opportunity to accurately interpret your
11 comments.

12 (Interpreter translated in Spanish).

13 THE INTERPRETER: Thank you, Madam Chair.

14 CHAIR RANDOLPH: We can't hear the other
15 interpreter.

16 BOARD CLERK ESTABROOK: It's a different channel.

17 BOARD CLERK MOORE: Esther, can you turn your mic
18 on now and interpret in Tagalog.

19 Esther, you can switch the English channel to
20 interpret.

21 Esther, are you there? Can you hear me?

22 Please try switching to the English channel to
23 interpret.

24 BOARD CLERK JENSEN: Sorry. Just give us one
25 second.

1 COREY BARNS: Hey, guys. This is Corey talking
2 to you on the Tagalog channel, I need one of you to switch
3 the English channel for the interpretation.

4 I'm hearing you still on the Tagalog channel. I
5 need you to join the English channel.

6 Okay. Esther, we are seeing you on the meeting.
7 We've asked you to unmute.

8 BOARD CLERK ESTABROOK: Corey, this is Katie. If
9 I select the English channel on my Zoom, I can hear
10 Esther. If I have original audio, I cannot hear her,
11 which is what I believe you have in the Board room.

12 COREY BARNS: Yeah, we should be translating.
13 Okay. All right. Go ahead.

14 BOARD MEMBER MOORE: Yes, we can hear you.
15 (Interpreter translated in Tagalog).

16 CHAIR RANDOLPH: Thank you.

17 I will now ask the Board Clerk to provide more
18 details regarding public participation.

19 BOARD CLERK MOORE: Thank you, Chair Randolph.

20 Good morning, everyone. I will be providing
21 additional information on how public participation will be
22 organized for today's meeting.

23 We will first be calling on any in-person
24 commenters who have turned in a request-to-speak card and
25 then we will be calling on commenters who are joining us

1 remotely. If you are joining us remotely and wish to make
2 a verbal comment on one of today's Board items, or during
3 the open comment period at the end of today's meeting, you
4 must be using Zoom webinar or calling in by telephone. If
5 you are currently watching the webcast on CAL-SPAN, but
6 you wish to comment remotely, please register for the Zoom
7 webinar or call in. Information for both can be found on
8 the public agenda for today's meeting.

9 To make a verbal comment, we will be using the
10 raise-hand feature in Zoom. If you wish to speak on a
11 Board item, please virtually raise your hand as soon as
12 the item has begun to let us know you wish to speak. To
13 do this, if you are using a computer or tablet, there is a
14 raise-hand button. And if you are calling in on the
15 telephone, dial star nine to raise your hand. Even if you
16 previously indicated which item you wish to speak on when
17 you registered, you must raise your hand at the beginning
18 of the item, so that you can be added to the queue. Also,
19 if you're joining us by Zoom, please don't unraise your
20 hand, because that will switch you in the order.

21 And for anyone giving verbal comments today in
22 Spanish or Tagalog and require an interpreter's
23 assistance, please indicate so at the beginning of your
24 testimony and our translator will assist you. During your
25 comment, please pause after each sentence to allow for the

1 interpreter to translate your comment into English.

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

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

25 If you wish to submit written comments today,

1 please visit CARB's send-us-your-comments page or look at
2 the public agenda on our webpage for links to send these
3 documents electronically. Written comments will be
4 accepted on each item until the Chair closes the record
5 for that Board item.

6 If you experience any technical difficulties,
7 please call (805)772-2715, so an IT person can assist.
8 Thank you. I'll turn the microphone back to Chair
9 Randolph now.

10 CHAIR RANDOLPH: Thank you very much. We only
11 have one item on the agenda today, which is item number
12 23-8-1, an update on the Low Carbon Fuel Standard. This
13 will be a non-voting item. As the clerk noted, since this
14 is the only item on the agenda, now is the time to fill
15 out a request-to-speak card and submit it to the Board
16 assistant, if you are here in person. And if you are
17 joining us remotely and wish to comment on the item, go
18 ahead and click the raise hand button or dial star nine
19 now. We will first call on in-person commenters and then
20 we will do remote commenters, once we get to the public
21 comment portion of this item.

22 Today, we are going to hear a staff update on the
23 Low Carbon Fuel Standard, as well as talk about potential
24 changes to this important program. Since the Board
25 originally approved the LCFS in 2009, the program has been

1 an effective tool to grow the availability of low carbon
2 transportation fuel.

3 We know that in order for us to be successful in
4 addressing climate change, we must drastically reduce our
5 fossil fuel usage and grow the low carbon energy supplies
6 that we need.

7 The 2022 Scoping Plan update, which this Board
8 approved in December of last year, calls for a 94 percent
9 reduction in petroleum use by 2045 and lays out a path to
10 achieve carbon neutrality by 2045. This is our most
11 ambitious climate plan ever and implementation of the
12 Scoping Plan is going to take a whole of government
13 approach. Just recently, CARB and the Energy Commission
14 initiated the work called for by our adopted Scoping Plan
15 and the Legislature's special session to ensure a
16 reliable, safe, equitable, and affordable transition away
17 from petroleum fuels in line with declining in-state
18 petroleum demand. There are two plans that CARB and the
19 Energy Commission are working on, the Transportation Fuel
20 Transition Assessment Plan and the Transportation Fuel
21 Transition Plan that will help us chart a path away from
22 fossil fuels in California.

23 This Board has taken several recent actions to
24 accelerate zero-emission vehicle deployment and
25 drastically cut combustion emissions in California over

1 the coming decades. We need to also make sure that low
2 carbon fuels are available to support this transition both
3 in the coming years and in the next two decades.

4 I'm glad we have this opportunity to have a
5 working meeting where we can ask questions, share feedback
6 with staff, and hear from stakeholders about the Low
7 Carbon Fuel Standard. I encourage my fellow Board members
8 to dig in and take this opportunity to ask those
9 questions, discuss the program, and to reflect on what we
10 heard at the joint CARB EJAC meeting earlier this month.

11 I look forward to hearing from everyone here
12 today on how we can update this important program to
13 continue our efforts to cut fossil fuel use and achieve
14 our climate and air quality goals.

15 Dr. Cliff, would you please introduce the item.

16 EXECUTIVE OFFICER CLIFF: Thank you, Chair
17 Randolph.

18 Staff is presenting an update to the Low Carbon
19 Fuel Standard, or LCFS. This is a non-voting item, as you
20 mentioned, but it's an opportunity for the Board to
21 further familiarize themselves with the program and
22 provide input on the development of rulemaking concepts.

23 The LCFS is one of the State's most important and
24 influential climate programs. California is receiving
25 significant volumes of low carbon fuels in response to the

1 Low Carbon Fuel Standard, including renewable diesel, low
2 carbon intensity electricity, biomethane, and hydrogen.
3 The fuels supported by the LCFS Program displaced nearly
4 four billion gallons of petroleum fuel in 2022 alone. In
5 fact, just last month, California passed an important
6 milestone. We now have over half of our diesel demand
7 being met by non-petroleum based diesel alternatives.
8 This is a direct outcome of the State's LCFS Program, and
9 it's bringing real climate and air quality benefits to the
10 state.

11 The last major update to the LCFS program was in
12 2018 following the passage of SB 32 and our approval of
13 the 2017 Scoping Plan update. Since that time, the
14 Governor has issued several major climate executive
15 orders. The State has enacted several major climate bills
16 and our Board approved a 2022 Scoping Plan update in
17 December of last year as you noted.

18 In response to this new direction, and evolving
19 circumstances, staff is working on updates to the LCFS and
20 is here to present these concepts for discussion with the
21 Board today. While this is still early in the process and
22 we have not yet released the formal amendment proposal
23 package for 45-day public comment, these concepts have
24 been informed by significant public input already.

25 Staff has been engaging with the public on

1 potential changes to the LCFS Program for over a year,
2 which has included multiple public workshops, community
3 listening sessions, and Environmental Justice Advisory
4 Committee meetings. We are committed to continuing the
5 public discussion on this program as we move forward with
6 the rulemaking.

7 I will now ask Dillon Miner of the Industrial
8 Strategies Division to begin the staff presentation.

9 Dillon.

10 (Thereupon a slide presentation).

11 ISD AIR POLLUTION SPECIALIST MINER: Thank you,
12 Dr. Cliff and good morning Chair Randolph and members of
13 the Board. For my presentation today, I'll provide a
14 background on how the Low Carbon Fuel Standard, or LCFS,
15 supports the State's decarbonization goals. Next, I will
16 provide an overview of the LCFS Program. And lastly, I
17 will walk through potential regulatory amendments.

18 --o0o--

19 ISD AIR POLLUTION SPECIALIST MINER: As a quick
20 refresher, California's climate policy framework starts
21 with greenhouse gas targets and goals established by the
22 Legislature and Governor. The State develops a Climate
23 Change Scoping Plan, which lays out a path to meet these
24 goals across all sectors of the California economy. The
25 most recent Scoping Plan was approved, as Dr. Cliff said,

1 just this last December by the Board. And after each
2 Scoping Plan is approved, CARB and other State agencies
3 review, update, or develop new regulations and programs to
4 align with the actions in the plan based on established
5 roles and authority. And once the regulations are -- and
6 programs are in effect, projects must be built to put the
7 plan into on-the-ground action.

8 --o0o--

9 ISD AIR POLLUTION SPECIALIST MINER: Many of the
10 strategies we are using to address climate change are the
11 same strategies that will also drastically improve air
12 quality. Fossil fuel use in vehicles is the single
13 biggest source of greenhouse gas and criteria pollutant
14 emissions in the state. Accordingly, CARB's regulations
15 are designed to decrease demand for petroleum by
16 supporting the transition to zero-emission vehicles and
17 deployment of cleaner alternative fuels.

18 The Board has already taken steps towards the
19 goals identified in the Scoping Plan by adopting
20 regulations such as Advanced Clean Cars II, Advanced Clean
21 Fleets, Advanced Clean Trucks, and other rules that
22 promote and hasten the deployment of low and zero-emission
23 technologies.

24 The LCFS is the key part of that transportation
25 decarbonization story. The LCFS provides the economic

1 incentives to produce cleaner fuels like electricity,
2 hydrogen, and biofuels which are needed to displace fossil
3 fuels reduce transportation sector emissions.

4 --o0o--

5 ISD AIR POLLUTION SPECIALIST MINER: The energy
6 transition called for in the Scoping Plan would result in
7 a major shift in energy and technology deployment away
8 from fossil fuels, including the rapid adoption of
9 zero-emission vehicles, expansion of renewable hydrogen
10 supply, and other low carbon fuels.

11 If we're successful in meeting the clean fuel and
12 vehicle goals identified in the Scoping Plan, we'll reduce
13 fossil fuel use by 94 percent by 2045. Even with an
14 unprecedented and rapid transition to zero-emission
15 vehicles, we will still have some remaining demand for
16 liquid fuels in the transportation system, given the
17 legacy combustion vehicles, aviation, and potentially some
18 off-road that will continue operating in the State through
19 2045.

20 And here is where the LCFS supports continued
21 greenhouse gas reductions by being able to not only
22 support zero-emission vehicle deployment, but also by
23 being able to support low carbon alternative liquid fuels
24 that reduce the greenhouse gases from the State's
25 remaining combustion vehicles.

1 --o0o--

2 ISD AIR POLLUTION SPECIALIST MINER: I would like
3 to provide some more general information on how the LCFS
4 works. Broadly speaking, the LCFS Program looks at the
5 life cycle greenhouse gas emissions of transportation
6 fuels. These emissions are summarized by a metric called
7 a carbon intensity, or CI, which represents the life cycle
8 greenhouse gas emissions of a fuel per unit of fuel.

9 The program works by:

10 Establishing an annual declining carbon intensity
11 target for transportation fuels used in California. If
12 you look at the chart on the slide, you'll see the current
13 targets are represented by the black line and dots on the
14 chart;

15 The lower carbon a fuel is the more credits can
16 be generated in the program per volume of fuel. In this
17 way, the program design rewards the lowest carbon fuels;

18 High carbon fuels like -- such as fossil gasoline
19 and fossil diesel, have carbon intensities that are higher
20 than the annual carbon intensity target. These high
21 carbon fuels generate deficits and deficit generators must
22 acquire and retire credits to comply with the annual
23 target.

24 As the CI targets get lower each year, credit
25 generating fuels generate fewer credits by volume. Some

1 comparison, let's look at an alternative low carbon fuel
2 supported by the LCFS Program. We're showing renewable
3 diesel from used cooking oil in this example, which has a
4 much lower CI value of 22 grams carbon dioxide equivalent
5 per megajoule. You'll notice that feedstock emissions are
6 not included. This is because used cooking oil is
7 considered a waste product and therefore, the life cycle
8 starts with the collection and transportation of
9 feedstock.

10 Additionally, tailpipe emissions are minimal for
11 this biofuel since the carbon combusted in the fuel is
12 biogenic, meaning it was originally sequestered in the
13 air, while growing as a crop, as opposed to a fossil fuel
14 combustion, which adds new carbon to the atmosphere.

15 --o0o--

16 ISD AIR POLLUTION SPECIALIST MINER: CARB follows
17 a robust process for calculating carbon intensities before
18 certifying applications for use in the LCFS. For CARB to
19 certify each pathway, the applicant must first submit
20 their operational data for each step of the life cycle,
21 including feedstock production, feedstock transport,
22 energy used to render or refine the feedstock, fuel
23 transport, and finally use in a vehicle. All entities
24 must submit LCFS data used to calculate greenhouse gas
25 life cycle carbon intensities. All entities that submit

1 this data must attest to its accuracy. Applicants
2 calculate their carbon intensity using approved CARB life
3 cycle analysis modeling tools, which I'll describe in more
4 detail soon.

5 A third-party verifier reviews the data and
6 conducts annual audits and/or site visits to ensure the
7 accuracy of the operational data. CARB staff then review
8 the pathway for accuracy and completeness. The most
9 complex pathways are also posted for public review prior
10 to being certified. CARB will require corrections or
11 adjustments to CI values if errors are identified at any
12 of these checkpoints. In addition to pathway processing,
13 staff also oversee the verifiers and conduct enforcement
14 activities as needed.

15 --o0o--

16 ISD AIR POLLUTION SPECIALIST MINER: Between 2019
17 and 2021, CARB implemented third-party verification
18 requirements for fuel pathway carbon intensities and fuel
19 transaction reporting. Lead verifiers are required to
20 have experience in alternative fuel production technology
21 and process engineering, since their responsibilities
22 include conducting site visits to inspect equipment, track
23 feedstock origins, and ensure the accuracy of meters.
24 These verifiers undergo a robust training program led by
25 CARB staff and must first be accredited by CARB before

1 becoming eligible to perform LCFS verification. Verifiers
2 audit fuel pathway carbon intensities over time to ensure
3 the certified values are accurate and associated credits
4 were validly generated.

5 --o0o--

6 ISD AIR POLLUTION SPECIALIST MINER: The life
7 cycle analysis required by the LCFS includes analysis of
8 both direct and indirect emissions. Staff uses or has
9 adapted a number of publicly available modeling tools to
10 assess these emissions as outlined on this slide. The
11 LCFS calculates direct emissions using the California
12 GREET 3.0 model and the OPGEE model and indirect emissions
13 associated with land use change using the GTAP model.
14 I'll get into these models more in the next couple slides.

15 --o0o--

16 ISD AIR POLLUTION SPECIALIST MINER: The
17 California GREET Model is the key life cycle analysis tool
18 used by the LCFS team when reviewing fuel pathways. The
19 model is based on the GREET model, an internationally
20 acclaimed model with the ability to calculate life cycle
21 greenhouse gas emissions for over 100 fuel pathways.
22 GREET is publicly available and was created by Argonne
23 National Laboratory, a subsidiary of the U.S. Department
24 of Energy. It is used by several governmental agencies
25 for life cycle analysis purposes, including by the U.S.

1 EPA for the Renewable Fuel Standard, and the states of
2 Oregon and Washington for their own LCFS programs. The
3 model was originally released almost 30 years ago and is
4 updated frequently most recently in 2022.

5 The LCFS team makes minor modifications to the
6 GREET Model to reflect California-specific emissions,
7 which at times are more conservative than the GREET Model
8 itself as is the case with land use change emissions. The
9 California version of GREET is called California GREET and
10 is used to determine the direct emissions for LCFS fuel
11 pathways. California GREET is put through a series of
12 public reviews for stakeholder testing and comments before
13 a new version is incorporated into amended regulations.

14 --o0o--

15 ISD AIR POLLUTION SPECIALIST MINER: In addition
16 to direct effects, the LCFS Program also looks at indirect
17 effects from crop based biofuels when evaluating CI. In
18 recognition that demand for crop-based biofuels can
19 indirectly incentivize land use change globally, the LCFS
20 accounts for land use change emissions associated with
21 crop-based biofuels. Land use change emissions for
22 crop-based biofuels were last assessed between 2013 and
23 2015 through an extensive work group -- extensive expert
24 work group, which informed the land use change estimates
25 we currently use today. The program naturally

1 incentivizes waste and residue based feedstocks for which
2 no indirect effects are assigned in the LCFS, and
3 therefore they received a lower carbon intensity. As a
4 result, the majority of biomass-based diesel in the LCFS
5 has come from waste feedstocks.

6 --o0o--

7 ISD AIR POLLUTION SPECIALIST MINER: Land use
8 change impacts are challenging to quantify as global
9 economics must be considered that include complex
10 interactions between supply and demand for crops, global
11 trade dynamics, population changes, availability and
12 competition for agricultural land, and regional renewable
13 mandates. Despite challenges, estimation of land use
14 change is critical in a regulatory framework, and CARB
15 uses the Global Trade Analysis Project, or GTAP, Model
16 produced by Purdue University. GTAP is widely used for
17 analysis of trade policy and consists of all sectors of
18 the global economy and data gathered by over 100
19 countries. The current LCFS regulation use land use
20 change emission estimates from GTAP by feedstock, which
21 are added to each fuel's carbon intensity. This results
22 in making their fuel pathways more carbon intensive and
23 disincentivizes sourcing biofuel feedstocks from crops in
24 regions with land use change risks.

25 --o0o--

1 ISD AIR POLLUTION SPECIALIST MINER: The LCFS
2 life cycle assessments result in a variety of carbon
3 intensity scores, as shown here. As you can see, the
4 alternative fuel pathways in the LCFS provide significant
5 emission reductions as compared to fossil fuels. Over
6 time, some of these pathways will continue to lower their
7 CI scores due to process improvements, such as using low
8 carbon electricity to power the facility or reductions in
9 feedstock and fuel transport emissions, as more
10 zero-emission vehicles enter companies' fleets. Not
11 reflected on this slide is the fact that battery electric
12 and hydrogen fuel cell electric vehicles are more energy
13 efficient than combustion vehicles, which increases the
14 greenhouse gas benefits and LCFS credits even more. I
15 will speak about the negative carbon intensity you see for
16 bio-CNG, also known as biomethane, on the next slide.

17 --o0o--

18 ISD AIR POLLUTION SPECIALIST MINER: Methane
19 reductions are a priority for the State, because methane
20 has a global warming potential 25 to 28 times that of
21 carbon dioxide. Taken together, the cumulative impact
22 from all short-lived climate pollutants including methane
23 is close to that of CO2. Given methane's outsized
24 contribution to climate change, California has set -- has
25 set legislative mandates for methane reductions and has

1 and many of them are verified each year for possible
2 changes in life cycle processes and emissions. As models
3 are improved, pathway holders have recertified their
4 pathways with updated emission assumptions. The numbers
5 here reflect the strength diversity of the market.

6 --o0o--

7 ISD AIR POLLUTION SPECIALIST MINER: All these
8 fuel pathways have had a big impact on the transportation
9 fuel pool. Fuels supported by the LCFS have displaced
10 approximately 25 billion gallons of petroleum fuel since
11 2011. In the first quarter of this year, we passed an
12 important milestone, over 50 percent of the diesel used in
13 the state came from non-fossil resources. This is a major
14 achievement considering that when the LCFS began in 2011,
15 California was consuming almost no biomass-based diesel.
16 In addition, to low carbon fuels, LCFS also supports
17 zero-emission vehicle regulations by providing funding for
18 electric and hydrogen refueling infrastructure deployment
19 and rebates for zero-emission vehicle purchases at the
20 State and local level. Credits transferred in the LCFS
21 market in 2022 were worth approximately \$4 billion
22 reflecting the strong support LCFS provides to low carbon
23 fuels.

24 --o0o--

25 ISD AIR POLLUTION SPECIALIST MINER: When you

1 compared to 2011, the first year of the program, to 2022,
2 you can see the difference the program has made with
3 regard to fossil fuel demand. As mentioned earlier in
4 2011, Californians were consuming almost 3.6 billion
5 gallons of fossil diesel annually. By 2022, that number
6 had declined to about two billion gallons of fossil diesel
7 to the point where diesel -- the diesel pool is majority
8 biomass based diesel rather than fossil diesel. And
9 despite growth in population and economic activity in
10 California, the gasoline pool has also seen a reduction in
11 fossil fuels of 800 million gallons. Without these
12 alternative fuels, we risk returning to higher levels of
13 fossil fuel use and missing out on the important climate
14 and air quality benefits these fuels provide to the state.

15 --o0o--

16 ISD AIR POLLUTION SPECIALIST MINER: At this
17 point, I will switch gears to talk about the future of the
18 program and concepts for the next LCFS rulemaking. Staff
19 have amended the LCFS Program multiple times since it was
20 first adopted in 2009, each time looking to improve and
21 strengthen the program. These concepts are intended to
22 help the program continue to provide the significant and
23 targeted incentives needed to meet State goals and
24 decarbonize the transportation sector quickly and
25 equitably.

1 --o0o--

2 ISD AIR POLLUTION SPECIALIST MINER: As I've
3 mentioned previously, the program has doubled the volume
4 of low carbon fuels consumed since the beginning of the
5 program. More recently, we have seen strong growth in
6 renewable diesel and electricity. Electricity in
7 particular has generated a growing share of the annual
8 LCFS credits in the last few years and is now the second
9 largest credit generator behind renewable diesel. And
10 much of this electricity is zero carbon electricity from
11 solar and wind. Biomethane has also increased in volume
12 over time and has successfully displaced almost all of the
13 fossil CNG used in transportation.

14 The timing of this next rulemaking comes at a
15 critical juncture for California. Once-in-a-life --
16 once-in-a-generation federal investment dollars are
17 available to support this transition to low carbon fuels,
18 particularly through the hydrogen hubs funding opportunity
19 from the bipartisan infrastructure law and the producers
20 tax credits for low carbon hydrogen and alternative jet
21 fuel. Through the existing LCFS mechanism, California can
22 bring significant investment into this low carbon fuel
23 space and build on the progress we have already achieved.

24 --o0o--

25 ISD AIR POLLUTION SPECIALIST MINER: The LCFS

1 team --

2 CHAIR RANDOLPH: Sorry, Dillon, I'm going to
3 interrupt. We just got a text that the webcast is frozen.
4 Is that -- is it an individual thing or is it still
5 working for folks.

6 It's working fine. Okay. Sorry. Go ahead,
7 Dillon.

8 ISD AIR POLLUTION SPECIALIST MINER: Thank you,
9 Chair.

10 The LCFS team is evaluating ways to update the
11 regulation to help the State reach its greenhouse gas and
12 carbon neutrality goals. To take the next step in the
13 rulemaking process, CARB staff released the Standardized
14 Regulatory Impact Assessment, commonly referred to as the
15 SRIA, on Friday, September 8th. That SRIA is a
16 preliminary evaluation of the economic impacts of updating
17 the LCFS and is a required element of the rulemaking
18 process.

19 Staff has not yet released an actual regulatory
20 amendment proposal but is evaluating a number of key
21 concepts for the forthcoming rulemaking package including:
22 Increasing the stringency of the program to further
23 decarbonize the transportation fuel pool; strengthening
24 the program's equity provisions to promote investment in
25 disadvantaged, low-income, and rural communities;

1 supporting electric and hydrogen truck refueling;
2 signaling -- strengthen our signal to decarbonize jet
3 fuel; incentivizing more production of clean fuels needed
4 in the future, such as low carbon hydrogen; supporting
5 methane emission reductions and deploying biomethane for
6 best uses across transportation and other sectors; and
7 considering the guardrails on crop-based fuels.

8 --o0o--

9 ISD AIR POLLUTION SPECIALIST MINER: To implement
10 these objectives, we are focusing the LCFS rulemaking on a
11 suite of updates and new provisions, which will be covered
12 in more detail. The most significant of these is updating
13 the compliance targets through 2030 and establishing a
14 more stringent post-2030 targets to match the greenhouse
15 gas reduction called for in the 2022 Scoping Plan update
16 and AB 1279, and to help facilitate the state's energy
17 transition.

18 The 2022 Scoping Plan update calls for outcomes
19 that would result in 94 to -- 94 percent reduction in
20 petroleum demand and identifies the LCFS as a key program
21 to help facilitate this shift through its support for
22 zero-emission vehicles and alternative fuels alike. As I
23 mentioned earlier, California also has a critical
24 opportunity to leverage federal funding for alternative
25 fuels. Increasing the LCFS's stringency will amplify the

1 signal to the market and continue to developing -- to
2 continue developing and deploying alternative fuels.

3 --o0o--

4 ISD AIR POLLUTION SPECIALIST MINER: To assist in
5 evaluating options for updating program stringency, CARB
6 staff developed the CATS Model to evaluate the California
7 fuel market and various LCFS policy decisions. The CATS
8 Model is an optimization model and identifies the lowest
9 cost options for providing fuel in California to meet
10 transportation fuel demand.

11 It is important to be aware of the limitations to
12 the CATS Model. CATS is used to approximate major
13 components of the California fuel supply market, but it is
14 not a perfect representation of the fuel market in
15 California. There are no models that perfectly predict or
16 model the real world. There are numerous market effects
17 that the model is unable to capture and so model outputs
18 will not perfectly encapsulate prices and outcomes. CARB
19 staff have tried to include the most important elements of
20 the California's fuel supply market, so results can help
21 staff better evaluate specific fueling scenarios and
22 identify the rate at which the market could adapt to
23 increase CI schedule stringency.

24 --o0o--

25 ISD AIR POLLUTION SPECIALIST MINER: This slide

1 shows the simplified diagram of what CATS does. Broadly,
2 it takes a set of user-defined inputs, the most important
3 of which are fuel or energy demand, feedstock supply
4 curves that represent costs and supply of feedstock used
5 to produce fuel, and feedstock conversion information,
6 which you can think of as information regarding a
7 feedstock to a specific fuel production process, such as
8 the cost, feedstock conversion efficiency, carbon
9 intensity, and subsidies that the fuel may receive outside
10 of the LCFS.

11 These inputs are used by the CATS Model, which
12 solves for the set of fuel and feedstock pathways that
13 will meet the proposed CI targets at the lowest possible
14 cost. The outputs from the model include the quantity of
15 specific feedstock used for a specific fuel production
16 pathway, the marginal cost of meeting the LCFS annual CI
17 target, the number of credits and deficits affiliated with
18 fuel production pathways, and the marginal cost of
19 providing a group of fuels to meet a specific fuel pool
20 demand.

21 Earlier this summer, staff updated the model to
22 reflect expected fuel pool demand under all current
23 regulations, including Advanced Clean Cars II, Advanced
24 Clean Trucks, and Advanced Clean Fleets. As a result, the
25 model now reflects the number of zero-emission vehicles we

1 expect will be on the road in the future given
2 implementation of these important regulations. This is
3 important, because without implementation of these
4 regulations, the demand for liquid fuels, like fossil,
5 gasoline, and diesel, would be much higher.

6 --o0o--

7 ISD AIR POLLUTION SPECIALIST MINER: In
8 preparation for the forthcoming rulemaking proposal and to
9 support the SRIA, staff ran some high-level scenarios to
10 look at what LCFS updates may result in. We'll continue
11 to iterate on these scenarios as part of developing the
12 staff rulemaking proposal. The regulation currently sets
13 a 20 percent reduction target for 2030, which holds static
14 beyond 2030. Staff's current modeling, informed by data
15 from both staff research and a variety of stakeholders,
16 supports 30 percent by 2030 and 90 percent by 2045.

17 Other modeling efforts by academics and industry
18 recommend more and less stringent -- target stringencies.
19 Staff thinks a target of least 30 percent is appropriate.
20 Staff understands the importance of maintaining strong
21 price signals to support investment in low carbon fuel
22 production as well as the need for long-term market
23 certainty.

24 In addition to revising the CI target, staff is
25 considering a near-term CI target step-down and an

1 auto-acceleration mechanism that would provide additional
2 market certainty. A near-term step-down would mean the
3 reflection[SIC] amendments include a larger one-time
4 decrease in the annual CI target to reflect and further
5 support the success of the program in providing low-carbon
6 fuels over the past few years.

7 Staff received feedback that a step-down could
8 strengthen the near-term price signal to support
9 additional near-term investment. Accordingly, staff
10 modeled a five percent step-down when the regulation is
11 implemented to bring the program into better alignment
12 with the current pace of decarbonization shown in the
13 market in the last two years.

14 In addition to a step-down, we want to make sure
15 the LCFS can continue to support and accelerate deployment
16 and adoption of low-carbon transportation technology, and
17 that the LCFS can be more responsive to changing market
18 conditions. To provide more market certainty, an
19 acceleration mechanism can be used that would
20 automatically increase the LCFS benchmark schedule in the
21 event that certain, well-observed market conditions have
22 been met. If designed appropriately, the acceleration
23 mechanism could allow California to more rapidly leverage
24 future innovations in transportation and fuels to achieve
25 transportation sector greenhouse gas reductions earlier.

1 Relative to the existing LCFS compliance targets,
2 implementing this example scenario would achieve
3 significant reductions in gasoline, fossil diesel, and
4 fossil jet fuel use. From our preliminary analysis, we
5 estimated that this scenario would reduce greenhouse
6 emissions by 558 million tons through 2046.

7 --o0o--

8 ISD AIR POLLUTION SPECIALIST MINER: In addition
9 to this 30 percent reduction by 2030 scenario, staff
10 evaluated two other scenarios in the Standardized
11 Regulatory Impact Assessment, known as the SRIA. The
12 first scenario included a declining limit on biomass-based
13 diesel starting at 1.6 billion gallons in 2025 and scaling
14 down to 180 million in 2045. This limit was designed in
15 response to both stakeholder concerns regarding land use
16 change associated with crop-based fuels and to reflect the
17 diminishing role of combustion vehicles going forward.

18 Because this limit resulted in less supply of
19 alternative fuel credits, which makes carbon intensity
20 targets harder to hit, staff lowered the CI target to 28
21 percent in 2030 while maintaining a 90 percent target in
22 2045. Staff's modeling showed that this scenario would
23 result in greater fossil fuel consumption to meet the
24 demand of the remaining combustion vehicles in light of --
25 even in light of the trucking sector's rapid shift toward

1 100 percent zero-emission sales.

2 The second scenario considered a market where
3 there are no new constraints on either biomethane or
4 biofuels. Staff then increased the carbon intensity to 35
5 percent in 2030. Staff's modeling showed that the 35
6 percent target in 2030 leads to credit prices consistently
7 near the price ceiling, and is therefore the highest cost
8 scenario economically.

9 We will be doing additional scenario analysis for
10 this staff report. In response to the Chair's request at
11 the joint EJAC/CARB Board meeting a couple weeks ago,
12 staff planned to evaluate the scenario designed by Dr.
13 Michael Wara from Stanford with EJAC.

14 I'll now describe some of the specific policy
15 items under consideration for the next rulemaking.

16 --o0o--

17 ISD AIR POLLUTION SPECIALIST MINER: As part of
18 both the Scoping Plan process and in relation to specific
19 regulatory items, the Board has consistently commented on
20 the importance of increasing zero-emission vehicle
21 infrastructure deployment in California in order to
22 support the growing number of zero-emission vehicles
23 called for by our regulations. The LCFS has and will
24 continue to help address the zero-emission vehicle
25 infrastructure buildout in California. Currently, the

1 LCFS Program provides credits for the unused capacity of
2 the light-duty vehicle fast charging or hydrogen refueling
3 stations to encourage this new infrastructure to be built
4 while consumer demand across the State increases. These
5 credits are in addition to the credits generated by
6 dispensing electricity and hydrogen. To date, the program
7 has approved applications for 3,800 fast chargers and
8 nearly 70 hydrogen stations.

9 To help address calls -- the calls for more
10 health on infrastructure by the Board and others,
11 particularly for medium- and heavy-duty zero-emission
12 vehicle refueling, CARB staff are considering a new
13 infrastructure crediting provision for fast charging and
14 hydrogen refueling station that serve medium- and
15 heavy-duty vehicles. This concept is supported by many
16 stakeholders and was identified as an important policy
17 lever in the 2022 Scoping Plan update. This new provision
18 would strengthen the LCFS's support for zero-emission --
19 for the zero-emission transition.

20 Notwithstanding the shift in -- notwithstanding
21 the shift in focus to the trucking sector, we must
22 continue to capitalize on progress in the light-duty
23 vehicle sector. Applications for the existing light-duty
24 zero-emission vehicle infrastructure provisions may be
25 submitted through December 31st, 2025, but staff is

1 considering a targeted extension of that provision with a
2 focus on infrastructure installed in disadvantaged,
3 low-income, or rural communities. This extension helps
4 fill gaps in the existing refueling network and helps
5 improve access to zero-emission vehicle technology in
6 underserved areas of California.

7 --o0o--

8 ISD AIR POLLUTION SPECIALIST MINER: What I'm
9 showing here are the results of the scenario we modeled
10 targeting a 30 percent CI reduction by 2030 and the 90
11 percent CI reduction by 2045. This scenario also reflects
12 implementing the ACC II, ACT, ACF regulations adopted by
13 the Board. This chart gives a snapshot of how this
14 scenario would support the continued ramping up of clean
15 fuels to displace fossil fuels over the coming decades.
16 Through 2045, staff expect that the makeup and volume of
17 electricity and hydrogen used in ZEVs in the program would
18 significantly increase. You'll also notice that biodiesel
19 and renewable diesel are still likely to be needed for
20 remaining internal combustion engine trucks in 2045,
21 although the vast majority of credits will support
22 zero-emission refueling.

23 Biomethane from various sources, such as
24 landfills and dairy operations are reflected on this chart
25 as well. You can see here represented by the orange

1 colors on the graph that biomethane represents roughly
2 seven percent of the total diesel equivalent fuel volumes
3 in 2024 and then declines to one percent by 2045 under
4 staff's analysis. This reflects the broader deployment of
5 zero-emission vehicles that is occurring as well as the
6 transition of RNG combustion out of the transportation
7 sector consistent with the policy direction in the 2022
8 Scoping Plan and the Board adopted ACF Regulation --
9 resolution.

10 The increase in hydrogen use by 2045 would be
11 used primarily in hydrogen vehicles deployed in medium-
12 and heavy-duty vector. And lastly, you'll notice an
13 increase in alternative jet fuel volumes as we work to
14 decarbonize the aviation sector, which is another goal
15 identified in the 2022 Scoping Plan. So all things
16 considered, this gives a sense of the scale of this move
17 away from fossil fuels. The majority of support will go
18 to zero-emission technology with an ongoing role for
19 alternative low carbon fuels as part of the transition.

20 --o0o--

21 ISD AIR POLLUTION SPECIALIST MINER: Hydrogen is
22 expected to have a large role as the State advances
23 zero-emission technology for heavy-duty vehicles and
24 hard-to-decarbonize industries. To achieve both the
25 health and climate goals associated with this transition,

1 low-carbon intensity hydrogen production must scale up
2 quickly. To enable the rapid growth in supply needed,
3 staff are considering ways we can harmonize with the
4 federal Inflation Reduction Act to incentivize increasing
5 hydrogen supply needed for transport with a focus on
6 electrolytic hydrogen and hydrogen produced from
7 biomethane.

8 --o0o--

9 ISD AIR POLLUTION SPECIALIST MINER: The aviation
10 sector represents around one percent of statewide
11 greenhouse gases and is almost entirely dependent on
12 fossil fuels today. Fossil jet fuel is currently exempted
13 from generating deficits in the LCFS. Governor Newsom
14 highlighted the need to transition to low carbon
15 alternatives in his July 2022 letter to the CARB Chair, in
16 which he directed CARB to adopt an aggressive clean fuels
17 target for the aviation sector. The 2022 Scoping Plan
18 reflects a major shift away from fossil fuel by 2045,
19 including 20 percent zero-emission aviation.

20 The federal government has also been highlighting
21 the importance of reducing aviation emissions as part of
22 the Department of Energy's Sustainable Aviation Fuel Grand
23 Challenge and has added large incentives for sustainable
24 aviation fuel through the Inflation Reduction Act of 2022.

25 Alternative jet fuel is a viable low carbon

1 alternative that can further reduce aviation carbon
2 dioxide emissions and currently generates credits in the
3 program. Its inclusion was to provide a support signal
4 for low carbon alternatives and we have seen the market
5 respond. Alternative jet fuel production has increased
6 since 2019 and 15 million gallons were supplied in
7 California in the last year of reported data.

8 Given the Scoping Plan's direction to move away
9 from fossil fuels in the aviation sector by 2045, we need
10 much faster adoption of this fuel. With this in mind,
11 CARB staff are evaluating how to increase the use of
12 alternative jet fuel in the state.

13 --o0o--

14 ISD AIR POLLUTION SPECIALIST MINER: California
15 is focused on achieving our near-term SB 1383 methane
16 reduction targets and 2030 greenhouse gas emission
17 reduction target. The current incentive structure has
18 supported methane reduction projects both in California
19 and throughout the United States, and we need to continue
20 to incentivize deployment of these projects, particularly
21 in this decade. Staff are also mindful of the importance
22 of avoiding stranded assets that risk backsliding on
23 greenhouse gas reductions. We know that biomethane is
24 unlikely to be cost competitive with fossil gas. Without
25 programs that provide financial support that values the

1 climate benefits from reducing methane emissions, we risk
2 methane capture projects going off line and an increase in
3 future methane emissions in California and in the United
4 States.

5 We also expect that while biomethane demands in
6 the transportation sector is expected to decline over
7 time, biomethane is a useful energy source that can
8 displace fossil fuels in other sectors on the path to
9 carbon neutrality. Biomethane can still play a key role
10 as a feedstock for hydrogen production used in
11 transportation.

12 We've heard from stakeholders that discussing a
13 transition out of transportation without a complementary
14 policy that incentivizes biomethane use in other sectors
15 can be counterproductive to investment in methane capture
16 projects. Staff acknowledges that this conversation about
17 treatment of biomethane under the LCFS is just the first
18 part of the equation. We expect that complementary
19 policies in the future can also value methane reductions
20 and support biomethane demand in other sectors.

21 --o0o--

22 ISD AIR POLLUTION SPECIALIST MINER: Staff's
23 first concept for changes to biomethane crediting is in
24 regard to avoided methane crediting. In previous
25 workshops, staff has discussed the concept of phasing out

1 avoided methane crediting by 2040. As I mentioned
2 earlier, avoided methane crediting reflects the capture of
3 methane that would have otherwise been released into the
4 atmosphere and is the reason behind the large negative CI
5 seen in some fuel pathways. Avoided methane crediting
6 provides an important support for payback of capital
7 expenses associated with methane capture projects needed
8 this decade. Longer term ongoing operational support is
9 likely needed, but at a different level than initial
10 buildout.

11 Currently, the LCFS provides avoided methane
12 crediting for 10-year crediting periods, which can be
13 renewed for up to 30 years. Staff received feedback both
14 opposing and supporting staff's consideration to phase
15 down avoided methane crediting and staff has engaged in
16 meaningful discussions with representatives of both
17 positions over the last year. Staff believes this
18 phaseout concept by 2040 provides the right signal and
19 timing for deployment of methane capture projects in the
20 near term, while sending a long-term signal to transition
21 to other sectors.

22 --o0o--

23 ISD AIR POLLUTION SPECIALIST MINER: Staff's
24 second concept for biomethane addresses deliverability
25 requirements. Staff is also considering aligning the

1 deliverability requirements of biomethane with that of
2 low-carbon intensity electricity by requiring that
3 biomethane injected into the pipeline for use in
4 California come from projects that can demonstrate
5 deliverability to California. Deliverability to
6 California would achieve the emission reductions required
7 by AB 1279 and decarbonize its -- the natural gas pool.

8 --o0o--

9 ISD AIR POLLUTION SPECIALIST MINER: We'll now
10 turn to crop-based fuels. The LCFS Program incentivizes
11 the lowest carbon feedstocks to be used in California.
12 And for most of the program's existence, the program has
13 not resulted in significant increases in crop-based fuels.
14 As the chart shows, waste oils like used cooking oil,
15 tallow, and inedible distillers corn oil have been and
16 continue to be the predominant feedstocks of choice for
17 fossil diesel alternatives, given their lower carbon
18 intensities. However, the use of biomass-based diesel
19 derived from crop-based vegetable oil has increased in
20 recent years. While the majority of biomass-based diesel
21 is delivered from waste oil, since 2020, the use of
22 crop-derived biomass-based diesel has increased.

23 A rapid increase in vegetable oil demand for
24 biofuel production could potentially introduce a feedstock
25 supply and land use problem. We can all agree that

1 biofuel production must not come at the expense of
2 forestland or food production. Given more recent trends
3 in biofuel production, staff and stakeholders are looking
4 into this topic in more detail.

5 --o0o--

6 ISD AIR POLLUTION SPECIALIST MINER: Other
7 governments are also grappling with this issue and have
8 instituted a variety of guardrails to prevent future
9 potential deforestation or adverse land use impacts. Some
10 of these guardrails include volume-based limits on
11 specific fuels, credit limits for specific fuels,
12 feedstock sustainability criteria to track feedstock to
13 their point of origin, and certify feedstocks are not
14 contributing to impacts on other carbon stocks like
15 forests, explicit bans of particular feedstocks deemed
16 high risk, and bans of feedstock from particular
17 locations. Staff are evaluating the appropriateness of
18 guardrails like these and others for the California LCFS.

19 --o0o--

20 ISD AIR POLLUTION SPECIALIST MINER: Staff
21 received a wide variety of feedback from stakeholders on
22 how to approach this topic. Several commenters raised
23 concerns regarding use of crop fuels for biofuel and cited
24 resources that supported these concerns. Other commenters
25 argued that additional land for increased crop production

1 would be minimal due to expected increases in crop yields
2 and other practices, such as planting second crops or
3 utilizing fallow land. Some commenters also highlighted
4 the difficulty of isolating the relationship between
5 biofuel demand and food prices, given the complexity of
6 food markets and the many factors that impact prices.
7 Commenters suggested a number of different mechanisms that
8 could be used to address this topic, including reassessing
9 land use change emissions in GTAP modeling, implementing
10 volume-based limits on crop-based fuels, and requiring use
11 of feedstock tracking or certification systems.

12 --o0o--

13 ISD AIR POLLUTION SPECIALIST MINER: An important
14 consideration as staff continue to develop and weigh
15 regulatory proposals is their impact on air quality and
16 health. In the example scenario, with the 30 percent
17 target in 2030, staff analyzed the life cycle NOx and
18 PM2.5 emissions of each of the fuels brought to market.
19 Staff found that the rulemaking concepts highlighted
20 earlier would result in a public -- in public health
21 benefits for California through displacement of fossil
22 fuel use. Staff took a conservative approach to this air
23 quality and health evaluation and assessed criteria
24 pollutant impacts from the production and transport of
25 feedstocks and fuels in California and from changes in

1 aviation and truck emissions due to replacements of fossil
2 fuels with biofuels.

3 Tailpipe emission reductions associated with
4 turnover to zero-emission vehicles were not included as
5 part of the benefits of the LCFS example scenario, as
6 those are -- as those are allocated to the vehicle
7 regulations, although the LCFS Program is key to
8 supporting successful implementation of these programs.

9 The analysis assessed emission changes by air
10 basin and then quantified health outcomes by air basin
11 from these emission changes. This analysis is just a
12 first take and will be reassessed with the formal staff
13 proposal when that is released.

14 --o0o--

15 ISD AIR POLLUTION SPECIALIST MINER: And here are
16 some of the high level results. As expected, as we deploy
17 clean fuels and technologies and displace fossil fuels,
18 we'll see significant reductions in criteria pollutant
19 emissions, particularly in disadvantaged communities and
20 communities impacted the most by transportation emissions.
21 This preliminary analysis found that these staff impacts
22 would reduce NOx by 17,000 tons and PM2.5 by 4,100 tons by
23 2046. Total monetized health savings from avoided health
24 outcomes would also be substantial at around \$5 billion.

25 This slide shows just the fuels side benefit that

1 we analyzed as part of the LCFCFS SRIA, but we know the
2 outcomes from both cleaner vehicle technologies and fuels
3 will result in even greater health benefits than shown
4 here. As part of the scoping plan, we estimated almost
5 \$200 billion in annual health savings in 2045. And in
6 2022, OEHHA released a report showing how some of the
7 greatest beneficiaries of reduced emissions, particularly
8 from cutting diesel emissions from trucks, are communities
9 of color and disadvantaged communities.

10 --o0o--

11 ISD AIR POLLUTION SPECIALIST MINER: And finally,
12 I'll close with a summary of the next steps of -- for the
13 LCFS Program. In recognition of the importance of
14 maintaining strong pricing signals to support investment
15 in low-carbon fuel production, as well as the need for
16 long-term market certainty, staff are moving expeditiously
17 to release the rulemaking package. As staff move towards
18 finalizing a proposed scenario, Board feedback and public
19 comments are vital to addressing some of the topics
20 presented today.

21 The staff proposal will be released in the coming
22 months, which will initiate a 45-day public comment
23 period. The staff proposal will include updated health
24 and economic analysis. Staff plan to release the
25 rulemaking proposal in quarter four of this year to target

1 a Board hearing and vote in quarter one of 2024. If
2 adopted by the Board, the regulatory updates will take
3 effect in 2024.

4 Thank you for your attention and will -- and we
5 look forward to hearing from the public and each of the
6 Board members. I'll now pass the microphone to Dr.
7 Michael Wang, Interim Division Director of the -- for
8 Energy Systems and Infrastructure Analysis at Argonne
9 National Laboratory to provide a few remarks about the
10 GREET Model.

11 (Thereupon a slide presentation).

12 DR. MICHAEL WANG: Thank you very much for -- the
13 Board for the opportunity for me to present a life cycle
14 analysis and the GREET model. Michael Wang from Argonne
15 National Laboratory. I am the Director of Systems
16 Assessment Center and the Interim Division Director of
17 Systems Assessment and Infrastructure Analysis.

18 I am the original GREET development in 1995 and
19 continue to lead the Argonne GREET development work.

20 Next.

21 --o0o--

22 DR. MICHAEL WANG: So here, these slides
23 summarize trend of life cycle analysis, all simply called
24 LCA. So LCA holistically evaluate sustainability of
25 technologies and policies. So it is moved from single

1 stage to complete supply chain, so the shift in the
2 environment burdens from one stage to another is not going
3 to be missed. LCA thinking has helped changed in
4 corporation and consumer behaviors and many of us can
5 relate when we by the specific consumer products, we
6 aren't paying attention of the steps are the environment
7 footprint how the products are produced.

8 Recent trend of transportation LCA applications
9 in domestic are we already are very familiar with
10 California LCFS and the seminal programs in several other
11 states, such as Oregon and Washington state, and the EPA's
12 RFS. And as the previous speaker already referred, the
13 Inflation Reduction Act incentives for clean hydrogen,
14 sustainable aviation fuels, and the clean fuels are based
15 LCA greenhouse gas emissions result.

16 On the international front, there are several
17 significant programs, the International Civil Aviation
18 Organization's CORSIA Program for SAFs cover intensity
19 based on LCA. The International Marine Organization's,
20 the current discussion on potential lower GHG stands that
21 list the LCA but it's the result. As many of us knows,
22 the EU RU -- RED, Canadian Clean Fuels Standard, Brazilian
23 RenovaBio Program all based on LCA result.

24 Next.

25 --o0o--

1 DR. MICHAEL WANG: So here I put life cycle
2 analysis into two perspectives. The life cycle analysis
3 for technologies. This is to examine the environmental
4 footprint of technologies, such as different fuel
5 production technologies by including the fuel cycle or in
6 the transportation area the vehicle cycles, such as
7 battery manufacture, or facility city cycle, such as
8 building the power plant, building solar PV, wind turbine
9 and so on. So this is to examine the environment
10 footprint of specific technologies.

11 On the other hand, the corporate front we know
12 now there are some voluntary and regulatory or legal
13 requirement for corporations to report supply chain
14 environmental footprint, such as Scope 1, 2, 3 emissions.
15 And the recent law adopted in California required
16 corporations to report their three Scope emissions. So
17 this is supply chain for corporation. So in a way, it
18 address LCA, but from company's point of view.
19 Historically, LCA has been addressed in environment
20 footprint from technology's point of view.

21 So two caveats intertwine each other. And the
22 LCA capability, CARB already established from LCFS. I see
23 tremendous value to help new law all for corporation
24 supply chain emissions, the so-called three Scope
25 emissions.

1 Next.

2 --o0o--

3 DR. MICHAEL WANG: This is a quick summary of the
4 GREET Model as we developed at Argonne National Laboratory
5 under the U.S. Department of Energy. So the first release
6 was in 1995. Since then, we have annual update and
7 expansion. Our 2023 release is scheduled for mid-October,
8 so in two weeks we'll have GREET 2023. The model is in
9 public domain as you see and the GREET website. The GREET
10 sponsors historically were from DOE, different offices in
11 Department of Energy. Here you see the Energy Efficiency
12 Renewable Energy office, ARPA-E program, Office of
13 Technology Transitions, Fossil Energy and Carbon
14 Management Office, and Nuclear Energy Office.

15 Besides DOE, we have other federal agencies in
16 recent years provide some support for GREET development,
17 FAA for SAF, Federal Marine Administration, or MARAD, for
18 marine fuels, LCA, and Federal Rail Administration for our
19 rail decarbonization effort. And we also had support from
20 USDA and NIST of the Department of Commerce.

21 Next.

22 --o0o--

23 DR. MICHAEL WANG: This slide summarizes the
24 GREET user base. Of course, you know, as we all know,
25 California has been the significant GREET user by

1 development and it's great. But worldwide, we have more
2 than 55,000 registered GREET users. And you see over 60
3 percent of users are indeed in North America, but we do
4 have extensive global user base. And, of course, the
5 academic institutions use GREET for research and agencies
6 use GREET for regulation and policy development, such as
7 CARB, and the International Civil Aviation Organization.
8 We were part of the CORSIA program, so we've been using
9 GREET to develop SAF carbon intensity for ICAO's CORSIA
10 program.

11 Next.

12 --o0o--

13 DR. MICHAEL WANG: As many of us know, in the LCA
14 field, LCA in general, GREET in particular is very data
15 intensive. So data are the key. So you'll hear as you
16 see us summarize data into two groups, the so-called
17 background data versus foreground data. Background data,
18 of course, we relied on your government agency's
19 statistics such as Energy Information Administration's
20 annual databases update, the EPA's, and your data update
21 at USDA and USGS, and so on.

22 So for data, the verification is key. So what
23 you put into LCA modeling needs to be verified and CARB's
24 presentation elaborate the significant of verification and
25 it's to certify verifiers to make sure the data gets into

1 the CI calculations to accurately reflect the operation.

2 And, of course, data from different sources:
3 primary data versus secondary data. Primary data are the
4 data from facility operations. So over the last more than
5 10 years, LCFS Program collect a tremendous amount of
6 primary data from individual facilities. So this help the
7 LC -- LCFS Program to have reliable data to develop the CI
8 values and to help the LCA field with more data, the data
9 we can have for reliable LCA models and LCA results.

10 Next.

11 --o0o--

12 DR. MICHAEL WANG: So here is example of the
13 system batteries for life cycle analysis. So here is the
14 biofuel as the example. So the key stages of biofuel LCA
15 is 14 hours of production, farming activities including
16 all the input, 14 hours of input, diesel fuel input, and
17 crop yield, et cetera. Then, of course, biofuel
18 conversion is significant stage. And as the CARB staff's
19 presentation already elaborate, the LCA system battery
20 include direct and indirect land use changes in biofuel
21 LCA.

22 Next.

23 --o0o--

24 DR. MICHAEL WANG: This chart shows you the
25 electricity LCA. So as we all know electricity is

1 generated from different primary energy sources called
2 nitric gas, uranium for nuclear power plant, geothermal
3 plant, hydro, solar, wind and so on. So each of the
4 energy feedstocks has its own cell project and it's part
5 of GREET and part of the LCA in general. And then during
6 the conversion, of course, for electricity itself
7 sometimes part of the LCA system, but only I mention the
8 construction of power plant, the production of solar PV,
9 production of one turbine. So this could be the -- you
10 know, within the LCA system battery. GREET is going to
11 include everything you see on this slide. But the
12 so-called facility cycle, LCA is optional. So people can
13 turn this off and on inside of GREET. And, in fact, in
14 many LCA studies, this is somewhat optional, because this
15 is a one-time emission, rather than the annual emission
16 when you operate facilities.

17 Next.

18 --o0o--

19 DR. MICHAEL WANG: So this is quick run of LCA
20 history application and GREET development. Thank you
21 again for the opportunity.

22 ISD AIR POLLUTION SPECIALIST MINER: Thank you,
23 Dr. Wang.

24 Chair Randolph, back to you.

25 CHAIR RANDOLPH: All right. Thank you very much.

1 So now I wanted to have an opportunity for Board
2 members to ask any clarifying questions sort of, you know,
3 while the staff report is fresh in everyone's mind. So I
4 will open it up to my fellow Board members to go ahead and
5 ask questions. We got a lot of information and heard a
6 lot of material. So do I have anyone who wants to go
7 first?

8 Dr. Shaheen.

9 EXECUTIVE OFFICER CLIFF: And Chair Randolph --

10 CHAIR RANDOLPH: Oh, sorry.

11 EXECUTIVE OFFICER CLIFF: Because Dr. Wang needs
12 to leave at 11 o'clock. If there's questions for him --

13 CHAIR RANDOLPH: Oh, good point.

14 EXECUTIVE OFFICER CLIFF: -- first would be
15 great. Thank you.

16 CHAIR RANDOLPH: Okay. If you have any specific
17 questions on the GREET Model for Dr. Wang, do those first.
18 Do we have any of those?

19 DR. MICHAEL WANG: Yes. Thank you very much. I
20 can stay longer.

21 CHAIR RANDOLPH: Okay. Great. All right.

22 So Dr. Shaheen has questions.

23 BOARD MEMBER SHAHEEN: Okay. Well, thank you so
24 much, Chair Randolph, and also want to acknowledge all the
25 staff and everyone that I've had the pleasure of speaking

1 to over the last two to three months on this policy. I
2 appreciate everybody who's leaning in to get me up to
3 speed. So kudos to staff. Really enjoyed the
4 presentation today, Dillon. That did a great job. So I
5 do have a number of questions, so let's got rolling.

6 The first one relates to infrastructure. So
7 Dillon's presentation emphasized the importance of LCFS to
8 support ACT, ACF, and AC -- Advanced Clean Cars II. So
9 how do we ensure that we have enough infrastructure to
10 support those policies and this being a key foundational
11 component of that.

12 DEPUTY EXECUTIVE OFFICER SAHOTA: So, Board
13 Member Shaheen, I can help answer that question.
14 Infrastructure is much larger than just the LCFS Program.
15 What we're doing here is looking at this program to
16 understand how we can support the broader needs for
17 infrastructure for the vehicle regulations that we've
18 adopted. So what we found is opportunities to leverage
19 this program to help in that sense, but it's not the
20 be-all or end-all of how to complete that picture on
21 infrastructure, whether it's electricity, or hydrogen, or
22 any of the other clean fuels we're going to need.

23 BOARD MEMBER SHAHEEN: All right. Is it okay if
24 I continue?

25 CHAIR RANDOLPH: (Nods head).

1 BOARD MEMBER SHAHEEN: All right. So next
2 question. So thank you so much. I appreciate that
3 response and the focus on the need for infrastructure.

4 My next question relates to data. And I've
5 raised this before in the past. And my colleague Dr.
6 Wang, who's a close colleague of mine, emphasized the need
7 for data as the GREET Model is extremely hungry for it.
8 So one of the things I really am interested in is how do
9 we improve the data quality that underpins all of our
10 models and the analysis that is needed for us to make sure
11 we're on track, but also for monitoring?

12 And what I've learned over the last couple of
13 months in my studies is that there's a lot of variability
14 in digester performance, and there's new data, remote
15 sensing coming in. There's joint level data coming in.
16 How can we improve the data quality that underpins this
17 particular policy?

18 ISD CHIEF BOTILL: Thanks, Dr. Shaheen. Matt
19 Botill. I'm the Division Chief for the Industrial
20 Strategies Division.

21 So there's a number of ways in which we look at
22 data that's coming into the program to both inform
23 individual fuel pathways as well as the broader limit in
24 energy strategy that we passed. I'll talk about the fuel
25 pathways really quickly.

1 As Dillon mentioned in his presentation, we have
2 a process by which fuel providers have to report their
3 fuel transactions and their fuel production on an annual
4 basis. And then that information comes to CARB and it is
5 also verified by a third party. So we have an independent
6 third party, that we audit on occasion, goes and actually
7 checks the information that is provided by the fuel
8 pathway holders. With that information, with that data on
9 their fuel production, the carbon intensity of their fuel,
10 the amount of energy that they use, it is actually
11 measured and reported to us. We use that information to
12 make adjustments to those carbon intensity scores that we
13 saw in these fuel pathways. And this is something that
14 Dillon highlighted in his presentation. So we have this
15 opportunity to take in real data on these projects and
16 make adjustments to the scores that are assigned to these
17 fuels over time.

18 The broader question about how do we use
19 information to inform our progress towards our climate
20 targets, that's really something that we are actively and
21 continue to do as part of tracking our progress on our
22 overall climate targets. We use information like we have
23 coming in through the satellites for the or through the
24 flights that happened on methane emissions to identify
25 where are areas where we can make, you know, regulatory

1 updates or target our emission reduction strategies to
2 help get additional reductions that we think we can get
3 sooner than if, you know, we don't take action on that
4 data. So we use that data both, you know, as part of our
5 regulatory programs and it's to inform our future
6 strategies when we're designing emission reduction
7 programs.

8 BOARD MEMBER SHAHEEN: Thank you.

9 So final question on my side for the time being
10 is the question of sustainable aviation fuels. This came
11 up in our briefing yesterday. Can the team comment on the
12 integration of SAF for aviation in CLSF -- LCFS and any
13 plans for integration of this fuel?

14 DEPUTY EXECUTIVE OFFICER SAHOTA: Board Member
15 Shaheen, I can take that questions. So right now, staff
16 is looking at the concept of making aviation fuel a
17 deficit generator. It's currently a voluntary opt-in for
18 credit generation. We had a letter from the Governor last
19 summer when we were working on the Scoping Plan to look at
20 decarbonizing the aviation sector. And since we have that
21 letter and we modeled it into the Scoping Plan, we are
22 looking at how to make sure that more sustainable aviation
23 fuel is in use in California to help reduce those
24 emissions toward our statewide targets. And so staff is
25 looking at the option of making it a deficit generator.

1 We're going to continue to evaluate how we make sure that
2 it's not just produced here but also used here in the
3 state.

4 CHAIR RANDOLPH: All right. Then I'll it over to
5 another Board member to ask a couple questions and then
6 we'll kind of keep rotating.

7 So Board Member Hurt.

8 BOARD MEMBER HURT: Thank you, Chair. And want
9 to echo Board Member Shaheen's comments of thanks to all
10 those who reached out and spoke to us about LCFS, and, of
11 course, staff that's put a lot of time and hard work into
12 what's before us today.

13 I want to drill into the general infrastructure
14 question that Board Member Shaheen brought up and
15 understand a little bit more about the hydrogen piece of
16 this rule. I mean, clearly there is a role for hydrogen.
17 And I'm curious what is the forecast on light-duty
18 hydrogen cars and the need to further incentivize when it
19 comes to infrastructure, most things focusing mainly on
20 mid and heavy?

21 DEPUTY EXECUTIVE OFFICER SAHOTA: So in -- the
22 regulations for ACC II, which is the light-duty
23 regulations, it's predominantly electrification, but there
24 is space for hydrogen and there's going to be some type of
25 vehicles in the light-duty vehicles fleets that may need

1 to have hydrogen as a fueling option and we know that.
2 There are some cars out there, there might be more, there
3 might be light-duty vehicles, service vehicles that don't
4 dip into medium- and heavy-duty that will require it.

5 And so as staff is looking at this regulation and
6 updating it, mostly in response to ACF and ACT, we are
7 cognizant of the fact that we need to be making hydrogen
8 available at a much larger scale for options across all
9 fleet sizes. The hydrogen infrastructure that we're
10 talking about dovetails very nicely with the ARCHES
11 proposal, which is the hydrogen hub proposal by this
12 administration -- the Newsom administration at the federal
13 level.

14 And so we are trying to align with that as much
15 as possible to leverage those federal dollars and bring
16 that infrastructure, that scaling of hydrogen, and those
17 jobs to the state, and make sure that we have the fuel
18 available on the time schedule needed to map with our
19 regulations for getting those clean vehicles out in
20 deployment

21 BOARD MEMBER HURT: Are we going to clearly
22 define green and gray hydrogen in this program and its
23 impact obviously with the CI and...

24 DEPUTY EXECUTIVE OFFICER SAHOTA: We do not use
25 the labels green, or turquoise, or gray, or blue hydrogen

1 in the program. We are again consistent with some of the
2 terminology that we are looking at with the ARCHES
3 Proposal, which is renewable hydrogen. And similar to
4 what we have in the Scoping Plan, we are looking at
5 electrolytic, which is produced with renewable
6 electricity, and then methane reclamation from biogas.
7 Both of those are eligible for federal credits and federal
8 incentives. Both of those are included in the ARCHES
9 Proposal, both of those were in the Scoping Plan, and both
10 of those are referenced here as part of this regulation.

11 BOARD MEMBER HURT: And are they equally
12 considered or they're separate valued?

13 DEPUTY EXECUTIVE OFFICER SAHOTA: They're going
14 to be separately valued because you can imagine that
15 there's more energy that is needed to bring methane into a
16 steam methane reclamation process to produce, you know,
17 hydrogen versus electrolytic where you just take water and
18 you take solar or wind power. And so depending on the
19 different pathways, which staff went through in the
20 presentation and that chain, there could be different CIs for
21 those.

22 BOARD MEMBER HURT: Thank you. And could you
23 speak a little bit as to why we're confident that using
24 the 2015 land use change of values in 2023 will
25 appropriately keep the program on pace? And I'm thinking

1 a little bit about the opportunity to fix the crop-based
2 fuel beyond guardrails with increasing the ILUC values on
3 crop-based values and ultimately increasing the CI.

4 DEPUTY EXECUTIVE OFFICER SAHOTA: That's a great
5 question. I'm going to start it and then I'm going to
6 give it back to Division Chief Matt Botill. I want to
7 highlight that one of the differences between GREET and
8 California GREET is that we actually have a more
9 conservative ILUC value than what's being used in the
10 national model. So we already have taken steps to make
11 sure our version of the model is even more conservative
12 and assigns a higher penalty for land use conversion than
13 what is in the existing national model. With that, for
14 the specifics on the years, I'm going to ask Matt to jump
15 in.

16 ISD CHIEF BOTILL: Yeah, I can add a little bit
17 here. So what we tried to highlight in the presentation
18 was the rolling use and deployment of fuels like renewable
19 diesel and the feedstocks that are being used to support
20 those fuels. Predominantly, we've seen waste-based oils
21 from used cooking oil be the feedstock to support
22 biomass-based diesels like renewable diesel. In the last
23 couple of years, we had some growth in soy-based
24 feedstocks or soy feedstocks for these biomass-based
25 diesels.

1 And with our current program intensity approach,
2 using Indirect Land Use Change values, we do have factors
3 that were mentioned that Deputy Executive Officer Sahota
4 mentioned in the carbon intensity scores that
5 disincentivizes the land use change associated with
6 reducing those feedstocks. That comes from the teamwork
7 and the work that we talked about in the presentation.

8 We've seen that we haven't had any, what are
9 traditionally considered, more my high risk feedstocks,
10 feedstocks entered the program thus far, and those are the
11 high risk feedstocks that could potentially contribute to
12 deforestation and other parts of the world. And so what
13 we talked about in the presentation is some of the work
14 that other jurisdictions have been doing, guardrails that
15 they have considered as the increase in biomass based
16 diesels potentially that happens across just not the U.S.
17 but the rest of the world as we move forward on some of
18 these biofuel programs. And that is something that is
19 based off of a concern and not necessarily, you know, data
20 that's borne out on significantly of the changes to date.

21 BOARD MEMBER HURT: Sorry I have a couple more
22 questions.

23 CHAIR RANDOLPH: Can we rotate and then we'll
24 come back if --

25 BOARD MEMBER HURT: Sure.

1 CHAIR RANDOLPH: -- if your question doesn't get
2 answered.

3 BOARD MEMBER HURT: Okay.

4 CHAIR RANDOLPH: Board Member De La Torre three
5 questions and then we rotate.

6 BOARD MEMBER DE LA TORRE: I'm going at the end

7 CHAIR RANDOLPH: You're going to wait till the
8 end?

9 BOARD MEMBER DE LA TORRE: Uh-huh.

10 CHAIR RANDOLPH: Okay. Senator Stern.

11 SENATOR STERN: Okay. I'll take my queue. I
12 appreciate it. Let's talk data for a quick sec. Two
13 questions there. Sort of building on Dr. Shaheen's point
14 to Mr. Botill on data quality. There was a slide I
15 believe it was in Mr. Wang's report that talked about --
16 he sort of gave an example of what life cycle looks like
17 going all the way back to like uranium mining and the
18 utility bill and I think a province in China looks like.
19 Board Scope 3 popped up in -- on -- in that slide
20 presentation. And, I was wondering how, presuming the
21 Governor ends up signing our legislation, I can't help but
22 bring it up in this context, but it's designed as a tool
23 to not just have to go through fuel suppliers and ask them
24 to bring life cycle emissions and then trust on sort of
25 jurisdictional level data coming in, but on the bios, the

1 corporate shippers, the asset holders, and others to have
2 at least more rigor, more enforceable kind of framework to
3 reach deeper into the supply chain.

4 So I was just wondering how -- if any thought has
5 gone into matching a more full scope of data and how they
6 integrate, if we have those new data streams coming in
7 from not just the fuel pathways themselves, right, but
8 from Amazon, can we use that to include data quality? I
9 know the Governor is on his way to China, so -- and we're
10 very curious about those kinds of jurisdictions and what
11 happens there. We want to trust, but we need to verify.
12 So I'm just wondering how you sort of anticipate dealing
13 with that jurisdictional risk, which certainly impacts
14 from everything from ILUC factors in a tropical forest
15 biofuels into say hydrogen -- green hydrogen made in
16 China, put on a ship and brought into the Port of LA. So
17 thoughts on that, Scope 3 piece and whether we have the --
18 if there's more to be done to bolster that data set that
19 will improve outcomes.

20 DR. MICHAEL WANG: Yeah. So let me address this
21 question before the staff kind of gets into the details.
22 So LCA value is global for the whole supply chain of a
23 specific technology. As you elaborate, fuels could
24 produce the upside of U.S., upside of California, but it
25 is part of the LCA system battery.

1 Certain activities we call background. For
2 example, when we ship crude from different part of the
3 world to California refinery into ocean tankers part of
4 system battery. But ocean tanker emissions related to
5 ocean tanker, we call the background data. So that's
6 where we spend significant amount of effort to think up
7 size of ocean tanker, what type of fuels used in ocean
8 taker to configure GREET to cover ocean tanker-related
9 emissions.

10 The foreground data is -- let's say if we get oil
11 to California refinery, the California refinery will
12 operate to the facility generate the diesel gasoline and
13 other fuels. So this is the facilities under the
14 producer's control we call foreground. The foreground
15 data is submitted to CARB for LCFS certification. So
16 that's where ARB spend significant amount of effort to
17 collect facility-related foreground data. And GREET built
18 significant amount of background data. Of course, the
19 CARB staff establish the Argonne GREET background data to
20 reflect California background data. So the data can be
21 separated into these two DNR groups.

22 If clean hydrogen is produced in China, then
23 you're in Argonne's GREET. We're going to evaluate how
24 the GREET -- how the renewable hydrogen is produced in
25 China. We'll take that into account in the Argonne GREET

1 portion. And you may just see GREET as the same approach.

2 SENATOR STERN: I think that is the response.

3 Just keep going real quick. SRIA economic benefits
4 analysis, there was -- in the last iteration of the LCFS,
5 there was -- there was an outside study done at UC
6 Berkeley talking about these avoided costs of spending
7 dollars at the pump and what it does for local economies.
8 The stat was that every dollar not spent at the pump and
9 spent on say local goods and services made 16 times more
10 jobs in California than it would otherwise. In other
11 words, that dollar is going to -- \$0.99 of it goes
12 upstream, in a foreign country somewhere, and \$0.01 stays
13 locally, based on maybe the slurpee you bought otherwise.
14 And that there's this huge sort of economic benefit of
15 that avoided cost, that sort of flows out, those indirect
16 economic benefits.

17 I'm just wondering in doing your -- the analysis
18 both in the jobs front but also on the -- on consumer
19 prices and the economic benefits, I don't see in there an
20 update to that kind of math. Like I'm wondering if that
21 is still the right metric to be thinking about that
22 avoided cost, or if there's better newer data on that
23 front, or how -- how the -- yeah, how the economic
24 analysis underpinning this could be strengthened to kind
25 of account for, you know, when you're paying 2.50 at the

1 plug versus 6 bucks at the pump or 3 bucks at the plug
2 versus 6 bucks, right? So, that math, I don't see it in
3 the sort of overall jobs or economic analysis, but maybe
4 that's you all can point me to or maybe it's an area
5 you're going to keep going with. Anyway, I was hoping for
6 feedback on that. It's a David Roland-Holst 2012 study
7 that ran alongside the last LCFS.

8 ISD CHIEF BOTILL: Thanks, Senator Stern. I
9 appreciate that comment. And I will say that as part of
10 doing the Standardized Regulatory Impact Assessment, or
11 the SRIA, you have to meet specific requirements set from
12 Department of Finance and types of analysis that we do. I
13 think you maybe the point with respect to moving away from
14 fossil fuel to alternative fuels into other sources will
15 generate benefits that we will have a difficult time
16 confined in that way. It's not part of the Standardize
17 Regulatory Impact Assessment methodology. It's not
18 something that we include in that assessment.

19 We are able to put information in there with
20 respect to social cost of carbon for instance, the net
21 social benefit of reducing carbon emissions. But you know
22 the impacts that are articulated in that SRIA are, you
23 know, based off of more traditional economic modeling
24 tools that are out -- you know, you impose a cost. What
25 does that cost actually look like for the traditional kind

1 of economy as opposed to what are some of these other
2 benefits that could be seen.

3 SENATOR STERN: So fair to say thanks to folks
4 like me and those who write statutes, you're bound by
5 certain metrics. And so the strictures on the SRIA
6 analysis under State law almost make the jobs analysis
7 here underwhelming for the state than the other was. You
8 understate probably with the job creation benefits and the
9 economic benefits here necessarily because you're kind of
10 stuck with SRIA.

11 DEPUTY EXECUTIVE OFFICER SAHOTA: Senator Stern,
12 I think that's an accurate statement. We have to use
13 some very limited tools and limited analyses that
14 responsive in the SRIA statute. Are there other benefits
15 and other ways to look at the benefits of these regs and
16 getting off of fossil fuel combustion? Absolutely. But
17 because it was a very tight statute on what we're supposed
18 to put into the document, we stay within that scope.

19 SENATOR STERN: Understood. Last question, a
20 quick one, but maybe an important one, because it
21 underlies some of the tensions out there. The staff
22 report says emissions specifically on PM2.5 have gone down
23 and they are projected to go further down. But on that
24 front and on the last front that the OEHHA data -- I was
25 just looking at some OEHHA data saying the recent, in

1 hydrogen and in refining, that between 2012 and 2018
2 emissions have gone up. So can you just comment on that
3 discrepancy?

4 DEPUTY EXECUTIVE OFFICER SAHOTA: Sure. So when
5 you look at that historical data, you're looking at when
6 the economy was growing and we did see overall emissions
7 climbing during that time period in many sectors. The
8 OEHHA report that is referenced in the document is about a
9 forward-looking forward under a direction of the previous
10 administration on what are the benefits and impacts of
11 achieving the climate targets for the state of California.

12 In that more recent report, OEHHA looked at what
13 does it look like if you put out more advanced
14 zero-emission vehicles in light-, medium-, heavy-duty,
15 when you have cleaner burning fuels in deployment. Based
16 on that forward-looking projection, the largest
17 significant benefits are achieved in disadvantaged
18 communities, because they actually live closest to many of
19 those sources, and freeways, and roadways.

20 CHAIR RANDOLPH: Okay. Who is next?

21 Dr. Balmes.

22 BOARD MEMBER BALMES: Thank you, Chair Randolph.
23 And I had to miss the end of that presentation and the
24 first few questions from my fellow Board members. So if
25 you already answered this question, let me know and I can

1 catch up.

2 So maybe Dr. Shaheen actually had asked this, but
3 the -- I'm concerned about the extension maybe thinking
4 about in terms of the light-duty EVs and the LCFS Program.

5 Okay. Yeah. Well, I'll use -- you can follow
6 up. Because right now, I think almost every new EV car is
7 replacing a gas vehicle, but that's not going to be the
8 situation in the future. And I'm not sure how much -- how
9 important it is to continue to be supporting electric
10 vehicles purchased from the LCFS much beyond, you know,
11 2025 I think is when it's originally supposed to stop. So
12 I'm not -- I don't think an extension is necessarily well
13 placed. I'm not talking about infrastructure. I'm
14 talking about the vehicles. I mean, I got \$500 when I
15 bought my Kia EV6. I didn't really need that. And I
16 think a lot of people who get that don't really need it.

17 CHAIR RANDOLPH: To be clear, Dr. Balmes, you're
18 talking about the Clean Fuel Rewards Program.

19 BOARD MEMBER BALMES: Yes.

20 CHAIR RANDOLPH: Yeah. Okay. I just wanted to
21 make sure staff understood.

22 BOARD MEMBER BALMES: Yeah, that specific point.

23 As you were talking, I understand that you were
24 talking about extending that past 2025.

25 DEPUTY EXECUTIVE OFFICER SAHOTA: So the clean

1 fuels reward program is a statewide program that was
2 developed with all of the utilities using the base credits
3 for electrification -- residential electrification. And
4 it had a rebate on the hood to help you in the moment make
5 a decision and hopefully choose an EV. We have other
6 programs and other rebate programs that are now almost
7 exclusively focused on low-income households and helping
8 them get those vehicles.

9 The CFR, the rebate on the hood, is actually
10 right now paused, because there isn't sufficient funds to
11 actually run that on-the-hood incentive. The decision
12 before us is what if we continue to generate credits for
13 residential charging, which goes to the utilities right
14 now that's how we have it in the regulation. What other
15 use could we put that money towards? And so that is
16 something that we are evaluating stakeholders, we're
17 evaluating for utilities, and we would welcome any
18 thoughts an input from the Board on that as well.

19 CHAIR RANDOLPH: And to be clear, I mean, I think
20 what you are saying is you're interested in perhaps using
21 those credits for infrastructure but less interested in
22 using credits for light-duty vehicles given the current
23 state of the market.

24 BOARD MEMBER BALMES: Thank you, Chair Randolph.
25 That's exactly what I'm interested in. Okay.

1 BOARD MEMBER TAKVORIAN: Except for low-income
2 consumers.

3 BOARD MEMBER BALMES: Yes. I would be interested
4 in continuing to support an equity component of the
5 program. Yes. Thank you.

6 (Laughter).

7 BOARD MEMBER BALMES: Okay. And so then another
8 credit that I'm not sure needs to be continued is for
9 light-duty hydrogen vehicles. I think basically,
10 light-duty hydrogen vehicle, you know, haven't -- pretty
11 much a failure so far. I've heard -- I'm totally
12 supportive of hydrogen for medium- and heavy-duty
13 vehicles. But I don't even know why we should bother with
14 light-duty hydrogen vehicles anymore. I mean, I've heard
15 industry folks say that the light-duty support is needed
16 to make the light- -- or the medium- and heavy-duty market
17 stronger, but I don't necessarily buy that. So I just --
18 some comment Rajinder.

19 DEPUTY EXECUTIVE OFFICER SAHOTA: Sure. So to be
20 clear, the CFR, the Clean Fuel Reward, Program that is
21 currently on pause was exclusively about EVs

22 BOARD MEMBER BALMES: Right.

23 DEPUTY EXECUTIVE OFFICER SAHOTA: There's no
24 other part of the LCFS that supports light-duty hydrogen
25 vehicles. Do we support the infrastructure? We do,

1 because we do need that infrastructure in totality for all
2 the vehicles across the fleets, but I guess the question
3 is -- and also, there's very limited space for any
4 infrastructure for light-duty right now anyway.

5 BOARD MEMBER BALMES: Right.

6 DEPUTY EXECUTIVE OFFICER SAHOTA: It's capped
7 right now.

8 BOARD MEMBER BALMES: Yeah. That's -- thank,
9 Rajinder clarifying my thinking. What I really would like
10 to see is -- I don't think we should be actually building
11 any more light-duty hydrogen fueling facilities, because I
12 think it's -- you know, it's a failed effort and I think
13 we should put everything into medium- and heavy-duty
14 fueling -- hydrogen fueling.

15 CHAIR RANDOLPH: And I'll just note as a point of
16 clarification, you know, this -- we're talking about LCFS
17 and various programs --

18 BOARD MEMBER BALMES: Yes.

19 CHAIR RANDOLPH: -- that are supported by LCFS.
20 There's also lost of other --

21 BOARD MEMBER BALMES: Yes.

22 CHAIR RANDOLPH: -- State programs like Clean
23 Cars 4 All and other programs that are implemented in
24 different ways and are complementary. So I just want to
25 be clear that this is not like -- we're not fully

1 rethinking all of our vehicles and programs right now.

2 BOARD MEMBER BALMES: Right, LCFS.

3 CHAIR RANDOLPH: Okay. All right.

4 BOARD MEMBER BALMES: And then my last of my
5 three questions that I'm allowed, on the crop -- so I
6 appreciate the staff thinking about the negative impacts,
7 negative land use impacts of crop-based biofuels. And, in
8 particular, I come from Illinois and I actually -- when I
9 went to medical school, my roommate was the son of a small
10 farmer, who basically got pushed out of doing integrated
11 farming because corn was becoming a mono crop in his area
12 in Illinois. And I just really don't think we want to be
13 incentivizing more soy bean production especially at the
14 expense of other vegetation in this country or elsewhere.
15 So I appreciate this staff's concern about that.

16 Would another approach, aside from the
17 guardrails, which seems like it could be complicated be
18 just to increase the indirect land use number for various
19 crops? Is that -- I'm just asking.

20 DEPUTY EXECUTIVE OFFICER SAHOTA: No. That's a
21 fair question. I think if there's science and data that
22 could support that kind of change, we would want to pursue
23 it, because we are working within the confines of a very
24 technical model, so we'd want to make sure we did our due
25 diligence. We can certainly go back and look to see if

1 there's other data out there that can support that kind of
2 a switch.

3 BOARD MEMBER BALMES: Thanks, Rajinder. Those
4 are my three. I'll have more later.

5 CHAIR RANDOLPH: We will come back to you.
6 Board Member Takvorian.

7 BOARD MEMBER TAKVORIAN: Thank you. Thanks to
8 everyone who's here today. I really look forward to
9 hearing from you and appreciate everything that I've heard
10 from the stakeholders that I, too, have been meeting with
11 for what seems like quite a while. And thanks to the
12 staff for the great staff report and the multiple
13 briefings. I appreciate that.

14 I also wanted to particularly thank the EJAC, the
15 Environmental Justice Advisory Committee. This is the
16 first major issue that the permanent EJAC has worked on
17 since the adoption of the Scoping Plan and really again
18 appreciate Chair Randolph's leadership in ensuring that we
19 have a permanent EJAC. And I think their intensive work
20 on this measure, on this rule is really evidence of why
21 it's important that we -- that they are permanent and that
22 this is, as referenced by the staff, an important element
23 of the Scoping Plan. So it's quite appropriate that the
24 EJAC would be working on it.

25 The EJAC initiated the request I believe with Dr.

1 Wara at Stanford to analyze the EJ analysis. And you
2 referenced that you would be reviewing and analyzing that.
3 My first question is when will that be prepared?

4 ISD CHIEF BOTILL: So our plan right now is to
5 take some of the inputs that Dr. Wara and the EJAC worked
6 on together and include them in a second round analyses
7 that we put forward as part of the staff report and the
8 staff proposal for the regulation. So the question on
9 when is going to be later this year. The types of things
10 that we'll be looking at based off of what Dr. Wara and
11 the EJAC did include limitations on avoided methane
12 crediting, near-term limitations, as well as limits on
13 crop-based biofuels as well. Those are some of the key
14 considerations that they had in their report.

15 BOARD MEMBER TAKVORIAN: So will that be an
16 alternative of the -- a clear alternative that's
17 considered in the ISOR?

18 ISD CHIEF BOTILL: Yes.

19 BOARD MEMBER TAKVORIAN: Okay. Great. Thank
20 you.

21 My second question has to do with not LCFS, but
22 what I think is a very related activity, and that is what
23 I believe is required by SB 1383 to meaningfully regulate
24 manure methane by 2024. So I would love to hear -- I have
25 questions -- deeper questions about the advisability of

1 and the ability of -- that we have to move forward with
2 LCFS without being clear on how that direct regulation
3 will occur. So I'd like to know what the status of that
4 is and how these two rules and programs travel together.

5 ISD CHIEF BOTILL: Great. Thanks for the
6 question. So as you pointed out, there is a companion
7 piece of legislation, SB 1383 that directs the State --
8 mandates the State reduce methane emissions 40 percent by
9 2030. And the statute also outlines a clear strategy by
10 which the State is to pursue incentives for methane
11 reductions before adopting a regulation. And it gives the
12 Air Resources Board the ability to implement a regulation
13 no sooner than 2024 for dairy manure methane reductions.

14 The pieces that are included in SB 1383 that we
15 need to look at include assessing progress towards the
16 2030 target and developing a report that shows progress to
17 the 2030 target how we're doing. We released that report
18 in 2022. And the statute also requires that if you were
19 to adopt any regulation on manure methane, that it meets a
20 number of criteria, including things around cost
21 effectiveness, technology feasibility, and protection from
22 leakage, which is, you know, if we were to regulate and
23 emissions were to -- and dairy production were to move
24 outside of the state.

25 So what we've been doing, we've been working with

1 various stakeholders. We did a full day workshop in --
2 just last year on the progress towards the targets, and,
3 you know, this was an outcome of the report that we had
4 worked on, as well as the various different manure and
5 enteric methane reduction strategies that could be pursued
6 as part of achieving the 2030 target.

7 We also looked at this in the Scoping Plan and
8 the analysis that we had done in the Scoping Plan showed
9 that we were making progress. The incentive-based
10 structure that we've deployed thus far both, you know,
11 through deployment of digesters in California as well as
12 what we call these alternative manure management practices
13 that have been funded by Department of Food and Ag have
14 resulted in progress towards the 2030 target, but that
15 more reductions, more projects would ultimately be
16 necessary and would also need to see the development of
17 what's called enteric strategy, so reductions that don't
18 come from the manure side, but also need to be realized
19 before 2030 to hit this 2030 target.

20 So we're continuing to monitor progress in the
21 sector. A recent release of funding from USDA, in
22 particular, on inflation reduction money for climate-smart
23 ag is a good thing. We hope it will result in more
24 alternative manure management practices and other methane
25 reduction strategies here in California. And funding that

1 the Legislature recently gave to the Department of Food
2 and Ag to deploy these enteric solutions and pilot them
3 here is also a positive development. Seeing these
4 multiple strategies come forward is ultimately what we
5 need for achieving the 2030 target.

6 BOARD MEMBER TAKVORIAN: So I think I heard that
7 there's multiple strategies and -- but I didn't hear
8 whether there was a direct emission reduction rule that
9 would be coming forward in 2024.

10 EXECUTIVE OFFICER CLIFF: So as Matt mentioned,
11 there are several things that have to occur before any
12 rule could come forward.

13 BOARD MEMBER TAKVORIAN: Yep.

14 EXECUTIVE OFFICER CLIFF: We don't currently have
15 a rule planned for 2024. That's correct.

16 BOARD MEMBER TAKVORIAN: Okay.

17 I'll have more today on that, but I think I will
18 stop there. Thank you.

19 CHAIR RANDOLPH: Okay. Any new questioners
20 before I circle back to our other questioners?

21 Board Member Guerra.

22 BOARD MEMBER GUERRA: Yeah. Thank you. I
23 apologize if I don't articulate this well, because the
24 recent conversation just sparked a question here. And
25 it is blended in with the last hearing we had, because

1 there are many stakeholders who have said that the LCFS
2 creates kind of a perverse incentive here, but at least
3 from what I'm hearing from staff, at least when it deals
4 with digesters and biomethane is that actually we've made
5 some significant progress and we're moving in that
6 direction. So could you please maybe explain or respond
7 to that -- those concerns that we've heard over now the
8 last two hearings or at least we have been receiving some
9 information on.

10 DEPUTY EXECUTIVE OFFICER SAHOTA: Yes, Board
11 Member Guerra, happy to start that and then have Matt or
12 Cheryl add in. The concern specifically is on the
13 proposed incentives that the existence of the LCFS Program
14 is resulting in increases in herd sizes and then
15 associated potential impacts for air and water. And as
16 Division Chief Botill said, there was an all-day workshop
17 on this topic. They looked at the trends for dairies in
18 California, outside of California, and trends that went
19 back several decades. That's important because the LCFS
20 did not start including digesters and landfills and
21 dairies until the last few years. So the long-term trend
22 in the industry has been consolidation. As with many
23 sectors out there, consolidation is about efficiency. And
24 so that's a pattern that we see over and over again.

25 The question was then has the LCFS Program

1 implementation of that program in some way contributed to
2 that consolidation? There is no data that supports that
3 to be the case. There was an earlier evaluation by a
4 researcher at UC Davis and he had substantial data, and
5 trend lines, and information posted to one of the websites
6 at UC Davis that looks at this very question. And again,
7 there was no data that supported that the implementation
8 of the LCFS program was contributing to increases in herd
9 size in California or anywhere else.

10 And so we've heard that there are ongoing
11 concerns about the role of this program relative to that
12 other concern on herd side increases. We've been asking
13 for data since I think 2021, 2022 for that data. We have
14 not received any data to counter -- to contradict what the
15 UC Davis evaluation has. And we continue to look for
16 other data out there to help inform this and keep
17 monitoring and tracking for this concern. If there is
18 data out there, we would welcome stakeholders to provide
19 it to us directly.

20 BOARD MEMBER GUERRA: Thank you, Chair. I think
21 that -- that's helpful, because I -- we do need to
22 function on as much clear and accurate data. And the
23 other concern that just popped up here in this, and maybe
24 I'll rephrase it after the public comment, because is if
25 the staff is considering or reducing impacts to the

1 digesters or the credits, then I -- then I want -- if --
2 it seems to me that we're -- that the federal government
3 is investing in this and there's an opportunity for us,
4 but if we're reducing that investment, then what kind of
5 signals do we -- are we sending to the digesters? Let me
6 also put that with the point that the local air districts
7 have a responsibility of making sure that they are
8 responding to any immediate air quality impacts. And if
9 there's a role that CARB has on with the air districts,
10 then that's an -- on forcing those responses, that's a
11 different one. But I want to make should that, you know,
12 we align -- that at least we get some clarity on this --
13 on these two points.

14 DEPUTY EXECUTIVE OFFICER SAHOTA: That is -- that
15 is pretty accurate and correct. The air districts are the
16 primary permitters for the digester technology for air
17 emissions. But because these concerns persist about air
18 quality impacts, there is research that is going to be
19 done jointly between ARB and districts at dairies to look
20 for some of the harmful pollutants that residents have
21 raised concerns about. So we continue to work with the
22 districts to look at other opportunities and other
23 concerns being raised outside those permitting concerns.

24 On the digester piece itself and the federal
25 dollars, yes, there's federal money coming in to help on

1 this. The Legislature has appropriated money directly to
2 digesters for capturing methane, because again it is a
3 super pollutant. It does have an outsized impact when it
4 comes to global warming over CO2. The technology for
5 handling this kind of an emission is digesters, whether we
6 do it through federal incentives, State standards, the
7 LCFS or direct regulation, what's going to happen to
8 control these emissions is digesters, because that is the
9 most readily available and comprehensive way to handle
10 these emissions.

11 BOARD MEMBER GUERRA: Thank you, Rajinder. Thank
12 you, Madam Chair. I'll wait till after the public
13 comment.

14 CHAIR RANDOLPH: Okay. Dr. Pacheco-Werner.

15 BOARD MEMBER PACHECO-WERNER: Yes. Thank you so
16 much, Chair. Thank staff.

17 I have a couple of questions here. The first one
18 on the carbon intensity. Could you talk to me a little
19 bit more about why the landfill gas value added is so
20 different with amendments than the -- than the dairy one.
21 And I'm looking at the Table 7 in the SRIA. And also, as
22 a follow-up question, what -- do you see opportunities to
23 right size the values to ensure that there are
24 proportional reductions since we know that methane -- that
25 that is also a large contributor to methane.

1 Thank you.

2 ISD TRANSPORTATION FUELS BRANCH CHIEF LASKOWSKI:

3 Hi. My name is Cheryl Laskowski. I'm the Chief
4 over the Low Carbon Ruel Standard Program. Happy to start
5 this. So the landfills are -- have a different CI score,
6 because they are regulated. They have a regulation in
7 place to capture some of the gas that's coming off of
8 them. And so we do not include any emissions that are
9 previously regulated as part of like the avoided methane
10 crediting, that the dairies are getting from their
11 digesters. So they are already regulated and required to
12 capture that methane.

13 BOARD MEMBER PACHECO-WERNER: Thank you. Okay.
14 So this also kind of -- I mean, I feel like this is sort
15 of looking forward and where we are today, because we are
16 signaling that we're going to be somewhat regulating that
17 avoided methane. How or when would that then apply in
18 changes to our regulations in the future then if we were
19 to do that for the dairies?

20 ISD CHIEF BOTILL: So this is -- this is Matt.
21 I'll take this one. Okay. I think the important
22 distinction here is that landfills, many of them in
23 California, the largest landfills, have gas capture
24 systems. And those were implemented as part of an early
25 action measure under AB 32. So well before LCFS came

1 along, we had implemented a regulation to require the
2 landfill operators to install these gas capture systems,
3 which means that roughly three-quarters of the methane
4 emissions that are coming off of these landfills were
5 already being collected and either used on-site for
6 on-site electricity or in certain situations used for
7 transportation fuels.

8 So the distinction with the dairies is that there
9 is no existing alternative for methane capture on those
10 dairies. Prior to the LCFS, the State strategy had been
11 direct incentives to pay for additional digesters. When
12 the LCFS came along, it provided an additional incentive
13 for digester developers to build digesters on the dairies,
14 capture methane that was coming off of an uncovered lagoon
15 that was essentially emitted into the atmosphere. There
16 wasn't an existing control that was already capturing a
17 portion of that methane.

18 BOARD MEMBER PACHECO-WERNER: Thank you.

19 CHAIR RANDOLPH: Can I follow up on that really
20 quickly?

21 BOARD MEMBER PACHECO-WERNER: Go ahead.

22 CHAIR RANDOLPH: This is just kind of a program
23 operational question, which is once a pathway is approved,
24 is that -- that pathway gets credited in the amount of the
25 approved pathway for a period of time? Does that change?

1 How does -- if you could just walk through how that works.

2 ISD TRANSPORTATION FUELS BRANCH CHIEF LASKOWSKI:

3 Yeah, so I could take that. So a pathway
4 application gets reviewed by staff. And once it's
5 certified, it's able to be used to report data into the
6 program and they can generate credits in that way. If
7 something major in that fuel production process changes,
8 the pathway holder is required to resubmit their
9 application and we would re-review that data to make sure
10 that they have an accurate CI score. If something else
11 changes like as a part of our regulation, we're looking at
12 updating the CA-GREET Model, and that will have updated
13 emission factors. And so the pathways will go through a
14 recertification to reflect that better data and
15 information.

16 And so then they will have a process by which
17 they will get those pathways recertified and they'll have
18 a new CI score, and then be able to use that going
19 forward.

20 CHAIR RANDOLPH: Okay. Thank you. That's
21 helpful. Okay. Sorry. Dr. Pacheco-Werner, I interrupted
22 you.

23 BOARD MEMBER PACHECO-WERNER: You're totally
24 fine. No, that was a helpful clarification. So just to
25 see if I got this right, so based on the controls we

1 already have at landfills and then what we do with LCFS,
2 we are on track to create or produce proportional
3 reductions in methane between the landfills and the
4 dairies?

5 ISD CHIEF BOTILL: That's a doozy of a question.
6 So the requirements to achieve the 40 percent reduction
7 under SB 1383 by 2030 apply to methane across the board
8 that includes methane that comes from our base sector, not
9 just the dairies, but also from organic waste that's
10 deposited in landfills. Much of the methane emissions
11 that come from the landfill sector are being addressed in
12 essentially two ways, the existing landfills with the gas
13 capture systems to reduce fugitive emissions coming off of
14 landfills is one. And then the second is through
15 diversion of organic waste away from landfills to keep it
16 from generating the methane emissions in the first place.

17 That's an area that CalRecycle has been working
18 on very hard. They have some regulations here. Many of
19 us have probably experienced the food waste collection
20 programs that are being spun up over the last couple of
21 years. It is still very much a work in progress. They
22 have a statutory target of removing organic waste at 75
23 percent by 2025, I believe. And that is a critical
24 strategy to reducing methane emissions from both organic
25 waste sector from the waste sector.

1 So we need that strategy. It needs to be
2 successful in order to us to get to the 2030 target. We
3 also need the dairy and livestock methane emission
4 reductions in order to get to that 2030 target as well.

5 BOARD MEMBER PACHECO-WERNER: Thank you. And
6 just -- if I could just have one more quick on the -- on
7 life cycle analysis for -- I don't know if our guest
8 speaker is still here, but I wanted to get a sense in
9 terms of when you talked about the example of the biofuel
10 life cycle analysis on the activities, you talked about
11 the energy inputs for farming and fertilizer. Can you --
12 can you describe or define like what are the outputs or
13 things that you're looking at within those two specific
14 components of the life cycle?

15 ISD CHIEF BOTILL: Do we know if Dr. Wang is
16 still on?

17 DR. MICHAEL WANG: Oh, I'm sorry. I double mute
18 myself. Yeah. So the -- yeah, the feedstock growth is a
19 significant stake for a biofuel LCA result is all the LCA
20 result showed. So for feedstock, specifically the
21 critical input, of course, fertilizer input, especially
22 for corn, because corn you're required significant amount
23 of nitrogen fertilizer. The diesel fuel use for farming
24 equipment, nitric acid used for corn, drying during
25 harvester season. All this critical input -- herbicide

1 and pesticide, they're all are a part of the input, and,
2 of course, generate emissions on farm. And, of course,
3 production of fertilizer has emissions in fertilizer and
4 that's part of LCA.

5 Also, the N2O emissions from the nitrogen in soil
6 is a significant source too. So that's part of the LCA.
7 So, you know altogether, feedstock cut almost half of the
8 corn ethanol greenhouse gas emissions, so they're all part
9 of the LCA. The output, of course, is the yield. So you
10 will have output as the yield. You'll have emissions from
11 all the inputs on-farm and off-farm.

12 BOARD MEMBER PACHECO-WERNER: For -- so for
13 the -- for cows, which are unique in this, are you taking
14 into account what they're eating too as part of this?

15 DR. MICHAEL WANG: For cow, cow is for milk
16 production. So, you know, we're not to take -- we're not
17 stealing milk or say we're doing biofuel LCA. So, you
18 know, that's -- you some -- you know, there are some
19 studies and we found that ourselves. The meat production
20 LCA, milk production LCA, that's where we take into
21 account different nutrition input for animal -- for
22 livestock crops, but, you know, that's not for biofuel,
23 that's for a different product.

24 BOARD MEMBER PACHECO-WERNER: Thank you so much,
25 Dr. Wang.

1 CHAIR RANDOLPH: Okay. Round two.

2 Dr. Shaheen.

3 BOARD MEMBER SHAHEEN: All right. So I'd like to
4 go back to the guardrails for crop-based fuels. And I
5 love a good case study. And so I know you've been doing
6 some hard work, team, on looking at case studies from
7 Europe. I was just curious, you know, with all of these
8 different strategies, have you seen actual data to support
9 them being successful? I'm just concerned because there's
10 so many different pathways. Are we going to be able to
11 capture them all?

12 ISD CHIEF BOTILL: I think that's a really good
13 question. And many of these other jurisdictions that are
14 looking at things, whether they be feedstock
15 sustainability criteria or credit or volume limitations
16 are just in the initial stages of rolling those things out
17 right now. So the question about are these going to be
18 successful and potentially avoiding specific impacts?
19 It's still a little unknown. And honestly, you know, what
20 we're talking about here are conflicts under national food
21 and cropping system where these commodities are traded
22 across multiple different platforms. And so being able to
23 do that exactly what the results of any individual policy
24 measure expect will be pretty challenging.

25 CHAIR RANDOLPH: Can I -- can I just follow up on

1 that really quickly, because I think -- I think one
2 important thing maybe you can cover at some point when we
3 get deeper into this guardrails question, and that may not
4 be until after the regulatory proposal, but, you know, one
5 thing that's important to note is that this program has
6 been amended several times over time and it will continue
7 to be amended. So as these different strategies get
8 developed in other jurisdictions, that might inform future
9 iteration. So we don't necessarily have to answer every
10 question sort of right away, but it's something to think
11 about as we're looking at different possibilities. Some
12 may be more developed than others and there may be an
13 opportunity to focus on the ones that are more developed.

14 DEPUTY EXECUTIVE OFFICER SAHOTA: So Chair
15 Randolph, I just wanted to add that this concept of
16 guardrails is not new to CARB regulations. We have
17 something similar already for biomass that's used for
18 energy and in terms of sustainable management and FCS
19 standards that are out there in the volunteer world. So
20 we're really pulling up some of the work that we did on
21 other energy regs for this purpose here.

22 The other thing that I think I want to make clear
23 is to date there is no data that shows there is an issue.
24 And so staff monitors what comes in. We have the data on
25 that. We're not seeing an issue. Again, this is to make

1 sure that we're being proactive to put guardrails to
2 protect against an issue that may come forward, but that
3 continued monitoring is going to be key for any future
4 updates as well.

5 BOARD MEMBER SHAHEEN: Thank you so much for the
6 clarification on that.

7 So I want to bring us to a different topic. In
8 fact, we spoke a little bit about that yesterday in the
9 staff briefing is around California leadership. So how do
10 we ensure that revisions to this policy are ones that can
11 be adopted by other states? I know during our briefing,
12 we talked about New Mexico, New York looking at this, but
13 they haven't gotten there yet. So just thoughts on how we
14 can ensure that it is replicable and adopted by other
15 locations.

16 DEPUTY EXECUTIVE OFFICER SAHOTA: That's a great
17 question, because climate change needs to be mitigated
18 everywhere, not just in California. We are seeing other
19 states that have adopted similar programs, such as Oregon
20 and Washington. We know that there's the Canadian Clean
21 Fuels Standard and we know that there is an opportunity to
22 help get standards similar to this -- not exactly like
23 this, because every jurisdiction is different, similar to
24 this in New Mexico and in New York. Those failed the last
25 time they tried to move those pieces of legislation

1 forward. And the challenge is is that California has all
2 this experience in this program on the books. It's been
3 on the books for over 14, 15 years here. And when we have
4 these conversations, it's on us to make sure we put the
5 data, the science the, facts out there, make sure that
6 we're relying on tools such as GREET, which is used very
7 widely by governments, not just in the U.S. but in other
8 parts of the world, so that there's confidence that the
9 science and data that underpins the design of these
10 programs can be carried forward in conversations in these
11 other jurisdictions.

12 Unfortunately, what we see is that some of the
13 incomplete information about our programs is carried
14 forward. And quite often, we may not be aware that those
15 conversations are happening in these other jurisdictions
16 and we're not able to help support and help provide data
17 and answers to respond to those assertions or claims. And
18 so part of this falls on us to make sure that as we are
19 aware of other jurisdictions moving forward with similar
20 programs, we are there to support, not advocate, but
21 support through science and data in a way that's helpful
22 to make sure the facts are out there about our program,
23 especially the benefits of our programs.

24 CHAIR RANDOLPH: I see Dr. Wang's hand up. Did
25 you want to respond to one of the questions?

1 DR. MICHAEL WANG: Yes. Yeah. I want to quickly
2 add to what Rajinder said. On the international front, we
3 know ICAO CORSIA program, the Canadian Clean Fuel Program,
4 and the Brazilian RenovaBio Program, they all four know
5 the California LCFS approach, which is different from the
6 EU's IED approach. The ongoing discussion of IMOs for
7 marine fuels for the LCFS is a cleaner approach.

8 So I felt that on the international front LCFS
9 already have impact for other national and international
10 for all the seminal approach capacity to you'll have lower
11 greenhouse gas fuels program. I just want to add on the
12 international front the impact LCFS already has.

13 CHAIR RANDOLPH: Thank you. Are you good?

14 One more.

15 BOARD MEMBER SHAHEEN: Yeah, I get one more on
16 this round. So I was curious -- enjoyed the briefing.
17 Would love to hear a little bit more your -- on your
18 thoughts around forklift credits, which I think have come
19 up before. You're smiling. We have a forklift expert.
20 Is that you, Cheryl?

21 ISD TRANSPORTATION FUELS BRANCH CHIEF LASKOWSKI:

22 Yeah. So the program has supported forklifts in
23 the past and they've gotten a number of incentive support.
24 We feel that with the data right now, the forklifts are
25 majority converting to electric. And we're also looking

1 at a Board level a zero-emission forklift regulation next
2 year or later this year. And so for those forklifts that
3 are largely transitioning already, we think it's time for
4 a reevaluation and a reassessment of those credits being
5 generated. Where we're seeing that there's still
6 difficulty in electrification, so those very heavy-duty
7 forklifts, staff are still considering continuing the same
8 kind of crediting for those forklifts, but that continue
9 to need support.

10 CHAIR RANDOLPH: Okay. Do we have anymore
11 clarifying questions before public comment?

12 Okay. Board Member Hurt.

13 BOARD MEMBER HURT: All right. I just have a
14 couple. So around the market, there's a real concern of
15 low credit pricing and the principle of the LCFS is
16 stimulating innovation and investment in clean renewable
17 energy. So we want to continue increasing the pace and
18 the ambition.

19 And so I'm wondering what we've learned from
20 those times when the credit price dropped dramatically and
21 how we're thinking about stimulating credit prices in the
22 LCFS Program today or not?

23 ISD TRANSPORTATION FUELS BRANCH CHIEF LASKOWSKI:

24 Thank you. Yes. So as Dillon said in the staff
25 presentation, we have seen overperformance in the program,

1 which is great, because we need to do more and do it
2 faster per the Scoping Plan to meet our broader climate
3 goals. So where we have the opportunity right now, we've
4 been evaluating how much we can increase the stringency of
5 our targets. So as Dillon showed the current trajectory
6 is a 20 percent CI reduction by 2030. And we think that
7 we can get to a 30 percent reduction by 2030, because
8 there are so many credits and -- coming into the market.
9 And so we also are proposing a provision that -- or we're
10 looking into a provision that we workshopped earlier this
11 year that if the market continues to overperform beyond
12 the expectations of staff, then there could be a mechanism
13 by which we advance the targets even further.

14 So we're going to set and establish a target per
15 year. But if we continue to see an overperformance,
16 there's an ability potentially to advance those CI
17 targets. So, for example, in 2030, we have a -- we might
18 be proposing a 30 percent CI reduction. If we do
19 something that includes an auto-adjustment mechanism based
20 on the market performance, we could potentially see a 34.5
21 percent reduction bowl in 2030.

22 And so we really want to show that we support the
23 program and investment long term. And that's one of the
24 reasons why we're -- staff are proposing to look out to
25 2045, because we want to send that long-term signal for

1 the major investments that we need in the program. And so
2 we know that we need to maintain that certainty in the
3 market to continue that investment opportunity.

4 BOARD MEMBER HURT: Thank you. And then
5 facilitating zero-emission public transit is extremely
6 important to me and I think to future of mobility. And so
7 I'm wondering -- it was said earlier about the Clean
8 Rewards Program and what are the things we'd like to see.
9 I would say how do we invest in zero public transit and
10 get folks to do that is top of mind. And I think those
11 are all my questions at this time.

12 CHAIR RANDOLPH: Okay. Any more clarifying
13 questions before public comment?

14 Senator Stern.

15 SENATOR STERN: Thank you very indulging one more
16 question. But I realize we haven't got into this, so I
17 thought it was important to ask, not just because of
18 everyone who's here today, but the -- one of the newest
19 elements of the program is the plane side of things and
20 jet fuels. So I wanted to ask about that sector. You
21 know, I am just going to say, I love that the Air Board
22 has reached into these sectors that for too long have sort
23 of just given the stiff arm to California and said your
24 rules don't apply to us, whether it's in trains, hopefully
25 in the future in ships, and now we're looking at planes.

1 I'm wondering about the scope of the proposal
2 itself though. The way I read it is that it would only
3 apply to certain flights and only intrastate flights. So
4 the Southwest flight I just took up from Burbank this
5 morning. But the fuel combusted in California that say is
6 combusted on the way to New York, but still, you know,
7 being burned right in the disadvantaged communities of Los
8 Angeles or wherever else they're coming from, that that's
9 somehow not going to be accounted for in the way the
10 proposal is designed. Does staff have an estimate of how
11 much -- proportionally how much fuel is that that sort of,
12 under the current proposal, might just slip by or find
13 it's way through a hole there?

14 And so intrastate versus -- intrastate flight
15 versus intrastate combusted fuel that might be part of an
16 interstate flight. In other words in trucking, in diesel,
17 we don't decide whether you're on an interstate or an
18 intrastate trip. There's diesel pathways, right? But a
19 jet, we have this sort of different design. And I was
20 hoping just to get a little clarity on that, because it --
21 I'm worried -- I'd love to know the number of how much
22 we're missing, if that is -- if I did get the description
23 right.

24 DEPUTY EXECUTIVE OFFICER SAHOTA: So Senator
25 Stern, I completely understand the question. The analogy

1 of the trucks was the appropriate one for making that
2 clear. What we're really looking at are the volumes of
3 fuel that are combusted in California for our inventory
4 for AB 32 and those are sitting at between about 300 to
5 400 million over the next few years. And so as we're
6 thinking about what to do with those volumes, and that's
7 regardless of if it's all consumed and combusted in state
8 or some of it leaves the state, it's really that volume
9 that's attributed to the California inventory. That's
10 really the scope we're looking at.

11 SENATOR STERN: So 340 to 400 million that's
12 gallons?

13 DEPUTY EXECUTIVE OFFICER SAHOTA: That's correct.

14 SENATOR STERN: Okay. So that's a -- that's
15 statewide how much jet fuel is being combusted in total by
16 trips that take off from California, but not only the
17 trips that also land in California?

18 DEPUTY EXECUTIVE OFFICER SAHOTA: Yeah. So it's
19 all the fuel that would be consumed over our airspace if
20 we had a funnel that would --

21 SENATOR STERN: So the fuel would be consumed
22 over our airspace on interstate flights.

23 DEPUTY EXECUTIVE OFFICER SAHOTA: That's right.

24 SENATOR STERN: So how much don't we -- aren't we
25 addressing? So you give me the 340 to 400, what isn't

1 being addressed in the rule then of those interstate?

2 DEPUTY EXECUTIVE OFFICER SAHOTA: So I think the
3 terminology is what's tripping us up here. It's
4 intrastate versus interstate. And I think what we're --
5 what should be clear is that we're talking about,
6 regardless of whether it's in-state and only remains
7 in-state or flies out the state of California, we're
8 talking about the fuel volume that is combusted within our
9 geographic borders independent of the location of where it
10 originates or where it lands.

11 SENATOR STERN: So we're not excluding fuel
12 combusted in California that might be otherwise on an
13 interstate left?

14 DEPUTY EXECUTIVE OFFICER SAHOTA: That's right.
15 That's right. If the plane leaves the state of
16 California, there's some portion that's burned in state,
17 we're capturing that in the number.

18 SENATOR STERN: Very helpful.

19 CHAIR RANDOLPH: Okay. Two more questions. Dr.
20 Pacheco-Werner is going to do one and Board Member
21 Takvorian is going to do one. Then we're going to do
22 public comment. Staff, I want you to keep your responses
23 succinct as possible.

24 Okay. Dr. Pacheco-Werner.

25 BOARD MEMBER PACHECO-WERNER: Thank you. You

1 talked a lot about medium- and heavy-duty hydrogen
2 infrastructure. And I'm wondering is there a distinction
3 to be made in terms of between medium- and heavy-duty,
4 when it comes to what OEMs are actually on track to
5 manufacture?

6 EXECUTIVE OFFICER CLIFF: So, Dr. Pacheco-Werner,
7 in terms of the use case, there may be some differences
8 between those. But in terms of how we're thinking about
9 medium- and heavy-duty when you sort of lump those
10 together, what's critical for thinking about that fueling
11 infrastructure is that it's necessary that it can be
12 within routes that would normally be taken by those types
13 of vehicles as well as that it can accommodate the fueling
14 for those types of vehicles. They're, you know, larger,
15 maybe have less ability to back up and so forth. So you
16 need pull-through spaces for fueling, unlike the
17 light-duty case where you can accommodate those in, you
18 know, more traditional parking lots and things like that.

19 But in terms of how we're -- how we think about
20 that, we sort of lump medium-duty and heavy-duty together
21 for the infrastructure purposes.

22 BOARD MEMBER PACHECO-WERNER: Thank you.

23 CHAIR RANDOLPH: Board Member Takvorian.

24 BOARD MEMBER TAKVORIAN: Thank you. So I wanted
25 to raise the question, which I'm sure we'll talk about

1 more in regards to avoided -- the avoided methane
2 crediting. And if I understand the staff's proposal, at
3 this point, that the avoided methane crediting would
4 continue for another 17 years. And the rationale -- but I
5 also heard that there was understanding of the need to
6 phase that out over that period of time. And the
7 rationale I heard was that if we were to phase it out
8 sooner than that, it would, to summarize, cost some
9 economic burden.

10 I want to understand that better, because it
11 seems that if we were to approve a timeline of 17 years,
12 that there would be many more, perhaps twice as many or
13 more companies that would be invested in the technology
14 and that the demands for economic security would be
15 increased at that point. So I'm concerned about the
16 responsibility that we have of sending a signal. I mean,
17 your -- the staff proposal is that it is not responsible
18 to send a signal for earlier transition, but I'm concerned
19 about the irresponsibility of sending that signal, sending
20 the signal that it -- that we want to continue that
21 crediting for another 17 years and increase the economic
22 dependence on this system.

23 So I would love to understand that better and I
24 know we've had this conversation before, but you're
25 looking like you're going to respond, Matt, so try it

1 again. It -- I think we're going to hear a lot about
2 this. It just doesn't make sense to me that some purely
3 electric systems would have a lower -- a higher carbon
4 intensity and -- than digesters. And we've talked about
5 that and we've talked about the need to phase it out,
6 which seems like there's agreement there. It's just about
7 timing and how that would happen. So in keeping with the
8 Chair's request, perhaps we could talk about timing and
9 not all the other issues that are associated with it.

10 ISD CHIEF BOTILL: Happy too. So timing-wise,
11 what staff showed on the slide is the idea that we would
12 no longer accept new applications for avoided methane
13 crediting by 2030. And really the goal here is to make
14 sure that we send the appropriate signal to get the
15 methane reductions that we need for 2030 for the climate,
16 because it is such a powerful near-term global warming
17 pollutant.

18 So as of 2030, we would no longer accept any new
19 applications for new projects. The ones that do come in
20 by 2030 would be able get 10 years of crediting from, you
21 know, up until 2040. And we've also talked about, you
22 know, a provision that would allow for equal treatment
23 where all applications could potentially get to 2040 on
24 their avoided methane crediting. So no new projects
25 post-2030 for avoided methane crediting. And in ten years

1 of crediting period give that investments for the
2 developers to put the money into the projects before 2030
3 to build them and get the methane capture that we need.

4 BOARD MEMBER TAKVORIAN: So the finer point is
5 why -- what's the rationale for 2030 versus 2024 or 2025?

6 ISD CHIEF BOTILL: We know that it takes a number
7 of years to design, permit, and ultimately build these
8 projects. And then it also takes some time for our staff
9 to have operational data on the fuel production to certify
10 the pathway to be able to generate credits. That is a --
11 that is a multi-year process in California and elsewhere
12 to be able to have a pathway that's generating credits.
13 And so we wanted to make sure that there was the
14 appropriate time to be able to build those projects -- to
15 design, permit, and build those projects, get them
16 certified under our program, and start generating credits.

17 EXECUTIVE OFFICER CLIFF: I'll also note that the
18 1383 target is for 2030, so staff is factoring that in as
19 one of the ways that helps achieve the targets for methane
20 reductions under 1383.

21 BOARD MEMBER TAKVORIAN: Sorry, at the risk of --
22 but I'll just say, yeah, I get it in terms of the targets.
23 I am very concerned in terms of the impact on human health
24 and I'm -- and our impacts on not incentivizing other
25 methodologies as much as we can, so I -- it's a

1 conversation for --

2 CHAIR RANDOLPH: (Inaudible).

3 BOARD MEMBER TAKVORIAN: We'll have time, yeah,
4 uh-huh. Thank you.

5 CHAIR RANDOLPH: Yes, we can -- we can dive in
6 deeper this afternoon.

7 Okay. So I think we need to now move to public
8 comment. I think we are going to do public comment until
9 roughly 12:30, take a lunch break, and then come back and
10 finish public comment for the duration of the afternoon.
11 We have well over 100 commenters, both in person and
12 online, so folks should settle in.

13 I will turn it over to the clerks. Oh, and we
14 have two minutes for public comment for each commenter.
15 So I will turn it over to the clerk.

16 BOARD CLERK MOORE: Okay. Thank you, Chair
17 Randolph. As you mentioned earlier, I will call in-person
18 commenters first and then we will hear from those who have
19 raised their hand in Zoom. We have 109 commenters who
20 have turned in request-to-speak cards and another 56 with
21 their hands raised in Zoom for a total of 165 commenters.
22 We'll be showing a list of the next several commenters on
23 the screen, so you can be prepared to come to the podium.
24 The public sign-up closure will at 12:11. Apologize in
25 advance if I mispronounce your name.

1 The first five commenters in person will be Asher
2 Goldman, Miles Heller, Todd Campbell, Mikayla Elder, and
3 Casey Coward.

4 Asher Goldman.

5 ASHER GOLDMAN: Hello and thank you to members of
6 the Board, Chair Randolph and CARB staff. And thank you
7 for all the hard work you've done to create the LCFS
8 Program and for the opportunity to help comment today to
9 help shape the future of it. I'm Asher Goldman a Vice
10 President Generate Capital. We're a California based
11 investor, owner, and operator of climate infrastructure
12 solutions really across the spectrum of what that can
13 mean.

14 We help to create the repeatable bankable
15 business models that allow for private capital to move
16 into this space and support deployment at scale of these
17 solutions. We work with project developers, startups,
18 corporations, and communities to bring down the cost of
19 financing and to implement the low-carbon projects that we
20 know we need to make happen.

21 We allow them to be accessible to a diverse set
22 of stakeholders within that. To this end, the Low Carbon
23 Fuel Standard has been vital in enabling Generate to
24 deploy hundreds of millions of dollars into sustainable
25 infrastructure across these technology categories,

1 including electrification, hydrogen, and RNG. In order to
2 continue the climate success story that that has -- that
3 that LCFS has been, we need to listen to what the market
4 has clearly been saying. Pricing has fallen 70 percent
5 from its all-time high. The current carbon intensity
6 targets are clearly insufficient.

7 And we should also listen to what the market has
8 been saying in the weeks since the SRIA was announced
9 where pricing has fallen since then, indicating that the
10 market is also saying that the goals proposed within the
11 SRIA are also insufficient.

12 Beyond the carbon intensity targets, we are
13 concerned about the chilling effect that CARB proposed
14 abandonment of technology neutrality, which has been a
15 core tenet of the program, will have on future investment
16 in climate solutions. Eliminating crediting for certain
17 product categories will mean reduced investment across all
18 product categories. If you decide, for example, that RNG
19 is not the right kind of emissions reduction, then I, and
20 others like me, are just no longer going to have --

21 BOARD CLERK MOORE: That concludes your time.

22 ASHER GOLDMAN: Thank you.

23 BOARD CLERK MOORE: Thank you.

24 Miles Heller.

25 MILES HELLER: Good morning, Chair Randolph and

1 Board members. Miles Heller with Air Products, the
2 largest producer of hydrogen in California, nationally and
3 globally, producing hydrogen for 60 years, including
4 hydrogen in transportation for over 30 years including in
5 California.

6 We really appreciate staff's outreach and
7 thoughtful discussion of regulatory concepts throughout
8 the workshop process. Air Products is very supportive of
9 the LCFS, which has become one of the world's most
10 impactful decarbonization policies. In fact, the program
11 has been so successful that it has incentivized
12 substantial quantities of low-carbon fuel exceeding the
13 ambitions set in the last substantive rulemaking,
14 including reducing by one half the amount of petroleum
15 diesel used.

16 It is now time for ambition to be raised and lead
17 the market to further reductions. We strongly support an
18 increase in stringency and initial step down of at least
19 five percent as proposed by staff effective as soon as
20 possible. Reduction target in 2030 of at least 30 percent
21 is recommended by staff in development of an
22 auto-acceleration mechanism, an important complement to
23 the existing price sealing. Without a strong step down
24 and strengthened year-over-year stringency, the growing
25 bank of credits will impede clean fuel use in California,

1 a lost opportunity for significant reductions in GHG and
2 other pollutants. We appreciate several improvements that
3 CARB is making to the program that recognize the important
4 role for hydrogen in the transportation sector, including
5 a simplified hydrogen carbon intensity calculator,
6 hydrogen refueling infrastructure crediting, support to
7 medium- and heavy-duty zero-emission vehicle market, and
8 tracking when hydrogen of varying carbon intensities, is
9 blended in pipelines.

10 We intend to continue to work closely with staff
11 on some of the improvements to the last item with respect
12 to carbon tracking. And we also support the inclusion of
13 interstate jet as an obligated fuel to further program
14 reductions. Thanks for allowing me to make these comments
15 and happy to answer any questions.

16 BOARD CLERK MOORE: Thank you for your comment.

17 The next commenter is Todd Campbell.

18 TODD CAMPBELL: Good morning, Madam Chair and
19 members of the Board. Todd Campbell here representing
20 Clean Energy and I would like to thank you for the
21 opportunity to speak on the LCFS update.

22 We encourage the Board to adopt an ambitious 2030
23 carbon intensity target like Alternative 2, to ensure that
24 California meets its carbon neutrality goals by 2045.
25 Setting a more ambitious target is in line with the

1 Governor's climate policies and sends the right market
2 signals to producers who need to invest in projects that
3 support carbon neu -- a carbon neutral California.

4 On book and claim, we appreciate that staff was
5 not prescriptive in the SRIA, so that we can continue the
6 discussion. Clean Energy would like to encourage the
7 Board and staff to allow producers who construct projects
8 up until 2035 to continue their use of this delivery
9 option. This would also give us the necessary time to
10 study how a producer can meet a physical flow requirement
11 of biogas and avoid creating otherwise stranded assets
12 built by companies who make significant capital
13 investments to support the standard.

14 Because the dairy digester investments are
15 one-year projects, Clean Energy would ask that CARB
16 maintain the avoided methane credit for -- constructed up
17 to 2035 and allow for a one-time 10-year extension that
18 would sunset in 2045. We would, however, discourage
19 applying any limitation to hydrogen electric pathways as
20 RNG is an agnostic fuel that supports California's
21 transition to zero.

22 Finally, the LCFS is designed to drive
23 California's transportation sector to zero. Attempts to
24 frame RNG as exclusively a combustion-only fuel are not
25 supported by the science.

1 In summary, the LCFS is a nation-leading policy
2 that decarbonizes transportation and puts us on a pathway
3 towards zero-emissions. It encourages the private
4 investment required to fully implement California's
5 Scoping Plan, as California's climate goals heavily depend
6 on public-private partnerships and it builds the projects
7 necessary to achieve SB 1383 goals and supports the
8 Governor's international agreement with other nations
9 signed in New York last week.

10 Thank you.

11 BOARD CLERK MOORE: Thank you for your comment.

12 The commenter is Mikayla Elder.

13 MIKAYLA ELDER: Hello, Chair and members.

14 Mikayla Elder on behalf of the Electric Vehicle Charging
15 Association, or EVCA. We would like to extend our
16 appreciation to the Board for your dedication to advancing
17 sustainable transportation in California and shaping
18 policies that drive the adoption of EVs and contribute to
19 a greener future.

20 With the CEC's recent estimation of 83,000 public
21 DCC -- DC fast chargers needed to support ACC II and 15
22 million EVs in 2035, there's an existing need to support
23 the installation and deployment of fast charging stations
24 throughout our communities and makes this program so
25 important. We recognize the challenges and complexities

1 involved in making California a leader in zero-emission
2 transportation and appreciate your consideration of our
3 recommended amendments to LCFS regarding light-duty
4 vehicle infrastructure.

5 EVCA's recommendations are the following.

6 First, an extension of light-duty vehicle
7 capacity credits to 2035 for fast charging infrastructure
8 and hydrogen refueling infrastructure at a capped rate of
9 five percent of prior quarter deficits with an equitable
10 allocation of 2.5 percent each for FCI and HRI. We feel
11 that reducing the cap to 5.5 percent will not help us
12 achieve our rapidly approaching charging infrastructure
13 goals.

14 Additionally and critically important, FCI
15 credits offer funding for operation and maintenance of
16 those chargers, which play a pivotal role in enhancing
17 overall customer charger -- charging experience.
18 Maintaining the cap at 2.5 percent will maintain a
19 significant source of operations and maintenance funding
20 that helps maintain charging infrastructure and supports
21 improvements in reliability for those stations.

22 Second, we recommend no geographic limits on
23 credits to allow for flexibility in installations and
24 facilitate rapid deployment of DCFCs.

25 And lastly, maintain the current FCI program

1 through 2025 with flexibility and site capacity based on
2 megawatts and exceptions to that cap.

3 We believe implementation of these recommendation
4 will contribute to California's clean transportation
5 objectives. Thank you.

6 BOARD CLERK MOORE: Thank you for your comment
7 Our next commenter is Casey Coward.

8 CASEY COWARD: Hey, good morning. Airport
9 workers from across the state are here today to ask this
10 Board to finally end the exemption that commercial
11 airlines receive for their polluting fossil fuels and Low
12 Carbon Fuel Standard. Front-line communities and workers
13 at the airports are the ones most harmed by this
14 industry's reliance on fossil fuels and we're nowhere
15 close to being on track to reckoning with the health and
16 climate impacts of aviation emissions. This industry is
17 not doing the right thing on its own.

18 Rather than push to truly sustainable
19 technologies, the airlines instead turn their profits
20 towards suing over and lobbying against things like
21 livable wages and health care for subcontracted low-wage
22 workers. Their operations contribute to serious health
23 problems for these workers in their communities and the
24 airlines then spend their resources undermining the very
25 tools these people need to cope with those health

1 outcomes.

2 For years now, SAF has been a credit generating
3 activity in the LCFS, while conventional jet fuel does not
4 produce deficits. We're still decades away from
5 zero-emission and commercial aviation. So much of the
6 focus has been on SAF as a near-term fix. The issue is
7 SAF itself is decades away from major industry adoption,
8 where still some SAF feedstocks like energy and food crops
9 raise significant sustainability concerns, and in some
10 cases don't even achieve substantial reductions in life
11 cycle emissions.

12 We need to address this issue at both ends.
13 First, bring the fossil jet fuels into the LCFS as a
14 deficit generator. CARB seems to be moving forward with
15 that for intrastate. That's encouraging, but know that
16 that only covers about six percent of the state's aviation
17 fuel. It's only intrastate that's in the statewide
18 inventory right now. A path towards addressing
19 California's share of the interstate international flights
20 will also be necessary in time.

21 Second, this needs to be paired with measures
22 aimed at ensuring that the SAF being credited does not
23 bring with it different kinds of harms. A cap on
24 local-based feedstock and a strong framework for factoring
25 in sustainability of SAF feedstock into the crediting

1 wouldn't -- would be called for. Progress for airport
2 basin communities should not come at the expense of
3 front-line, rural, or refinery communities. Strong
4 guardrails are going to be vital here.

5 A sustainable transition in aviation is an issue
6 of environmental justice and equity for flight path
7 communities and workers with stakes from many others
8 throughout the state. We're looking forward to
9 collaborating on pollution --

10 BOARD CLERK MOORE: Thank you.

11 The next commenter is Mary Solecki. And then we
12 will hear from --

13 CHAIR RANDOLPH: I'm sorry. I'm going to ask the
14 audience, if you want to express support for a speaker to
15 go ahead and the ASL response and that way we can moving,
16 so we can both hear your support and continue having
17 commenters be able to speak.

18 MARY SOLECKI: Good morning, Chair and members of
19 the Board. My name is Mary Solecki. I'm here today on
20 behalf of World Energy. World Energy is committed to a
21 clean energy future and providing renewable fuel
22 solutions, like sustainable aviation fuel that's already
23 in 80 percent reduction from its fossil fuel counterpart
24 and green hydrogen of the future.

25 World Energy is enthusiastic to support the LCFS

1 because it provides that investment signal for continuous
2 improvement. And that's exactly what World Energy is
3 doing is continuously taking its investment and looking
4 towards the future of how can we have better and better
5 replacements for fossil fuels.

6 We want to encourage the Board to look beyond the
7 30 percent at 2030, because we are looking at that market
8 price and thinking about how we can invest and have
9 greater and greater market signals. We also want to
10 support the staff proposal for an acceleration mechanism
11 as an important bookend for the bad investment.

12 That concludes my remarks and thank you for your
13 time.

14 BOARD CLERK MOORE: Thank you.

15 Our next commenter is Katherine Lee. After
16 Katherine Lee, we will hear from Pete Vander Poel from
17 Tulare County. So if Pete's in the room, please come to
18 the front. You can have a seat in the front row.

19 Katherine, thank you.

20 KATHERINE LEE: Hi, everyone. My name is
21 Katherine Lee and I'm a youth organizer who drove here
22 today this morning from Richmond, California. And
23 Richmond California is my hometown, but it's also home to
24 one of the biggest refineries in California, which is the
25 Chevron refinery. And I remember just four days after my

1 14th birthday seeing just how scary and unsafe Chevron can
2 be when it exploded right in our backyards. And there
3 were clouds of black smoke in the air and no one knew what
4 to do except close their windows and doors. And I was
5 very, very scared for my little sister who was just one
6 year's old at the time already struggling with asthma.

7 And since then, there's been nearly daily
8 burnings of chemicals and an oil spill in our water where
9 people go swimming and fishing. And now the State of
10 California is suggesting that we invest more of our State
11 dollars into dirty fuels in the form of hydrogen. The
12 majority of hydrogen is made at refineries with fossil gas
13 steam methane hydrogen. Not only is it expensive and
14 dangerous, but it's also doubling down on pollution in our
15 backyards. And BAAQMD's flaring data shows that it
16 doubled between 2018 to 2019 with the start of the added
17 hydrogen plant.

18 California's own timelines tell us that we will
19 need fewer refineries as we continue to build electric
20 cars on the road. So why would you choose this moment now
21 to invest in fossil fuel hydrogen? We can and must plan
22 for refinery phasedown that protects workers, community
23 members, and the environment. And we need clean renewable
24 energy not dirty refinery hydrogen and other expensive
25 polluting tactics.

1 We're counting on CARB Board members today to
2 make the right decision. We can and must plan for
3 refinery phaseout instead.

4 Thank you.

5 BOARD CLERK MOORE: Thank you for your comment.

6 Pete Vander Poel.

7 PETE VANDER POEL: Good morning, CARB. Thank you
8 very much for the opportunity to come here and comment on
9 the LCFS. I'm Peter Vander Poel, a Tulare County
10 Supervisor. I represent the largest dairy county really
11 in California and in the United States of America. We
12 continue about 300 of the 1,200 dairies that exist in
13 California, one of which I was born and raised on, and now
14 I do serve in the capacity as a -- as a County Supervisor.
15 I'm very proud of that background. I'm very proud of the
16 dairy industry and how they have advanced with more and
17 more stringent environmental standards.

18 California not only leads this country, but it
19 leads the world in reducing the environmental impact of
20 agriculture and of dairy farms. In Tulare County, we have
21 seen the number of dairy facilities not grow, but shrink.
22 We have seen the number of dairy cattle over the last 10
23 years shrink by over 35,000 animal units. We have seen
24 the number of dairy digesters in partnership through the
25 LCFS grow. We currently have 40 operational digesters,

1 methane digesters, in Tulare County, and we have 12 that
2 are permitted and being constructed. So they are approved
3 and ready to get connected.

4 So these are great projects and they show that
5 this program works. It's effective. We have actually
6 reduced the CO2 equivalent in methane gas emissions of
7 close to 850,000 metric tons. This is a significant
8 reduction and one of the only ways that a super pollutant
9 in methane gas can actually be captured and converted into
10 something productive. So this program is working. We
11 encourage CARB to stay the course and to continue to
12 incentivize and partner with the agricultural industry in
13 California, as well as the dairy industry not only in
14 Tulare County, but the State. This program is working and
15 we're having a significant impact in the betterment of
16 people's lives, not only the families on the dairy farm,
17 but residents within and around them.

18 Thank you.

19 BOARD CLERK MOORE: The next five commenters will
20 be Jenna Saefong, Richa Dahal, Jovan Houston, David
21 Goddard, Melvoy Vance Ewing, Jr.

22 Jenna

23 JENNA SAEFONG: Good morning. My name is Jenna
24 and I came here today from Richmond with the Asian Pacific
25 Environmental Network. I'm speaking today to express my

1 concerns with adding more hydrogen production at the
2 Chevron oil refinery located in Richmond.

3 Growing up close to the refinery, I felt unsafe
4 since the 2012 explosion. I was 11 years old watching my
5 parents run around the house to close all open doors and
6 windows. And I was told I couldn't go outside because the
7 air was unsafe. I didn't understand why this was
8 happening and was scared for my safety.

9 Chevron's explosion sent 15,000 people to the
10 hospital that day, some with series breathing problems,
11 respiratory issue, or worse. In 2018, Chevron began
12 making more dirty hydrogen, and as result, flaring at the
13 Richmond refinery has increased immensely. Flaring is
14 when the refinery burns off gas and other chemicals into
15 the air above our homes. Richmond residents already have
16 higher rates of asthma and cancer compared to the rest of
17 Contra Costa County. We don't more pollution.

18 As a Richmond resident, I worry for my family,
19 friends, neighbors and myself. Big oil companies know
20 their impact on Richmond residents, and day by day their
21 actions make it difficult to live. This is unacceptable.
22 I call on CARB to say no to dirty refinery hydrogen, stop
23 subsidizing big oil. As members of this Board, you can
24 cut the flow of dollars that support these massive
25 polluters.

1 We have a choice. We can invest today in a
2 different Richmond in California, one where kids play on
3 beaches free of diesel spills and breathe clean air, where
4 elders can take cheap transit to listen to music in the
5 parks and where people feel safe, strong, and healthy. I
6 believe that we can build a future beyond oil with quick
7 buses and trains, and reliable, cheap, and truly clean
8 cars. We need our State regulators to stand with people,
9 not corporations.

10 Thank you.

11 BOARD CLERK MOORE: Thank you.

12 Richa Dahal.

13 RICHA DAHAL: Hello. My name is Richa Dahal and
14 I'm with APEN. I've lived in the Richmond area for nearly
15 20 years after my family immigrated to the East Bay when I
16 was six years old. We didn't know about the refinery and
17 other polluters. We just wanted to be close to our family
18 and friends. Then my little brother developed severe
19 asthma. When the refinery exploded in 2012, they caused
20 additional nightmares for my family. Whenever I go
21 outside and see black smoke or flames above the refinery,
22 I know that Chevron is burning or flaring off chemicals
23 and putting us at risk again.

24 With ongoing flareups and the recent diesel
25 spill, we know that we're all one slip away from a real

1 disaster. California wants to invest in dirty fossil fuel
2 hydrogen made at the same refineries that fill our air and
3 water with smoke and diesel. I believe that the State can
4 and must commit to real climate solutions. Dirty hydrogen
5 is not the answer. From my firsthand experience, I know
6 there are better solutions, like rebate programs for
7 electric cars and cheap public transit.

8 Post-pandemic, we searched for an affordable
9 family car, but the prices were impossible. A car
10 salesman told my father and I about Clean Cars 4 All, a
11 rebate for low-income folks to trade in their older
12 vehicle for a new electric or hybrid vehicle. We got the
13 \$9,500 grant and shortly after, we found our way free
14 solar programs in our community. Seeing my dad drive
15 around town without needing to pay for gas, or turning on
16 the lights and knowing that part of the energy is from
17 solar has shown me that this clean energy is possible for
18 working class people.

19 I'm here on behalf of my Richmond community to
20 fight for our right to clean air and water. I've lived
21 with climate racism my whole life, but I've also seen that
22 we have real solutions and I refuse to accept more of the
23 same pollution when we have clean energy answers on the
24 table.

25 Thank you for your time.

1 BOARD CLERK MOORE: Thank you.

2 Jovan Houston.

3 JOVAN HOUSTON: Hello. My name is Jovan Houston.
4 I'm a proud executive Board member of SEIU USWW. I'm also
5 an airport worker. I'm here today to let you know about
6 the pollution that I breathe daily at LAX. 2019, I was
7 diagnosed with COPD. No, I'm not a smoker, but I guess I
8 breathe jet fuel on a daily. I work adjacent to where the
9 planes take off and taxi to the runway, big clouds of
10 smoke I will breathe on a daily basis. I was wearing a
11 mask before the pandemic.

12 Also, I live seven minutes from LAX. So when I
13 lay in bed at night, I see jet fuel flying, dumping over
14 my house. This is the type of air that I breathe on a
15 daily basis. Enough is enough. We live in a community
16 full of color as you can see. It's harmful. We breathe
17 this. We need to know what we're breathing. We need
18 clean air, safe air that we can breathe, so our families
19 can grow. I have a seven -- sorry, a 13 year old son. He
20 has asthma. It shouldn't be that way. Enough is enough.

21 Thank you.

22 BOARD CLERK MOORE: Thank you.

23 David Goddard.

24 DAVID GODDARD: Hi. Good afternoon. Good
25 morning. Sorry. Afternoon.

1 I'm worker in cargo LAX. Working at LAX exposed
2 me and my co-workers to air pollution and it affect our
3 health. As an airport worker, I am very concerned about
4 the impact of climate change, and our planet, and our
5 health. I work both inside, outside LAX, and so I am
6 exposed to airplane fumes all day long. On really bad
7 days, I have trouble catching my breath and it's difficult
8 to breathe. A lot of my coworkers have developed asthma
9 and breathing problems. I have also seen the impact
10 climate change on the home of my country, which is
11 Barbados, and I am -- and it has taken away from the
12 beauty of the place that I have once loved.

13 I'm also living with the thoughts that we are
14 wasting time. The world does not have 50 years. The
15 world sees fit now. Regrettably, using a bike it isn't
16 going to fit it.

17 In the words of the nation, small islands all
18 around the world cannot do it without much more support.
19 California has always been a leader in the fight against
20 climate change. Please take action now. For the health
21 of our airport workers, we need CARB to regulate jet fuel.
22 We need clean transportation in our communities.

23 Thank you.

24 BOARD CLERK MOORE: Thank you.

25 The next commenter is Melvoy Vance Ewing, JR.

1 After Melvoy, we'll Oscar Antonio, Monaye Lyman,
2 Armando M, Kevin Orange, and Maria Romero.

3 MELVOY VANCE EWING, JR: Good afternoon, CARB
4 Board members. Thank you for this opportunity to speak in
5 front of you. I'm here today on behalf my SEIU members.

6 The airport of outside is having an impact of
7 some kind on the environment, both locally and potentially
8 globally. This can include emissions from aircrafts,
9 ground vehicles, as well as from power use in buildings
10 are contributing to climate change, local air quality
11 issues.

12 Climate change is breeding storms with heavier
13 rainfall, which causes more flooding. Such change in
14 conditions, put our agriculture, health, water supply, and
15 more at risk. Flooding disrupts our lives, contaminates
16 soil. Heat waves harm our health and causes drought,
17 which lowers the nutrients values of food. Aviation jet
18 fuel is not environmentally friendly, because it emits CO2
19 and other chemicals that can contribute to global climate
20 change.

21 The lower carbon a fuel is more credits can be
22 generated. LCFS outcomes 12.6 reduction in carbon
23 intensity. Thank you for this opportunity to speak.

24 BOARD CLERK MOORE: Thank you.

25 Next commenter is Oscar Antonio.

1 As a reminder to commenters, please either line
2 up or sit as close to the mics as possible.

3 OSCAR ANTONIO: Good afternoon, everybody. My
4 name is Oscar Antonio. I have been working 23 years at
5 Los Angeles International Airport. And the air right here
6 is nice and healthy. I developed pneumonia, asthma, and
7 diabetes. I have respiratory problems okay and my living
8 through every day is kind of hard, you know. I have
9 weakness sometimes. And the contamination that the
10 airplanes do is invisible. We don't see it. We live
11 their every day. You don't see it here. Nobody see it.

12 When we sleep, the airplanes still flying. They
13 almost -- operation a the airport is almost 24 hours a
14 day. A flight to Boston needs like 35,000 gallons. I can
15 fill up 4,500 cars with that with one flight they do to
16 Boston. So my question is why we regulate only cars? Why
17 we don't regulate airplanes when these airplanes they make
18 a lot of contamination and make a lot of damage to the
19 community and to the environment. And we suffer of the
20 problem from the environment right now. So I hope this
21 Commission, you know, think about it. And, you know, I
22 think your commune -- you work for the community for the
23 people, and thank you.

24 BOARD CLERK MOORE: Thank you.

25 Our next commenter is Monaye Lyman.

1 MONAYE LYMAN: Good afternoon. My name is Monaye
2 Lyman. I've been working at the airport for about eight
3 years now. I actual -- I'm actually a cabin cleaner. So
4 me and my co-workers we actually front-line to a lot of
5 air pollution and a lot of stuff and we're just -- I'm
6 just here to ask that you guys help fix the
7 transportation.

8 BOARD CLERK MOORE: Thank you.

9 Our next commenter is Armando M.

10 ARMANDO M: Hello. Good morning, Board members.
11 How are you doing today? I'm here on behalf of my
12 colleagues, SEIU local USWW. SEIU members are here in
13 solidarity with other Black and urban communities fighting
14 for environmental justice. We support the farmworker
15 community's fighting to end bad air pollution from methane
16 crediting. We stand in solidarity with the communities
17 living in the air pollution jet fuel refineries.

18 We are suffering from the same health impacts.
19 We support community demands to limit the use of
20 unsustainable lipid biofuels and phase out crop-based
21 feedstocks. California should not put billions of dollars
22 into polluting industries at the expense of front-line
23 communities. This is not the action that we need on
24 climate. We are calling on you, Board members, to do
25 everything that you can to create a program that provides

1 clean transportation for workers environmental justice
2 communities.

3 Thank you.

4 BOARD CLERK MOORE: Thank you.

5 Our next commenter is Kevin Orange.

6 KEVIN ORANGE: Good afternoon. SEIU supports
7 and represent 700,000 service workers in California,
8 including thousands of airport workers. I am also a
9 airfield worker on an airport. I am executive Board
10 member of SEIU USWW. I am speaking to share our position
11 as an organization. Airport workers are here today to
12 make sure our voice is heard and included. Black and
13 Brown communities near the airport are exposed to toxic
14 pollutants produced by airlines, and on top of the
15 environment of racial and neighborhood we face suffering
16 from these solutions.

17 We are here to urge you to include conventional
18 fossil fuels for jet fuels. When you use -- when you
19 consider updating the regulation here, we are considered
20 to the airlines to basically put restrictions on airlines.
21 We just want to make sure that, you know, we hold the
22 airlines accountable to actually paying the tax just like,
23 you know, every other industry that's in California to pay
24 the tax.

25 Thank you.

1 BOARD CLERK MOORE: Thank you.

2 Our next commenter is Maria Romero.

3 MARIA ROMERO: Good afternoon, members. My name
4 is Mario Romero. I'm an SEIU USWW member. I have been
5 working at the LAX for 17 years as an airport worker. I'm
6 here to share how I am exposed every day to airplanes'
7 emissions. I'm concerned about the environment and health
8 impact it's having on me and my family who work and live
9 near LAX.

10 Working at the terminal, I am always breathing
11 airplanes' emissions, which has affected my breathing
12 system. I use an inhaler to help me breathe, even though
13 I don't smoke either. I often feel light-headed, and my
14 eyes burning, because I'm working in a terminal where the
15 airplanes are kept. I also have lived under the flight
16 path, as Jovan, over 13 years. And so not only am I
17 exposed to these toxics at work, but at home where I live.

18 We have to do something about this. I ask that
19 the jet fuel be included in the Low Carbon Fuel Standard.
20 Airplanes need to be also be regulated as well. Thank
21 you, everyone. Appreciate it.

22 BOARD CLERK MOORE: Thank you.

23 Our next commenter is Elido Hernandez. After
24 Elido, we will hear from Salvador Rodriguez, Guadalupe
25 Rivas, Emmanuel Torres.

1 ELIDO HERNANDEZ (through interpreter): Hello. My
2 name is Elido Hernandez. I am a member of USWW. We're
3 representing the Los Angeles Airport. We're just asking
4 for please for you to hear our voices. We want a better
5 environment for us, for our families, and for the
6 environment. Thank you for listening to us.

7 BOARD CLERK MOORE: Thank you.

8 Salvador Rodriguez.

9 SALVADOR RODRIGUEZ: Hello. My name is Salvador
10 Rodriguez. I am currently a farm manager at Bar 20 Dairy
11 located in Fresno County. I have been employed at Bar 20
12 for over 16 years and grew up on a farm. The dairy
13 provides over 140 employees most who are Latino. It
14 provides jobs for over 140 employees who mostly are
15 Latino. These employees live in surrounding disadvantaged
16 communities, but have a positive impact on the economy.

17 The dairy provides great paying jobs and provides
18 benefits to the employees and their families. Most
19 employees are long-term employees with over 60 percent
20 being employed for over 10 years. I support the LCFS
21 credit system, because it has allowed the dairy to invest
22 in a -- into building a digester, which captures hydrogen
23 sulfide and pollutants that would otherwise be emitted
24 into the air.

25 I've witnessed firsthand the positive effects

1 from the digester. Employees love the fact that they no
2 longer smell or are breathing gases being collected by the
3 digester. Not only have our employees reaped the benefit,
4 but our families and local communities have as well. The
5 dairy is not looking to expand its herd but to produce the
6 same amount of milk with less cows and be more efficient
7 while being stewards of the environment. We have become
8 more efficient, which translates into decreasing methane.

9 Thank you for your time.

10 BOARD CLERK MOORE: Thank you. Our next
11 commenter is Guadalupe Rivas.

12 GUADALUPE RIVAS (through interpreter): Good
13 afternoon. I've worked in the -- at the airport for 22
14 years. Mainly, I've been having colds with greater
15 frequency. And it's certain that it's because of
16 contaminated air. We ask you to please do something about
17 air pollution, plane pollution for all of the people, for
18 all of us who work at the airport. You know we need the
19 work, but we're exposed to any kind of sickness that we
20 could get. You know some of us are more sensitive to
21 these lung ailments. And we're exposed every day to this
22 dirty air from the planes.

23 Thank you.

24 BOARD CLERK MOORE: Thank you.

25 Emmanuel Torres.

1 EMMANUEL TORRES: Good afternoon. My name is
2 Emmanuel Torres and I'm here with Bar 20 Dairy. I come
3 from Kerman, California, a small town in the Central
4 Valley located about 60 miles west of Fresno. I grew up
5 living in a dairy and have been around the dairy industry
6 my entire life. My father has worked and continues to
7 work in the dairy industry for over 40 years now. Being
8 exposed to the family culture behind the dairy industry
9 made me want to pursue and complete a Bachelor's degree in
10 dairy science production management at Fresno State.

11 Family owned dairies are always trying to do our
12 part to ensure the future of our children, our community
13 we live in. Methane digesters allows us to be at the
14 highest level in environmental stewardship with the milk
15 production with the low carbon emission. Methane
16 digesters are a big solution in reducing emission working
17 24/7, 365 days a year. We don't rely on wind, sunlight,
18 rain. All we need is to capture methane from going up
19 into our air resulting in renewable energy, less odor,
20 less flies, results in happier cows and proud employees.

21 We take pride in working for a family dairy that
22 cares about its employees, our families, and the
23 environment that surrounds us. With the LCFS Credit
24 Program, projects like the methane digester wouldn't be
25 possible. California can continue its position as a world

1 leader in producing low carbon dairy products, if we
2 continue the avoided methane carbon crediting for these
3 projects. Thank you for your time.

4 BOARD CLERK MOORE: Thank you.

5 Our next commenters will be Bonney Shehadey, Sam
6 Wade, Brian Biering, Gloria Alos, and Oscar Monterosa.

7 BONNEY SHEHADEY: Hi, everyone. My name is
8 Bonney Shehadey. I'm currently a student at Cal Poly San
9 Luis Obispo, but I'm also part of the fourth generation of
10 a Fresno dairy farming family, the Bar 20 Dairy.

11 I believe the dairy digesters should continue to
12 be supported, because they are an ideal solution to many
13 concerns people have about dairies. Also, they lineup
14 really well with fulfilling the LCFS program goals to
15 decrease carbon intensity of California transportation
16 fuel pool and provide an increasing range of low carbon
17 and renewable alternatives, which reduces petroleum
18 dependency and achieves air quality benefits.

19 In addition to capturing dairy methane, a
20 separate goal the dairy digesters achieve is that they
21 cover lagoons to capture almost all the NOx, hydrogen
22 sulfide, or other pollutants that would otherwise be
23 emitted. Collecting pollutants in a gaseous state, the
24 may gas is cleaned and converted into a source of
25 renewable transportation fuel, which burns cleaner than

1 diesel. The availability of this clean fuel helps to
2 mitigate the usage of fossil fuels and ultimately stretch
3 our energy reserves.

4 In addition to the potential to generate
5 renewable natural gas, dairy digester projects like the
6 one at my family dairy are using dairy biogas to generate
7 clean electricity and hydrogen transportation fuel.
8 Thanks to the LCFS Program's inclusion of dairy biogas,
9 this is just the beginning of a promising future for clean
10 24-hour electricity and hydrogen generation from dairy cow
11 manure. For years, California has been setting the
12 standard for climate-smart dairy worldwide.

13 In order to continue being a state of
14 agricultural climate innovation, we need to encourage and
15 enable our family farmers in this goal. Increasing
16 sustainable practices in agriculture will require
17 collaboration and retaining access to programs that help
18 farmers, like LCFS. We should be supporting dairy
19 farmers' efforts towards cleaner renewable energy sources
20 and trying to work in ways that make high tech climate
21 solutions more accessible to them.

22 If we want to continue to be climate leaders,
23 programs like LCFS are vital to supporting dairy farmers
24 in their investments in new and expensive Climate
25 technologies. Thank you for your time.

1 BOARD CLERK MOORE: Thank you.

2 Sam Wade.

3 SAM WADE: Hi. Sam Wade with the Coalition for
4 Renewable Natural Gas. We're the national trade
5 association for the RNG industry headquartered here in
6 California. As you've heard from many today already, RNG
7 development under LCFS is about methane reductions. It
8 doesn't require tradeoffs with any other strategies to
9 decarbonize or foregoing opportunities to make other local
10 environmental improvements at our dairies.

11 There is overwhelming research demonstrating that
12 capturing and utilizing manure methane leads to
13 significant odor, air quality, and greenhouse gas
14 benefits. That's why the U.S. EPA has supported AD at
15 dairies for almost 30 years. Slowing down on methane
16 reductions under the LCFS would be directly counter to the
17 subnational methane action initiative launched by Governor
18 Newsom last week. It would also be directly counter to
19 the Biden administration's participation in the global
20 methane pledge.

21 The website for that pledge says that rapidly
22 reducing methane emissions from energy, agriculture, and
23 waste can achieve near-term gains in our efforts this
24 decade for decisive action and is regarded as the single
25 most effective strategy to keep to the goal of limiting

1 warming to 1.5 degrees C within reach, while yielding
2 co-benefits including improving public health and
3 agricultural productivity.

4 Outside of the LCFS, California is struggling to
5 come out of the starting blocks on our initiatives to
6 reduce methane. For example, we very disappointed to see
7 the Little Hoover Commission recently call for significant
8 adjustments to the organic waste diversion portion of SB
9 1383. And we can't afford to disrupt the functioning
10 dairy methane strategy under 1383 as well. The LCFS is
11 great, because it helps both capture methane and utilize
12 it to replace fossil fuels. We're agnostic as to if
13 that's in an EV, a hydrogen fuel cell vehicle, or a
14 natural gas truck.

15 The methane needs to be abated and used
16 somewhere. And the opponents of the current LCFS
17 framework offered no viable alternative as to how it
18 should be dealt with. The RNG industry has promoted the
19 LCFS as a model policy for others to copy. Following
20 California's successful example in other dairy states,
21 would be the fastest way to deal with manure methane
22 emissions nationwide.

23 Thank you.

24 BOARD CLERK MOORE: Thank you.

25 Our next commenter is Brian Biering.

1 AMANDA COOEY: Hi. My name is Amanda Coeey.
2 Brian Biering had to step out, but I'm here on his behalf.

3 Good afternoon, Chair Randolph and members of the
4 Board. As I said, my name is Amanda Coeey and I'm here
5 today on behalf of several alternative fuel providers,
6 including, BlueArrow, Fulcrum BioEnergy, H Cycle,
7 Infinium, Velocys, and World Energy.

8 This diverse group of alternative fuel providers
9 all rely on a considerable amount of process energy to
10 make alternative fuels like sustainable aviation fuel,
11 waste to energy, and renewable hydrogen. When new fuel
12 sources develop, the local electric -- electrical utility
13 will serve that incremental energy demand, often with
14 marginal, less efficient power plants. Currently, the
15 only way to reduce the carbon intensity for process energy
16 is by directly connected renewables like behind the meter
17 solar.

18 To facilitate additional emission reductions, we
19 have proposed an LCFS mechanism for grid connected
20 renewable energy for low CI power to be studied in a Tier
21 2 application. If an applicant can demonstrate that it
22 signed a power purchase agreement for a new renewable or
23 low CI energy source in the same balancing authority as
24 the fuel production facility, CARB should allow the fuel
25 producer to claim a lower CI score. The power must be

1 from a new incremental resource. The environmental
2 attributes must be dedicated to the LCFS and power must be
3 matched with the energy demand of the fuel production
4 facility.

5 We have included details of this proposal in two
6 comment letters already submitted during the
7 pre-rulemaking phase and we encourage CARB to include the
8 low CI proposal in the upcoming rulemaking.

9 Thank you very much for your consideration.
10 Thanks to CARB staff for all your hard work in preparation
11 for updating the LCFS.

12 BOARD CLERK MOORE: Thank you for your comment.

13 Our next commenter is Gloria Alos. And then we
14 have Oscar Monterosa. Chair, were you wanting to take
15 lunch around 12:30?

16 CHAIR RANDOLPH: Yes.

17 BOARD CLERK MOORE: So after Oscar Monterosa.

18 GLORIA ALOS (through interpreter): Hello. My
19 name is Gloria Alos and I've worked in the airport since
20 2014. I come to ask you for a favor, which is in God's
21 hands so that you can see what -- how the air quality is
22 affecting airport workers. We are breathing the air, air
23 which is polluted and we're -- we are -- we are exposed to
24 this at the airport. This can cause asthma and other
25 respiratory infections, cancer and heart problems. That

1 is it what studies have shown. That with the levels of
2 contamination it has reached dangerous levels at the
3 airport. So as a favor I'm asking you -- this why I've
4 come. I'm representing my colleagues. I'm asking you to
5 help us with this level of pollution.

6 Thank you and God Bless you.

7 BOARD CLERK MOORE: Thank you.

8 BOARD MEMBER DE LA TORRE: Before the next person
9 comes up I just want to say something in Spanish because
10 this has happened a couple times.

11 (Spoke in Spanish.)

12 BOARD MEMBER DE LA TORRE: I just said that when
13 you're needing translation to wait until the translator
14 actually gets there so that she doesn't have to run across
15 the room to catch up.

16 Thank you, Chair.

17 OSCAR MONTEROSA: Good afternoon. My name is
18 Oscar Monterosa. I've come from Los Angeles. I've been
19 working at the airport for 22 years. I've come because I
20 want to ask for your help, so that you can become
21 conscious. At the -- most of the people who die at the
22 airport it's from cancer. I would like you to please help
23 us, so that new generations can receive this help and
24 those few who still remain who are older. It's difficult
25 to be cleaning up because the planes drop so much fuel.

1 Even if we use masks and gloves and all of that, it's very
2 difficult to prepare for all of that. Please, if it's in
3 your hands to help us, we will be infinitely grateful on
4 the part of our children, of our wives, and of our
5 colleagues.

6 Thank you very much.

7 BOARD CLERK MOORE: Thank you.

8 Chair. Chair Randolph.

9 CHAIR RANDOLPH: Sorry. So that was -- that was
10 the last one on your list. Okay. All right. Thank you
11 so much. So we are going to take a 60-minute lunch break,
12 which would put us back here at 1:30. Thank you very
13 much.

14 (Off record: 12:30 p.m.)

15 (Thereupon the Board recessed into
16 closed session.)

17 (Thereupon a lunch break was taken.)

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1 us. For the workers health, at the airports. We need for
2 CARB to regulate the airplanes fuel. We need clean
3 transportation in our communities.

4 Thank you very much.

5 BOARD CLERK MOORE: Thank you.

6 Next commenter is Carmen Ovevedo.

7 CARMEN OVEVEDO (through interpreter): My name is
8 Carmen Ovevedo and I've been working at the airport in LA
9 for 16 years. And working at the airport is exposing us
10 to pollution. Air pollution which is affecting our
11 health. For the airport workers' health, we need for CARB
12 to regulate the fuel for airplanes or airplane fuel. We
13 need clean transportation in our communities.

14 Thank you so much.

15 BOARD CLERK MOORE: Thank you.

16 Next comment is Hector Alfaro.

17 HECTOR ALFARO (through interpreter): Good
18 afternoon. My name is Hector Alfaro. I've been working
19 at the airport for five years and I work in the cleaning
20 department. Working at the airport has exposed us to the
21 air pollution and is affecting our health. For our
22 workers' health, the workers at the airport, we need for
23 CARB to regulate the air fuel. We also need clean
24 transportation in our communities.

25 Thank you.

1 BOARD CLERK MOORE: Thank you.

2 Our next commenter is Maria Martina.

3 MARIA MARTINA (through interpreter): Good
4 afternoon. My name is Maria Martina. I'm coming from LA
5 and I work at the airport. I've only worked there for
6 three years. And I feel how much I'm absorbing the air
7 coming out of the airplanes. I'm coming to support this
8 protest for the families that live nearby and around the
9 airport have a better health, not just for us, but also
10 for the upcoming generations. If it is in your hands to
11 be able to help us, we'd request your support.

12 Thank you.

13 BOARD CLERK MOORE: Thank you.

14 Our next commenter is Alma Enciso.

15 ALMA ENCISO (through interpreter): Good afternoon.
16 My name is Alma Enciso. I'm coming from LA. I have
17 worked at the airport for 15 years. There's a lot of
18 pollution in LA. And I'd like to know if there's anything
19 you can do to have better air or cleaner air. I will
20 greatly appreciate it.

21 Thank you.

22 BOARD CLERK MOORE: Thank you.

23 Our next five commenters are - and I'm sorry if I
24 pronounce your names wrong - Boron M., Tania Derivi,
25 Austin Mchenry, Adriana Carroscosco, and Bill Magavern.

1 Boron M.

2 Okay. I'll come back to that one.

3 Tania Derivi.

4 TANIA DERIVI: My name is Tania Derivi with WSPA,
5 a trade organization, representing several major regulated
6 entities under LCFS. This program is very complex. As
7 the forthcoming amendments will make it even more so,
8 there must be an opportunity for robust public input with
9 adequate time for their consideration prior to the Board
10 consideration of the 45-day and 15-day packages. We also
11 urge the Board to discuss with staff how potential
12 amendments may complicate efforts to comply with the
13 Governor's Senate Bill X12, which seeks to ensure the
14 transportation fuels are adequate, affordable, equitable,
15 and reliable, and his request to CARB to help accelerate
16 the production of cleaner fuels at refineries.

17 Specifically, SB X12 would be difficult to
18 achieve if CARB arbitrarily caps alternative fuel pathways
19 or reverses investment signals for projects that
20 significantly reduce emissions in the transportation and
21 stationary source sectors. For example, crop-based
22 renewable diesel has been shown, compared to petroleum
23 diesel, to reduce life cycle emissions in vehicles today.
24 Even CARB recently touted how cleaner fuels are an
25 essential tool replacing over half the diesel used in

1 California and the first quarter of the year. Crop-based
2 feedstocks create a significant bridge between the use of
3 petroleum diesel and other solutions that are challenged
4 with permitting, scalability, and infrastructure issues.

5 WSPA is also not aware of any conclusive
6 scientific evidence supporting the need to cap biofuel
7 feedstocks. Such a cap will only slow the pace of
8 emission reductions. There are also multiple safeguards
9 in place today prevent the issues some stakeholders have
10 raised, including the Indirect Land Use Change Assessment.

11 Finally, we urge the Board to direct staff to
12 consider what should be done, if very aggressive CI
13 targets create a major program imbalance with too many
14 deficits and too few credits.

15 Thank for the time and for CARB staff's hard work
16 on this matter.

17 BOARD CLERK MOORE: Thank you.

18 Our next commenter is Austin Mchenry.

19 Austin.

20 AUSTIN MCHENRY: Hello. I'm Austin Mchenry. I'm
21 a security officer in the Sacramento area and I'm just
22 commenting to support airport workers and their -- I don't
23 really know what to say other than I just support the
24 airport workers.

25 Thank you.

1 BOARD CLERK MOORE: Thank you.

2 Our next commenter is Adriana Carrosco.

3 Adriana?

4 Okay. Our next commenter will be Bill Magavern.

5 I'll come back to these other two commenters.

6 BILL MAGAVERN: Good afternoon. Bill Magavern
7 with the Coalition for Clean Air.

8 The Low Carbon Fuel Standard is an effective tool
9 needed to both work harder and work smarter. Work harder
10 in the sense of greater level of stringency to lower the
11 carbon intensity of our transportation fuels and reduce
12 emissions, and that includes an acceleration mechanism as
13 proposed by the staff, and work smarter in the sense of
14 only incentivizing the cleanest fuels on a life-cycle
15 basis and avoiding adverse impacts to communities.

16 We support the inclusion of aviation fuel and,
17 ending that exemption that's been there for too long,
18 because aviation is a growing source of greenhouse gas
19 emissions and the burning of the fuel also has adverse
20 impacts on workers and the communities. We also support
21 the proposal that the LCFS should enhance and support our
22 important regulatory standards, including Advanced Clean
23 Cars, Advanced Clean Trucks, and Advanced Clean Fleets.
24 And to that end, we support the expansion of the
25 infrastructure credit to heavy-duty vehicles, which

1 obviously we know there's a great need for infrastructure
2 in that area.

3 And we also want to focus the use of the
4 residential charging credits on helping our low-income and
5 disadvantaged communities get access to clean mobility.
6 And this gets to Dr. Balm's point earlier on. We can use
7 that money more effectively and help people, whether it's
8 to own an EV or to have access to clean mobility without
9 actually having to own a vehicle. I will have some
10 further comments that I will put into writing.

11 Thank you.

12 BOARD CLERK MOORE: We're going to go back to
13 Boron M or Barry M.

14 Adriana Carroasco.

15 ADRIANA CARROSCO (through interpreter): Good
16 afternoon. I am Adriana Carroasco. I've been in the
17 janitorial work for 23 years and I am part of a union. I
18 am here to ask you to support us on the requests we have
19 mentioned today. I'm also here to request for you to
20 prioritize for clean transportation on behalf of our Latin
21 families and of our American families as well. I thank
22 you very much.

23 BOARD CLERK MOORE: Thank you.

24 The next commenter will Grant Zimmerman followed
25 by Rosa D. L., Frank Cardoza, Christina Alvarez, and Sean

1 Trambley.

2 Grant.

3 GRANT ZIMMERMAN: My name is Grant Zimmerman.
4 I'm CEO of Amp Americas. On behalf of our farmwork
5 partners and all who hard each to fight climate change, I
6 think CARB staff leadership, this Board, and the Governor
7 for your leadership in driving climate impact.

8 Amp is a methane abatement company. We've abated
9 1.6 million tons of carbon equivalence by building and
10 operating dairy manure digesters. Digesters reduce
11 methane, air pollutants, and odor at our dairies. Methane
12 is a greenhouse gas 84 times more powerful than CO2.

13 Governor Newsom said last week tackling methane
14 emissions is key and methane emissions reductions are
15 critical for helping to put the world on a path to 1.5 C.
16 California's methane reduction goals and LCFS goals are
17 ahead of schedule in large part because the LCFS program
18 has caused digesters to be build with a lot of capital.
19 The world is watching you right now. What CARB does here,
20 others will follow. If CARB stops methane crediting,
21 other states and countries will follow. We will stop
22 reducing and, in fact, we will increase methane emissions
23 from when digests shut down.

24 The Scoping Plan calls for many digesters.
25 Without methane crediting, there will be no digester. And

1 if CARB says methane credits sunset in 2040, new digester
2 investment will stop now. Once crediting stops, existing
3 digesters will shut down. Avoided methane crediting is
4 science, not policy. Sunsetting methane crediting at all
5 will increase fossil fuel use, and the fossil fuel
6 emissions, and methane emissions. It's almost like we'd
7 be saying we'd rather have fossil fuels than digesters.

8 We support all solutions to the climate crisis,
9 including electric vehicles, hydrogen, and other inducers
10 for avoided methane. We urge CARB to strengthen the
11 program targets to at least 35 percent with a step-down in
12 '24, and expand book and claim, and preserve methane
13 crediting for RNG projects --

14 BOARD CLERK MOORE: Thank you. That concludes
15 your time.

16 The next commenter is Rosa D. L. It's somewhat
17 hard to read, so if there's Rosa

18 Frank Cardoza.

19 FRANK CARDOZA: Good afternoon. It seems to me
20 that everybody here wants the same thing and that is a
21 better -- better air and a better world, something that we
22 can leave for our kids for generations. I was five years
23 old when my dad put me driving a tractor. So I like to
24 think I've got 52 years of experience in the dairy
25 industry, so I've seen a lot of changes. And I do think

1 digesters are a good thing for the environment just based
2 on my experience. I don't have any data, but I have
3 visuals. And when you see that tarp full, that's the
4 gases that otherwise would have gotten into the
5 atmosphere.

6 Thank you.

7 BOARD CLERK MOORE: Thank you.

8 Our next commenter is Christina Alvarez.

9 CHRISTINA ALVAREZ: Good afternoon. My name is
10 Christina Alvarez. I'm an organizer with SEIU USWW. Our
11 union represents janitors, officers, airport workers, and
12 property service workers, 20,000 workers cross the state
13 of California from the Oregon border to the San Diego and
14 Southern California border.

15 And every day, our union members and families are
16 exposed to jet fuel and emissions. Our workers at the
17 airport clean the airport, they clean the grounds and
18 maintain the property every day, working multiple shifts.
19 I'm here to ask you to prioritize our members and their
20 families, more than anything to prioritize the environment
21 including transportation in Black and Brown communities.
22 I ask you to please include jet fuel in the regulations.
23 Thank you.

24 BOARD CLERK MOORE: Thank you.

25 Next commenter is Sean Trambley.

1 SEAN TRAMBLEY: Good morning -- or good
2 afternoon, Chair Randolph, members of the CARB Board, and
3 staff. Thank you for the opportunity to speak today. My
4 name is Sean and I'm here on behalf American Biogas
5 Council, voice of the U.S. biogas industry representing
6 more than 400 companies in all parts of the biogas supply
7 chain.

8 We have submitted several letters and comments to
9 the Board and staff outlining our views in more detail,
10 but there are a couple points I'd like to highlight in my
11 time today. First, we're encouraged by the direction of
12 the staff presentation, particularly the retention of
13 avoided methane crediting and an auto-acceleration
14 mechanism for increased carbon intensity reductions. We'd
15 like to emphasize higher carbon emissions reductions are
16 possible with more ambitious targets for carbon intensity.
17 We work with peers in the industry and experts at ICF to
18 develop research in support of more aggressive CI
19 reduction targets with a 42 percent target by 2030
20 possible with existing policies.

21 These findings were presented to CARB staff with
22 higher reduction scenarios also outlined. At this time --
23 this is the time to accelerate efforts to reach
24 California's aggressive climate goals. Bit ignoring the
25 valuable reduction opportunities in particular sectors

1 like dairies and landfills restricts CARB's ability to
2 move swiftly and aggressively on climate targets. Let's
3 be more ambitious.

4 Second, phasing out avoided emission crediting --
5 phasing out avoided emissions crediting is phasing out
6 science. Avoided emissions are part of science-based
7 life-cycle assessments, and ignoring this goes against
8 internationally recognized standards of carbon accounting.
9 If CARB -- California is interested in removing specific
10 fuel sources from the program, this should be accomplished
11 not by phasing out science, but phasing out specific
12 pathways over time.

13 Lastly, suggested changes to deliverability
14 requirements for renewable fuels effectively incentivizes
15 fossil natural gas to continue to be in use in
16 California's transportation sector due to the fact that
17 fossil natural gas can continue to be moved into the state
18 without restriction. Strict deliverability requirements
19 further limit the access to a robust fuel supply and slows
20 the program's progress toward carbon neutrality.

21 The LCFS continues to drive investments and the
22 ABC is proud to help be a part of that. Thank you again
23 for your consideration and the opportunity to share our
24 views.

25 BOARD CLERK MOORE: Thank you.

1 Our next five commenters are Karen Tate, Kimberly
2 Jorritsma, Jesse Hernandez, Whitney Richardson, and Neil
3 Black. I want to reminder everyone to please speak slowly
4 so the interpreters can accurately interpret your
5 comments.

6 KAREN TATE: Hello. I'd like to thank the CARB
7 Board for allowing us to speak here today and the staff.
8 My name is Karen Tate and this is my sister Kimberly
9 Jorritsma and we dairy farm with our parents in Merced
10 County on a Jersey dairy farm.

11 We are very passionate, just like you've heard a
12 lot of passionate people here today, speak on things, and
13 we are passionate about dairy and dairy farming. We have
14 lived in the same area, our family has, for over a hundred
15 years and what we have learned growing up with our family
16 is the importance of our dairy cows. We have learned
17 about how to care for them, and that they are our
18 business, and they are, not only are that, but they're a
19 part of our family life, and the way we've been raised.

20 We also have been taught about the land and so
21 one thing I want to state today is we're still on the same
22 land that my great-great-grandfather came to here in
23 California and taught us how to take care of. So we want
24 to continue to offer nutrient rich milk. And my son is
25 home taking care of the dairy today, so we want to

1 continue to dairy in California. And my sister will talk
2 about some of the tools we are using on the dairy.

3 KIMBERLY JORRITSMA: Thank you. As she was
4 saying, we've been sustainable for generations.

5 BOARD CLERK MOORE: One moment.

6 KIMBERLY JORRITSMA: Oh, sorry.

7 BOARD CLERK MOORE: We're going to reset your
8 time.

9 KIMBERLY JORRITSMA: Okay.

10 BOARD CLERK MOORE: For two more minutes.

11 KIMBERLY JORRITSMA: Okay.

12 BOARD CLERK MOORE: All right go ahead.

13 KIMBERLY JORRITSMA: We are currently installing
14 a digester right now on our operation. We are hoping that
15 that will be started in 2024 and we are not planning to
16 grow, but we just want to be sustainable. We also have
17 put a solar field out in our operations to help. We
18 participated in the Ag Tractor Replacement Program. We
19 have variable speed pumps on our dairy. We actually reuse
20 our water at four different points in our operations. We
21 have over 50 employees and their families. We live in a
22 dairy community in the San Joaquin Valley as you have
23 heard is a largely dairy community, and they all depend on
24 these dairies. And so we have been a leader in California
25 as far as our digester program. And so we just hope that

1 you can look to us and we can continue to lead the
2 industry, and the world, and by keeping LS -- LCSF[SIC] in
3 place. So thank you very much for everything you're doing
4 and thank you to staff too.

5 KAREN TATE: Thank you

6 BOARD CLERK MOORE: Thank you.

7 Our next commenter is Jesse Hernandez.

8 JESSE HERNANDEZ: (Spoke in Spanish).

9 BOARD CLERK MOORE: Just a moment for the
10 interpreter.

11 JESSE HERNANDEZ: No I don't. I got it. Thank
12 you.

13 I've been working for California Bioenergy for
14 approximately two years. I'm gas a ignition there for
15 North Visalia Cluster. And my job is basically to clean
16 and have the gas ready to go to be able to go into
17 people's homes, to gas stations, RNG stations, also make
18 electricity. I live in Delano, California, which is
19 roughly about 25 minutes away from California Energy's big
20 cluster, which has 14 dairies and it's one upgrader. They
21 are scheduled to have four assembled by next year and
22 double the size of the upgrader as well.

23 In working for Cal Bio I've seen the difference
24 we have -- that we have made in the community, not only by
25 not getting that dairy smell when you walk out of the

1 door, by -- but by also going door to door, talking to the
2 community, let them know what we do, educating them.

3 I worked in the oil industry for about 14 years.
4 Coming to California Bio Energy -- oh, I'm sorry -- for
5 about 14 years and am I -- not even one of those 14 years
6 did I feel a sense accomplishment or making a difference
7 the way I feel about working with California Bioenergy.
8 I'm hoping you guys will take this into consideration and
9 do your part.

10 Thank you.

11 BOARD CLERK MOORE: Thank you.

12 Our next commenter is Whitney Richardson.

13 WHITNEY RICHARDSON: Good afternoon, Chair
14 Randolph and Board members. My name is Whitney Richardson
15 with Electrify America. Electrify America is the nation's
16 largest open DC fast charging network for electric
17 vehicles with over 3,500 ultra fast chargers across more
18 than 820 locations across the country and over a thousand
19 chargers across roughly 250 locations open to the public
20 in California.

21 The Low Carbon Fuel Standard is a critical
22 program advancing California's climate change goals,
23 including supporting the state's rapid transition to
24 zero-emission vehicles. As a leading charging
25 infrastructure developer, I can tell you that the dollars

1 that we receive from LCFS credits go back into our
2 operations in efforts to expand access to affordable,
3 reliable EV charging in California.

4 In order to maintain this critical role of the
5 LCFS, we think that it is vital that the amended
6 regulation include the following three elements: a
7 step-down in carbon intensity as soon as the regulation
8 takes effect and sufficient to address the current glut of
9 credits in the market; strong 2030 targets of at least 35
10 percent and in line with outcomes needed to achieve the
11 goals of the Scoping Plan; and an auto-acceleration
12 mechanism to complement the existing cost containment
13 features of the program and bolster the stability of
14 credit prices when the program may be overperforming as it
15 is now.

16 Electrify America has also participated in the
17 coalition group working with ICF to analyze market
18 appetite for low carbon fuels and associated appropriate
19 targets for LCFS. We support our overarching finding of
20 that report and a 2030 target of greater than 40 percent
21 is appropriate. We also anticipate further innovation and
22 efforts to reduce the carbon intensity of electricity used
23 as transportation fuel in California and we expect that
24 others will increasingly to the same. Sorry I missed the
25 part talking about 100 percent renewable Solar Glow PV

1 project which is already providing power for our stations.

2 We hope the Board will ask staff to go back and
3 look at the 2030 target and in particular --

4 BOARD CLERK MOORE: Thank you. That concludes
5 your time.

6 WHITNEY RICHARDSON: Thank you.

7 BOARD CLERK MOORE: Next commenter is Neil Black

8 NEIL BLACK: Hello. My name is Neil Black and
9 I'm President of California Bioenergy. We founded CalBio
10 in 2006 at the time of the passing of AB 32. Our goal was
11 to work with the State and dairies to reduce methane
12 emissions. We added a second goal to improve local air
13 quality. We are please to report they were substantially
14 reducing methane emissions. There are over a million
15 metric tons so far per year. And we're also substantially
16 improving air quality.

17 As you know, the sings and the impacts of climate
18 change are refutable and require immediate action. Now,
19 in careful review, California decided to partner with the
20 dairy community to reduce methane emissions. There were
21 two reasons. First, to support the San Joaquin Valley's
22 economy. It has one of the highest unemployment levels in
23 California. Dairy is a backbone of middle class jobs
24 employing well -- employing over 180,000 people, most in
25 the Central Valley. Mandating methane emissions cannot be

1 paid for by higher milk prices. Local dairies compete
2 with dairies across the country. A mandate would have
3 sped an exodus pushing emissions and jobs out of state.

4 Second, projects are expensive. We have raised
5 and invested in disadvantaged communities hundreds of
6 million of dollars and have available hundred of millions
7 more. The LCFS Program is the key. Without it, many old
8 projects would fail and many new projects won't move
9 forward. The State had a big goal for the dairy industry,
10 a 40 percent dairy methane reduction by 2030. In just a
11 few years, we are on our way to achieving it. Few
12 programs can attest to such dramatic results.

13 Support this tremendous program. Encourage us to
14 move faster. We don't have time to waste. Thank you.

15 BOARD CLERK MOORE: Thank you.

16 The next commenter is Julia Levin.

17 JULIA LEVIN: Good afternoon. Julia Levin with
18 the Bioenergy Association of California. We strongly
19 support the Air Board's recommendation to increase the
20 carbon intensity target for 2030. We think it should be
21 at least 30 percent, but 35 or 40 percent would be more in
22 alignment with the State's other climate policies. We
23 also support the proposed requirement requiring delivery
24 of biomethane. If we don't require delivery, then the
25 biomethane isn't actually replacing -- or displacing

1 fossil fuel use in California. But in fairness to
2 out-of-state projects that have invested millions of
3 dollars in biomethane capture projects, we think that book
4 and claim should be phased out over several years.

5 On avoided methane, I appreciate the comments
6 that Cheryl and Matt made this morning about projects
7 should not receive credit for things that are already
8 required by law, and we agree with that. That is critical
9 to a valid life-cycle analysis. But dairies are not
10 currently regulated under law. They're -- individual
11 dairies are not required to reduce methane. And even for
12 diverted organic waste projects, they're required to
13 divert organic waste from landfills, but they're not
14 required to produce biomethane or bioenergy which is
15 several times better for the climate than the other
16 alternatives that are allowed under CalRecycle's SB 1383
17 regulations. And this is critical if we cant to continue
18 to incentivize the most beneficial projects for climate
19 change and other benefits, we need to continue to find
20 incentives and a market for that biomethane methane.

21 And that brings to me my last point, which is in
22 April, this Board adopted the Advanced Clean Fleets
23 Regulation. And we applauded the Board for the last
24 paragraph. Thank you to all of you who were involved,
25 which recognized the need to develop long-term reliable

1 markets for biomethane. And we really urge the Air Board
2 to move forward on that as quickly as possible and before
3 you move biomethane out of the Low Carbon Fuel Standard.
4 Methane reductions are too urgent. They're critical to
5 meet our climate goals and need a secure long-term market,
6 as you recognized in the ACF Resolution. And that really
7 needs to be in place and working before you kick
8 biomethane out of the Low Carbon Fuel Standard.

9 BOARD CLERK MOORE: Thank you.

10 Our next commenter is David Ribeiro, followed by
11 Patrick Couch, Minerva Ramirez, and Phoebe Seaton.

12 DAVID RIBEIRO: Good afternoon. My name is David
13 Ribeiro. I am a third generation dairy farmer from
14 Tulare, California, in the San Joaquin Valley. My two
15 sons are fourth generation. We just as 98 percent of
16 California dairies are owned and -- are family owned and
17 operated. We have farmed in the same neighborhood for 103
18 years. We care immensely about our animals, our soil, our
19 water and our air.

20 Our families drink the water from our wells not
21 from a municipal. We breathe and work in the outside
22 environment. Our children and grandchildren play in it.
23 We care about our environment and we care about our
24 future. It's also an honor to work side by side with our
25 co-workers as we watch their families grow and they're

1 able to purchase homes, send their kids to college. Some
2 become business owners themselves. These families are a
3 huge part of the California economy.

4 Programs developed for the dairy industry have
5 shown to be some of the most efficient use of funds for
6 environmental programs, programs like FCFS and others
7 helped us afford to purchase and build a digester on our
8 dairy approximately a year ago.

9 Being environmentally responsible requires
10 everyone's part -- everybody is part of this, each person,
11 not just a single entity or business. So programs like
12 this and others help all of us. Especially at the dairy
13 industry, we would like to thank you for helping us do our
14 portion of this.

15 Thank you.

16 BOARD CLERK MOORE: Thank you.

17 The next commenter is Patrick Couch.

18 PATRICK COUCH: Good afternoon. My name is
19 Patrick Couch with Gladstein Neandross and Associates, a
20 TRC company.

21 GNA has been working to deploy cleaner lower
22 carbon fuels and technology into transportation for over
23 30 years. And my personal experience with the LCFS
24 Program goes back to 2008. The LCFS Program has always
25 been based on engineering and science-based assessments of

1 the carbon benefits of fuels over their fuel life cycle
2 using robust modeling tools like the GREET Model.

3 Importantly, this is included in accounting of the avoided
4 methane emissions associated with anaerobic digesters.

5 Dairy projects -- dairy digester projects in
6 California provide significant climate benefits through
7 methane capture and destruction as well as providing
8 localized air quality improvements. According to Dairy
9 Cares, existing dairy digesters capture the waste from
10 approximately 383,000 milk cows. By 2030, planned
11 projects could capture waste from an additional 283,000
12 milk cows if the LCFS Program continues.

13 Based on our assessment at GNA of emissions
14 benefits from CalBio digester projects currently operating
15 digesters in California provide nearly 680 tons per year
16 of local, direct, and secondary PM2.5 emissions
17 reductions. This is equivalent to removing 420,000
18 heavy-duty diesel trucks from the roads. By 2030, PM2.5
19 emissions reductions could roughly double to be nearly
20 1,200 tons per year. Along with these PM2.5 reductions,
21 digester projects provide similar substantial reductions
22 in hydrogen sulfide and VOC emissions, not only improving
23 local air quality, but providing additional benefits like
24 odor reduction. We urge you to continue the 15-year
25 history in the LCFS Program with science-based analysis in

1 recognition of the carbon benefits from a broad range of
2 fuels and continue to recognize the full benefits of
3 avoided methane emissions in digester projects.

4 Thank you.

5 BOARD CLERK MOORE: Thank you.

6 Our next commenter is Minerva Ramirez.

7 MINERVA RAMIREZ (through interpreter): Good
8 afternoon to everybody. My name is Minerva Ramirez and I
9 come from a community called -- that's called Lamont,
10 California. My community is surrounded by a lot of
11 pollution because of agriculture refineries, but also
12 because of the dairies. Since this morning, I have been
13 listening to the plans that you have that -- what you want
14 to do in order to reduce pollution 2030, 2040. And the
15 fact is in theory when I was listening to you, I felt
16 very, very hopeful and I'm very thankful for your work.

17 But unfortunately, in terms of what's really
18 happening and in practice, I'm seeing really the opposite.
19 I'm here today representing my community and ask you to
20 help us. We have understood that there are credits that
21 you are giving that get -- that the dairies can have in
22 order to be able to produce methane gas. But we also --
23 we also understand that it also causes us serious problems
24 in terms of our health, since we're breathing polluted
25 air, but we' also have water -- we're using water that is

1 also polluted. Everyone in my family has respiratory
2 issues. I have had tumor in a lung for many years. And
3 the doctor says that there are a lot of people in this
4 same area that is having the same problem suffering from
5 the same issue because of pollution.

6 So what I'm asking today, what I'm asking for is
7 that you stop giving the credits to the dairies since
8 because of the credits, we are -- that you're giving to
9 the dairies, they are -- they are expanding.

10 BOARD CLERK MOORE: Thank you. That concludes
11 your time.

12 MINERVA RAMIREZ (through interpreter): Can't even
13 imagine what's going on with larger dairies.

14 Thank you very much.

15 BOARD CLERK MOORE: Thank you.

16 Our next commenter is Phoebe Seaton.

17 After Phoebe, we will hear from Davonni
18 Sturdivant, David De Groot, and Andre Brasil.

19 PHOEBE SEATON: It doesn't have to be that low.

20 Good afternoon, Board. Phoebe Seaton. I'm
21 reading comments prepared by David Rodriguez. David has
22 been looking forward to talking to you, but unfortunately
23 couldn't be here today due to a death in his family.

24 "My name is David Rodriguez. I live Planada,
25 California. We are located in the Central Valley in

1 Merced county, population a little over 4,000. It's been
2 designated as a severely disadvantaged community. I have
3 lived here since 1960. Hillcrest Dairy arrived in 2002
4 with over 3,000 cows. In 2012, they were out of
5 compliance with Merced County's permit with over 8,000
6 cows. Now they want to expand to over 9,750 cows.

7 The residents in this town have endured
8 horrendous odors from time to time, which come from the
9 dairy. The dairy is not even a mile from our town. With
10 odors filtered through Planada polluting -- pollution
11 affecting the air and nitrates filtering into our
12 groundwater, what chance do we have for clean air and
13 water? Global warming is no longer a theory and our
14 subbasin in Merced County is severely overdrafted.

15 Meanwhile, one cow uses over 30 gallons of water
16 just for their drinking water needs. CAFOs create severe
17 environmental impacts in communities that have been
18 designated as severely disadvantaged communities. The
19 original program of the LCFS was to reduce carbon
20 intensity by 10 percent. Yet, California is the most
21 polluted state in the country.

22 Manure management practices at California dairies
23 account for 25 percent of the state methane emissions.
24 California has spent hundreds of millions of dollars to
25 build digesters. If you have a program that creates

1 incentives for dairies to generate more pollution, we will
2 never have the clean air or water that everyone in
3 California deserves. CARB has the opportunity to
4 implement strict regulations, including for dairies to
5 prevent pollution and climate change.

6 Thank you.

7 BOARD CLERK MOORE: Thank you.

8 Our next commenter is Davonni Sturdivant

9 DAVONNI STURDIVANT: Hello. My name is Davonni
10 Sturdivant. I am a Transportation Security Officer at
11 SFO. Even though I work inside the terminal, my job at
12 the airport exposes me to air pollution that impacts my
13 health and the health of my co-workers. I have asthma and
14 the pollution and smell of the fumes that I am exposed to
15 on the job definitely makes it worse. The fumes come into
16 the terminal sometimes and I have trouble breathing and
17 getting. I get bad headaches and migraines from it.
18 Wildfires caused by climate change sometimes sends smoke
19 into the Bay Area and make the it air much worse. Just
20 last week or air quality was at a unhealthy level for
21 several days in a row and I don't take my breaks outside
22 because of it, because it triggers my asthma.

23 I also live by the airport in Daly City,
24 California, and the pollution and smell of the fumes are
25 bad there as well. My friends and I are worried about the

1 things and that they will get worse over time.

2 Thank you.

3 BOARD CLERK MOORE: Thank you.

4 Our next commenter is David De Groot.

5 DAVID DE GROOT: Yes. Good afternoon. My name
6 is David De Groot and I'm a Principal at 4 Creeks, which
7 is an engineering company. I'm a civil engineer and grew
8 up on a dairy. I've had the opportunity to work with a
9 lot of dairies and digester developers in providing the
10 design, the permitting, and the construction for these
11 projects to get them from concept to full operations.

12 A couple points I'd like to highlight today is
13 one is this program has created a lot of economic boost
14 for the local communities that these projects are being
15 built in. And it's not only the professional, but it's
16 the laborers, it's the contractors that are a part of
17 these projects that, especially, you know, in the past
18 couple years, especially with all the COVID and everything
19 else going on, have really provided an economic boost for
20 these communities that are disadvantaged during this time.
21 But in the future, they will continue to provide support
22 with all the operations and all the maintenance that is
23 ongoing with these projects to make sure that they're
24 reported very well.

25 The second item is there's a lot of co-benefits

1 to these projects. So we're not just designing a project
2 just to capture the methane. As a part of that, you're
3 designing wastewater systems, you're designing separation
4 systems, mature systems, nutrient management. And all of
5 that has co-benefits to water quality, removes H2S,
6 removes local pollutants. All these things are
7 co-benefits to these projects that are part of the designs
8 for a successful project.

9 The third is this program promotes innovation,
10 promotes the ability to come up with new ideas to solve
11 these problems. And having this program being a robust
12 program brings professionals, brings people like me who
13 grew up on a dairy that wants to solve problems, wants to
14 find problems. It encourages those types of much people
15 to get involved in these programs and to want to do it if
16 there's investment that can continue in these projects.

17 One point to note is these are family projects.
18 You know, there's local fairs, 4H, FFA is a big thing in
19 our area. What's being talked about is these projects.

20 Thank you very much.

21 BOARD CLERK MOORE: Thank you for your time.

22 The next Commenter is Andre Brasil.

23 ANDRE BRASIL: Hello. My name is Andre Brasil
24 and I'm a dairy farmer along with my siblings and parents.
25 We are one of the mainly family farms in California that

1 are often misclassified as factory farms. We are simply
2 generational families tasked with providing wholesome food
3 through a growing world. We're not a large corporation
4 and our business began when my father immigrated from
5 Azores Islands and started milking cows on a dairy in
6 Tulare County when he was 13 years old.

7 It was his first job in the U.S. with his first
8 pair of shoes, and decades later he purchased that same
9 dairy that is now operated by the next generation. We all
10 live on the farm. We're raising our kids here. We drink
11 the water. We breathe the air. We also provide housing
12 to our employees who are like family to us. And we care
13 about the air that they breathe, the water they drink, and
14 their livelihoods.

15 In my career, I spent some time working for the
16 Workforce Development Board of Tulare County, where I
17 first met the California Bioenergy team. They were
18 reaching out to disadvantaged communities and explaining
19 the dairy digester projects that they planned on building.
20 After learning about the environmental and economic
21 benefits of dairy digesters to dairies and the communities
22 that they support, I partnered with CalBio and built a
23 digester on my family's dairy. I later joined the CalBio
24 team to help extend the opportunity to dairy families
25 throughout the California, so that they too can

1 participate in the commitments we make to our environment
2 and our communities.

3 CalBio alone is now responsible for roughly one
4 million metric tons of CO2 equivalent reductions per year,
5 a major contribution to California's methane reduction
6 goals. We're doing this by capturing fugitive methane
7 that would have otherwise been released into the
8 atmosphere and using it to displace diesel trucks that
9 were polluting our valley air. We're also furthering
10 local emissions reductions by destroying dangerous
11 hydrogen sulfide on-site.

12 Dairy digesters are an amazing story where you
13 have we're have Republicans and Democrats working together
14 to build projects that combat climate change and support
15 our rural communities through great environmental and
16 economic benefits. Programs like the Low Carbon Fuel
17 Standard have been instrumental to this effort.

18 Thank you.

19 BOARD CLERK MOORE: Thank you.

20 Our next commenter is I think it was Howey
21 Hettinga.

22 HARVEY HETTINGA: Good afternoon. My name is
23 Harvey Hettinga. I'm Rockview Dairies out of Corcoran,
24 California. Our digester was commissioned and began in
25 2019. Our dairy is family owned and operated. I'm a

1 first generation farmer and my children will bill the
2 second. Climate-smart practices that we currently take
3 part in are we have a 4 megawatt solar system. We have a
4 6 megawatt solar system currently in construction and a 10
5 megawatt solar system currently in the application
6 process. We compost and deliver approximately 80,000 tons
7 of compost annually. Over 50 percent of our feed
8 selections are made up of by-products, by-products
9 consisting of wheat NIVs, distillers grain, straw, gray
10 pumice, almond hulls, almond shells, pistachio hulls,
11 cotton seed, citrus, reject onions, reject garlic, and gin
12 trash.

13 Our team is reducing methane emissions by roughly
14 140,000 metric tons annually. As part of our
15 sustainability initiatives, we're proud to improve local
16 air quality. Covered lagoons reduce emissions via
17 hydrogen sulfide, which also reduces odor. In addition,
18 dairy methane has allowed our team to replace 37 diesel
19 trucks with natural gas powered trucks, which continues to
20 contribute to the clean air initiative, while
21 demonstrating responsible business practices.

22 We strongly support the Low Carbon Fuel Standard
23 Program to reduce dairy methane. It enabled our project.
24 We need to -- we need to protect and expand on this
25 practice to protect our air and build new projects on

1 other dairies. California dairies have responded to the
2 State's call for better stewardship. Now we're succeeding
3 together.

4 Thank you.

5 BOARD CLERK MOORE: Thank you.

6 Our next five commenters will be Neil Koehler,
7 Wendell Wesley Jr., Chad Frahm, Noah Garcia, and Michael
8 Boccadoro.

9 Neil Koehler.

10 NEIL KOEHLER: Members of the Board, my name is
11 Neil Koehler with the Renewable Fuels Association. We are
12 strong supporters of the LCFS. Ethanol has been a work
13 horse of the program generating 3 of 10 credits program
14 today. And more is possible with higher ethanol blends.

15 A vehicle emissions study co-funded by CARB
16 demonstrated remarkable air quality benefits on increasing
17 the blend of ethanol from 10 to 15 percent. E15 results
18 in an additional annual reduction of two million metric
19 tons of GHG emissions, further reductions in criteria
20 pollutants, all while reducing cost of gasoline. E15 is
21 approved by the EPA and has been certified as a legal fuel
22 in 48 states. Only California and Montana are laggards in
23 not approving E15 blends.

24 RFA is part of the broad coalition of clean fuel
25 suppliers who have documented, through analysis by ICF,

1 that carbon reductions of over 40 percent by 2030 are
2 achievable. E15 is a significant contributor to these
3 additional carbon reductions in that analysis.

4 Decarbonizing the liquid fuels that would be in the market
5 for decades to come is a critically important complement
6 to the electrification goals of this Board. Science
7 informs us that time is of the essence to achieve maximum
8 GHG reductions now. E15 is the leading opportunity under
9 the LCFS to immediately and significantly further reduce
10 GHG emissions.

11 Higher ethanol blends do -- are not about
12 increasing the production of ethanol. It is about using
13 existing supplies to displace more petroleum, as gasoline
14 consumption declines. As commented by the RFA from the
15 beginning of this process, E15 certification should be
16 part of the current LCFS rulemaking. We respectfully ask
17 that CARB expedite the simple gasoline specification
18 change allowing for, not mandating, allowing for E15 to
19 facilitate greater emission reductions, petroleum
20 displacement, and cost savings as soon as possible, in
21 advance of the great success of the LCFS Program.

22 Thank you very much.

23 BOARD CLERK MOORE: Thank you.

24 Wendell Wesley Jr.

25 WENDELL WESLEY JR: Hi. My name is Wendell

1 Wesley Jr. I want to thank everyone for being here and be
2 a part of this process for environmentally safe water,
3 air, and land. And yes, I say water and land as well,
4 because I have asthma. And in 2021 of March, I found out
5 I had Valley Fever. That's from the spores in the ground
6 from construction, and pesticides, and probably even all
7 this dairy talk that we're hearing about as well. So
8 we're polluting our land. Global warming is a real thing.

9 I have grandchildren. They're on the east coast,
10 a lot of us have grandchildren. We need to start thinking
11 about our future for the next generation and the
12 generation beyond. I don't have a problem with all the
13 progress that's being made. These BAFs sounds like a good
14 idea. They're helping. But if you have too many BAF in a
15 small concentrated area -- like take this room. Let's say
16 this room was Kern County where I'm from, okay, and the
17 whole building was California, and everything was just in
18 this room. It's a lot more toxic to us here. We need to
19 spread things out. That would make it a lot more
20 breathable and a lot more safer for all us.

21 So in thinking about the future and all these
22 fossil fuels, and processors, and everything, you know,
23 the bottom line here is, you know, we're doing a good job,
24 but we need to do better. We're still about 40 years
25 behind, in my opinion. And we need to incentivize

1 everybody that's out there that's a part of this to do
2 better and to do more. I mean Shell had \$9 billion in the
3 first quarter -- excuse me, 7 billion for Shell, 9 billion
4 for Chevron. That's a lot of billions. Surely they can
5 pitch in and help a lot more.

6 Thank you.

7 BOARD CLERK MOORE: Thank you. Chad Frahm.

8 CHAD FRAHM: Good afternoon. Chad Frahm with
9 Brightmark. Brightmark is a San Francisco based company
10 and it's on a mission to solve critical environmental
11 challenges with particular emphasis on circular solutions
12 that reimagine waste.

13 One of these solutions is capturing waste
14 methane. As was stated in the staff presentation,
15 fugitive methane emissions from organic material have an
16 outsized impact on climate change in the near term.
17 California is a leader in addressing the climate crisis.
18 Programs that create long-term market certainty are needed
19 to lower the carbon intensity in California's economy and
20 meet its climate goals.

21 At Brightmark, we have low carbon intensity
22 projects on dairy farms in California and across the
23 country. Today -- to date, our projects have offset over
24 650,000 metric tons of CO2 equivalent and provided low
25 carbon fuel to California. Many of our RNG projects in

1 operation and under construction currently rely on LCFS
2 revenues. Significant changes to the current framework
3 will undermine long-term capital investment decisions
4 based on that LCFS credit value and risk stranding
5 existing assets.

6 We support the use of the GREET model in the
7 current framework as it's backed by science and is the
8 most widely accepted carbon accounting methodology for
9 clean fuels. Also, current biomethane deliverability
10 through book and claim is consistent with how conventional
11 gas markets work. It's also used by other successful
12 renewable energy standards and U.S. EPA's renewable fuel
13 standard as well as European green gas programs.

14 As the Board considers LCFS Program changes or
15 not, we would request that the increase to the carbon
16 intensity reduction goal of at least 35 percent. We also
17 request to retain the current programmatic framework for
18 biomethane crediting and biomethane deliverability until
19 at least the next LCFS update.

20 The LCFS Program is a success and the certainty
21 it provides to the market is a key factor in the long-term
22 success of projects that are reducing fugitive methane
23 emissions and decarbonizing California's transportation
24 secretary -- sector.

25 Thank you.

1 BOARD CLERK MOORE: Thank you.

2 Noah Garcia.

3 NOAH GARCIA: Great. Good afternoon, Chair
4 Randolph and members of the Board. Thanks for the
5 opportunity to speak today. My name is Noah Garcia with
6 EVgo. And EVgo owns and operates one of the largest
7 public EV fast charging networks with a commitment to
8 supporting electric for all. EVgo commends CARB's ZEV
9 leadership and recognizes the LCFS as a critical tool for
10 accelerating investment zero-emission fuels. In response
11 to new regulations and policies including ACC II, it is
12 critical that CARB strengthen LCFS by adopting more
13 stringent near-term carbon intensity reduction targets
14 including in 2024 and developing new mechanisms to
15 accelerate or pull forward carbon intensity benchmarks if
16 certain conditions are met.

17 In addition, we encourage CARB to reinforce, not
18 weaken provisions in the LCFS that enable widespread
19 transportation electrification in line with State goals.
20 Specifically EVgo recommends that CARB preserve existing
21 fast charging infrastructure, or FCI, credit provisions
22 through 2035 to support deployment of fast charging
23 infrastructure that's needed statewide instead of limiting
24 their availability starting in 2026. Policy tools like
25 the LCFS and FCI are important not only for driving

1 deployment of new chargers, but also for enhancing the
2 rebuilt in customer experience at existing fast chargers.

3 So in this way LC -- FCI acts as a critical
4 complement to California Energy Commission incentive
5 programs that often provide CapEx incentives and is an
6 important funding source for fast charging operations and
7 maintenance, which again are critical for supporting a
8 superior customer experience.

9 Moreover, CEC recently modeled that more fast
10 charging is needed scaling up from 10,000 fast chargers
11 today to nearly 40,000 in 2030 and up over 80,000 in 2035,
12 so the demand is clearly there.

13 So ultimately, we look forward to working with
14 CARB to support a strengthened LCFS Program and that
15 promotes a shared vision for electric for all. Thank you
16 very much.

17 BOARD CLERK MOORE: Thank you.

18 Our next commenter is Michael Boccadoro, who has
19 slides.

20 (Thereupon a slide presentation).

21 BOARD CLERK MOORE: After Michael, we will hear
22 from Floyd Vergara, Shelby Neal, and Andrew Craig.

23 MICHAEL BOCCADORO: Sorry. I'm being high
24 maintenance today.

25 There we go.

1 Thank you very much. My name is Michael
2 Boccadoro. I'm here on behalf of the Ag Energy Consumers,
3 as well as Dairy Cares today and I've been working with
4 the dairy sector for the past 20 years on sustainability
5 issues. I was very deeply engaged in the development of
6 Senate Bill 1383. I think it would be good for folks to
7 have a history lesson on 1383 and how we got to where we
8 had. I want to underscore a point that staff made today
9 and that is what would happen if we got rid of avoided
10 Methane crediting in 2024 and we directly regulated the
11 industry in 2024. And the answer is very straightforward.

12 The chart in front of you is from a UC Davis
13 report that was conducted in December of 2022, late last
14 year, and it built on the staff analysis. And what it
15 shows is that we can get to the staff's 40 percent
16 reduction -- excuse me, the State's 40 percent reduction,
17 but we can only do that if we have all of our tools
18 available to us. Herd reduction is going to be a big
19 piece of this and we're seeing attrition happen naturally.
20 Anaerobic digesters are a critical component. Alternative
21 manure management practices are a big piece of this. But
22 without digesters, there's simply no way to achieve the
23 reductions we're trying to achieve.

24 We're only going to need to build about another
25 120 digesters in California. We're going to need to build

1 another four to five hundred alternative manure management
2 practices. So the point of this isn't just about
3 digesters. We need them both, so it's really important.

4 Next slide.

5 --o0o--

6 MICHAEL BOCCADORO: And then really quickly, we,
7 at some point, have to ask ourselves why we would abandon
8 the most effective program that the State is currently
9 funding, dairy methane reduction program that producing
10 more reductions than any other program, 25 million metric
11 tons over the next 10 years, cost effectively, and it's
12 all methane and we all know how important that is.
13 Abandoning what we've achieved would be counterintuitive
14 and counterproductive.

15 Thank you.

16 BOARD CLERK MOORE: Thank you.

17 Our next commenter is Floyd Vergara.

18 FLOYD VERGARA: Good afternoon, Chair Randolph,
19 Board members, and CARB staff. I'm Floyd Vergara with the
20 Clean Fuels Alliance America. We're the U.S. trade
21 association representing the biodiesel, renewable diesel,
22 and sustainable aviation fuel industries. I first want to
23 thank CARB staff for all the hard work they put into the
24 rulemaking this past year. Clean Fuels has strongly
25 supported the Low Carbon Fuel Standard since 2009 and we

1 support the proposed amendments evaluated in the SRIA, in
2 particular minimum five percent step-down in 2024, a
3 minimum 30 percent CI target by 2030, and
4 auto-acceleration mechanism.

5 Regarding the arbitrary caps on lipids, a
6 science-based guardrail is already hardwired into the
7 LCFS, and namely the requirement to use GTAP as the only
8 model allowed for assessing ILUC effects. Caps suggested
9 to date are not based on the latest GTAP model and are
10 therefore not allowed under the regulation. Now, with
11 that said, the GTAP data sets that are used in the LCFS
12 are well over a decade old at this point. So any
13 discussion of guardrails that doesn't first involve
14 updating the GTAP data sets is misinformed. Facts and
15 science matter. As staff noted earlier, there is no data
16 evidence right now to suggest that biofuels is causing a
17 problem.

18 In fact, Purdue's latest assessment of soil
19 lipids estimates an ILUC score of 9.8, which is 84 percent
20 less than CARB's 2011 assessment and 66 percent less than
21 the 2015 assessment. So it's clear that the ILUC effects
22 have been greatly overestimated since the start of the
23 LCFS.

24 Biodiesel and renewable diesel keep crude in the
25 ground, displacing more than half of petroleum diesel and

1 generating nearly half of all LCFS credits. California
2 must double down on these fuels in the heavy-duty sectors
3 while aggressively pursuing electrification where it can,
4 not arbitrarily taking valuable decarbonization options
5 off the table. You can't reach your goals with one hand
6 tied behind your back.

7 Thank you.

8 BOARD CLERK MOORE: Thank you.

9 Shelby Neal.

10 SHELBY NEAL: Good afternoon, Madam Chair,
11 members of the Board. My name is Shelby Neal. I
12 represent a company called Darling Ingredients. Darling
13 is the largest collector of used cooking oil in the state
14 of California. We operate all over the state. We have
15 more than 300 full-time union employees who work at six
16 locations from Los Angeles to San Francisco and in between
17 in the Central Valley. We also have a 50 percent
18 investment in a large renewable diesel production facility
19 and a sustainable aviation fuel facility.

20 I first want to thank CARB staff who have done an
21 absolutely tremendous job. They represent the agency with
22 a world class level of professionalism and intelligence.
23 And thank you to them. We're very supportive the
24 direction that the rulemaking appears to be going,
25 particularly the long-term ambition that's been

1 represented in the SRIA, the step-down, which is crucial,
2 and obviously adding aviation, an obligation for aviation.

3 When you think about petroleum aviation rule
4 versus SAF, which we will begin producing very shortly 235
5 million gallons, that petroleum-based SAF produces -- or
6 petroleum-based aviation fuel produces over 100 times the
7 amount of sulfur. I mean, this is a very serious issue.
8 I know CARB staff understands that. And so my point in
9 saying that is we're very supportive of the direction, but
10 could the timing be improved slightly. In terms of a
11 potential January 1, 2025 implementation date, could that
12 be moved up to July 1, 2024, so that we're not leaving
13 these greenhouse gas emissions on the table. We're not
14 leaving these health benefits on the table.

15 We stand ready. We can produce 1.2 billion
16 gallons of renewable diesel. We will very shortly produce
17 235 million gallons of sustainable aviation fuel. We're
18 ready to bring that to California and put it in the market
19 January, but not January 1, 2025 when the market signals
20 were there, and we moved those market signals to the
21 middle of the year and get those benefits earlier.

22 So that's our recommendation at this point. But
23 again, thank you to Rajinder, Cheryl, Matt, Jordan. They
24 do an amazing job representing the agency. Thank you,
25 Madam Chair.

1 BOARD CLERK MOORE: Thank you. Our next
2 commenter is Andrew Craig.

3 ANDREW CRAIG: Good afternoon. My name is Andrew
4 Craig. I'm the Vice President of Greenhouse Gas Programs
5 at California Bioenergy. My role is to ensure the
6 digester projects we build achieve the highest levels of
7 integrity and data quality. I'm proud to live in a State
8 where climate science is recognized and programs like the
9 LCFS have been put in place to achieve methane reductions.
10 Because of this program, our operating projects reduce
11 over one million metric tons of CO2 equivalent per year.
12 The reductions achieved are real, permanent, and
13 meaningful. The projects also provide local air quality
14 benefits by capturing and destroying high H2S biogas that
15 would otherwise be emitted into the atmosphere.

16 The reason these reductions have been achieved is
17 largely thanks to CARB's world-leading LCFS Program, which
18 was designed to incentivize the capture and beneficial use
19 of methane. Avoided methane crediting is a fundamental
20 concept in greenhouse gas accounting. It's rooted in
21 science and goes back to CARB's earliest livestock
22 protocols.

23 Our projects must undergo a rigorous verification
24 process, which involves a site visit to each farm from a
25 CARB accredited third-party verification body. We review

1 manure management practices down to the PIN level,
2 including gas data that we collect on a 15-minute basis.
3 There are multiple stages of review by CARB staff where
4 each farm's carbon intensity score is evaluated on a
5 site-specific basis using the GREET Model, which was
6 developed by Argonne National Laboratory. This model
7 accurately calculates the greenhouse gas emissions avoided
8 from the full life cycle of the RNG and electricity
9 produced from our projects.

10 There's no doubt the LCFS Program is working
11 exactly as intended. And it would be disastrous from a
12 climate standpoint to backslide on the immediate emission
13 reduction opportunities that are right in front of us.
14 Thank you for the opportunity to speak today.

15 BOARD CLERK MOORE: Thank you.

16 The next five commenters are Shannon Broome,
17 Nestor Dolde, Laura Renger, Taylor Roschen, and Carlos
18 Gutierrez.

19 Shannon Broome.

20 SHANNON BROOME: Okay. Thank you very much. Hi.
21 Good afternoon. My name is Shannon Broome. And I am here
22 today on behalf of Highly Innovative Fuels U.S.A., or HIV
23 U.S.A. This is a global eFuels company that is harnessing
24 renewable energy sources to decarbonize the transportation
25 sector and more we're currently developing a large-scale

1 commercially viable facility to produce a carbon neutral
2 fuel for many transportation modes and we very much
3 appreciate CARB staff's time and effort on this rulemaking
4 and also on our application for a pathway, which is
5 currently pending.

6 I'm here today to focus on one particular
7 suggestion that we have, which is to amend section 95482,
8 to add a provision that ensures and clarifies that low CI
9 methanol is eligible for LCFS crediting as an opt-in fuel
10 for marine and other specialty transportation
11 applications, like direct methanol fuel cells. Currently,
12 the regulations provide that transportation fuel use in
13 ocean-going vessels is exempt. Thus, low CI marine
14 transportation fuels are not eligible for crediting except
15 in at-berth power -- shore power situations. So our
16 process will generate low CI methanol for us in marine
17 applications, and that's a real opportunity. We request
18 that opt-in entities be able to obtain LCFS credits for
19 low CI methanol volumes in marine applications and/or that
20 the exemption does not apply to methanol provided as a
21 transportation fuel in marine applications.

22 It looked like CARB was going to do this last
23 summer when staff presented, but we didn't see it in the
24 February proposal and we'd really encourage you to do
25 that, so that it could be finalized and that's -- we

1 appreciate your time and attention and all the work that
2 you're doing. Thank you so much

3 BOARD CLERK MOORE: Thank you.

4 Mr. Dolde.

5 NESTOR DOLDE: Good afternoon, everybody. My
6 name is Nestor Dolde. I work at San Francisco Airport as
7 wheelchair attendant. And similarly, I am also the
8 Executive Board of SEIU USWW. Many of our colleagues work
9 in areas with toxic fumes of the aircraft, jet fuel that
10 sometimes spills from the aircraft down to the ramp area,
11 where we smell and inhale. I work for more than eight
12 years as security at the ramp where we secured the
13 aircraft during the arrival and departure of aircraft at
14 the aircraft movement area, where we walk at the area to
15 secure the area. Sometimes we found out that during the
16 fueling, the fuel spills at the ramp, which we experience
17 to inhale it. It is hazardous to our health. Nobody is
18 exempted here. All airport employees who work at the ramp
19 will experience this. Nobody from us over here present to
20 us working at the airport experience these incidences. We
21 don't want this to happen. We don't want any incidences
22 of asthma, incidences of diabetes, incidences of high
23 blood pressure, because of the fuel fumes that we inhale.
24 As such, we need the support of the --

25 BOARD CLERK MOORE: Thank you for your time.

1 NESTOR DOLDE: -- CARB Board.

2 BOARD CLERK MOORE: That concludes your comment.

3 The next commenter is Laura Renger.

4 LAURA RENGER: Laura Renger from CaleTC. CaleTC
5 is supportive -- CaleTC is the California Electric
6 Transportation Coalition and we are supportive of the 30
7 percent stringency in 2030 and a mid-2024 step-down in
8 stringency. We've also been working with over 25 equity
9 stakeholder groups and other supporters to address some of
10 the issues that Dr. Balmes and Dr. Shaheen raised this
11 morning with regard to the current use of the utility
12 funds from the LCFS-based residential credits.

13 And what we're proposing is a -- changes to the
14 program that would effectively triple the amount of money
15 that the utilities are spending on low-income communities.
16 What we would like to do is to really take that money and
17 focus it where there's the a biggest gaps. And we see
18 those gaps in medium- and heavy-duty, the need for
19 infrastructure, the need for upgrades to the grid to
20 support electrification in low-income communities, and
21 programs for low-income customers.

22 As a reminder, the utilities have been working
23 with CARB for years on -- LCFS, and we do not receive any
24 sort -- the money doesn't go to our bottom line. It's a
25 pass-through that goes straight to customers. And the

1 utility's accounting and bookkeeping is all transparent.
2 We -- the IOUs are governed by the Public Utilities
3 Commission and, of course, the POUs are State -- I'm sorry
4 local agencies.

5 So we really hope to continue to work with CARB
6 on these issues. If any other folks here today from the
7 environmental justice community have additional feedback
8 that you'd like to share with us, please do so. I'll be
9 sitting in the back and we you really appreciate the
10 support we've received so far and the same goes to the
11 CARB Board. We appreciate your support and would like to
12 thank CARB staff for all their hard work.

13 Thank you.

14 BOARD CLERK MOORE: Thank you.

15 Taylor Roschen.

16 TAYLOR ROSCHEN: Good afternoon, Chair and
17 members. Taylor Roschen on behalf California Dairies,
18 Inc., the state's leading dairy cooperative that's
19 co-owned by over 300 farming families in California.
20 You've heard from staff today about the need to expand
21 methane capture and the importance of continuing
22 successful dairy methane reduction efforts. We've heard
23 via writing from a bipartisan group of Central Valley
24 legislators about the importance of staying the course and
25 continue what they initiated with SB 1383. And you've

1 heard from San Joaquin Valley elected officials about the
2 importance of climate-smart dairy, methane reduction
3 efforts, and local air quality and water quality benefits
4 that these projects provide.

5 But despite that support and a record of success,
6 we still have requests to abandon these practices, which
7 will stymie immediate emissions reductions and harm the
8 hundreds of farming families that have done exactly what
9 the Legislature and CARB has asked them to do since the
10 passage of 1383 to significantly reduce their methane
11 emissions.

12 Digesters are highly proven And cost-effective
13 methane reduction strategies. They provide critical
14 co-benefits. And California's program is fully aligned
15 with the Biden administration's approach. This is how
16 California and the Air Resources Board leads. Abandoning
17 California's most impactful methane strategy, as we
18 recognize the growing importance of reducing methane, is
19 counter to the State and the public's interest, and it
20 signals to many of the dairy families, some of which you
21 heard from today, that they don't play an active role in
22 assisting with State's achievement of their climate goals.

23 As such, CDI respectfully requests CARB to stay
24 the course and continue to partner with California's
25 dairies families to achieve the State's climate goals.

1 Thank you.

2 BOARD CLERK MOORE: Thank you.

3 Carlos Gutierrez.

4 CARLOS GUTIERREZ: Good afternoon, Madam Chair
5 and Board members. Carlos Gutierrez, Executive Director
6 of the California Advanced Biofuels Alliance, also known
7 as CABA. CABA's mission is to promote the production and
8 use of advanced fuels. So on behalf of our 16-member
9 companies, I'd like to thank you and your staff for all
10 your hard work on these very important issues. Here in
11 California, there are five biodiesel and three renewable
12 diesel plants, which supports 1,500 good paying jobs and
13 335 million in economic activity.

14 Now, we understand electrification is coming and
15 we support it, but we believe investing in biodiesel now
16 in combination with battery electric technologies
17 collectively achieves the greatest reduction total GHG
18 emissions over the next 20 years. The LCFS provides a
19 clear reliable pathway for California to facilitate the
20 use of alternative fuels as one piece of the puzzle
21 towards achieving carbon neutrality. To that end, we
22 support, and have continued to support, and historically
23 supported LCFS and the lack of feedstock and fuel caps so
24 that the market can respond to market demands and
25 California's necessities.

1 Failure to stay that course only allows for the
2 proliferation of petroleum fuels. So again, my comments
3 will be brief, and I just want to thank you again for the
4 opportunity to speak with you and we look forward to
5 working with you as we address these important issues.
6 Thank you.

7 BOARD CLERK MOORE: Thank you. Our next
8 commenter is Brent Newell. After Brent, we will hear from
9 Jason John, Tom Knox, Faraz Rizvi, and Amelia Keyes.

10 BRENT NEWELL: Good afternoon, Madam Chair,
11 members of the Board. I'm Brent Newell. I'm with
12 Leadership Counsel. I have two points today, first, to
13 eliminate avoided methane crediting, and second adopt the
14 Senate Bill 1383 regulations.

15 The Board should direct staff to eliminate
16 avoided methane crediting by 2024. Staff said in their
17 presentation that they plan to issue no new pathway
18 certifications after 2030. That's only half the plan.
19 The other half of the plan is that they will reauthorize
20 existing pathway certifications for periods of up to five
21 years after 2030. So meth -- avoided methane crediting is
22 going to continue for 16 years. It should end, because it
23 lavishly rewards dairies for fictitious reductions.

24 Second point is the Board should direct staff to
25 adopt Senate Bill 1383 regulations. The legislation says

1 CARB shall adopt regulations. It's not a discretionary
2 act and they shall be done. Dr. Cliff, in his remarks in
3 answering Board Member Takvorian's question said, well, we
4 Need to make some findings before we adopt regulations and
5 we have no plans to adopt regulations. That's not how the
6 statue works. It says you shall adopt regulations and
7 then before you implement them, after January 1st of 2024,
8 you need to make some findings.

9 So this Board needs to initiate and direct staff
10 to do this immediately the SB 1383 regulations, whether
11 they get implemented depend on other factors. But you
12 need to adopt the regulations now. Now, what's happening
13 here, it's pretty clear CARB is a long way from achieving
14 the Senate Bill 1383 targets, less than halfway there, and
15 it wants to use the LCFS to do that, but you can't claim
16 those reductions because you're selling them to oil
17 companies who use those methane reductions to increase
18 their own emissions. You are not achieving net reductions
19 under SB 1383. You need to adopt regulations and you need
20 to eliminate --

21 BOARD CLERK MOORE: Thank you.

22 BRENT NEWELL: -- avoided methane crediting.

23 BOARD CLERK MOORE: That concludes your comment.

24 BRENT NEWELL: Thank you.

25 BOARD CLERK MOORE: Next commenter is Jason John.

1 JASON JOHN: Good afternoon, Chair Randolph and
2 Board members. My name is Jason John with Sierra Club
3 California. Thank you for hearing and considering our
4 comments today. We feel that the LCF continues to hold
5 incredible potential for decarbonizing fuels in
6 California, as well as reducing other greenhouse gas
7 emissions and toxic air pollutants.

8 However, we cannot fully achieve those goals and
9 protect California's communities by continuing to
10 overprioritize combustion fuels. Sierra Club California
11 supports the recommendations from the Environmental
12 Justice Advisory Committee presented earlier this month,
13 including eliminating avoided methane credits effective
14 January 1st, 2024. The industrialized conditions that
15 leave significantly higher methane emissions are no more a
16 necessity in California than unregulated emissions from
17 landfills or from fossil fuel combustion would be.

18 Overincentivizing these pathways imbalances the
19 LCFS and harms disadvantaged communities
20 across the state. We also support capping lipid biofuel
21 levels. Failing to do so will continue to overincentivize
22 this combustion fuel that still result in the emission of
23 carbon, nitrogen oxides, and particulate matter, and will
24 continue to harm California's communities.

25 Additionally, the associated land use conversion

1 needed to produce these fuels can result in the loss of
2 habitat, biodiversity, and carbon stocks. Regardless of
3 where these crops are planted, this is directly in
4 opposition to California's biodiversity and climate
5 resilience goals. Rather than overprioritizing these
6 combustion fuels, we encourage the Board to increase
7 support for zero-emission vehicles and charging
8 infrastructure, prioritizing communities that have been
9 most impacted by environmental injustices.

10 Thank you.

11 BOARD CLERK MOORE: Thank you.

12 The next commenter is Tom Knox.

13 TOM KNOX: Chair and Board members, I'm Tom Knox
14 of Valley Clean Air Now. We manage clean vehicle programs
15 in the San Joaquin Valley. I'm commenting today in
16 support of the LCFS hold-back funded programs currently
17 managed by the utilities. Our organization focuses on how
18 to use available resources to create the most impact for
19 low-income residents of disadvantaged communities. We
20 feel that utilities as consumer-facing businesses that
21 touch virtually every household in California are in a
22 unique position to support community-led solutions for EV
23 adoption in priority communities.

24 ZEV adoption in disadvantaged communities
25 requires a much more comprehensive approach than simply

1 offering purchase incentives. What is needed is to
2 rebuild the light-duty transportation infrastructure from
3 the ground up, including home service panel upgrades,
4 improved access to public charging, new models for vehicle
5 finance to name just a few.

6 Our team's experience working with the utilities
7 that are implementing the LCFS holdback funded programs
8 have convinced us that they are a key part of accelerating
9 ZEV adoption in disadvantaged communities.

10 Thank you very much.

11 BOARD CLERK MOORE: Thank you.

12 Faraz Rizvi.

13 FARAZ RIZVI: Good afternoon, Board members.

14 Faraz Rizvi here on behalf of APEN. Today, workers,
15 community members, residents from all across the strait --
16 across the state have showed up to tell you very clearly
17 this program is not working for us. In our joint
18 advocacy, we have put forward a suite of reforms that will
19 align this program better for working class communities.

20 All this requires from you is courage, political
21 courage to stand up to vested interests that seek to make
22 a lot of money who have hijacked this program and refused
23 to let it be fixed, balk at meaningful policy design that
24 is inclusive, equitable and just. This program, as it is
25 designed, upholds almost shocking absurdities, but

1 allowing refineries to pass off dirty grey hydrogen as
2 clean or renewable by either purchasing inflated methane
3 credits by using biomethane as a feedstock, the LCFS
4 upholds a pay to pollute gift. It hides the truth that
5 refinery hydrogen is inherently dirty and harmful, that
6 dairy digesters create water and air pollution. To claim
7 these as clean fuels is tantamount to a dystopian
8 distortion of truth that up is down, that ignorance is
9 strength.

10 We are asking you once again to end avoided
11 methane crediting, to cap lipid-based biofuels, to include
12 jet fuel as a deficit generator as our brothers and
13 sisters at SEIU have uplifted, and to finally ditch
14 refinery hydrogen.

15 Thank you.

16 BOARD CLERK MOORE: Thank you.

17 Amelia Keyes.

18 AMELIA KEYES: Hello. I'm Amelia Keyes and I'm a
19 Legal Fellow at Communities for a Better Environment.
20 CBE's members come California communities living next to
21 fossil fuel infrastructure like oil refineries and major
22 diesel corridors. Prior to becoming an attorney, I have
23 several years of experience in climate policy research,
24 including energy modeling of market-based climate
25 programs.

1 I'm here to reiterate our members long-standing
2 concerns that LCFS is undermining environmental justice in
3 refinery communities. The current LCFS staff package is
4 not saving the planet. It's saving big oil. We're
5 calling on the CARB Board to make critical changes to the
6 LCFS.

7 First, CARB should incorporate the changes
8 identified in the EJAC resolution. Specifically, CARB
9 should end avoided methane crediting for factory farm gas.
10 The purpose of carbon markets is supposed to be making
11 polluters pay to pollute, but these credits instead pay
12 factory farms for their pollution, even though CARB has
13 authority under SB 1383 to regulate this methane pollution
14 directly. This perverse program design not only harms
15 communities in the Central Valley, but also harms refinery
16 communities in cities like Richmond in the Bay Area and
17 Wilmington in LA.

18 Nearly all hydrogen produced in California today
19 comes from or is co-located with oil refineries, which
20 means it all comes from dirty polluting methane leaking
21 processes. The CARB staff package used inflated factory
22 farm methane credits to call its dirty hydrogen renewable.

23 Next, CARB should place a cap on liquid based
24 bio -- lipid-based biofuels. The LCF has encouraged a
25 limitless amount of biofuels, which creates new pollution

1 in communities that could have finally been free from
2 refinery pollution. These changes would allow the LCFS to
3 align with other CARB policies that prioritize investments
4 and electrification, not putting money into dirt
5 alternative fuels like biofuels and the same dirty
6 hydrogen production methods that keep pollution in the
7 same communities that have been dealing with it for far
8 too long.

9 Thank you.

10 BOARD CLERK MOORE: Thank you.

11 The next five commenters are Denny Kamphanthong,
12 Adam Jorge or Jorge, Henry Chiu, Ryan Kenny, and Alfredo
13 Arredondo.

14 Denny.

15 DENNY KAMPHANTHONG: Good afternoon. My name is
16 Denny Khamphanthong and I'm the Richmond community
17 organizer with the Asian Pacific Environmental Network.
18 We organize Asian immigrant and refugee communities for
19 environmental justice. I hope everyone had a good lunch.

20 Outside just now, we heard from people across the
21 state, who live next to expanding dairies, and from the
22 men and women who work at our airports. Nobody should
23 have to work with jet fuel dumped on them or live in fear
24 of the next refinery disaster.

25 Growing up in North Richmond, me and all the kids

1 had asthma. You learn to spot the signs right away to
2 help someone out if they had an asthma attack, with either
3 shortness of breath, or something else. I've seen so many
4 family members here in Richmond die from cancers, while
5 folks back home in Laos and across the world are fine.
6 Seeing loved ones pass away with slow deaths from
7 chemotherapy and no support, it's terrifying. Nobody
8 wants that and our communities deserve better.

9 We know who's responsible for this pollution and
10 suffering. It's the refineries next door to our homes and
11 our neighborhoods. That's why Richmond residents are here
12 to say that we don't need any more dirty hydrogen.

13 A shift from one polluting industry to the next
14 polluter that recreates those harms is not a future that
15 we want. It's not a future we can afford. We urge Board
16 members to make this program work for working class
17 communities, not big oil or big ag. We all want the same
18 thing, all right, everyone inside the room. We want
19 tree-lined streets where our nieces and nephews can play
20 safely living full lives without asthma or cancer. We
21 know this future is possible for everyone, not just the
22 wealthy. That's why we're calling on CARB to stop
23 burning -- funding dirty hydrogen and other fossil fuel
24 scams. Make airlines accountable for their pollution.
25 And as our sisters and brothers in the Central Valley are

1 saying, say no to polluting factory farm gas and this
2 methane gift.

3 Thank you.

4 BOARD CLERK MOORE: Thank you.

5 Adam Jorge.

6 ADAM JORGE: Hi, everyone. Good afternoon, Chair
7 Randolph, Board members, and staff. I'm Adam Jorge,
8 speaking on behalf of Southern California Gas Company.

9 First, we want to thank CARB staff for all of
10 their work on the Low Carbon Fuel Standard. This is an
11 essential, successful, and incredibly complex program.
12 LCFS has had a wide-sweeping impact in California and in
13 other states driving investments in low carbon fuels and
14 methane reduction projects. Effort everybody in this room
15 and outside of it puts in to getting it right is not lost
16 on us.

17 The LCFS is the primary tool to deliver low
18 carbon fuels to drive us into the future. It has played a
19 crucial role in advancing the development of new
20 biomethane facilities in and beyond California and we are
21 concerned that some of the proposed changes may discourage
22 further market growth. The development and utilization of
23 biomethane is widely acknowledged as an effective means to
24 reduce greenhouse gas emissions synergizing with other
25 strategies to displace more carbon intensive fuels.

1 While we acknowledge biomethane's ongoing
2 integration into the LCFS program, the proposed
3 alterations to book and claim deliverability could send an
4 adverse message to the market and inadvertently curb the
5 supply of biomethane required to displace fossil fuels.
6 It's vital to appreciate and recognize the differences
7 between deliverability in by power and gas markets. The
8 gas system operates differently from the electric system
9 and maintaining tames distinct accounting mechanisms.
10 Pipelines have varying flow directions making it
11 impractical to receive the exact contracted molecules.

12 The proposed changes requiring verification that
13 biomethane pipeline injection flows towards California 50
14 percent of the time creates an operationally challenging
15 and ambiguous rule for market participants. We believe
16 it's in the State's best interest to retain the current
17 framework for biomethane until there is a program in place
18 that incentivizes use for these -- for other sectors of
19 the economy. This will enable continued success in
20 decarbonizing California's transportation section and
21 achieving the State's methane reduction goals.

22 Thank you very much for your time.

23 BOARD CLERK MOORE: Thank you.

24 Henry Chiu.

25 HENRY CHIU: My name is Henry Chiu. I have been

1 a baggage screener at SFO for more than 20 years. I'm
2 here as a voice for the SEIU United States Workers West
3 airport workforce, often unseen when you and I travel.

4 I've listened to CARB, and especially Matt who
5 just left, present on methane regulation. Today, my hope
6 is that you will see us as partners. I'm here to
7 recommend each of you to choose to take action to regulate
8 the airline industry. My working conditions exposed me
9 and my co-workers to pollution that affects our health.
10 Because of the long-term exposure of airplane jet fuel's
11 harmful by-products, I go home to my family covered in
12 black soot from the airplane fuel exhaust buildup, which I
13 breathe every day for 10 hours a day. Many days I come
14 home, remove my clothes and decontaminate before I hug my
15 family.

16 I don't know the long-term exposure the impact of
17 breathing these by-products of airplane fuel as well as
18 black soot on my work clothes. I'm the primary bread
19 winner for my family so my health matters. For the health
20 of the airport workers, we ask CARB to regulate jet fuel.
21 We need clean transportation in our communities.

22 Let me close with this. Every time you travel
23 with luggage and find a notice of inspection card, please
24 remember me, remember each of our stories and faces of
25 families we represent today. Thank you, all of you, for

1 doing your best every day to not provide incentives for
2 corporations that harm workers. I appreciate your time
3 and have a nice day.

4 BOARD CLERK MOORE: Thank you.

5 Ryan Kenny.

6 RYAN KENNY: Hi. Good afternoon. I'm Ryan Kenny
7 with Clean Energy. Our company is a early, and original,
8 and strong supporter of the LCFS and we believe the SRIA
9 is on the right track. I have three main points I'd like
10 to make today, the first of which is the LCFS is a
11 success. It's decarbonizing the transportation sector
12 achieving methane emission reductions and contributing to
13 clean air.

14 To continue achieving reductions in fugitive
15 methane emissions, the LCFS must continue to incentivize
16 private investment in dairy digesters. Many RNG projects
17 in planning and construction across North America
18 currently rely on LCFS revenues to be built and operated.
19 Any detrimental changes will undermine prior efforts to
20 convince investors who make long-term capital deployment
21 decisions based on LCFS credit value. California is
22 benefiting from investments in dairy renewable natural
23 gas.

24 The production and utilization of RNG it's a well
25 recognized strategy to reduce emissions that can work in

1 conjunction with other strategies. RNG is an end use
2 agnostic fuel that could be used for low NOx, hydrogen,
3 and electric vehicle trucks. The claim that current RNG
4 incentive structure favors combustion over a ZEV future
5 under the LCFS Program is false. Contrary to the claims
6 of some stakeholders, four electric vehicle trucks
7 generate significantly more LCFS credits than one dairy
8 RNG truck regardless of whether the electricity si from
9 the grid, solar, wind or dairy.

10 It's important to note that over 10 percent of EV
11 usage in 2022 in California received its energy from dairy
12 digesters. In other words, the LCFS Program properly
13 incentivizes a transition to zero.

14 Wrapping up, we again ask that the Board adopt a
15 42 percent CI reduction by 2030 and adopt the acceleration
16 mechanism and extend book and claim out to 2035.

17 Thank you.

18 BOARD CLERK MOORE: Thank you.

19 The next commenter is Alfredo Arredondo.

20 ALFREDO ARREDONDO: Good afternoon. My name is
21 Alfredo Arredondo. I'm providing comments today on behalf
22 of the Low Carbon Fuels Coalition.

23 Governor Newsom said it best just last week
24 during his address to the UN Climate Ambition Summit.
25 This climate crisis is a fossil fuel crisis, and the

1 Scoping Plan makes clear that the LCFS is the primary
2 mechanism driving the defossilization of the
3 transportation sector. As the Board contemplates updating
4 the LCFS, the Low Carbon Fuels Coalition recommends a
5 strong focus on setting the most ambitious and achievable
6 CI target for 2030.

7 To that end, along with other key partners, the
8 LCFC commissioned a reported that has been shared with the
9 Board and staff showing that a 40 percent CI target for
10 2030 is achievable. Higher ambition, also results in
11 higher benefit from a GHG perspective, a financial
12 investment in job development perspective, and as
13 articulated by CARB staff in Alternative 2 of the SRIA
14 from air quality and health perspective as well.

15 The idea promoted by fossil fuel companies that
16 the LCFS is driving higher cost to consumers that cannot
17 afford a ZEV vehicle is debunked by traveling to any gas
18 station that offers E85 high blend ethanol fuel that is
19 consistently one-to-one -- one dollar to one and a half
20 dollars cheaper than fossil gasoline.

21 The LCFS is supporting cheaper fuels even for
22 consumers that have not been able to transition away from
23 an internal combustion engine vehicle and that is
24 happening today. As the Governor highlighted just last
25 week, the State now has oil watchdog that is providing the

1 necessary insight and data about the actual drivers of
2 price spikes for fossil gasoline at the pump. And spoiler
3 alert, it's not the LCFS.

4 The Board should continue to support
5 climate-smart and consumer-friendly policies like the LCFS
6 and increase the ambition of this technical mechanism to
7 achieve even better outcomes for consumers and the
8 environment.

9 Thank you for the time to offer comments.

10 BOARD CLERK MOORE: Thank you.

11 Our next five commenters will be Daniel Chiu, I
12 have Maryann Smith was written down, Luis Munoz, Carlo
13 Oviedo, and Nina Robertson.

14 Daniel Chiu.

15 DANIEL CHIU: My name is a Daniel Chiu. I'm a
16 baggage screener at SFO. I am here as a member of the
17 SEIU USWW. I have worked alongside ramp workers,
18 security, construction workers, and cleaners.

19 The air near the planes is sticky, oily, heavy
20 with fumes, and unpleasant to breathe. Many of these
21 workers have lung conditions. It is critical that CARB
22 include aviation fuel in its carbon fuel standards. Let's
23 hold the airlines to a higher standard. For the health of
24 airport workers, we need CARB to regulate jet fuel. We
25 need clean transportation in our communities.

1 Thank you.

2 BOARD CLERK MOORE: Thank you.

3 Maryann Smith.

4 MARYANN SMITH: My name is Maryann Smith. I am
5 TSO screener at SFO. I recognize the airport exposes me
6 to -- and my co-workers to air pollution that I'm -- that
7 impacts our health. I have asthma, so I'm concerned about
8 the quality of our air. If there is too much pollution,
9 it triggers my asthma and makes it difficult to breathe.
10 That's why -- that's what happens to me at work sometimes.

11 The airplane fumes will get bad enough to trigger
12 my asthma. It's worse for the people that work in the
13 baggage and are closer to the tarmac. I am asking the
14 California Air Resources Board to start standing up for
15 working people like me and not for polluting companies
16 like the airlines. Climate change is happening and unless
17 we do something, our air quality will continue to get
18 worse. For the health of our airport workers, we need
19 CARB to regulate jet fuel. We need clean transportation
20 in our communities. The airlines can afford it.

21 Thank you

22 BOARD CLERK MOORE: Thank you.

23 Luis Munoz.

24 LUIS MUNOZ: Hello. My name is Luis Munoz. I
25 work at SFO Airport. I'm a Transportation Security

1 Officer. Working at the airport exposes us to air
2 pollution that affects our health. In the past five
3 years, I've seen my co-workers get dizzy, nauseous, and
4 light-headed from breathing in fumes at the airport from
5 8- to 10-hour day shifts. I have lived near the airport
6 my whole life. My mom is a cancer survivor. My dad has
7 continued heart problems.

8 We all deserve to have healthy air to breathe no
9 matter where you work or live. For the health of the
10 airport workers, we need CARB to regulate jet fuel. We
11 need clean transportation in our community.

12 Thank you.

13 BOARD CLERK MOORE: Thank you.

14 Carla Oviedo.

15 CARLA OVIEDO: Hi. I'm Carla Oviedo. I'm a
16 Behavior Detection Officer at SFO. I work upstairs in the
17 terminal. I also work on the tarmac. I screen both the
18 passengers and the employees, meaning the fuelers as well.
19 I get to work very closely with them.

20 I have co-workers that have asthma. I've got a
21 chronic cough. Whenever I'm at the airport, I cough. My
22 co-worker asked for help as far as not being located there
23 on the tarmac as much, because of his asthma and he got
24 denied. They told him no. Unfortunately, they did not
25 want to help him out in any way.

1 Change is not an event, it's a process, and I
2 understand that. But I think we really need to think
3 about what we're doing here in the future.

4 Thanks.

5 BOARD CLERK MOORE: Thank you.

6 Nina Robertson.

7 NINA ROBERTSON: Good afternoon, Board members.
8 My name is Nina Robertson and I am an attorney at
9 Earthjustice. We are alarmed that unless key changes are
10 made now, the LCFS will continue to direct billions of
11 dollars every year to polluting factory farm gas and
12 biofuels, rather than the zero-emission solutions that we
13 need. I want to specifically urge the Board to stop a
14 major disaster from unfolding on the hydrogen front. We
15 all know that there is dirty hydrogen produced from fossil
16 fuels and clean hydrogen produced from zero-emitting
17 electrolysis powered by wind and solar.

18 What staff is suggesting to you today is to allow
19 the LCFS to continue to reward dirty hydrogen producers
20 who greenwash their polluting fuel with bogus biomethane
21 credits rewarded to today factory farm gas.

22 For at least three reasons, the Board must stop
23 this greenwashing exercise now. First, as mentioned by
24 other commenters today, the carbon accounting used to
25 assign biomethane, a highly negative carbon intensity

1 score is based on faulty assumptions and rewards
2 polluters.

3 Second, the producers of truly green hydrogen are
4 handicapped, because hydrogen producers who paper over
5 their dirty hydrogen with biomethane get much larger
6 subsidies than companies that produce zero-emission
7 hydrogen from solar and wind.

8 Third, the LCFS is sending a signal to oil
9 companies to expand their polluting FMR capacity,
10 increasing pollution in nearby communities. It's
11 outrageous that the LCFS gives the biggest hydrogen
12 subsidies to industries that harm California's vulnerable
13 residents. We need the Board to direct staff to fix these
14 glaring problems with the LCFS's treatment of dirty
15 hydrogen. This means ending avoided methane crediting by
16 2024 and boosting clean zero-emitting hydrogen.

17 The nation is looking to California for climate
18 and environmental justice guidance. Allowing the LCFS to
19 reward dirty hydrogen and handicap clean hydrogen will be
20 colossal failure of leadership.

21 Thank you.

22 BOARD CLERK MOORE: Thank you.

23 The next five commenters will be Carolina Rocha,
24 Nicole Rice, Quentin Foster, Mikhael Skvarla, and Orguidea
25 Sandoval

1 Carolina Rocha.

2 Okay. I'll come back to Carolina -- Carolina.

3 Nicole Rice.

4 NICOLE RICE: Good afternoon. My name is Nicole
5 Rice. I'm the President of the California Renewable
6 Transportation Alliance and I appreciate this opportunity
7 to once again share our thoughts with you.

8 First, I want to thank CARB staff for all their
9 hard work and for today's comprehensive presentation. We
10 agree with staff that the LCFS Program is critical to
11 accelerating the low carbon fuel production in meeting the
12 objectives of the 2022 Scoping Plan.

13 That is why we have joined with 76 alternative
14 fuel producers and end-users in asking the Board to focus
15 on improving the stringency at the carbon intensity
16 targets to achieve deeper, quicker reductions and to
17 refrain from making any changes to the biomethane
18 production and deliverability sections in the program that
19 could risk slowing the State's progress, stranding
20 existing assets, or chilling future project development
21 and investments for all the reasons that have been stated
22 by so many today.

23 The LCFS has been highly successful to date. It
24 is an excellent example of a highly successful
25 public-private partnership. The amount of investment

1 needed to fully transition California's transportation
2 sector to zero-emission is greater than the State can do
3 alone. Monetary investments from the private sector will
4 also be necessary to enable the State to reach its
5 objectives. And these investments can only be encouraged
6 by ensuring that there is a stable, predictable market
7 structure that can provide a reasonable return on
8 investment.

9 The diversity of biomethane cannot be dismissed.
10 It can be a feedstock for electric and hydrogen pathways
11 as well as for CNG pathways and it can also be part of the
12 decarbonization strategy for other sectors of the economy
13 as envisioned in the latest Scoping Plan revision.

14 Thank you again for the opportunity to share
15 these comments.

16 BOARD CLERK MOORE: Thank you.

17 I'm going to go back to Carolina Rocha.

18 All right. Quentin Foster.

19 QUENTIN FOSTER: Good afternoon, Madam Chair,
20 members of the Board, staff. Thank you for the
21 opportunity to comment. My name is Quentin Foster. I'm
22 the Vice President of with H Cycle, LLC. We are a clean
23 hydrogen development company. And you've heard multiple
24 constituencies today share with you their issues with
25 asthma, of which I, too, share their affliction, which is

1 why it is imperative that the update of the LCFS does not
2 lose site of the State's ultimate goal, which is moving
3 the transportation sector away from fossil fuels, driving
4 that energy innovation and investment in California, and
5 job creation that includes our key partners trades to
6 ensure that steward workers are not left behind from our
7 decarbonized industries.

8 These economic and environmental benefits, we
9 support the staff recommendation to be more ambitious by
10 setting a higher CI target to 2030. This will send the
11 right signal to the market and investors to drive even
12 more money into fuels development at the pace that the
13 climate crisis demands. Now, of course, ambition in the
14 program must not come at the expense of environmental
15 integrity. And to do this, staff can rely on proven tools
16 to help our electric grid continue to become cleaner, by
17 ensuring that renewable fuel development is incentivized
18 to use renewable electricity with EPA's. This is a
19 complex issue, of which I keep familiar with in the
20 multiple years I've spent working at the CAISO. But we
21 don't need to reinvent the wheel or inadvertently make
22 sourcing renewable so complicated that we keep relying on
23 our bartered rules present.

24 We are ready and we commit to advancing our
25 collective energy in decarbonization rules and supporting

1 a just job transition for a workforce that it knows
2 transferable skills. I am hopeful that the update in
3 guidance will be pragmatic, working, and in fairness of
4 the State's overall intent and appreciate the effort of
5 staff taking on this endeavor.

6 Thank you.

7 BOARD CLERK MOORE: Thank you.

8 Mikhael Skvarla

9 MIKHAEL SKVARLA: Mikhael Skvarla here on behalf
10 of the California Hydrogen Coalition, the California
11 Hydrogen Business Council. We want to extend our
12 appreciate to the Board and staff for this hearing today,
13 as well as the ones last week and, you know, the last two
14 years of work that have led us to this point.

15 Two issues. We want to extend our support for
16 capacity crediting. We think it's an important tool. Our
17 goals are in 2035 and 2045 and the ability to build the
18 capacity today while the fleet comes up to speed and while
19 more vehicle offerings come to market. It is truly vital
20 for us to make sure that we have the steel in the ground
21 by the time we hit those goal lines.

22 And so to that end, you know, kind of the analogy
23 is we're about a mile into this marathon, in terms of
24 vehicle deployment. We've got a long ways to go. And so
25 we've got to keep it up. We think the LCFS is a great

1 tool and the capacity creditings are -- have done a pretty
2 significant move and they've also helped drive
3 decarbonization of hydrogen throughout the market. As
4 soon as the Board adopted the HRA crediting, we saw an
5 immediate increase in renewable hydrogen content being
6 delivered to these stations.

7 Second, and I believe Quentin touched on this,
8 was the ability to use renewable electricity for
9 compression liquification at hydrogen production
10 facilities. Again, this will go along way to
11 decarbonizing the finished fuel as it's getting delivered
12 to states. So we look forward to working with staff on
13 that process.

14 And then just one thing, we've talked a lot about
15 kind of science-based decision-making and carbon intensity
16 and all these various factors. I think a couple
17 statements that we just want to correct real quick. To my
18 knowledge, based on the membership of these two
19 organizations that I represent, not a single kilogram of
20 hydrogen from a oil and gas refinery has made it into a
21 fuel cell electric vehicle. Hydrogen production
22 facilities outside of the refineries do renewable hydrogen
23 are delivering most of the fuel today. HRA capacity
24 crediting requires 40 percent. The last AB 8 report
25 indicated 55 to 65 percent. Prior to COVID we were

1 upwards of 90 percent.

2 BOARD CLERK MOORE: Thank you.

3 MIKHAEL SKVARLA: Markets have changed.

4 BOARD CLERK MOORE: That concludes your time.

5 Orguidea Sandoval.

6 ORGUIDEA SANDOVAL (through interpreter): Good
7 afternoon. I work in the San Diego Airport. My
8 colleagues and I are daily -- are exposed daily with these
9 pollutants. This poses risks to our health. And it
10 doesn't just affect sector. It affects our whole planet.
11 So about -- there is no difference of social classes here.
12 It affects all of us. We all breathe the same air, so
13 something that is such -- damages our planet in such a
14 way, damages all of us. Thank you.

15 BOARD CLERK MOORE: Thank you.

16 Our next commenters will be Patricia Valazquez.

17 PATRICIA VALAZQUEZ (through interpreter) Good
18 afternoon. My name is Patricia Velazquez. I'm doubly
19 affected because I work in the San Diego Airport and I
20 live in the Logan neighborhood which is one of the most
21 polluted areas of San Diego. Most of the inhabitants
22 there are Latinos. I have a son that has asthma and I
23 imagine that all of you are familiar with the kinds of
24 problems with having a child who has asthma.

25 We have pollution in our neighborhood that's

1 coming from shipping from the cars, also because of the
2 airplanes, because the planes go past our neighborhood. I
3 hope we can leave a better world for our children and
4 those who come afterwards.

5 Thank you.

6 BOARD CLERK MOORE: Thank you.

7 Our next commenter will be Jane Martin, followed
8 by Ignacio Fernandez, and Gary Hughes.

9 JANE MARTIN: Good afternoon. Jane Martin. I'm
10 the Division Director for the Airport Worker Division of
11 SEIU.

12 And I just wanted to thank you for hearing from
13 all of our members who came from all of over the state to
14 share their stories with you today, to thank all of you
15 that met with us in advance as well as the staff team who
16 were very engaged with us, and were super helpful.

17 We're very hopeful that you're going to move
18 forward with incorporating conventional get fuel as a
19 deficit generator. We do want to get clarity on what is
20 included in the recommendation as far as intrastate versus
21 interstate flights. And we believe that under AB 32, the
22 GHG inventory would only be intrastate.

23 And it's just been really transformational for us
24 to be here today to finally be weighing in on all these
25 decisions that impact our environmental health to be able

1 to stand with the farmworker communities fighting dairy
2 pollution, to be able to stand with the refinery
3 communities as well. And we are united in wanting to see
4 a cap on the lipid oil seed crops as far as sustainable
5 aviation fuel.

6 And we look forward to continue to work with you
7 on this rulemaking process, but also to continue to work
8 with you long-term. You know, we need to find cleaner
9 solutions for this industry. To say that aviation is too
10 hard to decarbonize would be to turn our backs on all the
11 workers you've heard from today. We're going to be here
12 engaging with you as a union to push for this industry to
13 clean up. As many have said before, they can afford to do
14 it. They have to do it. And we're going to be here to
15 work with you to make sure they do do it. Thank you very
16 much.

17 BOARD CLERK MOORE: Thank you.

18 Ignacio Fernandez.

19 IGNACIO FERNANDEZ: Thank you, Chair Randolph and
20 members of the Board. My name is Ignacio Fernandez and on
21 behalf of Southern California Edison I'm presenting these
22 remarks.

23 At SCE, we believe that LCFS has been
24 instrumental in the adoption of alternative transportation
25 fuels and that California continues to meet as strong LCFS

1 that can be leveraged and grow over time. As an active
2 participant in the LCFS Program, SCE has implemented
3 multiple LCFS-funded transportation programs, including
4 an -- initiatives actually, including offering our
5 customers a pre-owned EV rebate for \$4,000 and we are also
6 in the process of implementing over \$234 million in
7 programs including, among others, charge ready home that
8 will help residential customers cover the cost of
9 upgrading their panels to support EV charging and a
10 drayage truck rebate. There's many of others.

11 We also serve as the administrator for the carbon
12 data California Clean Fuel Reward, CRF, that we've been
13 talking all morning about it, which distributed \$400
14 million in rebate to nearly 400,000 EVs in 2021 and 2022.
15 But unfortunately, as Ms. Sahota pointed out early on,
16 this success caused the CCFR program to be paused as the
17 interest in the program is greater than the LCFS revenue
18 can support.

19 Therefore, at SCE, we believe that final
20 modifications are needed to strengthen the LCFS
21 regulation, a minimum 30 percent reduction in the carbon
22 intensity target for 2030, the adoption of a trigger
23 mechanism that could accelerate the compliance once
24 certain parameters are met. Provide an additional options
25 of the programs and projects that are eligible for the

1 LCFS holdback revenues that will help streamline the
2 approval process and support the State's carbon neutrality
3 goal.

4 Thank you very much for your time.

5 BOARD CLERK MOORE: Thank you.

6 Gary Hughes.

7 GARY HUGHES: Thank you so much, Chair, members
8 of the Board. Appreciate your attention today. My name
9 is Gary Hughes. I work as the Americas Program
10 Coordinator to organization Biofuelwatch. And though I'm
11 really glad to hear that there's so much attention on the
12 threats and risks in looking to high deforestation
13 commodities to serve as feedstocks for biofuels, I thought
14 I'd take a moment here really quickly to try to catch you
15 up a little bit on the crisis in governance that's going
16 on in the San Francisco Bay Area and the refinery corridor
17 with the refineries that are converting to biofuels.

18 Namely in August, Judge Martinez just decertified
19 the Final Environmental Impact Report for the Phillips 66
20 Rodeo refinery biofuel project. How do you like that?
21 This all started three years ago. It was like in late
22 2021 that scoping happened on that project. And then
23 there was a draft Environmental Impact Report released in
24 the fall of 2021 on the exact same day as the Marathon
25 Refinery Environmental Impact Report.

1 And then it was in December before the ink had
2 even dried on public comment that the Air Resources Board
3 awarded Phillips 66 LCFS credits for renewable diesel
4 coming from that refinery. Then it was shortly after
5 that, that the FEIR was completed and Ms. Sahota came to
6 the Planning Commission and insisted that the County
7 certify the FEIR. And then it was appealed to the Board
8 of Supervisors and Richard Corey came to the Board of
9 Supervisors and insisted that the FEIR be approved and
10 that the appeal be denied.

11 Okay. So now, we have CARB leaning in really
12 hard to see that what a judge has ruled is a totally
13 inadequate CEQA review of this refinery conversion be
14 approved. So I don't have anymore time, but I hope you
15 take a closer look at what's going on with liquid
16 biofuels, because there's a crisis going on right here and
17 people --

18 BOARD CLERK MOORE: Thank you.

19 Our next commenters will be Zaray Ramirez,
20 Armanda Ruiz, Cathy Moreno, Barry Anderson, and Patricia
21 Ramos Anderson.

22 Zaray.

23 ZARAY RAMIREZ: Good afternoon. Zaray Ramirez
24 with Leadership Counsel. The current LCFS program set
25 forth by CARB staff worsens the impact of dairies on

1 communities in the worst air basin in the nation, the
2 Central Valley. I work along some residents directly
3 impacted by dairies in Planada and throughout Merced
4 County. For years, we have consistently seen the factory
5 farm gas infrastructure grow, all the while ignoring
6 residents' concerns. Constantly living with risk of the
7 water being contaminated, drying out, and poor air quality
8 is exhausting. Residents cannot enjoy their community as
9 they are confined to their homes due to the smell and
10 flies. Many folks in Planada suffer from asthma and
11 allergies. And being fewer than two miles from a dairy
12 only makes these conditions worse.

13 With the current structure of the LCFS, dairies
14 are incentivized to shift to the production of methane
15 biogas, which concurrently influences dairies to expand.
16 We are seeing are part of Merced County where dairies are
17 doubling their herd sizes in order to be able to produce
18 this gas in mass production or to set their facilities up
19 for this type of production in the future.

20 The production of methane biogas comes with the
21 burden of NOx and PM2.5 emissions. These emissions are
22 harmful as is, but impose even more of a set in
23 communities in the San Joaquin Valley that are already not
24 compliant with the standards set for the federal Clean Air
25 Act.

1 Communities such is Tulare and Merced County that
2 continuously see the appearance of digester facilities do
3 not see improvements to the air quality. On the contrary,
4 environmental and health impacts only get worse. Because
5 of this, the LCFS Program must incorporate a full life
6 cycle analysis of their -- of all air pollution and GHG
7 emissions as well as create new first policies that
8 directly regulate dairies.

9 More production of manure in these facilities to
10 produce biomass -- biogas means more nitrates that are
11 seeped into our groundwater that supply our communities.
12 The Merced subbasin is already critically overdrafted and
13 increasing the risk of contaminants to the water supply
14 would worsen the impacts.

15 Thank you.

16 BOARD CLERK MOORE: Thank you.

17 Armanda Ruiz.

18 ARMANDA RUIZ (through interpreter): My name is
19 Armanda Ruiz. I live in the City of Los Banos that
20 belongs to the Central Valley. My family and I are
21 asthmatic. I'm worried that you'll continue giving credit
22 for dairies knowing that there are many environmental
23 problems. More cows in our community would mean that the
24 air is more polluted -- more polluted. In my town, water
25 is not drinkable because of this problem. Our asthma

1 rates have increased.

2 I invite the people on this Commission, those who
3 give credits to the dairies, to come and live in my
4 community for one week, to smell it, to live with all the
5 flies, and to breathe this polluted air, so that you can
6 understand -- so you can understand what we're explaining
7 to you. Also, if you give credits to the owners of the
8 dairies, force them to live in the area, so that they can
9 also breathe that putrid air, since some of the owners
10 don't live in the area. Only those who work there, or
11 who live there, or go to the area to go shopping, breathe
12 that.

13 The methane gas that is produced is not clean
14 gas, because of the impact that it has in the near -- the
15 nearby areas. Have you done some analysis of what impact
16 these dairies have? Who are the ones who benefit from
17 these credits? Those methane emissions were going to be
18 regulated for 2024. Has something advanced in this
19 respect.

20 Thank you so much.

21 BOARD CLERK MOORE: Thank you.

22 Cathy Moreno.

23 CATHY MORENO: Hello. My name is Cathy Moreno.
24 I live in Planada, California. I've been a resident for
25 31 years. Every day I hope we don't get a digester after

1 seeing and smelling Pixley. I remember going to my
2 grandma's house and smelling her homemade baked pies and
3 her freshly cooked tortillas. I remember going into her
4 backyard to play all day. I married and eventually became
5 a grandmother myself. I don't get the same pleasures my
6 grandma did of having her grandbabies around. I live one
7 mile away from a dairy and my grandbabies come to my house
8 smelling the dairy's manure and fighting off the flies too
9 many to count, which carry many diseases.

10 I miss my grandchildren and grandbabies, my
11 children and my grandbabies. Please put regulations on
12 dairies and start moving the dairies incentives to
13 maintain their polluting practices at the cost of their
14 profits and are unlivable air standards, nausea, vomiting,
15 headaches. We can't tolerate the stench. And many times
16 we get away from our home and communities for cleaner air.
17 The greed of the smelling of big dollars, our tax dollars
18 at our cost, of our lifetime, therefore if CARB actually
19 cares about the well-being of communities like Pixley and
20 Planada, we should go -- they should do regulations on
21 dairies, not create incentives.

22 BOARD CLERK MOORE: Thank you.

23 Barry Anderson.

24 PATRICIA RAMOS ANDERSON: My name is Patricia
25 Ramos Anderson. CARB was a surprise for me. I was

1 attending -- what happened was I was invited to a public
2 meeting and what we discovered was that it was a CARB
3 meeting and had been in existence for 23 years. Not to
4 our knowledge at that meeting, there were no translators,
5 no staff members that were translating for the
6 commissioners, and vice versa. And I had brought up the
7 issue of meaningful community engagement at that time.
8 And furthermore, also how truly were these meetings open,
9 because up until then, they had been in existence for 22
10 or 20 some years. And that is why we are here, so we
11 can -- we were able to prove that we have some illnesses
12 in our communities for many decades that have not been
13 participating to report them.

14 What is very important to us is that the public
15 Issues were brought up of health, rashes, and what these
16 credits and illnesses were rampant in San Joaquin Valley
17 and Merced County. The environment had changed and
18 invasion of these giant flies, literally these horrible
19 flies. You couldn't even have birthday parties,
20 barbecues, nothing in the backyard. We had headaches. We
21 had rashes. We had the asthma. We had our elderly
22 population getting much older, and ill, and some more
23 deaths.

24 Now, that we're here we have the opportunity to
25 make things right. We need to address the Environmental

1 issues. No more guinea pigs. No more credit stops
2 subsidizing the affluent business over public health.
3 Stop the dumping of cow manure in our water canals. I
4 knew that dairy man for many decades as an elected
5 official. The Board -- CARB Board has to hold accountable
6 the dairies and cut these subsidies. We must address the
7 impacts of what the program and ranchers have impacted our
8 health and welfare, the public in Merced County and San
9 Joaquin. The environment has changed, the health, lung
10 conditions, issues, asthmas, headaches blood pressure,
11 rashes, accelerating more deaths. We cannot continue to
12 damage the community's environment. Please, please. We
13 urge you to fix the LCFS and public health.

14 BOARD CLERK MOORE: Thank you.

15 Barry Anderson.

16 BARRY ANDERSON: I was going to have her speak on
17 my behalf.

18 Thank you.

19 BOARD CLERK MOORE: Thank you.

20 Leslie Martinez.

21 LESLIE MARTINEZ: It's perfect size for me. I'm
22 going to be speak for a resident in Pixley who couldn't be
23 here today.

24 "California must regulate our polluters, not just
25 a select few. Living in Pixley, I know first hand that

1 the dairies are growing. I can smell it. And if you
2 actually lived there, you would too. Our local
3 government, the Tulare County Board of Supervisors is ran
4 by the dairy industry and dismisses our real concerns. We
5 may not have money in the digester game, but our lives are
6 on the line. Our health, air, water and community has not
7 benefited. Their lack of action is dangerous mainly to
8 communities like mine or contaminated in the San Joaquin
9 valley.

10 "Their staff has ignored us, their staff has
11 refused to consider our concerns. My community can't
12 wait. It won't breathe because of your choices. Do your
13 duty, regulate the state's biggest methane emitter.

14 Thank you. God bless.

15 BOARD CLERK MOORE: Thank you.

16 Our next three commenters will be Julia
17 Sebastian, Maria Olivera, and Maria Arevalo

18 Julia Sebastian.

19 Okay. I'll come back to Julia

20 Maria Olivera.

21 MARIA OLIVERA: Hi. My name is Maria Olivera
22 from Tooleville and we have water. It's contaminated.
23 But I'm against the government giving credit to the
24 dairies, because the gas that's producing it is not really
25 clean and it's so smelling. It smells so when you go

1 there or you drive by there. So we need help to stop that
2 to -- because they're getting a lot of help from the
3 State, so do we. We need help from you guys.

4 Thank you.

5 BOARD CLERK MOORE: Thank you.

6 Maria Arevalo.

7 MARIA AREVALO (through interpreter): Good
8 afternoon. My name is Maria Arevalo. I lived in Pixley
9 for 47 years and I'm coming here as a member of the
10 advocates of the valley -- advocates of the air in the
11 valley and clean water. Pixley is a community of 5,000
12 residents and that is because we have 27 dairies around
13 Pixley. And seven dairies are up in north, even the
14 digester. Digester Calgren which is processing the waste
15 of the cows of 15 dairies. Calgren processes the waste of
16 the cows, 15 dairies, but they also work overnight -- day
17 and night to make the methane gas. The emissions are
18 killing people and they are dying with lung problems.

19 We ask you to please look for a remedy and
20 establish a remedy, because all these incentives are
21 causing the extension of dairies. More cows means more
22 manure odor. During the heat, you can smell the urine of
23 the cows. And because of the urine, this creates a big
24 huge smell that is kind of stingy. It makes you nose kind
25 of go up. We a ask you to please find the remedy, because

1 all these incentives will cause for more expansion in
2 dairies and we -- there are -- there are a lot of flies
3 and all horrible in the communities around the dairies.
4 The dairies should be in the outside areas, outside from
5 where people live. The low-income communities have no
6 resources to protect themselves.

7 BOARD CLERK MOORE: Thank you. That concludes
8 your time. Okay. I'm going to go back to Carolina Rocha?
9 Is there a Carolina Rocha in here or Julia Sebastian.

10 Okay. Our next commenters will be Nicolas
11 Cisneros and Jamie Katz.

12 NICOLAS CISNEROS: Can I pull this up a little
13 bit?

14 Good afternoon all members of the Board. This is
15 Nicolas, N-i-c-o-l-a-s, Cisneros, C-i-s-n-e-r-o-s from
16 Greenfield are in Bakersfield, California.

17 I want CARB to please take dairies out of the Low
18 Carbon Fuel Standards and stop the big incentives they are
19 obtaining. It's due to them being (inaudible) green
20 energy industry. Yet, they are green grass washers. A
21 great contributor to methane emissions, GHG, nitric oxide,
22 hydrogen sulfide, and ammonia gas in the California
23 Central Valley. In it's totality it is contaminating the
24 air and water. Every California resident has the right to
25 basic clean air and water. The most impacted by pollution

1 are people of color in disadvantaged communities. A lot
2 of people have been impacted by disease like asthma,
3 Valley Fever, and cancer in the Central Valley.

4 So we need help immediately from CARB by doing a
5 new assessment on dairies, reducing the number of cattle,
6 and not allowing them close to communities. I believe
7 CARB was created to protect the majority of people in
8 California, not just a few wealthy people who profit from
9 the big incentives. It is a double-edged sword where a
10 few profit at the great expense of the community's health.

11 Dairy digesters is delaying step to prevent CARB
12 from taking the right action and protect people from
13 contamination, which can't wait anymore.

14 Thank you for the opportunity

15 BOARD CLERK MOORE: Thank you.

16 Jamie Katz.

17 JAMIE KATZ: Jamie Katz, Leadership Counsel for
18 Justice and Accountability. I want to echo the EJAC's
19 resolutions call to CARB to eliminate credits for supposed
20 methane emission reductions that would have occurred or
21 legally or contractually obligated. Staff's presentation
22 asserts that avoided methane crediting reflects the
23 capture of methane that would have otherwise been released
24 into the atmosphere.

25 Among the myriad flaws with this accounting, a

1 fundamental one is that many dairy digesters -- for many
2 dairy digesters the supposed methane emission reductions
3 were already occurring or obligated and accounted for in
4 other programs when they were awarded and LCFS pathway.

5 For example, each dairy digester has received
6 funding under the Aliso Canyon mitigation agreement to
7 offset the Aliso Canyon methane disaster. Another 130
8 dairy digesters received funding from the dairy digester
9 research and development program. The LCFS does not
10 currently limit awarding credits to these projects that
11 received funding from these other programs for the very
12 same supposed methane emission reductions. As a result,
13 many dairy digester projects are double and triple
14 counting the same alleged reductions.

15 Not only are these non-additional, they undermine
16 staff's justification for avoided methane crediting since
17 they would not otherwise have been released into the
18 atmosphere. For these and many other reasons, this Board
19 must eliminate these junk credits and eliminate avoided
20 methane crediting in 2024. Thank you.

21 BOARD CLERK MOORE: Thank you.

22 Our final two in-person commenters are Matt
23 Miyasato and Sasan Saadat.

24 DR. MATT MIYASATO: Thank you. Dr. Matt Miyasato
25 with FirstElement Fuel that I was so close to being the

1 last word, so apologies for that. But let me first
2 applaud you for your stamina and thank you for your
3 leadership and sticking it out today. FirstElement Fuel,
4 we are a small California business that was started 10
5 years ago with the sole mission of providing hydrogen
6 fueling stations to enable the transition to zero-emission
7 transportation, and that's only possible because of the
8 very strict policies that California has in place, but
9 also married with incentive program that make sense for
10 businesses to enable the market, one of which and the most
11 critical of which, is the LCFS Program.

12 So we do support staff's proposals in regard to
13 the changes in the LCFS Program, namely attending the
14 standards, the auto-adjustment mechanism, the heavy-duty
15 HRI is going to be critical for us. But I would also say
16 that the light-duty HRI is instrumental and that has been
17 instrumental in us promulgating more light-duty stations.
18 I know Dr. Balmes had made a comment and I would -- rather
19 than say it's a failed experiment I'd rather say it's an
20 incomplete commercial launch. We talked to the OEMs and
21 we know that it's fueling infrastructure that is keeping
22 them from deploying more vehicles. In fact, we have
23 another OEM bringing a hybrid fuel cell vehicle next year.
24 And two of the domestics are working on fuel cell pickup
25 trucks. So now is the absolute wrong time to stop having

1 incentives for the light-duty market.

2 My final comment is just please beseech you to
3 bring the regulatory action before you as early as
4 practicable in Q1 2024. Having the regulatory certainty
5 will enable us to attract more financing to help us
6 further buildout the light-duty infrastructure and really
7 initiate and kick-start the heavy-duty hydrogen refueling
8 structure. So thank you.

9 BOARD CLERK MOORE: Thank you.

10 Sasan Saadat.

11 SASAN SAADAT: Thanks, Board members. Sasan
12 Saadat with Earthjustice. It's understandable that this
13 Schwarzenegger era program once emphasize crop fuels and
14 factory farm gas, but it's perplexing that it still does
15 in 2023 after all of CARB's great work on zero emissions.

16 Mounting evidence shows that these combustion
17 fuels do not deliver meaningful benefits. Biofuels
18 required for the federal RFS are merely shuffled into
19 California. They threaten biodiversity and global hunger.
20 And the argument for biofuels completely collapses when
21 one factors in the carbon opportunity cost. In other
22 words, the fact that you could reduce more greenhouse
23 gases merely by leaving the land alone to revegetate.

24 (Inaudible) and others have submitted detailed
25 comments to the record citing peer-reviewed literature

1 explaining why CARB should stop subsidizing these fuels
2 echoed by experts at the Union of Concerned Scientist, and
3 ICCT, by Dr. Michael Wara at Stanford, and residents
4 tracking violations at factory farms and refineries in
5 their communities.

6 I'm not aware of any think public interest groups
7 that can continue support for these fuels, but the current
8 LCFS does enjoy support from agribusiness, trade
9 associations, commodities traders, gas, and of course, oil
10 companies. Indeed, WSPA said in Politico yesterday that
11 they're basically fine with the LCFS, because the oil
12 industry benefits from the program's current form. So why
13 in 2023 does the program remain so lopsided towards fuels
14 championed by the oil and ag industry.

15 Researchers have actually studied this question
16 why policy continues to subsidize disproven technologies.
17 And they found is that for industries in decline their
18 sunk costs rule out new entry. Incumbents have a much
19 larger incentive to defend their subsidies. In other
20 words, the researchers concluded, and I quote, losers
21 lobby harder and so it's losers that often pick government
22 policy.

23 I urge the Board to adopt the EJ scenario instead
24 and pry this program away from its outdated origins,
25 reclaim it, so that it can advance the very climate and

1 air quality goals we have all worked so hard to pass.

2 Thank you.

3 BOARD CLERK MOORE: Thank you.

4 That concludes our in-person commenters.

5 I'll pass it to Lindsay to do the Zoom

6 Commenters, unless we need to take a break.

7 CHAIR RANDOLPH: Executive Officer do we need to
8 take a break for the court reporter or the -- okay.

9 Deputies are nodding, so we're going to take a 10-minute
10 break and we will be back at -- let's be back at 4:10, so
11 it will be a 14-minute break.

12 (Off record: 3:56 p.m.)

13 (Thereupon a recess was taken.)

14 (On record: 4:11 p.m.)

15 CHAIR RANDOLPH: Okay. We are going to start
16 again. Please clearly and slowly for the interpreter.

17 BOARD CLERK GARCIA: Speakers with their hands
18 raised in Zoom, I apologize in advance if I mispronounce
19 your name. And just reminder for all commenters to speak
20 slowly and clearly for our interpreters and court
21 reporter.

22 So the first few commenters will be Tony
23 Brunello, Dallas Gerber, Grace Pratt, Christina Scaringe,
24 Suncheth Bhat, Martina Simpkins, and Adam Browning.

25 So Tony, I have activated your microphone.

1 Please unmute and you can begin.

2 TONY BRUNELLO: Thank you. Can you hear me?

3 BOARD CLERK GARCIA: Yes, we can.

4 TONY BRUNELLO: Thank you. Hi. My name is Tony
5 Brunello and I'm here today representing U.S. Energy.
6 Sorry you guys are all there for so long, but really
7 appreciate the work you're doing.

8 U.S. Energy and its parent -- and its parent
9 company U.S. Venture have operated across the country --
10 I'm sorry, I have two things set up here.

11 I'm sorry. So U.S. Energy and its parent company
12 U.S. Venture have operated across the county for over 70
13 years and have been an innovative leader in the
14 distribution of renewable and traditional energy products,
15 including biomethane as a drop-in replacement for
16 compressed natural gas vehicles and as a feedstock for
17 hydrogen. U.S. Venture also has a large presence in the
18 tire distribution industry as the second largest private
19 distributor in the U.S. In California, we have over 600
20 employees at seven distribution centers and dispense RNG
21 at over 72 stations among other businesses.

22 U.S. Energy has been a part of the LCFS since
23 2017 and commends CARB for developing a program that is
24 following through on its targets to reduce greenhouse gas
25 emissions in the transportation sector, along with

1 reducing short-lived climate pollutants across the country
2 via, among other things, methane reduction projects, which
3 include anaerobic digesters.

4 Nowhere else in the country for sure has there
5 been the vision and mission to reduce transportation
6 emissions in the data-driven LCFS. We support CARB staff
7 proposals to increase the CI reduction targets to 30
8 percent by 2030 and join the numerous other groups that
9 talk today to encourage CARB to increase that target to
10 even higher to over 40 percent as outlined in the ICF
11 report mentioned and submitted to the CARB Board for
12 review.

13 Finally, U.S. Energy alongside its development
14 partners have invested heavily in developing methane
15 reduction projects in California and across the country
16 based on current LCFS rules. Change is also imminent in
17 rulemaking, of course, as you guys no well, and including
18 more focus on protecting those communities that are most
19 vulnerable to transportation fuel impacts should be a key
20 priority. In the end, our hope is CARB continues to
21 fulfill its commitment to reducing fugitive emissions over
22 the short and long term across the country.

23 Thank you.

24 BOARD CLERK GARCIA: Thank you.

25 Dallas, I have activated your microphone. Please

1 unmute and you can begin.

2 DALLAS GERBER: Thank you. My name is Dallas
3 Gerber, Director of State Government Affairs for Growth
4 Energy, the nation's largest ethanol association
5 representing 93 biofuels producers that produce nine
6 billion gallons of cleaner burning renewable fuel
7 annually, and more than 100 businesses associated with the
8 production process.

9 As the Board considers changes to the LCFS, I
10 respectfully urge the Board to consider the positive
11 impact biofuels in general and bioethanol in particular
12 has made to reduce greenhouse gas emissions and decrease
13 fossil fuel use in the state.

14 Growth Energy has previously submitted extensive
15 comments demonstrating the vital role low carbon biofuels
16 and higher blends that the biofuels can play in meeting
17 California's ambitious climate goals. Recent data from
18 the Transportation Energy Institute shows biofuels have
19 been the largest contributor to greenhouse gas reductions
20 since the implementation of the LCFS. The approval of
21 higher blends of ethanol in fuel for State's road
22 transportation fleet can contribute even more to
23 greenhouse gas reductions.

24 E15 approved by the U.S. EPA for use in passenger
25 vehicles model year 2001 and newer can be immediately

1 deployed to reduce greenhouse gas emissions.
2 Additionally, research conducted by UC Riverside and
3 University of Illinois has shown E15 to reduce harmful
4 particulates and air toxics. CARB recently recognized
5 innovations in the ethanol industry with the latest
6 changes to CATS modeling. These changes factored in
7 carbon sequestration and its impact on ethanol's carbon
8 intensity score, dropping it from 66 to 35.

9 Additional consideration of low-carbon farm
10 practices can further deepen biofuel's greenhouse
11 reductions. As adjustments to the LCFS's emissions
12 reduction targets are considered and eventually adopted.
13 The approval of E15 and its use by Californians can a
14 vital contributor to achieving those targets.

15 A switch to E15 state wide would recruit --
16 reduce greenhouse gas emissions by 1.8 million tons, the
17 equivalent of taking more than 400,000 cars off of
18 California's highways each year. Growth Energy looks
19 forward to contributing -- continuing to work with CARB on
20 the revisions to the LCFS and ensure their roles bio --
21 the role biofuels will play in making California's fuel
22 mix more sustainable and help achieve its climate goals.

23 Thank you.

24 BOARD CLERK GARCIA: Thank you.

25 Grace, I have activated your microphone. Please

1 unmute and begin.

2 GRACE PRATT: Hello. My name is Grace Pratt and
3 I am representing Electric Hydrogen. Electric Hydrogen is
4 a deep decarbonization company pioneering low cost, high
5 efficiency, fossil fuel green hydrogen electrolyzer
6 systems. We would like to thank staff for all of their
7 work in developing this next phase of the LCFS program.
8 We are excited to see updates to the LCFS that will drive
9 California toward its ambitious climate goals. Electric
10 hydrogen supports the incorporation of a strong carbon
11 intensity reduction target of at least 30 percent by 2030,
12 and increasing stringency in subsequent years.

13 We also support an auto-acceleration mechanism
14 to ensure compliance targets push rapid decarbonization
15 forward. Hydrogen will play an important role in
16 California's carbon neutrality efforts as emphasized in
17 CARB's 2022 Scoping Plan. However, in order to ensure
18 that carbon neutrality is achieved, it is important to
19 create a clean hydrogen economy that does not rely on
20 fossil fuels or increased emissions, requiring hourly
21 matched RETS in regionality for grid-connected
22 electrolytic hydrogen projects will play an important role
23 in ensuring emissions reductions from grid-connected
24 hydrogen production.

25 The LCFS can help scale the green hydrogen market

1 in the transportation sector. Electric hydrogen therefore
2 supports streamlining hydrogen participation in the
3 program through the creation of a Tier 1 calculator and we
4 have suggestions on how to improve the draft calculator
5 released by staff.

6 We look forward to collaborating with CARB on
7 these issues to ensure that California is maximizing the
8 rule that carbon-free hydrogen and other clean
9 technologies can deliver for the state.

10 Thank you.

11 BOARD CLERK GARCIA: Thank you.

12 Christina, I have activated your microphone.
13 Please unmute and begin.

14 CHRISTINA SCARINGE: Good afternoon. Christina
15 Scaringe with the Center for Biological Diversity. We'll
16 follow with more detailed written comments. And in the
17 meantime reference our prior comments and the submission
18 we joined along other environmental and EJ organizations.
19 We also support the EJAC recommendations.

20 Some of our concerns include that CARB still
21 incentivizes ELR out of state and assumes use of this
22 harmful technology in its modeling. California banned the
23 use of carbon dioxide from carbon capture and storage for
24 enhanced oil recovery within the state. It should be cut
25 from the LCFS Program.

1 Also, CARB mustn't enable CCS to extend the life
2 of fossil fuels. CCS has for years consistently
3 overpromised and underperformed. CARB's carbon intensity
4 calculations for fuels made using CCS failed to reflect
5 real-world capture efficiencies or adequately account for
6 life cycle emissions such as those upstream, in transport,
7 or from its own energy-intensive operations. This
8 significantly underestimates the carbon intensities of
9 fuels made using CCS.

10 Also, CARB should update its model inputs as they
11 underestimate the carbon intensity of fuels made with
12 fossil gas and biogas, allowing on assumptions that
13 drastically underestimate leakage and are inconsistent
14 with the best available science. LCFS mustn't incentivize
15 or include pathways for fuels made from woody biomass
16 either, given high carbon intensities and pollution with
17 significant emissions up and downstream, all while
18 reducing the capacity of forests to store and sequester
19 carbon. Using so-called forest residue for energy is not
20 carbon neutral, but rather leads to a net increase of
21 carbon emissions for decades. Broadscale fitting creates
22 more carbon emissions than it prevents.

23 We urge you to more seriously consider and
24 integrate environmental public health and EJ
25 considerations. We have the tech to move the focus away

1 from combustion and prioritize investments for clean air,
2 ZE transit and infrastructure and reduced VMTs.

3 Thank you.

4 BOARD CLERK GARCIA: Thank you.

5 Suncheth, I have activated your microphone.
6 Please unmute and begin.

7 SUNCHETH BHAT: Hello. I'm Suncheth Bhat with EV
8 Realty. EV Realty is an EV charging infrastructure
9 developer based in California. We focus on developing,
10 owning, and operating multi-fleet EV charging hubs for
11 medium- and heavy-duty fleets. Our hubs serve multiple
12 fleets through a subscription model that allows for fleets
13 to save money and enable speed to employment while
14 optimizing Infrastructure for the grid.

15 I'd like to thank CARB and the State of
16 California for your leadership in establishing LCFS in
17 2009 and ACF earlier this year. LCFS is the single
18 largest set of funds in th state to support the ZEV
19 transition and its at no ratepayer or utility ratepayer --
20 sorry, no taxpayer or utility ratepayer cost. Supporting
21 the significant amount of infrastructure needed in an
22 equitable and affordable way is critical. The CEC's
23 recent AB 20 -- 2127 report highlights a need of 115,000
24 chargers for medium- and heavy-duty EVs by 2030.

25 In order to accelerate this market,

1 infrastructure needs to be built before the vehicles
2 arrive. One of the most powerful tools to make this
3 happen is the medium- and heavy-duty fast charging
4 infrastructure program, or FCI. The medium- and
5 heavy-duty FCI is an elegantly designed capacity credit
6 for infrastructure that provides important bridge funding
7 that helps address the chicken and egg dilemma. We
8 recommend the robust and inclusive medium- and heavy-duty
9 FCI. Our hub model is important from an equity
10 perspective as it allows small- and medium-business fleet
11 owners access to charging where they may not otherwise be
12 able to do so due to grid space or lease constraints.

13 We recommend CARB be inclusive of new business
14 models in its eligibility and not have geographic
15 limitations and unnecessary high -- minimum charger sizes
16 for eligibility that can have negative consequences on
17 affordability and charging impacts to the grid.

18 We appreciate the collaboration with CARB to date
19 and thank you for your time.

20 BOARD CLERK GARCIA: Thank you.

21 Martina, I have activated your microphone.
22 Please unmute and begin.

23 MARTINA SIMPKINS: Yes. Hi. Good afternoon.
24 I'm Martina Simpkins, with Anew Climate, one of the
25 largest climate solutions providers in North America.

1 Anew is an established participant in
2 California's sustainability programs and has brought low
3 carbon gas to market in support of these programs for over
4 a decade. Most importantly, we'd like to sincerely thank
5 the agency for its work on the LCFS Program and during
6 this amendment process. We applaud CARB for the benefits
7 that the program has already delivered outperforming
8 historic compliance targets.

9 I have three quick points. One, the LCFS is
10 actively driving down greenhouse gas emissions in the
11 transportation sector. It is displacing diesel with
12 cleaner fuels and successfully attracting investment to
13 the state. The program brings real public health
14 benefits, reducing emissions of particulate matter, NOx,
15 and other harmful air pollution -- pollutants at a very
16 low cost.

17 Two, in CARB staff presentation today, we've seen
18 the intent of altering the current book and claim
19 framework for biomethane, which could hinder the ability
20 of existing and future biomethane production facilities to
21 contribute to the decarbonization across all sectors.
22 Biomethane book and claim is consistent with how
23 conventional gas markets work. It is also used in other
24 renewable electricity standards, the RFS and European
25 green gas programs. We ask to continue the successful

1 delivery framework.

2 And last, but not least, we would like to support
3 to ensure that greenhouse gas reductions are not being
4 left on the table the adoption of the a 35 percent CI
5 reduction target for 2030, as well as to prioritize a
6 step-down in the CI reduction target of at least six
7 percent no later than mid-2024. Thank you so much for
8 your work and the opportunity to speak today.

9 BOARD CLERK GARCIA: Thank you.

10 Okay. After Adam, we will hear from Krysta
11 Wanner, Stephen Rosenblum, Sean Newsum, Betsy
12 Hunter-Binns, Karen Jones, and a phone number ending in
13 111.

14 So Adam I've activated your microphone. Please
15 unmute and you can begin.

16 ADAM BROWNING: Good afternoon, Chair and Board
17 members. This is Adam Browning with Forum Mobility. We
18 are building a network of heavy-duty truck charging depots
19 designed for drayage to help comply with the Advanced
20 Clean Fleet goals to transition to zero-emission vehicles.

21 I would first like to just thank CARB for their
22 support in this absolute world-leading goal of
23 transitioning to zero-emission vehicles and then I would
24 also like to ask CARB to do more to assure that the --
25 that these goals are actually met. I think that the Low

1 Carbon Fuel Standard is one of the most important tools
2 yet to be fully applied in the -- amongst the -- all the
3 tools in the arsenal that CARB has at its disposal. I
4 think there are two main changes that could be
5 tremendously helpful.

6 The first is efforts to increase the credit value
7 through the tightening of the carbon intensity values. I
8 will say that since CARB has announced its intention to do
9 just that, the market has responded, but not in a positive
10 way. Credit values have actually gone down slightly since
11 then, which indicates to me that more could and should be
12 done in order to drive in more of LCFS to electrification
13 solutions.

14 The second really big way that the Low Carbon
15 Fuel Standard could be modified to support the transition
16 of heavy-duty freight to zero-emission through the
17 establishment of a FCI, the fast charger initiative, that
18 is currently available to light-duty, the development and
19 deployment of a similar program for heavy-duty, and making
20 it eligible crucially to third-party depots and other
21 service providers that are there to meet the needs of
22 freight businesses will be very helpful in making that
23 happen. Thank you for your time.

24 BOARD CLERK GARCIA: Thank you.

25 Krysta, I have activated your microphone. Please

1 unmute and begin.

2 KRYSTA WANNER: Hi. Krysta Wanner with Western
3 Propane Gas Association. The Low Carbon Fuel Standard has
4 played a successful role in decarbonizing the
5 transportation sector. The propane industry has also been
6 doing its part to promote decarbonization across all
7 sectors of the economy, including hard-to-decarbonize
8 segments.

9 California has proven to be a national leader in
10 renewable fuels to rapidly decarbonize the transportation
11 sector. The production and utilization of blended
12 conventional and renewable propane is a viable strategy to
13 reduce emissions that can work in conjunction with other
14 strategies to meet goals of LCFS. The GREET Model used is
15 backed by science and is the most widely accepted carbon
16 accounting methodology. It currently calculates
17 conventional propane at a carbon intensity of
18 approximately 81, which is directly comparable to the
19 California electric grid for transportation and is likely
20 lower, if accurately calculated.

21 The Western Propane Gas Association requests the
22 following: clarity in any possible acceleration mechanisms
23 before the consideration of adoption; consideration to a
24 allow book and claim for molecule transfer; and support
25 for drop-in fuels like renewable propane that do not need

1 changes in infrastructure or technology to adopt.

2 Thank you.

3 BOARD CLERK GARCIA: Thank you.

4 Stephen, I've activated your microphone. Please
5 unmute and begin.

6 Stephen Rosenblum.

7 STEPHEN ROSENBLUM: Yes. Sorry.

8 My name is Stephen Rosenblum. Good afternoon,
9 CARB directors and staff. Thank you for your fortitude.
10 I'm a member of Climate Action California, statewide
11 organization fighting climate change through regulatory
12 and legislative action. And I'd like to confine my
13 comments to dairy cattle biomethane avoided mission
14 credits, issues raised in questions today by Director
15 Takvorian and Guerra, and many public speakers.

16 My question goes to the heart of the GREET Model
17 that an incorrect input assumption leads to an incorrect
18 conclusion by the model. Dairy cattle methane is an
19 industrial waste product. It's not a product of a process
20 that should be resulting in a profit to the milk
21 producers. Do we give refineries profitable credits to
22 mitigate PM2.5 emissions? No, we require them to include
23 the cost of mitigation into their product rights. This is
24 the proper regulatory stance.

25 In fact, a CAFOs are much -- they're putting at

1 refineries. They emit NOx, ammonia, H2S. They have odor,
2 flies, and water pollution, as others speakers have
3 already said. I'd like you -- to refer you to slide 15 in
4 the staff presentation, where the carbon intensity of
5 fossil compressed natural gas is strangely absent. It
6 relates -- it rates, according to CARB at 100 grams of
7 carbon dioxide equivalent per megajoule, whereas
8 biomethane carbon compressed natural gas is minus 99.
9 Methane emitted into the atmosphere does not care whether
10 it comes from fossil carbon or cow poop, making this
11 distinction climatically incorrect.

12 I'd like you to follow the EJAC recommendations
13 at the joint committee and eliminate the avoided --

14 BOARD CLERK GARCIA: Thank you. That concludes
15 your time.

16 Sean, I have activated your microphone. Please
17 unmute and begin.

18 SEAN NEWSUM: Good afternoon. I'm Sean Newsum
19 with Airlines for America, A4A, the principal trade
20 association of U.S. airlines. Airlines, governments, and
21 other aviation stakeholders have recognized that achieving
22 net zero aviation emissions by 2050 will require a rapid
23 increase in the production of sustainable aviation fuel,
24 or SAF.

25 A4A and our member airlines have set a goal of

1 making three billion gallons of cost competitive SAF
2 available to U.S. aircraft operators in 2030 marrying the
3 Biden administration's SAF grand challenge goal. A4A
4 appreciates CARB's desire and actions to develop a market
5 for SAF in California. Carbon has been leader in
6 accelerating the production and use of alternative fuels
7 in California in creating a first and viable market for
8 SAF in the U.S.

9 The existing opt-in model combined with U.S.
10 federal incentives has been highly successful in drawing
11 the majority of SAF deployment to date into California.
12 We are eager to work with CARB to further increase the
13 availability of SAF in California towards achieving our
14 shared goal of next zero emissions.

15 With this in mind, we want to underscore our
16 concerns with obligating jet fuel for intrastate use.
17 First, federal law preempts CARB from regulating jet fuel
18 under the LCFS Program. We've provided detailed comments
19 on this in writing in an attempt to obligate jet fuel for
20 intrastate flights would likely be challenged on federal
21 preemption grounds.

22 Second, obligating interstate jet fuel would be
23 much less effective at increasing the availability of SAF
24 and the current opt-in approach for jet fuel. A primary
25 barrier to increase SAF production is the cost

1 differential between SAF and renewable diesel. Obligating
2 intrastate jet fuel would not fully address this barrier.
3 CARB's leadership and innovation has achieved much to
4 date, maintaining the current opt-in approach while
5 identifying new cooperation opportunities to increase
6 production and availability of SAF is the best way
7 forward, and we look forward to opportunities to work with
8 CARB and the State of California towards their shared
9 climate goals.

10 Thank you.

11 BOARD CLERK GARCIA: Thank you.

12 Betsy, I have activated your microphone. Please
13 unmute and begin.

14 BETSY HUNTER-BINNS: Good afternoon. My name is
15 Betsy Hunter-Binns and I live south of Bakersfield on the
16 outskirts of a disadvantaged community. I am an employee
17 for a few dairies in Kern County assisting with their
18 environmental compliance. I have been working for Kern
19 County dairy farms for over 25 years. I have lived on a
20 dairy or within a quarter mile of a dairy my entire adult
21 life. As a single working mother, I have raise my child
22 on or near a dairy farm for her entire life. I have seen
23 firsthand the climate-smart practices that dairy farmers
24 families have been doing every day to ensure that the
25 environment, the air, the water, the soil, and the

1 employees are protected.

2 Dairy farm families want to have their farms be
3 multi-generational businesses, and that means protecting
4 the air, water, and soil for the next generation. Farmers
5 are good stewards of the overall environment because they
6 have to be. Protecting the environment is essential to
7 the viability of their business, feeding people, not just
8 today but for the next generation. Dairy farmers and
9 engineers have figured out to capture methane from dairy
10 farms to convert it into usable fuels.

11 Dairy manure digesters are expensive systems to
12 install and maintain. The incentives through the LCFS are
13 necessary to encourage more dairy farmers to install dairy
14 digesters. The dairy digesters are huge projects
15 capturing huge -- thousands of tons of methane and thusly
16 the value of what they are doing to improve the
17 environment and air quality calls for a reciprocal
18 incentive.

19 Don't be fooled, the LCFSs are not lining the
20 dairy farmers' pockets. The incentives are simply
21 off-setting the multi-million dollars investments and
22 costs of installing and maintaining those digesters.
23 Dairy digesters are providing a quantifiable data for the
24 tons of methane that is being removed. Keeping the dairy
25 digester LCFS incentives is vital to continue the

1 measurable improvements to the air. California dairies
2 are heavily regulated By multiple agencies. Dairy farmers
3 are not environmental villains.

4 BOARD CLERK GARCIA: Thank you. That concludes
5 your time.

6 Karyn, I have activated your microphone. Please
7 unmute and begin.

8 KARYN JONES: Karyn Jones, Director of
9 Sustainability for Gevo. Gevo is a producer of renewable
10 fuels including renewable natural gas from dairy manure
11 and sustainable aviation fuel. Our RNG project located in
12 Northwest Iowa is actively participating in the California
13 LCFS Program.

14 The Low Carbon Fuel Standard is a success that is
15 achieving reductions in fugitive methane emissions and
16 decarbonizing the transportation sector. Gevo's RNG
17 project is fully additional, meaning that in absence of
18 the LCFS Program and our project, the three dairy farms
19 that our project serves would continue to emit methane
20 emissions into atmosphere. Because of the LCFS program's
21 recognition of the importance of methane capture and the
22 program's strong benchmarks and forward-thinking policies
23 around book and claim of biomethane and avoided methane
24 emission credit, Gevo was able to finance and build this
25 RNG project to capture biomethane produced from dairy

1 manure and convert it for beneficial use to fuel CNG
2 vehicles in California.

3 Our project is among many others across North
4 America that currently rely on the LCFS revenues to
5 support investment into methane capture, infrastructure,
6 and operations. Any significant changes to the current
7 successful framework will undermine efforts to convince
8 investors to make long-term capital deployment decisions
9 based on LCFS credit value.

10 The GREET Model is backed by science and is the
11 most widely accepted Carbon accounting methodology for
12 clean fuels. Our requests to increase the carbon
13 intensity reduction goal to at least 42 percent in
14 alignment with the ICF -- ICS study, to adopt the
15 acceleration mechanism to increase the stringency of CI
16 benchmarks, and to retain the current programmatic
17 framework until at least the next LCFS update. This will
18 provide for continued success in decarbonizing
19 California's transportation sector.

20 Thank you.

21 BOARD CLERK GARCIA: Thank you.

22 After the phone number ending in 111, we will
23 hear from Madison Vanderklay, Amara Eger, Dan Ress, Russel
24 Dyk, Sherrie Merrow, Anna Christina Amason, Amanda Parsons
25 DeRosier.

1 So phone number ending in 111, I have activated
2 your microphone. Please state your name for the record
3 and you can begin.

4 DR. JAMES DUFFY: My name is Dr. James Duffy. I
5 helped develop and enthusiastically support the LCFS.
6 During my career at CARB, I served as co-chair of the
7 expert work group on indirect effects of biofuels and
8 retired after serving as Branch Chief overseeing the
9 program.

10 I support the recommendations made by the
11 environmental communities. Specifically, I urge you to
12 cap and ultimately phase out the use of crop-based
13 biofuels. There remains significant uncertainty as to
14 whether biofuels actually reduce greenhouse gas emissions
15 as compared to gasoline and diesel. Unfortunately, what
16 we can say with much more certainty is that diverting
17 crops, such as corn, to produce biofuels threatens
18 tropical forests, increase food prices, and exacerbates
19 global hunger.

20 CARB's own modeling from prior LCFS rulemakings
21 indicates that global food consumption decreases in
22 response to biofuel production. And this reduction in
23 food consumption results in a lower carbon intensity
24 score. In essence, a portion of the LCFS credits
25 generated by biofuel producers are the result of the most

1 food insecure people in the world eating less. Tom
2 Hertel, Distinguished Professor of ag economics at Purdue
3 University and author of the original land use change
4 modeling work performed for the LCFS wrote, "Reduced food
5 consumption is an important market-mediated response to
6 increased biofuels production. While food consumption may
7 not translate directly into nutritional deficits among
8 wealthy households, any decline in consumption will have a
9 severe impact on households that already malnourished."

10 I urge you to recognize this harsh economic
11 reality and direct staff to place a cap on the use of food
12 and feed crops to produce biofuels. I have submitted
13 written comments and also refer you to written comments
14 from biofuel expert Tim Searchinger, the World Resources
15 Institute, Chris Malins, and Richard Plevin.

16 Thank you.

17 BOARD CLERK GARCIA: Thank you.

18 Okay. Next - sorry about that - we will hear
19 from Madison. I have activated your microphone. Please
20 unmute and begin.

21 MADISON VANDERKLAY: Good afternoon. My name is
22 Madison Vanderklay with the Silicon Valley Leadership
23 Group. Thank you for the opportunity to comment today on
24 pending changes to the Low Carbon Fuel Standard. The
25 Leadership group represents hundreds of Silicon Valley's

1 most respected employers, many of who are key players in
2 decarbonizing fleets, including businesses with fleets to
3 decarbonize as well as those producing zero-emission
4 vehicles and related infrastructure.

5 SVLG appreciates the Board and staff's
6 thoughtfulness in formulating a draft proposal and all of
7 the work that goes into this. We would encourage a timely
8 resolution to increasing the stringency of the program and
9 support a 30 percent benchmark by 2030. Low credit values
10 have hindered the ability of many companies to deploy ZEVs
11 and the ability of the State to meet its goals in the
12 interim.

13 We also support continuing conversation on
14 including an acceleration mechanism to protect credit
15 value and ensure a health marketplace.

16 SVLG would encourage the extension of light-duty
17 capacity credits while maintaining the current cap of five
18 percent instead of lowering the cap. The cap should not
19 be lowered as demand continues to increase for light-duty
20 vehicles and chargers, as is both necessary for meeting
21 our climate goals and a reflection of the great work that
22 the State has done so far. Likewise, SVLG supports
23 providing infrastructure capacity credits for medium- and
24 heavy-duty vehicles space. This would be an invaluable
25 tool for supporting the creation of the infrastructure

1 needed to support the Advanced Clean Fleet ruling. We
2 would urge maximum flexibility when determining
3 eligibility for both capacity credits.

4 Finally, we would ask CARB to continue working
5 with the airline industry to develop and incentive-based
6 framework to support both the production and use of
7 sustainable aviation fuel, rather than obligating it under
8 an LCFS pathway. This would support the development of a
9 robust SAF market, which can meet air travel needs while
10 reducing emissions substantially.

11 Thank you to staff and the Board for your work on
12 this program. We are available to assist or clarify these
13 comments. Thank you.

14 BOARD CLERK GARCIA: Thank you.

15 Amara, I have activated your microphone. Please
16 unmute and begin.

17 AMARA EGER: Good afternoon, Chair, members, and
18 staff. I'm Amara Eger speaking on behalf of CR&R
19 Environmental Services. CR&R is a Southern California
20 based waste and recycling collection company. We thank
21 staff for their work on this important program. As an
22 early implementer of the State's organic waste diversion
23 goals, CR&R has heavily invested in a state-of-the-art
24 anaerobic digestion facility that recycles green and food
25 waste to create renewable natural gas.

1 With CARB winding down the use of renewable
2 natural gas in the transportation sector through the
3 Advanced Clean Fleet Regulation, we urge CARB through LCFS
4 to simultaneously build a roadmap to develop incentives
5 and markets for RNG produced from organic waste that are
6 equal to those that currently exist for the transportation
7 sector.

8 The State is already struggling to meet its
9 ambition 13 -- ambitious 1383 climate targets and
10 long-term markets for RNG are critical to support existing
11 operators like us and to encourage new investors to build
12 out organic waste processing capacity. The State needs to
13 clarify -- clearly define what hard-to-electrify --
14 hard-to-electrify sectors are most viable for RNG and how
15 markets will transition over between now and 2040.

16 Additionally, we are extremely concerned about
17 phasing out the avoided methane credit before there is a
18 viable alternative market to ensure that California's
19 progress on short-lived climate pollutant near-term
20 reductions does not slow down or reverse. We hope to
21 collaborate with CARB in the near future on what this
22 roadmap could look like.

23 Thank you so much for your time.

24 BOARD CLERK GARCIA: Thank you.

25 Dan, I have activated your microphone. Please

1 unmute and begin.

2 DAN RESS: My name is Dan Ress speaking on behalf
3 of the Center on Race, Poverty, and the Environment. CRPE
4 is a community-based environmental justice organization
5 based in the San Joaquin Valley.

6 The LCFS is failing both climate and communities
7 by providing lavish subsidies to dairy digesters. Dairy
8 Digesters increase local pollution, yet require liquid
9 manure management practices that increase methane
10 emissions and nullify any purported climate benefits.

11 Large dairies are predominantly located near
12 low-income communities of color, which must bear the
13 externalities of increased odor, flies, water pollution,
14 water scarcity, and air pollution. At the same time, the
15 LCFS as proposed will drive substantial increases in gas
16 prices amounting to a regressive tax. Between 2024 and
17 2030, that pass-through cost will average \$0.37 a gallon.
18 Between 2031 and 2045, it will average \$1.15 a gallon,
19 \$1.15 per gallon extra largely to pay for dairy digesters,
20 which increase local pollution without meaningful climate
21 benefits.

22 Rural communities in the valley will likely be
23 among the last to adopt electric vehicles, because of the
24 high cost of EVs, as well as infrastructure challenges.
25 Yet, because the area is so rural, the nation's most

1 productive cropland. Mass transit is not a realistic
2 option for most. Thus it will be our community member who
3 pay their regressive pass-through costs for gasoline in
4 order to finance their own poisoning from dairy digesters
5 without benefit beyond private profits. This is the
6 height of injustice and Air -- the Air Resources Board
7 must not enshrine this path into law, but must instead end
8 avoided methane crediting in 2024.

9 Indeed, staff recognized that avoided methane
10 crediting is incoherent, planning to phase it out in 2040
11 in 17 years. That delay is inexcusable. From EJ
12 communities' front-line workers, we are demanding reforms
13 to a program that allows and incentivizes pollution in
14 lower income communities of color and puts profit over
15 people.

16 BOARD CLERK GARCIA: Thank you. That concludes
17 your time.

18 Russel, I have activated your microphone. Please
19 unmute and begin.

20 RUSSEL DYK: Hi there. Can you hear me?

21 BOARD CLERK GARCIA: Yes, we can.

22 RUSSEL DYK: Great. Well, Chair Randolph and
23 honorable members of the CARB Board. Thank you for the
24 opportunity to comment today. My name is Russel Dyk and I
25 am representing the BTR Energy, an industry-leading

1 platform that enables electric vehicle manufacturers and
2 renewable electricity generators to work together to
3 reduce emissions and to participate in low-carbon
4 transportation fuel programs. Both our business and our
5 partners are aligned with California's mission to scale
6 electricity use in transportation.

7 I have two comments that I'd like to share today,
8 but I first want to commend CARB staff for being
9 responsive to input from stakeholders during the amendment
10 process, and particularly for incorporating two important
11 concepts that we and others have proposed namely a carbon
12 intensity step-down and an auto-acceleration mechanism.

13 My first comment concerns the step-down, the
14 purpose of which is to immediately reset the ambitions of
15 the LCFS Program ahead of its performance. The program --
16 the program's success has led to currently outperform not
17 only its 2023 target, but also that of 2024 and 2025. It
18 is critical, therefore, that the timing of the step-down
19 occurs immediately upon adoption of the amendments in
20 2024, and that the magnitude of the step-down meaningfully
21 exceed the program's outperformance.

22 Delaying implementation until 2025 would
23 jeopardize the integrity, incentive, and the success of
24 the program. The decline in prices since CARB published
25 its SRIA underscores that the market doesn't believe a

1 2025 step-down, as modeled, will produce the necessary
2 incentive for new investments.

3 My final comment is on the currently proposed
4 2023 -- 2030 target of 30 percent. We encourage CARB to
5 consider the results of the recent independent analysis by
6 ICF, which found that a 2030 target greater than 40
7 percent is achievable.

8 Thank you very much again to CARB staff and to
9 the CARB Board for listening to all the comments today and
10 we look forward to commenting further as this process
11 proceeds. Have a good evening.

12 BOARD CLERK GARCIA: Thank you.

13 Sherrie, I have activated your microphone.
14 Please unmute and begin.

15 SHERRIE MERROW: Thank you. Chair Randolph and
16 honorable members of the CARB Board, my name is Sherrie
17 Merrow and I am the NGV America Director of State
18 Government Affairs. NGV America is the national trade
19 association dedicated to the decarbonization of the
20 transportation sector through the increased use of gaseous
21 fuels, including renewable natural gas, conventional
22 natural gas, hydrogen-blended gas and hydrogen. Thank you
23 for the opportunity to speak today in support of
24 California's robust Low Carbon Fuel Standard.

25 NGV America and its members recognize that

1 decarbonization efforts and cleaner air will only be
2 achieved by focusing on a multi-technology approach that
3 includes promoting the use of readily available,
4 cost-effective, low-carbon, and carbon-negative solutions.

5 Today, trucks, buses, and other vehicles powered
6 by RNG are delivering steep reductions in greenhouse gas
7 emissions as has been shown in the emissions reductions
8 California has achieved through its LCFS program. We
9 therefore urge the Board to retain the inclusion of
10 avoided methane crediting and the use of RNG as a
11 transportation option in the LCFS program and other
12 regulatory programs.

13 Moreover, we also request that CARB increase the
14 carbon intensity reduction goal to at least 40 percent --
15 42 percent and adopt the acceleration mechanism to increase
16 the stringency of the CI benchmarks when specific
17 regulatory conditions are satisfied. The LCFS is a
18 success that is achieving reductions in fugitive methane
19 emissions and decarbonizing the transportation sector.
20 Continuing to operate the California LCFS program in its
21 present form will enable the cleanest and best-for-purpose
22 fuels to be used for transportation in California.

23 Thank you for your time.

24 BOARD CLERK GARCIA: Thank you.

25 And after Amanda, we will hear from Dean Taylor,

1 Sara Gersen, Daniel Chandler, Jane O'Malley, Robbie
2 Macias, And Fariya Ali.

3 Amanda, I have activated your microphone. Please
4 unmute and begin.

5 AMANDA PARSONS DEROSIER: Thank you for taking
6 the time to hear our remarks today. My name is Amanda
7 Parsons DeRosier. I'm Vice President of Public Affairs
8 for Global Clean Energy, a California based renewable
9 fuels innovator.

10 The LCFS plan discussed today proposes enacting
11 restrictions on the use of crop-based feedstocks for our
12 state's renewable fuel production. We hope CARB does not
13 strictly limit crop-based feedstocks, because meaningful
14 change will require an all-of-the-above solution. And we
15 encourage the Board to incentivize the use of intermediate
16 crops like camelina within any adopted proposal.

17 Our company specializes in camelina production.
18 Camelina and other intermediate crops, as they are known
19 in the European Union, provide ultra low carbon finished
20 fuels, are non-food, require little water, and do not
21 cause land use change, because they are grown on existing
22 farmland during periods where land would otherwise sit
23 idle or fallow.

24 Intermediate crops grown between traditional crop
25 cycles on existing farmland, provide cover crop benefits

1 to that land and do not displace many crops. They also
2 provide additive economic revenues for rural agricultural
3 communities while strengthening our nation's domestic
4 energy supply. Our clean energy future will require
5 diverse low-carbon solutions and renewable fuels made from
6 crop-based feedstocks will propel California toward
7 reaching carbon neutrality responsibly as well as
8 assisting our nation in meeting the goals of the SAF grand
9 challenge.

10 Renewable fuels work as drop-in replacement for
11 traditional fuels with far fewer emissions and no
12 infrastructure or -- infrastructure or engine changes
13 necessary. They will play a key role in achieving our
14 clean air -- our goals. We urge you to reject the
15 crop-based feedstock restriction and incentivize the use
16 of innovative new intermediate crops like camelina in
17 renewable fuels production.

18 Thank you.

19 BOARD CLERK GARCIA: Thank you.

20 Dean, I have activated your microphone. Please
21 unmute and begin.

22 DEAN TAYLOR: My name is Dean Taylor for the
23 California Electric Transportation Coalition. We support
24 the heavy-duty infrastructure credits, which are also
25 called capacity credits. Because the market is nascent,

1 the program should not have many restrictions on it. We
2 also support extending the existing light-duty capacity
3 credits and we also recommend no cuts to this program as
4 staff is currently proposing a level that is five times
5 less than today's program.

6 Modeling by the CEC and NREL shows we need four
7 times more DC fast charging by 2030. We also recommend
8 that it be expanded to serve multi-family residences and
9 dense urban areas. While LCFS supports many types of
10 transportation, it still does not support emerging EVs
11 used in agriculture, airports, mining, warehouses, and
12 some types of recreation. Ironically, other fuels can
13 earn credits for vehicles in these sectors. This needs to
14 be fixed.

15 The last ten years have shown that these small
16 industries do not have the wherewithal to develop staff's
17 request for a scientific study to prove their efficiency
18 compared to gasoline or diesel, which is called an EER.
19 To solve this problem, we propose that LCFS allow these
20 industries to use a conservative default EER, which is
21 much less than what other EVs receive today. If these
22 industries want a more realistic EER, they can do the full
23 scientific study.

24 Thank you very much for the considering this.

25 BOARD CLERK GARCIA: Thank you.

1 Sara, I have activated your microphone. Please
2 unmute and begin.

3 SARA GERSEN: My name is Sara Gersen. And I'm an
4 attorney at Earthjustice, speaking in solidarity with the
5 EJ communities and front-line workers who are demanding
6 reforms to the LCFS. My comments today focus on four
7 harms that result from relying on the false assumption
8 that livestock biomethane is a carbon negative resource.

9 First, the outside support for CNG fuel distorts
10 the market in favor of combustion fuels that have no role
11 in California's future. One CNG truck that purportedly
12 burns livestock biomethane will typically lead to more
13 credit generation than the fleet of four electric trucks.

14 Second, the LCFS is undermining the market for
15 truly clean zero-emission hydrogen by providing the
16 biggest hydrogen subsidies to companies that produce
17 hydrogen through the polluting process of steam methane
18 reformation.

19 Third, Californians have historically been
20 willing to pay for clean air and climate action. However,
21 overgeneration of credits for biomethane skews the program
22 in favor of polluting fuels. And it's not fair to expect
23 California's drivers to subsidize fuels that have no
24 future in our transportation sector.

25 Fourth, creating a lucrative market for livestock

1 biomethane creates a perverse incentive for factory farms
2 to create methane through unsustainable manure management
3 practices. Factory farms can only generate methane for
4 capture if they choose to use manure lagoons, which have
5 uniquely devastating environmental and nuisance impacts on
6 local communities. Addressing livestock methane through
7 direct regulation will avoid this perverse incentive.

8 So I urge the Board to end avoided methane
9 crediting in 2024 and adopt all the other EJAC
10 recommendations. Thank you for your consideration.

11 BOARD CLERK GARCIA: Thank you.

12 Daniel, I have activated your microphone. Please
13 unmute and begin.

14 DANIEL CHANDLER: My name is Daniel Chandler. I
15 represent 350 Humboldt and Climate Action California.

16 While recognizing the importance of the LCFS
17 overall, we support the EJAC policy positions. I also
18 would like to say I appreciated the perceptive questions
19 of Board members on dairy emissions earlier today.

20 The biomethane industry calls digester gas
21 renewable natural gas. A more accurate name is avoidable
22 natural gas, because dairy industry manure management
23 choices - excuse me - cause most manure methane. The main
24 culprit is the wet or flush lagoon system of manure
25 management, which is unknown in Europe and used much less

1 in other parts of the U.S. than in California.

2 In 2023, Professor Frank Mitloehner of UC Davis
3 published an article that showed it is possible to get to
4 a 40 percent reduction in dairy methane by 2030 just by
5 switching away from the flush lagoon system to dry
6 management. That would be the best approach, but there
7 are a number of other effective ways of cutting methane
8 from stored manure. These include burma filtration and
9 the addition of an additive to the slurry, each of which
10 is as effective as digesters. Digesters only exist in 200
11 dairies. What about the other 1,200 dairies? If CARB
12 regulates manure methane, we can reach the 40 percent goal
13 by 2030 by not creating the methane in the first place.

14 Thank you for your time. I've submitted a
15 written comment with references to back up my statements.
16 And I would also like to thank you Board and the pandemic
17 for making it possible for people in rural areas like me
18 to have our voices heard virtually.

19 Thank you.

20 BOARD CLERK GARCIA: Thank you. Jane, I have
21 activated your microphone. Please unmute and begin.

22 JANE O'MALLEY: Hello. This is Jane O'Malley
23 with the International Council on Clean Transportation.
24 Thank you to the meeting organizers and Board for the
25 opportunity to speak today. On behalf of the ICCT, I

1 would like to commend CARB for undertaking the LCFS
2 revision process.

3 Today, we have two key recommendations to
4 strengthen the environmental integrity of the LCFS and to
5 ensure that guidance is applied equally across feedstocks.
6 These recommendations are time sensitive. Delaying action
7 to a later rulemaking would risk undermining the intended
8 outcomes of the program.

9 One, we encourage the Board to consider a cap on
10 the contribution of either crop-based biofuels or
11 lipid-derived biofuels, those made from fats or oils.
12 Although CARB recognized these risks in its February 2023
13 workshop and explored the option to set a cap in its July
14 2022 workshop, a cap was not included in the SRIA
15 published on September 8th. Setting a cap on lipid
16 derived fuels is critical to avoid any market distortions
17 and associated climate impacts from increasing demand for
18 virgin vegetable oils.

19 Already, crediting and biomass-based diesel
20 produced from soybean oil grew more than 60 percent
21 between 2021 and 2022. The European Union has implemented
22 a cap on the consumption of food and feed-based biofuels
23 under its renewable energy directive, with Germany having
24 implemented this cap in its own national level Low Carbon
25 Fuel Standard.

1 Two, we strongly recommend that CARB extend
2 deliverability requirements on biomethane to hydrogen
3 fuel. Already the status quo on book and claim crediting
4 is encouraging pathway applications for fossil-direct
5 hydrogen produced in California paired with environmental
6 attributes from biomethane producers located all over the
7 country. The current inconsistency in guidance undermines
8 the intent of setting deliverability requirements on
9 biomethane that is later upgraded to RNG.

10 Further, the value of credits for biomethane
11 derived hydrogen often vastly exceeds that of green
12 hydrogen produced from renewable electricity. Exempting
13 this pathway from deliverability requirements would
14 exacerbate the current trend of compliance being driven by
15 a very small quantity of out-of-state and out of sector
16 greenhouse gas reductions.

17 Thank you for the opportunity to comment. We
18 have submitted written comments that --

19 BOARD CLERK GARCIA: Thank you.

20 Robbie, I have activated your microphone. Please
21 unmute and begin.

22 ROBBIE MACIAS: Hello, all. Thank you for the
23 opportunity to speak. My name is Rob Macias, serving as
24 the Vice President of Aemitas Biogas. I stand before you
25 as a second generation American with roots tracing back to

1 my father's journey as a Mexican immigrant.

2 Since our establishment in 2018 Aemitas has been
3 at the forefront of converting dairy methane into negative
4 CI renewable natural gas, RNG. Our projects are located
5 in Stanislaus and Merced counties, which also happens to
6 be where my wife and I have lived our entire lives and
7 where chose to raise our family.

8 I grew up and continue to live near dairies much
9 like the entire Aemitas team, who all have strong ties to
10 farming areas. So it's fair to say that with the
11 reduction of air pollution and mitigation of methane --
12 that the reduction of air pollution and mitigation of
13 methane is much more than just business at Aemitas. It's
14 deeply personal to us. It has a direct impact to our
15 quality of life.

16 Despite when some others may suggest, we
17 experience firsthand how dairy digesters and RNG are
18 benefiting our fellow citizens, especially the
19 disadvantaged and marginalized communities, which many of
20 our digesters are located through cleaner air, cleaner
21 water, employment opportunities, and economic development.
22 The LCFS has been extremely successful in generating
23 billions of dollars in investment in low carbon fuels and
24 methane reduction. But beyond the investment in economic
25 development, real results have been achieved in meeting

1 the program's goal of reducing and ultimately eliminating
2 damaging greenhouse gases.

3 The noteworthy strides California has taken in
4 mitigating methane, especially from dairies, owes a great
5 deal to dairy RNG. Its utility as a -- it's utility as a
6 fuel stands unmatched. I respectfully emphasize the
7 importance of harnessing RNG's complete potential and urge
8 CARB to adopt a holistic range of solutions to satisfy the
9 ambitious benchmarks enforced by the Low Carbon Fuel
10 Standard. California will need every tool in its arsenal
11 to meet the demanding goals set forth by the LCFS and CARB
12 should actively support a wide, not narrow, variety of
13 fuels and technologies. Any substantive changes to the
14 LCFS framework may inadvertently deter indispensable
15 private sector participation.

16 Thank you.

17 BOARD CLERK GARCIA: Thank you.

18 After Fariya, we'll hear from Victoria Rodriguez,
19 Peter Whitfield, Peter Dahling, Natalie Findlay.

20 So Fariya, I have activated your microphone.
21 Please unmute and begin.

22 FARIYA ALI: Good afternoon, Chair Randolph and
23 Board members. My name is Fariya Ali speaking on behalf
24 of Pacifica Gas and Electric. PG&E continues to support
25 California's Ambitious climate and air quality goals and

1 we believe the LCFS Program is an important tool in order
2 to help achieve these keys goals.

3 Moving forward, we want the LCFS to continue to
4 contribute to the transformation of the transportation
5 sector. We support CARB's proposals to increase the
6 program's 2030 stringency, including the near-term
7 step-down in the CI as well as an automatic acceleration
8 mechanism. PG&E participates in the LCFS program on
9 behalf of our residential EV customers who use the
10 electricity we deliver as a low carbon transportation
11 fuel. The revenue from the credits we received goes back
12 to customers not the utility, and we are subject to many
13 levels of regulatory oversight and reporting. To date,
14 PG&E has provided over a hundred million dollars in EV
15 rebates through our utility programs and this is separate
16 from the statewide Clean Fuel Rewards Program.

17 Our portfolio now includes rebates for used EVs
18 and home charging options, charging installation for
19 multi-family and small businesses and managed charging in
20 high fire threat districts. Three of these four programs
21 also focus on low-income customers in disadvantaged
22 communities.

23 We believe there are opportunities to further
24 support equity with the revenue from the LCFS program
25 going forward as noted by CalETC. In collaboration with

1 other utilities and incorporating feedback from multiple
2 equity stakeholder groups, we have developed a proposal
3 that would triple the amount of LCFS revenue the utilities
4 spend on equity programs. Over the coming decade, we
5 anticipate that LCFS will continue to provide revenue that
6 can meaningfully help remove barriers to EV adoption
7 beyond just vehicle rebates, to Dr. Balmes's point, and
8 especially for hard-to-electrify communities. We look
9 forward to continuing to work with you all on helping to
10 realize this potential.

11 Thank you.

12 BOARD CLERK GARCIA: Thank you.

13 Victoria, I have activated your microphone,
14 please unmute and begin.

15 VICTORIA RODRIGUEZ: Good afternoon, CARB Board
16 members. My name is Victoria Rodriguez and I am speaking
17 on behalf of the Milk Producers Council of California.

18 Reducing methane emissions is critical as
19 Governor Newsom highlighted last at New York Climate Week,
20 which is why California's dairy farm families are
21 partnering with the State to achieve the State's
22 short-lived climate pollutant goals. As CARB staff and
23 others have stated, the LCFS Program is one of the most
24 efficient programs in the state and in the country,
25 looking at all the tools that we can use moving forward to

1 continue to reduce emissions in California and reach
2 carbon neutral by 2035 and then 2040.

3 Moreover, we want to ensure that the investments
4 that have been made need to continue to be made. And as
5 staff has pointed out, backsliding by pulling the rug out
6 from under these investments made in digesters would stand
7 billions of dollars in projects and preclude the State's
8 ability to achieve our targets on time. It's important
9 that we continue to provide incentives that are working to
10 continue to reduce emissions and benefit the good actors
11 in the state.

12 Our farm families are part of the fabric of our
13 rural communities and are critical to the economic and
14 environmental sustainability of these regions. Over the
15 past few weeks, you've heard from elected officials who
16 represent these communities and residents supporting the
17 broad benefits these projects and these family farms
18 provide. There's no question that these projects are
19 providing air quality and other benefits to communities.

20 We urge CARB to stay the course and continuing to
21 implement digesters and other projects to reduce dairy
22 methane. The incentive-based system is working and
23 consistent federal efforts. Changing the course now would
24 only ensure that we are not successful. We look forward
25 to continuing these important efforts and the important

1 partnership we have develop with the state.

2 Thank you.

3 BOARD CLERK GARCIA: Thank you.

4 Peter Whitfield I have activated your microphone.
5 Please unmute and begin.

6 PETER WHITFIELD: Okay. Can you hear me?

7 BOARD CLERK GARCIA: Yes, we can.

8 PETER WHITFIELD: Okay. Thank you very much.

9 I'm Peter Whitfield. I'm an attorney with the law firm of
10 Sidley Austin. I represent clients that are major
11 investors in Low Carbon Fuel Standard technologies. Our
12 clients encourage CARB to pursue regulatory amendments
13 that provide compliance certainty for investments in
14 low-carbon fuel technologies in California.

15 One particularly beneficial regulatory amendment
16 would be a provision in the law that would allow for a
17 true-up procedure at the end of the year regarding carbon
18 credits. The provision would allow balancing of credits
19 to reflect scenarios where natural fluctuations in carbon
20 intensity scores occur during the year. So if an actual
21 carbon intensity score was higher than anticipated,
22 facilities could retire extra credits without additional
23 penalty. And if carbon intensity scores were lower than
24 anticipated then facilities could generate additional
25 credits. This approach would be consistent with other

1 regulatory programs, not only in California, but allow for
2 balancing out compliance obligations, but also neighboring
3 states and even at the federal level.

4 And additionally, this type of regulatory
5 amendment would encourage additional investment in
6 low-carbon technologies in California.

7 Thank you very much for your time.

8 BOARD CLERK GARCIA: Thank you.

9 Peter Dahling, I have activated your microphone.
10 Please unmute and begin.

11 PETER DAHLING: Can you hear me?

12 BOARD CLERK GARCIA: Yes, we can.

13 PETER DAHLING: Thanks very much. Chair
14 Randolph, and Board members, and staff members, thanks
15 very much for the opportunity to speak to you today. My
16 name is Pete Dahling. I'm speaking on behalf of Neste
17 U.S. Neste is working to create a healthier planet for
18 future generations as the world's leading producer of
19 renewable diesel and sustainable aviation fuel primarily
20 from waste and residues.

21 We congratulate CARB for creating the right
22 policies and market signals that have resulted in the
23 California diesel market now being 57 percent renewable.
24 What's more impressive is that consumers actually saw a
25 drop in diesel prices during the most recent significant

1 increase in renewable diesel consumption showing that
2 phasing out fossil fuels can actually protect the
3 consumer. As noted by CARB staff in the SRIA, stronger
4 action in the LCFS rulemaking will speed up the phaseout
5 of fossil fuels and result in billions of dollars in
6 health benefits to Californians.

7 Neste recommends the following as part of the
8 ongoing rulemaking process.

9 First, choose a carbon intensity goal of 35
10 percent by 2030, the most ambitious goal being evaluated.
11 Second, apply an immediate reduction in carbon -- in the
12 carbon intensity target, a step-down, and apply automatic
13 adjustments to the CI to address overperformance in the
14 credit market to continue incentivizing investments in
15 renewable energy. Third, avoid an arbitrary cap on
16 feedstocks used to produce renewable diesel and SAF. We
17 believe this cap will only extend our dependence on fossil
18 fuel and the SRIA seems to agree.

19 With this rulemaking, CARB has an opportunity to
20 implement Governor Newsom's July '22 directive to speed
21 the transition away from petroleum and CARB can do that
22 maximizing the stringency of the LCFS Regulation. Any
23 hesitation to be ambitious at this point will only delay
24 critical progress toward meeting the State's goals.
25 Neste, therefore, recommends that CARB make every effort

1 to maximize the carbon reductions that will occur under
2 this rulemaking. Thanks for the opportunity to talk to
3 you.

4 BOARD CLERK GARCIA: Thank you.

5 Next, we'll hear from Natalie Findlay.

6 Natalie, I have activated your microphone.
7 Please unmute and begin.

8 NATALIE FINDLAY: Hi. My name is Natalie
9 Findlay. I am representing Global Clean Energy, a
10 renewable fuels innovator specialize in crop called
11 camelina. We were disappointed to see that the LCFS
12 proposal being considered today features crop-based
13 feedstock restrictions in the production of renewable
14 fuels. We believe that all feedstocks will be necessary
15 to meet the demand for renewable fuels, including
16 sustainable aviation fuel in the coming years. We urge
17 the Board to reject this proposed crop-based feedstock
18 restriction.

19 We also urge the Board to incentivize the use of
20 intermediate crops and renewable fuel production.
21 Intermediate crops grow between traditional crops and on
22 existing idle or fallow farm acres and do not cause land
23 use change.

24 Global Clean Energy produces an intermediate crop
25 called camelina. Camelina provides cover crop benefits to

1 soil and sequesters carbon as it grows and produces ultra
2 low carbon renewable fuels. It has a value throughout its
3 life cycle. In fact, camelina has the potential to be the
4 lowest carbon renewable fuel feedstock available. Our
5 clean energy future will require an all-of-the-above
6 strategy. Crop-based feedstocks are necessary to meet our
7 emission reduction goals and crops like camelina can play
8 a big part in ensuring that we reach our carbon neutrality
9 goals responsibly.

10 Our State will need more feedstocks, not less, to
11 meet the State's carbon neutrality targets. We urge a
12 rejection of any crop-based feedstock restriction and
13 encourage incentivizing the use of intermediate crops like
14 camelina.

15 Thank you for your time and have a good evening.

16 BOARD CLERK GARCIA: Thank you.

17 Next we'll hear from Tyler Lobdell, Katie Little,
18 a phone number ending in 576, John O'Donnell, Danielle
19 Illig, Kimberly McCoy, and Kristin Olsen-Cate.

20 So Tyler, I have activated your microphone.
21 Please unmute and begin.

22 TYLER LOBDELL: Good afternoon. Thank you.
23 Tyler Lobdell on behalf of Food and Water Watch. Food and
24 Water Watch stands in solidarity with community members of
25 the San Joaquin Valley and elsewhere who are impacted by

1 the factory farms that are unfortunately rewarded and
2 incentivized by the LCFS today. We also support the
3 comments provided by Leadership Counsel, and Earthjustice,
4 and the EJAC recommendations.

5 I want to make two quick specific points about
6 the presentations today. I want to address herd size and
7 consolidation incentives created by avoided methane
8 crediting. So when CARB adopted this policy in 2018, the
9 industry -- the livestock industry itself called it a
10 manure gold rush. The clear signal here is that more
11 manure-emitting methane at factory farms means more
12 opportunity to generate LCFS revenue. Earlier today,
13 staff said that no one has data showing that the LCFS has
14 the effect of incentivizing larger herds. That's not
15 correct. We have prevented -- presented such evidence and
16 will do so again.

17 But what's more concerning is that in response to
18 a recent public records request, CARB could not muster a
19 single analysis, study, or other records supporting the
20 idea that the LCFS is not causing herds to get larger,
21 even though this concern has been raised consistently by
22 many advocacy groups. Avoided methane crediting has
23 serious unintended consequences and environmental justice
24 harms and it must be eliminated in 2024.

25 So moving to SB 1383 and direct regulation. In

1 response to Dr. Pacheco-Werner's questions about landfills
2 compared to carries, staff explained that landfill
3 emissions are reduced in two ways, capture and diversion
4 of organics away from landfills describing diversion as a
5 critical strategy.

6 Similarly, diverting manure away from what causes
7 methane emissions at factory farms that is liquefying
8 manure and storing it in lagoons is a far more effective
9 way to handle these emissions. But dry waste management
10 isn't suitable for digesters and biogas so it isn't an
11 LCFS option. Ignoring 1383 direct regulation illuminates
12 this critical strategy from reducing methane emissions
13 from dairies and must be --

14 BOARD CLERK GARCIA: Thank you.

15 Katie -- Katie Little, I have activated your
16 microphone. Please unmute and begin.

17 KATIE LITTLE: Thank you. Good afternoon Chair
18 and members. My name is Katie Little and I'm here on
19 behalf of the California Farm Bureau. We align our
20 comments with our fellow dairy and agricultural
21 stakeholders and urge CARB to continue implementing
22 digesters and other projects to reduce dairy methane.
23 California Farm Bureau represents almost 30,000 farmers
24 and ranchers throughout the state. Our members provide
25 important economic and environmental benefits to their

1 local communities and most notably safe and nutritious
2 food.

3 California's dairy methane reduction programs are
4 all critical to achieving the ambitious 40 percent
5 reduction sought by the state. Dairy digesters are a
6 vital part of this effort. And removing one of the most
7 effective programs is counterproductive and will preclude
8 the State's ability to achieve the methane reduction goals
9 that have been established. We urge CARB to continue this
10 partnership with our family dairies who are working to
11 accomplish this reduction. We look forward to continuing
12 these important efforts and important partnerships we have
13 developed with you.

14 Thank you so much.

15 BOARD CLERK GARCIA: Thank you.

16 Phone number ending in 576, I have activated your
17 microphone. Please state your name for the record and you
18 can begin.

19 LISA MCGHEE: Hi. My name is Lisa McGhee with
20 Tom's Truck Center. My comments address the preliminary
21 draft of potential Low Carbon Fuel Standard credit
22 amendments and update California Code of Regulations
23 95486.3, generating and calculating credits for medium-
24 and heavy-duty ZEVs fueling infrastructure pathways at
25 slide 29, "(E), crediting is limited to 10 years starting

1 with the quarter following Executive Officer approval of
2 the application." We recommend this should be a minimum
3 of 15 years, which is the same as the LDA RHR -- HRI right
4 now.

5 The regulation says the station should be open to
6 two different trucking companies and it says the SOSS, the
7 Station Operational Status System, is listed open for
8 retail. We recommend "retail" should be deleted. LDA
9 cars should not be included and LDA's relying station is
10 not the same as meeting the heavy-duty.

11 SOSS number 3 states at least three OEMs have
12 confirmed that the station meet protocol expectations and
13 their customers can fuel at the station. We recommend
14 SOSSs already list the station passed inspection by AH --
15 by the AHJ and make them Society of Automotive Engineers
16 fueling protocols. The three OEMs should be deleted.

17 (G) states if the Applicant fails to demonstrate
18 fuel supply equipment within 24 months of approval, the
19 Application will be canceled. We recommend the
20 application have a minimum of 36 months and this is
21 reasonable based on current experience and findings.

22 Next, the regulation should require a heavy-duty
23 station meet minimum site, storage, and pressure that
24 supports repeated 700 bar pressure. Storage plus
25 reloading plus pressure is necessary to meet reliable

1 standards for medium- and heavy-duty HRI.

2 Finally, we support more and a maximum
3 flexibility of capacity for medium- and heavy-duty RHI.

4 Thank you.

5 BOARD CLERK GARCIA: Thank you.

6 John O'Donnell, I have activated your microphone.
7 Please unmute and begin.

8 JOHN O'DONNELL: Hello. I'm John O'Donnell with
9 Rondo Energy. We're a California company that have
10 invented and developed the world's most efficient energy
11 storage. And the Low Carbon Fuel Standard has provided a
12 lot of the incentive that is behind the company. Over
13 time, the LCFS has driven all kinds of innovations that
14 nobody knew were coming. CARB has understood that and has
15 establishing stable price signals that have encouraged all
16 kinds of investments and innovations in low carbon fuels.

17 We're a leader in an emerging technology sector,
18 the storage of electrical energy as heat that can
19 materially change the carbon intensity of liquid fuel
20 production. Electrification of the production of
21 transportation fuels is on track to cut the carbon
22 intensity of liquid fuels by up to 80 percent. And doing
23 so is quite cost effective as the cost of intermittent
24 electricity, wind and solar power, continues to drop.

25 We're now decarbonizing on the first set the

1 production of corn ethanol at a California biofuel
2 refinery. We're working across projects across the --
3 across the country and internationally in decarbonizing
4 the production of biofuels and petroleum fuels from
5 feedstock through the refineries. And my main comment is
6 I want to propose that you support your continuing to
7 tighten the standards, because the credit price, the
8 stable credit price, is critical for this ongoing
9 technology deployment.

10 You're going to see ongoing drops in the actual
11 available carbon intensity of liquid transportation fuels.
12 And they're cutting the carbon intensity of the vehicles
13 that we have as the vehicle fleet evolves is good for the
14 whole system.

15 Thank you.

16 BOARD CLERK GARCIA: Thank you.

17 Danielle, I have activated your microphone.
18 Please unmute and begin.

19 DANIELLE ILLIG: Good evening, members of the
20 Board. My name is Danielle Illig, Director of Compliance
21 and Sales Operations at Clean Energy.

22 The SRIA proposed and early phaseout of avoided
23 methane credits and an elimination of book and claim
24 functionality for RNG to CNG, which will curb methane
25 capture project investment and likely result in an

1 increase of fossil fuel consumption. Avoided methane
2 credits are a major incentive used to build dairy and food
3 waste digesters. We have seen the capital markets tighten
4 and projects put on hold since the phaseout was first
5 proposed in November of '22.

6 We propose all -- that all projects built by 2035
7 received at least one 10-year crediting extension making
8 them eligible through 2045. This is only five years
9 beyond what's in the SRIA. The SRIA supports the State's
10 2045 carbon neutrality goals and would accelerate digester
11 deployments today. Also, the removal of book and claim
12 functionality for RNG will alienate projects outside of
13 California and may lead to stranded assets. There are
14 only a handful of pipelines providing natural gas in the
15 state, all of which are oversubscribed. CARB should
16 commission a study to look at this issue and the existing
17 pipeline system.

18 Finally, a false narrative has been floated to
19 the Board that three diesel trucks one natural gas truck
20 using dairy RNG generated more -- generates credit than
21 four electric trucks. This is false and a
22 misrepresentation of how the Low Carbon Fuel Standard
23 works. Four EV trucks generate significantly more credits
24 than one dairy RNG truck regardless of whether the
25 electricity is from the grid, solar, wind, or dairy. It's

1 important to note that over 10 percent of EV usage in '22
2 in California received its energy from dairy digesters.

3 I ask that CARB continue to be ambitious with the
4 compliance target setting to extend the phaseout period of
5 avoided methane credits and to not eliminate book and
6 claim functionality for RNG to CNG. All eyes are on
7 California and what we do with these amendments will have
8 an impact on the market and other LCFS states.

9 Thank you for consideration of these comments.

10 BOARD CLERK GARCIA: Thank you.

11 Kimberly McCoy I have activated your microphone.
12 Please unmute and begin.

13 KIMBERLY MCCOY: Good afternoon, Chair Randolph
14 and the Board members. My name is Kimberly McCoy. I am a
15 Climate and Environmental Policy Associate with Central
16 California Asthma Collaborative.

17 The CARB Board should direct staff to incorporate
18 the policy changes identified in the first resolution
19 adopted by the permanent Environmental Justice Advisory
20 Committee. The EJAC carefully considered the issues and
21 invested its time, expertise, and energy to provide
22 thoughtful recommendations to address their environmental
23 injustice inflicted by the LCFS.

24 Staff appear more concerned with protecting
25 profits for producers of and investors in factory farm gas

1 than achieving actual and substantial environmental
2 benefits through the LCFS. Our flagship climate and
3 transportation programs should be solely focused on
4 improving air quality, greenhouse reductions, and
5 environmental justice. Ensuring a return on investment
6 and protecting lavish subsidies is not and should not be
7 part of CARB's mission. Unfortunately, it seems to be in
8 this program.

9 Prioritizing environmental justice, as CARB has
10 complained, it does actually mean far more than giving
11 EJAC leaders a seat at the EJAC table while ignoring their
12 well-founded recommendations. As it stands, EJAC
13 communities are at the table at the EJAC and here today,
14 but we are still on the menu. The CARB Board must provide
15 leadership and direct staff to incorporate the EJAC's
16 resolution into the proposed regulations, otherwise the
17 LCFS will sacrifice environmental justice communities for
18 factory farm gas and hydrogen production.

19 Thank you.

20 BOARD CLERK GARCIA: Thank you.

21 Let's see, next -- sorry. Next, we will hear
22 from Jan Warren. Jan, I have activated your microphone.
23 Please unmute and begin.

24 Okay. Let's go to Kristin Olsen. Kristin, I've
25 activated your microphone. Please unmute and begin.

1 KRISTIN OLSEN-CATE: Thank you. Good evening.
2 This is Kristin Olsen from California Strategies here
3 today on behalf of Monarch Bioenergy. Thank you for your
4 service and for listening to all of us today. Monarch
5 Bioenergy operates and develops renewable natural gas
6 facilities throughout the country and has participated in
7 CARB's LCFS Program for many years.

8 We applaud CARB for developing such an innovative
9 program that significantly reduces methane emissions while
10 making fuels and our air cleaner. For over a decade,
11 Monarch and its team have created numerous jobs and
12 deployed significant capital building and maintaining our
13 RNG projects, projects that simply would not be viable
14 without the strong and continued support of the LCFS
15 Program. Monarch Bioenergy supports CARB staff proposals
16 to increase the CI target to 30 percent by 2030.

17 We also join other groups encouraging
18 consideration of an even more aggressive target such as 40
19 percent, which will only accelerate progress. We
20 understand, appreciate, and support CARB's goal of
21 increasing program efficiency and helping protect the most
22 vulnerable communities in California. We share those
23 values and work hard to contribute to a better tomorrow in
24 the communities in which we operate. We urge CARB to
25 continue to support Monarch and the others via a durable

1 and stable LCFS credit market, recognizing the significant
2 methane releases that we abate across the United States,
3 and to allow our projects to continually participate in
4 the LCFS Program regardless of location throughout the
5 country.

6 Thank you again for your time and support of our
7 efforts at Monarch.

8 BOARD CLERK GARCIA: Thank you.

9 Next, we will hear from Akashdeep Singh, Jan
10 Warren, Kathryn Kuchta, Hannah Huffines, Kyle Heiskala,
11 and the Original Dra

12 So Akashdeep, I have activated your microphone,
13 please unmute and begin.

14 AKASHDEEP SINGH: Good afternoon, Chair and
15 members. My name is Akashdeep Singh and I am speaking on
16 behalf of the Union of Concerned Scientists. We have been
17 a long-time supporter of the LCFS and have been involved
18 in its implementation for more than 15 years. This
19 provides vital support for transportation electrification
20 which will be key to achieving CARB's other critical
21 regulations.

22 However, we are here today in solidarity with
23 many of the environmental and environmental justice
24 organizations you've heard from today to urge CARB to
25 modernize the LCFS to ensure equity meets the needs of

1 Californians and supports the attainment of air quality
2 standards.

3 First, the drop in credit prices that
4 precipitated this process came from a glut of renewable
5 diesel credits. CARB must place a hard cap on the share
6 of compliance from liquid-based biofuels to the LCFS
7 imbalance. The current proposal to simply increase
8 stringency and would result in worse economic consequences
9 with fewer environmental benefits.

10 Further, avoided methane credits for dairies must
11 be phased down more quickly than staff is proposing. CARB
12 should instead seek to regulate methane emissions from
13 dairy as soon as they are legally allowed to do so next
14 year. California must continue steadfastly moving away
15 from combustion in the transportation sector. The LCFS
16 can play a key role in this transition, but if there are
17 not -- if there are not significant changes to the current
18 proposal, the LCFS would not live up to their promise and
19 could even be counterproductive.

20 Thank you so much for your time.

21 BOARD CLERK GARCIA: Thank you.

22 January Warren, I have activated your microphone.
23 Please unmute and begin.

24 JAN WARREN: Got it. Thank you very much.

25 Jan Warren from Walnut Creek. I want to support

1 the EJAC recommendations. Equity is living in a community
2 with clean air and water with access to a living wage job,
3 healthy affordable food, health care, and a place to call
4 home. There needs to be healthy investments in impacted
5 communities. Enough of the fossil fuel investments there.

6 Transition -- let's see I want to thank Board
7 Member Takvorian for her comment about the length of time
8 needed to send signals to industry. Economic dependence
9 is a reality. Ethanol started being added to gasoline in
10 the 1920s and 30s, continued through World War II and is
11 still with us. Ten percent of our gasoline has ethanol
12 and was added during the 1970s oil embargo. Ethanol is a
13 domestically produced alternative fuel commonly made from
14 corn. And overall, 94 percent of ethanol in the U.S. is
15 produced from corn.

16 There's an ethanol plant at the Port of Stockton
17 and a project wants to use that ethanol to inject CO2 into
18 a river formation and transport it via barge down the
19 Stockton deep water channel. There needs to be guardrails
20 on crop-based fuels.

21 Economic dependence is a reality even when the
22 original intention was just to get new industry off the
23 ground. No one wants to give up market share and most
24 businesses want to continue to grow. I appreciate that
25 the biodigester folks have been successful at reducing

1 methane from dairy cows and we know the health impacts
2 that others are experiencing.

3 I'm hearing today from people who want to
4 increase any excess product for new markets, so they want
5 to generate more and more in export, excess, whether
6 that's biogas, or fossil fuel, or ethanol, or someone
7 else. There's a limit. Business likes creativity and
8 certainty. Does anyone remember the term "bridge fuel"?
9 We need to step down and let's remember spoiler alert,
10 fossil fuel industry wants to drag out the transition to
11 clean energy as long as they can.

12 Thank you.

13 BOARD CLERK GARCIA: Thank you. Kathryn, I have
14 activated your microphone. Please unmute and you can
15 begin.

16 KATHRYN KUCHTA: Can you hear me?

17 BOARD CLERK GARCIA: Yes, we can.

18 KATHRYN KUCHTA: Hi. My name is Kathryn Kuchta.
19 I work at Skyview Dairy where I'm a fourth generation
20 dairy farmer in Bakersfield, California, Kern County. I
21 just had my son. He's five months old, so he would maybe
22 hopefully be our fifth generation.

23 I work on the dairy every day. I used to, but
24 now I'm slowing getting back. And we got our digester
25 implemented in 2021. And it has greatly helped our air

1 and just our whole facility in general. It's made
2 everything much cleaner. I often run on the dairy. I
3 marathon train and I ran when I was pregnant. And I was
4 thankful when ever I say it inflated knowing that it's
5 doing its job. CalBio and the whole program with LCFS
6 we're thankful for their work in implementing that.

7 We also work with Starbucks and have a
8 partnership with them to continue sustainability actions.
9 They're very impressed with the digester. They love it.
10 And we did a video with them too. And they do CO2 reports
11 and they tell us where we can improve on. So the digester
12 really helps and we're like very low for our standard. So
13 now, we're working on getting those other things done, so
14 we can get to that zero number. We also have solar on our
15 farm and we do water conservation, and we're working to
16 help the endangered species as well. So just trying to
17 help in any way we can to keep doing the efforts for
18 sustainability that CalBio and all of them have helped to
19 implement and start. Thank you.

20 BOARD CLERK GARCIA: Thank you.

21 Hannah, I have activated your microphone. Please
22 unmute and begin.

23 HANNAH HUFFINES: Hi, CARB staff and everyone
24 attending. My name is Hannah Huffines. I'm the
25 Environmental Commodities Manager at Maas Energy Works.

1 Maas Energy is a California-based developer owner and
2 operator of dairy digesters. When the California Air
3 Resources Board first developed the Low Carbon Fuel
4 Standard to accomplish greenhouse gas reduction goals, our
5 company was formed in response to the program's objectives
6 for methane reduction by dairy digesters. Since then,
7 Maas Energy has developed over 60 dairy digesters, most of
8 them California based, and employed over 120 hard working
9 individuals invested in working with dairy farm owners to
10 build digester projects that capture methane emissions and
11 deliver fuel to the California transportation sector.

12 We're able to do this because CARB leadership has
13 established incentives and a price for low carbon
14 intensity credits, which we are incredibly grateful for.
15 It's allowed us to build an entire company and dedicate
16 years to the State's carbon neutral goals.

17 I'm here today because some of CARB's proposals,
18 including removing incentives for dairy digesters. Dairy
19 digesters will no longer be able to now claim a methane
20 reduction benefit, even if dairy digesters are indeed
21 capturing methane and creating a carbon negative operation
22 where there otherwise wouldn't have been one.

23 If our entire industry exists because of this
24 incentive, if taken away, we have no feasible method for
25 building new digesters. It's simply too extensive. We

1 cannot support new growth without with methane reduction
2 benefit. So we're very much concerned and encourage the
3 Air Board to reconsider incentivizing our industry to take
4 risks and invest in digesters.

5 These projects take years to build, then a couple
6 more years to generate revenue, and then a larger even few
7 more years to see payback. Ten years of avoided methane
8 benefit at minimum. And really anything short of 20 years
9 is barely scratching the surface of giving the industry
10 enough confidence to continue investments. We really
11 enjoy the work that we do.

12 BOARD CLERK GARCIA: Thank you.

13 Kyle, I have activated your microphone. Please
14 unmute and begin.

15 KYLE HEISKALA: Good evening, CARB Board. My
16 name is Kyle Heiskala. I'm the Policy Co-Director with
17 Environmental Health Coalition in the San Diego-Tijuana
18 region.

19 I'm here in support of the EJAC resolution and
20 speaking in solidarity with the requests being made by EJ
21 communities living across California. Please end the
22 avoided methane crediting, cap lipid-based biofuels, and
23 direct staff to start a rulemaking for direct methane
24 regulation. While we don't have dairies impacting
25 residents in San Diego's portside communities, our members

1 have had a small taste of what it's like being next to a
2 biofuel facility.

3 The noxious odors that were being generated from
4 a biodiesel processing facility across the street from
5 senior apartments where community elders were living were
6 unbearable. They couldn't open their windows without
7 noxious odors watering their eyes, and causing respiratory
8 issues. Their quality of life was devastated by being
9 near this facility and I've stood across the street and
10 have my own eyes water with the fumes.

11 While our local experiences our not a cow farm or
12 a dairy, I can't imagine the impacts of living next to
13 a -- an entire factory farm. When thinking about the
14 future and a climate safe economy, we must transition to
15 avoid climate disaster. It looks all electric in my
16 dreams. Biofuels cannot be our long-term solution.

17 To reiterate, please make the requested changes
18 from the EJAC before the LCFS returns to the Board to end
19 methane crediting, the cap -- to cap unrestricted use of
20 lipid-based biofuels, and to begin the rulemaking process
21 for direct regulation of livestock emissions beginning in
22 2024.

23 Thank you.

24 BOARD CLERK GARCIA: Thank you.

25 And lastly, we'll hear from The Original Dra.

1 Can you please state your name for the record.

2 THE ORIGINAL DRA: The Original Dra. Sure.

3 Yeah, and I just -- I'm so worried about the
4 climate. I don't understand why people aren't taking this
5 seriously. You know, I've been capturing my own carbon
6 myself and I feel like that's something that people need
7 to do, because we emit emissions. Also my animals do. I
8 was thinking about like killing them, but then I thought
9 no they're really useful for this, because I've been able
10 to gas my car with my own methane. I just have this tube
11 that I stick into my butt and then it goes into the tank.
12 And it's been really sustainable and good. And it's like
13 why isn't everybody else willing to do what it takes to,
14 you know, lower these emissions, because we have a climate
15 crisis and our earth is dying.

16 And like, you know, we have a water crisis as
17 well. I've been, you know, saving my own sewage and like
18 giving it back to myself, because that's sustainable. So
19 I feel like we need to be, you know, incentivizing people
20 to do these same things, because it's so important. Like,
21 we have a major threat on our hands and if people aren't
22 willing to go the extra mile to do what it takes to make
23 sure that they're not emitting, you know, emission as
24 well, then, you know, we're going to get anywhere. And so
25 it's really important that people take this upon their

1 shoulders and do everything in their power to make sure
2 that they're not emitting stuff.

3 And, you know, at the same time, it's like people
4 breathe different amounts of air. So I'm just wondering
5 like -- I feel like someone else could be breathing more
6 than me and that's not equitable. And I don't want them
7 taking all my fresh air. So I don't know if we need some
8 kind of bubble around us or something, but it's really not
9 equitable the way that the air is, you know, being able to
10 be breathed in by certain people.

11 And I think that, you know, like I said, people
12 aren't taking this serious enough to do whatever it takes,
13 you know, even if it's like, you know, whatever it needs
14 to be. So once people start taking it seriously, then I
15 think that we can really reduce the greenhouse gases and,
16 you know, that takes people, you know, capturing their own
17 carbon and whatnot.

18 So people need to get on that. This is
19 ridiculous. It's about time that we do something instead
20 of just telling other people what to do.

21 BOARD CLERK GARCIA: Thank you. And that
22 concludes the Zoom commenters that raised their hand
23 before the sign-ups closed.

24 CHAIR RANDOLPH: All right. Thank you.

25 Do Board members have any additional questions or

1 comments on this item?

2 Mr. De La Torre.

3 BOARD MEMBER DE LA TORRE: Thank you. I didn't
4 speaker earlier, because I wanted to wait till this, to
5 have -- hear everybody and it's what I wanted to highlight
6 for staff. These aren't questions. These are just the
7 things that I see that I would like to see as we're all
8 thinking over the next couple of months on this proposal.

9 This is my third version, third iteration with
10 LCFS. I was here for the first one and then the second
11 one. Here we are on the third one. And I want to start
12 by saying when we -- and I've said this to lots of folks.
13 When we started this, we weren't really sure, because it
14 hadn't been done anywhere. We weren't really sure -- you
15 know, we used obviously the best minds that we have on
16 this team. And I always talk about how our science is
17 going to kick your science's ass. So it did. It worked
18 out really well.

19 The initial iteration of this really worked out
20 well. I mean, I think we got a little greedy. We thought
21 it was working so well. Let's do this, and do this, and
22 do this. And then, you know, what's ended up happening is
23 the credits aren't worth as much, and not doing all of the
24 wonderful things that we would like it to do. And so for
25 the last several months, I've been telling people we're

1 going to trim this program, period, and some people are
2 going to up unhappy about that. We're not here to make
3 sure that people business plans succeed. We are here to
4 put the best program together that has strong credits,
5 that can do again the priority work for this agency. And
6 so I'm very focused on that. So that's my preface.

7 Here are a handful of things. The CI for avoided
8 methane, I would like to see that tightened up. I
9 understand the logic of why we do what we do, but I still
10 think it is too generous, so -- in comparison to
11 everything else. So when I saw that chart, that staff
12 presented that has most of them being above the line and
13 then there's a couple that are below the line and -- that
14 gives me heartburn. And so I think we've -- we should
15 look at what -- how we're scoring. And I understand we're
16 tied to other standards elsewhere. But, you know, we made
17 this up -- this program up, many, many years ago. We can
18 make adjustments that are rational, that are again based
19 in science, and based on our judgment of what we are
20 looking to do.

21 Two, non-fossil hydrogen. I want to make clear
22 that -- and I don't use the color system. I hate it that
23 we have a CI for hydrogen, and we're going to get that
24 from the Feds this fall I understand, but that we overlay
25 that -- and this is my personal view, we overlay that with

1 non-fossil fuel. So low CI plus not fossil fuel based,
2 that's California's green hydrogen, to address some of the
3 concerns that we heard today. Throughout the day, a lot
4 of folks were very worried of hydrogen being a Trojan
5 Horse, and I am as well. So I think we need to do
6 everything we can to drive in that direction moving
7 forward.

8 Tropical force biofuels, tropical forest based
9 biofuels is another concern of mine. And I think we all
10 should be very concerned and make sure that this LCFS
11 program does not directly or indirectly, or in any way,
12 shape, or form incentivize those activities in tropical
13 forests, because that would really be cutting off our
14 noses to spite our face.

15 The holdback provision for utilities, I think
16 there should be two things with it. One, narrow the
17 vehicle incentives to just low income, folks. Make them
18 worth something for the people who need it. When we saw
19 that, because there's so many people buying electric
20 vehicles and the credit that's available is minor, there's
21 hardly any money in it, et cetera. But if we focus that
22 on low-income folks buying used -- in most cases, used
23 EVs, that could really like get us something on the
24 vehicle side.

25 And then, of course, infrastructure -- charging

1 infrastructure. For those multi-family, the places where
2 low-income folks could benefit from it on the charging
3 side, and then medium- and heavy-duty trucks,
4 high-capacity charging for them. So those are two
5 categories that I would say, vehicles just for low-income
6 and charging infrastructure, and fueling infrastructure.
7 I'm assuming -- I didn't even talk about hydrogen fueling
8 like we did last time. I assume that's still potentially
9 part of this, but fueling and charging for medium- and
10 heavy-duty. I think narrowing it down like that, we get a
11 bigger bang for our buck.

12 Zero-emission transit. Allowing -- I'm not sure
13 if it's in the holdback provision or if it's just in the
14 regular credits to support where our transit buses that we
15 have -- we have mandated in order to give those transit
16 districts a little left. They've had some difficulties.
17 It was well publicized during the budget process. And so
18 we're asking them to make this transition, we should
19 support it as well that giving them these credits for
20 going the right thing.

21 And then finally jet fuel. Jet fuel is
22 essentially diesel. And I have said many times here that
23 diesel is the worst thing we've got going in California.
24 It's particularly in underserved communities like the one
25 I live in. It's over 70 percent of the carcinogenic

1 effect on air pollution. And that's just diesel. I don't
2 know what the percentage is for jet fuel, but you would
3 add on top of that. So I think we should find the right
4 way - and we've got these great minds. We've got great
5 lawyers - to put together some way to bring jet fuels into
6 the mix here and then incentivize that as well.

7 So those are my points. Thank you, Madam Chair.
8 And I'm sure we've got a few more months. I know we have
9 a few more months to flesh all of this out, but I wanted
10 to put those markers down. Thank you.

11 CHAIR RANDOLPH: Thank you.

12 Board Member Kracov.

13 BOARD MEMBER KRACOV: Hi. Thank you, Chair, and
14 sorry I couldn't be with all of you today. I want to
15 welcome our new Board Member Cliff Rechtschaffen if he's
16 listening. I look forward to learning from him, and
17 working with him, and he has, as our Chair does, this
18 terrific background from the Public Utilities Commission,
19 this really important intersection with infrastructure.
20 And we have so much work to do in that area, so it's great
21 that Cliff is joining us.

22 I'd like to thank staff, Rajinder Sahota, for all
23 the time and education that she graciously provided me on
24 this one. Matt Botill for of the work particularly that
25 he's done with the EJAC, our Environmental Justice

1 Advisory Committee. Cheryl, Dillon, the whole team. We
2 saw from the slides how enormously impactful this program
3 has been, what a market mover it has been, and that it's a
4 key part, you know, maybe even perhaps the center piece of
5 our climate policy.

6 I want to thank all the stakeholders, especially
7 the EJAC, and its leadership. I attended several meetings
8 throughout the summer and learned a lot from that process,
9 and their recommendations. If I can, I'll take a few
10 moments here, Chair. It's been important for me to sort
11 of construct a framework, sort of two lenses, over which
12 I'm viewing this program.

13 The first lens is that the program should align
14 as close as possible with CARB's work to implement our
15 State's climate laws and regulatory activities, and the
16 projections that result from all of that in our recently
17 passed Scoping Plan that we should lineup as closely as
18 possible with our world-leading petroleum demand-side
19 reduction efforts. ACF, Clean Cars II, Innovative Clean
20 Fleets for the transit buses. So I strongly the SRIA
21 proposal as does EJAC that LCFS give as much credit as
22 possible for zero-emissions vehicles and fast charging
23 infrastructure, heavy- and medium-duty transit buses,
24 multi-family. You know, that's what allows us to get
25 across the bridge to the zero emissions promise land that

1 we imagine.

2 We need help big time from LCFS on
3 infrastructure. I also want to align my views on the
4 utility holdback with what Board Member De La Torre just
5 expressed. Also, LCFS must align with SB 1383 methane
6 reduction and regulation for landfills, methane gas
7 delivery, digesters from dairies. We're supposed to be
8 reducing organic waste disposal in-state by 75 percent in
9 2025. And we are way behind on that goal.

10 So let's strongly support the changes to the
11 biomethane book and claim deliverability requirements
12 proposed in the SRIA. If California consumers are going
13 to pay for LCFS, it should be for fuels that are
14 physically consumed and delivered in California pipelines.
15 We need to support California's SB 1383 organics projects,
16 with LCFS credits to meet California's goals. This
17 requires investments in jobs in California.

18 And I believe these changes to the delivery
19 requirements that are proposed should take effect
20 immediately for all new projects, all the new crediting
21 pathways.

22 Also, LCFS should tightly adhere to our Scoping
23 Plan fuel mix projections in transportation through 2040.
24 These next 15 to 17 years there will still be internal
25 combustion trucks running on diesel. There still will be

1 hard-to-decarbonize sectors. These are the sectors where
2 we need the cleaner bridge fuels like biogas and biofuels.
3 These are the sectors where LCFS has been very successful,
4 because the alternative -- the unacceptable alternative is
5 another two decades of dirty diesel. So I strongly
6 support, as does EJAC, the proposal, for example, in the
7 SRIA to add intrastate jet and marine fuel deficits to the
8 program. But let's be aware that this means more SAF,
9 more sustainable aviation fuel, more alternative fuels,
10 refined in our communities, more use of the biofuels
11 supported by LCFS. I mean, that's the reality. We can't
12 have it both ways.

13 So just one example. I'm zooming in today from
14 Copenhagen, Denmark, where we just visited MAN, which is
15 by far the largest ship engine manufacturer in the world,
16 80 percent market share. It's working on methanol,
17 zero-emission ammonia fuel. But widespread use of these
18 fuels, especially like deep sea containers -- tankers is
19 decades away. We just heard that. It's the fact. We
20 must face these facts as policymakers. That is why LCFS
21 is still needed. And for those that are producing these
22 bridge fuels, industry, who is closely watching our
23 actions today, and when this comes back to us for a vote
24 next year, they need a return on investment. They need
25 regulatory certainty to be able to amortize the costs. We

1 get it.

2 But there's also a second lens. The LCFS subsidy
3 for these same bridge fuels has to end. The SRIA
4 therefore proposes to end the avoided methane credit in
5 2040, because the Scoping Plan projects we no longer will
6 have a major need or a role for renewable natural gas in
7 transportation. Now, how that is worded must be
8 scientifically accurate. I heard from RNG coalition about
9 that. And our agency, the PUC, our State must truly
10 support SB 1440 and the pipeline injection of biomethane
11 from wastewater and waste digesters. If remember, Board
12 Member Guerra, the last paragraph on SB 1440 that you
13 negotiated in our Advanced Clean Fleets resolution, we
14 have to do that.

15 You know, that being said, I want to hold the
16 line on the 2040 phaseout proposed in the SRIA by our
17 staff, but frankly, this should be the case for all the
18 bridge fuels. We need to signal this to industry. Yes,
19 you get a fair return from LCFS for biogas and biofuel
20 projects, but that's it. If you want to build or plan to
21 rely on LCFS past 2040 and can't figure something else
22 out, yes, you will strand assets. These are bridge fuels
23 that we do not want in the transportation sector after
24 2040. We decided that, colleagues, when we voted on ACF.
25 And that is what our Scoping Plan projects.

1 Otherwise, we subsidize -- LCFS subsidizes the
2 very things we're trying to prevent, longer use of ICE
3 engines, more bigger CAFO manure ponds, and slower
4 progress on decarbonizing off-road. And when we do that,
5 we negatively impact other non-climate, but equally
6 important State policies, like criteria pollutant
7 detainment, ammonia in the Central Valley, air toxics, and
8 public health impacts at fence-line communities in South
9 Coast air basin. Pay to gasify plastics in our waste
10 stream, because the purported Carbon intensity benefits,
11 when the last thing we want to do is encourage more
12 plastic use.

13 So that's the fundamental fear that I heard
14 voiced by EJAC. The LCFS can subsidize bridge
15 infrastructure that's going to be very hard to dismantle.
16 And Board Member Takvorian touched on this earlier, but we
17 get that too.

18 So with these lenses, I see a few other of the
19 EJAC recommendations as presented during our last Board
20 meeting. Recommendation 3 on dairy methane, we regulate
21 every major source of methane and GHG emissions. We have
22 a rule for landfill control, so does CalRecycle for
23 organics. We have a rule for methane and gas delivery,
24 expensive Cap-and-Trade for our largest GHG stationary
25 sources, mobile sources of all shapes and sizes,

1 regulations for harbor craft, for truckers, for small the
2 rail lines, but not the dairies. Instead, consumers pay
3 them.

4 Now, I visited with the dairymen who were
5 extremely persuasive about the need for digesters and
6 methane capture the way that they do it. Yes. But this
7 is about LCFS and this exceptionalism seriously distorts
8 our LCFS CI crediting. SB 1383 itself explicitly says
9 this sector can be regulated in 2024. That's in three
10 months. That was the deal. CARB's recent dairy and
11 livestock report identifies significant evidence gaps
12 about how well the program actually works and concludes
13 that quote, "Our record keeping and reporting regulation
14 developed pursuant to SB 1383 could provide a mechanism to
15 obtain the necessary data," end quote.

16 I would support this and a Board Resolution
17 indicating that we will initiate in 2024 rulemaking for
18 this sector. And that also should include enteric
19 emissions.

20 The large customers of the dairies, consumer
21 product companies understand this. It's inevitable that
22 they're going to have to report and mitigation their Scope
23 3 GHG emissions. I'm in the European Union today. Here,
24 they have a carbon tax, the ETS. It goes into effect next
25 year. Industry accepts it and I'm seeing how they're

1 adapting, investing. And many of these same big firms
2 also do business in our state.

3 Recommendation 5 on lipids and the impacts that
4 biofuels like soybean oil can have on land use. There's
5 significant expansion of hydrotreated fuel production in
6 North America, four to six billion gallons of annual
7 capacity is expected. I've seen the analysis from UC
8 Davis experts on this, Dr. Wara, and agree that we must
9 address it with guardrails and commitments to additional
10 study.

11 EJAC Recommendation 6, and I'll finish soon,
12 preventing out-of-state enhanced oil recovery as an
13 eligible sequestration method. I believe we should
14 address this.

15 So to conclude, there are these two lenses on my
16 LCFS glasses. The program is very successful and can be
17 enhanced to specially target zero-emission infrastructure
18 and transition. For biofuels and biomethane, LCFS also
19 can be a much needed bridge until 2040. These are cleaner
20 than diesel and there has to be an appropriate return on
21 investment. But we also need to signal to industry that
22 the credit and subsidy has to end. Otherwise, I do
23 believe we imperil our zero-emission future.

24 We should use both these lenses, Chair, Board
25 colleagues to carefully examine the language of the rule

1 and resolution when it comes to us next year. In the mean
2 time, I hope that these comments have helped provide
3 direction to staff as requested for this Board meeting
4 today.

5 Thank you.

6 CHAIR RANDOLPH: All right. Thank You.

7 Board Member Hurt.

8 BOARD MEMBER HURT: I'll be pretty quick my
9 comments. I'll think I'll align mine with Board Member
10 Kracov and De La Torre, much of what they said is what I'm
11 interested in seeing more of, and staff tailoring LCFS to
12 meet some of these goals. I'll start with hydrogen and
13 ask all my questions around that as I think there's a lot
14 of confusion on whether we're going to take folks down the
15 wrong path when it comes to hydrogen being the fossil fuel
16 portion is the clean, green, whatever you want to call it,
17 I want to make sure that we closely look at that and
18 handle that appropriately.

19 I also hope we can maximize what we can under our
20 authority to affect aviation jet fuel through those
21 programs and we can begin effectively to move the nation
22 in a conversation in that area. And to add that we're
23 looking at it as a generator. I'm just wondering what
24 more we can manage in that conversation too. We have
25 others to look at this as an important area.

1 The dairy digesters are a small portion of the
2 LCFS. It definitely has a large impact on communities
3 struggling with their clean air in communities of color.
4 But for digesters though, what would the impact be? Would
5 it be less? Some say yes, some say no. But are there
6 other reliable alternatives to deal with this that we
7 should be incentivizing more, and how do we ensure that
8 we're not incentivizing and subsidizing manure to be more
9 valuable than milk?

10 Like this is what I'm thinking about that we must
11 make sure that we're not doing. And I believe the goal of
12 a closed loop sustainability system makes good sense when
13 we're dealing with waste, but I never want us to get to, I
14 think the saying is, the tail wagging the dog. We don't
15 want to get there with dairy digesters.

16 But as a role, when I -- I get a little bit
17 worried when I hear a hundred more is necessary and I've
18 heard even bigger numbers. I just want to make sure that
19 it's narrowly tailored. That it's locally used in this
20 closed system idea.

21 Feedstocks, crop-based, is it a cap or do we
22 greatly increase the ILUC values or the CI? That's
23 something I'd like to hear more from staff on. There are
24 concerns when it comes to crop-based and also tropical as
25 well. And I think those are the ones that are really

1 important to me to learn and understand more about. I
2 would say, I've said it before, about the utilities hold
3 back, that public transit is extremely important to me,
4 how we can incentivize and help our public transit for
5 those folks who will maybe not even get to use EVs, that
6 they are traveling in zero-emission transport publicly.

7 And I will end there.

8 Oh, actually I do have a question. For those
9 refineries that place in the crediting, if they have
10 extensive NOVs, are they eligible to bank on or receive
11 credits for sustainable fuels or better numbers? I hope
12 I'm articulating it. I'm probably not doing it quite
13 well, but there's a concern that some refineries -- I know
14 they have to participate in LCFs, but if they have
15 extensive NOVs, like how do they --

16 DEPUTY EXECUTIVE OFFICER SAHOTA: For anyone that
17 wants to generate credits in the program, they have to be
18 in compliance with all federal, State, and local
19 regulations.

20 BOARD MEMBER HURT: Okay. That is all for me.
21 Thank you, Chair.

22 CHAIR RANDOLPH: All right. Dr. Pacheco-Werner.

23 BOARD MEMBER PACHECO-WERNER: Thank you, Chair.
24 I just want to thank everyone on their comments, both in
25 person an online. And I know many of you traveled very

1 far to give testimony. And I just want to say I
2 appreciated each and every one of you. And, you know,
3 speaking from the valley, I definitely see, you know, both
4 of those worlds that were highlighted today. And I think,
5 you know, there is a -- there is room to say that, you
6 know, ag industry, you know, continues to meet the call
7 whenever we challenge them on reductions and there are
8 many challenges that remain that continue to affect
9 communities today that we can't leave on the table.

10 I definitely agree with a lot of what Board
11 Member Kracov stated and I do want to specifically call
12 out the inclusion of the intrastate jet fuel. And I'm
13 glad that we're moving forward on that piece.

14 I also, in terms of the feedstock piece, you
15 know, I think we heard a lot today about different types
16 of feedstock. And so that idea that, you know, not all
17 feedstock is the same and how do we think through the
18 different types of -- effects of the different types of
19 feedstock, and, you know, credit them appropriately I
20 think is a -- is a direction that I would like to see
21 staff go through as well, and not just -- not as a way to
22 punish other feedstock, but as a way to continue to
23 challenge that industry as a well, to continue to build
24 more and more sustainable practices in their operations,
25 as part of meeting all of our climate goals.

1 Lastly, I think it's important to think about
2 all -- everyone here, you know, is a partner. And I think
3 that -- I really want all of us to think about, you know,
4 in our -- in our meetings the challenge to save the
5 planet, in 2045, that we look back and we are truly -- we
6 can say we are proud of what we did and that no community
7 was sacrificed to make this happen. And I think if we use
8 that as our Northstar, we can come up with really good
9 solutions that continue to both see our industries as
10 partners, but also challenge them to build on their most
11 innovative practices that yield the most public health
12 benefit, because in the end, that's what this is really
13 about.

14 Thank you.

15 CHAIR RANDOLPH: Dr. Shaheen.

16 BOARD MEMBER SHAHEEN: Thank you. So I just
17 wanted to wrap by thanking everyone for all their hard
18 work and energy today. We've had a long day and I feel
19 like I understand a lot more than I did going into the
20 hearing. I think we've got a lot of work to do and I'm
21 not going to revisit a lot of the questions and the
22 priorities that I raised earlier. I want to work with
23 everyone to reach common ground and bring about clean air
24 and address climate change, but also to think about the
25 markets and the effects, and in particular the underserved

1 communities. So I just wanted to conclude by saying I'm
2 looking forward to working with everyone on this, all the
3 stakeholders, and staff, and my fellow Board members, and,
4 of course, the Chair.

5 CHAIR RANDOLPH: All right. Thank you.

6 I will just make a few comments. First of all, I
7 want to thank staff for the extensive staff report. It
8 was -- it was lengthy, but it was really important to
9 understand the science behind all the analysis that you
10 all do and why questions like just simply saying, oh,
11 we're going to reduce the CI score for avoided methane is
12 not as simply as it may seem on the surface, right,
13 because we're trying to have a -- sort of a program that
14 is based on a consistent way of analyzing. So I really
15 appreciated that analysis.

16 Between now and sort of when the staff proposal
17 comes out and as we're gathering public comments, some of
18 the things I'm going to be thinking about are some of the
19 conversations about how to help the program support
20 zero-emission infrastructure some more. We've gotten a
21 lot of questions. There were some comments about, well,
22 how much are we going to be crediting that infrastructure?
23 Are we going to be changing that crediting over time? So
24 I want to explore that a little bit more and understand
25 what the pros and cons are of some of the concepts that

1 were workshopped. You know, thinking about what are --
2 what are the most effective ways to help support mass
3 transit, to help support infrastructure for heavy- and
4 medium-duty vehicles.

5 I -- one of my colleagues noted earlier that they
6 didn't feel like we could move forward without -- with our
7 updates to LCFS without fully addressing the question of
8 regulating dairies under 1383. I don't -- I don't agree
9 with that. I think we can move forward with how we want
10 to deal with LCFS. I think we can think about how we want
11 the existing landscape of facilities here in California to
12 be handled. And then we can have a conversation about
13 what is the next logical regulatory step on 1383, because
14 we cannot craft a regulation between now and the of next
15 year when we want to get our LCFS changes done.

16 But there's certainly an opportunity to continue
17 to have public discussion and engagement with staff about
18 what the next logical step is around 1383 and how we
19 approach dairies. You know, when we look at the 1383
20 report and it talks about more digesters, it's really
21 talking about these are the dairies that exist here in the
22 state and how can we capture the methane on the dairies
23 that exist here? They are emitting dairy -- emitting
24 methane as we speak, and what can we do to capture that
25 methane?

1 There is State support for the enteric
2 strategies. \$25 million the Legislature has provided. So
3 as soon as the FDA approves an enteric additive, there
4 will be funding to help deploy that. There, of course, we
5 continue to support alternative manure management
6 programs, but digesters are a piece of that puzzle. And
7 so really it's just a question of how are we
8 incentivizing, or regulating, or both those facilities,
9 because our ultimate goal is to capture the methane.

10 And so as we think about the timeline that was
11 workshopped around 2040, and, you know, obviously there
12 are folks who want a much shorter timeline. But I think
13 there's a lot of really important issues around
14 incentivizing that sort of fast deployment of digesters in
15 that -- in the short term to capture the methane that is
16 being released today, and what is the best way to do that.

17 So that's dairies -- oh, feedstock. Okay. That
18 was the last issue I wanted to cover. I do really want to
19 hear more about potential guardrails, what the potential
20 options are. I'm very mindful of the fact that a lot of
21 the analysis around feedstock is very forward, looking
22 right? If trends go a certain way, a certain thing may
23 happen. So it's not a today problem, but it could
24 potentially be a significant problem, right? So the
25 question is what's the right data to understand the scope

1 of that problem, what are some of the short-term
2 guardrails we should put into place and then how do we
3 think about gathering the right data and understanding
4 the right strategies in the longer term?

5 And so I think we really need to do both of those
6 things. And so I'll be looking for more staff analysis
7 and engagement on that topic, as we think about how to
8 tackle sort of what are things we should do in the short
9 term and how should we be thinking about the long term.

10 I think those were all the key things I wanted to
11 discuss. I really appreciate all the engagement.
12 Shout-out to the SEIU workers from SFO. I will see you
13 all for my 5 a.m. flight tomorrow morning. Appreciate you
14 coming. I agree that talking the jet fuel issue is also a
15 really important piece of this regulatory update. And so
16 looking forward to how that's going to play out as we
17 continue to develop the proposal.

18 So I think that's it for this item. Did staff
19 want to say anything?

20 Okay. I know everybody is really tired, but we
21 do have open public comment.

22 Do we have anyone signed up?

23 BOARD CLERK GARCIA: No, no one signed up. Oh,
24 we just got a hand in Zoom.

25 CHAIR RANDOLPH: Okay. Call them. Let's go.

1 BOARD CLERK GARCIA: Okay. So one commenter the
2 Original Dra. I have activated your microphone. Please
3 unmute and begin.

4 THE ORIGINAL DRA: Yeah. Actually, what's going
5 on is really sad, because everything that you guys are
6 doing is based off of lies. It's not based off of factual
7 information, like fossil fuels aren't from fossils.
8 There's an abundance of oil that comes from the earth just
9 like the water and they want us to make us think it's a
10 scarcity, so that you put people in a fearful, you know,
11 chaotic mode, so that they make irrational decisions and
12 believe whatever you guys tell them. And, you know, we
13 don't ever talk about the fact that you need all of these
14 like fossil fuels in order to get all of your electric
15 energy stuff or whatever.

16 And not only that, there's a bunch of radiation
17 that comes off of these electric charging stations and
18 infrastructure that nobody talks about, let alone -- you
19 know, it comes from our phones. It comes from many
20 avenues, but we never talk about that or the fact that
21 those lithium batteries are literally combustible bombs
22 that you're putting people in and incentivizing people to
23 get in, wanting that to be the only way for people -- one
24 of the only ways for people to get around.

25 But we don't talk about the dangers that it is

1 putting them in inside a Literal bomb that can continue to
2 explode and they emit toxic gases when that happens. But
3 you guys have this agenda, which is coming from the UN.
4 That's the thing that people need to be paying attention
5 to, that this isn't something that isn't coming down the
6 pipe from a global entity that wants to take total
7 control. And so people need to understand that.
8 Everything that you're telling people is a lie, like we
9 don't need to reduce all of these things, because it's not
10 killing the planet. But we don't want to talk about the
11 things that are sprayed from the air or all these other
12 things that are, you know, poisoning the people.

13 But we're sitting here saying that we need to
14 save the planet so it doesn't matter if people die in a
15 lithium bomb or kids, you know, die from mining for
16 lithium and so many other things. So it's very sad that,
17 you know, we sit here and push this in this echo chamber
18 of like repeating the same thing to make people afraid so
19 that you push them into a new way of life. You guys need
20 to think about what you're doing, because it is pure evil
21 and it is not what you should be doing, because it's --

22 BOARD CLERK GARCIA: Thank you.

23 That concludes the open commenters.

24 CHAIR RANDOLPH: All right. Thank you.

25 The Board meeting is adjourned.

(Thereupon the Air Resources Board meeting
adjourned at 6:15 p.m.)

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