

MEETING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

ZOOM PLATFORM

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

FRIDAY, NOVEMBER 18, 2022

8:36 A.M.

JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
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APPEARANCES

BOARD MEMBERS:

Liane Randolph, Chair

Sandra Berg, Vice Chair

John Balmes, MD

Hector De La Torre

John Eisenhut

Senator Dean Florez

Davina Hurt

Gideon Kracov

Tania Pacheco-Werner, PhD

Barbara Riordan

Supervisor Phil Serna

Professor Dan Sperling, PhD

Diane Takvorian

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 and Mobile Source Compliance

APPEARANCES CONTINUED

STAFF:

Edna Murphy, Deputy Executive Officer, Internal Operations

Rajinder Sahota, Deputy Executive Officer, Climate Change and Research

Craig Segall, Deputy Executive Officer, Mobile Sources and Incentives

Ellen Peter, Chief Counsel

Cari Anderson, Branch Chief, Freight Transport Branch, Transportation and Toxics Division (TTD)

Heather Arias, Chief, TTD

Rhead Enion, Senior Attorney, Legal Office

Layla Gonzalez, Staff Air Pollution Specialist, Freight Activity Branch, TTD

Ajay Mangat, Manager, Freight Systems Section, TTD

Cory Parmer, Mobile Source Analysis Branch, Off-Road Diesel Analysis Section, Air Quality Planning and Science Division

ALSO PRESENT:

Yasmine Agelidis, Earthjustice

Tracy Alves, Modesto and Empire Traction Company

Jan Victor Andasan, East Yard Communities for Environmental Justice

Andrew Antwih, Southern California Regional Rail Authority (Metrolink)

Chuck Baker, American Short Line and Regional Railroad Association

Angie Balderas, Sierra Club

APPEARANCES CONTINUED

ALSO PRESENT:

Daniel Barad, Sierra Club California

William Barrett, American Lung Association

Kennan H. Beard, III, Sierra Northern Railway

Steve Birdlebough

Teresa Bui, Pacific Environment

Christopher Chavez, Coalition for Clean Air

Dave Cook, Rail Propulsion Systems

Eddy Cumins, Sonoma Marin Area Rail Transit

Beverly DesChaux, Electric Vehicle Association of
California Central Coast

Oscar Garcia, Neste

Ma Carmen Gonzalez, The People's Collective for
Environmental Justice

Mike Hart, Sierra Railroad

Jason Jewell, LOSSAN Rail Corridor Agency

Yassi Kavezade, Sierra Club My Generation

Lena Kent, Burlington Northern Santa Fe Railway Company

Bianca Lopez, Valley Improvement Projects

Marcos Lopez, East Yard Communities for Environmental
Justice

Benjamin Luna

Ian MacMillan, South Coast Air Quality Management District

Bill Magavern, Coalition for Clean Air

Mark Mollineaux

APPEARANCES CONTINUED

ALSO PRESENT:

Anthony Molina, California Grain and Feed Association

Gem Montes, The Air I Breathe

Charlotte Mourad, The People's Collective for
Environmental Justice

Marven Norman, Center for Community Action and
Environmental Justice

Donald Norton, California Short Line Railroad Association

Graham Noyes, Sierra Northern Railway

Chris Orlando, North County Transit District

Cynthia Pinto-Cabrera, Central Valley Air Quality
Coalition

Adriana Rizzo, Common Ground California

Matt Robinson, California Transit Association

Michael Rush, Association of American Railroads

Devon Ryan, Caltrain

Mark Twain, Locomotive Emissions Watchdogs

Lupe Valdez, Union Pacific Building America

Andrea Vidaurre, The People's Collective for Environmental
Justice

Brian Yanity

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PROCEEDINGS

1
2 CHAIR RANDOLPH: Okay. Good morning, everyone.
3 The November 18th, 2022 public meeting of the California
4 Air Resources Board will come to order. Board Clerk will
5 you please call the roll.

6 BOARD CLERK GARCIA: Yes.

7 Dr. Balmes?

8 BOARD MEMBER BALMES: Here.

9 BOARD CLERK ESTABROOK: Mr. De La Torre?

10 Mr. Eisenhut?

11 BOARD MEMBER EISENHUT: Here.

12 BOARD CLERK GARCIA: Senator Florez?

13 BOARD MEMBER FLOREZ: Florez, here.

14 BOARD CLERK GARCIA: Assemblymember Garcia?

15 Ms. Hurt?

16 BOARD MEMBER HURT: Present.

17 BOARD CLERK GARCIA: Mr. Kracov?

18 BOARD MEMBER KRACOV: Here.

19 BOARD CLERK GARCIA: Senator Leyva?

20 Dr. Pacheco-Werner?

21 BOARD MEMBER PACHECO-WERNER: Here.

22 BOARD CLERK GARCIA: Mrs. Riordan?

23 BOARD MEMBER RIORDAN: Here.

24 BOARD CLERK GARCIA: Supervisor Serna?

25 Professor Sperling?

1 BOARD MEMBER SPERLING: Here.

2 BOARD CLERK GARCIA: Ms. Takvorian?

3 BOARD MEMBER TAKVORIAN: Here.

4 BOARD CLERK GARCIA: Supervisor Vargas?

5 Vice Chair Berg?

6 Vice Chair Berg?

7 VICE CHAIR BERG: Here.

8 BOARD CLERK GARCIA: Chair Randolph?

9 CHAIR RANDOLPH: Here.

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

12 CHAIR RANDOLPH: All right. Thank you.

13 And a particular thanks to the Board members who
14 are under the weather who are joining us remotely. I'd
15 like to begin with a few housekeeping items before we get
16 started. We are conducting today's meeting in person as
17 well as offering remote options for public participation
18 both by phone and in Zoom. Anyone who wishes to testify
19 in person should fill a request to speak card available in
20 the lobby outside the Board room. Please turn it into a
21 Board assistant prior to the commencement of the item. If
22 you are participating remotely, you will raise your hand
23 in Zoom or dial star nine if calling in by phone. The
24 Clerk will provide further details regarding how public
25 participation will work in just a moment.

1 For safety reasons, please note the emergency
2 exit to the rear of the room through the foyer. In the
3 event of a fire alarm, we are required to evacuate this
4 room immediately and go down the stairs to the lobby and
5 out of the building. When the all-clear signal is given,
6 we will return to the auditorium and resume the hearing.

7 A closed captioning feature is available for
8 those of you joining us in Zoom environment. In order to
9 turn on subtitles, please look for a button labeled "CC"
10 at the bottom of the Zoom window, as shown in the example
11 on the screen now.

12 I would like to take this opportunity to remind
13 everyone to speak clearly and from a quiet location
14 whether you are joining us in Zoom or calling in by phone.

15 Interpretation services will be provided today in
16 Spanish. If you are joining us using Zoom, there is a
17 button labeled "Interpretation" on the Zoom screen. Click
18 on that button and select Spanish to hear the meeting in
19 Spanish. If you are joining us here in person and would
20 like to listen to the meeting in Spanish, please notify a
21 Board assistant and they will provide you with further
22 instructions. I want to remind all of our speakers to
23 speak slowly and pause intermittently to allow the
24 interpreters the opportunity to accurately interpret your
25 comments.

1 (Interpreter translated in Spanish).

2 CHAIR RANDOLPH: Thank you.

3 I will now ask the Board clerk to provide more
4 details regarding public participation.

5 BOARD CLERK GARCIA: Thank you.

6 Good morning, everyone. My name is Lindsay
7 Garcia. I'm one of the Board clerks here at CARB. I will
8 be providing additional information on how public
9 participation will be organized for today's meeting. We
10 will first be calling on in-person commenters who have
11 turned in a request to speak card. And then I will be
12 calling on commenters who are joining us remotely in Zoom.
13 If you are joining us remotely and wish to make a verbal
14 comment on today's Board item or during the open comment
15 period at the end of today's meeting, you will need to be
16 using Zoom webinar or calling in by telephone. If you are
17 currently watching the webcast on CAL-SPAN, but you wish
18 to comment remotely, please register for the Zoom webinar
19 or call in. Information for both can be found on the
20 public agenda for today's meeting.

21 To make a verbal comment, we will be using the
22 raise hand feature in Zoom. If you wish to speak on a
23 Board item, please virtually raise your hand as soon as
24 the item has begun to let us know you wish to speak. If
25 you are using a computer or tablet, there is a raise hand

1 button. And if you are calling in on the telephone, you
2 will need to dial star nine to raise your hand. Even if
3 you previously indicated which item you wish to speak on
4 when you registered, you must still raise your hand at the
5 beginning of the item, so that you can be added to the
6 queue.

7 If you will be giving your verbal comment today
8 in Spanish and require an interpreter's assistance, please
9 indicate so at the beginning of your testimony and our
10 translator will assist you. During your comment, please
11 pause after each sentence to allow the interpreter to
12 translate your comment into English.

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

1 to testify on an item.

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

11 If you wish to submit written comments today,
12 please visit CARB's send-us-your-comments page or look at
13 the public agenda on our webpage for links to send these
14 documents electronically. Written comments will be
15 accepted on each item until the Chair closes the record
16 for that Board item. And if you experience any technical
17 difficulties, please call (805)772-2715, so that an IT
18 person can assist. This number is also noted on the
19 public agenda.

20 Thank you. I'll turn it back to Chair Randolph
21 now.

22 CHAIR RANDOLPH: All right. Thank you. The last
23 item on our agenda is Item number 22-15-6, the proposed
24 In-Use Locomotive Regulation. If you are here with us in
25 the room and wish to comment on this item, please fill out

1 a request to speak card as soon as possible and submit it
2 to a Board assistant. If you are joining us remotely and
3 wish to comment on this item, please click the raise
4 button or dial star nine now. We will call on both
5 in-person and remote commenters when we get to the public
6 comment portion of this item.

7 This is the first of two planned Board hearings
8 on this proposal. While the Board will not be voting on
9 the final proposal today, we can provide direction to
10 staff.

11 Meeting all of California's public health air
12 quality and climate goals requires significant emissions
13 reductions beyond those achieved by our current programs.
14 So we know we need to do more. California is a gateway
15 for the nation's freight. As freight volumes continue to
16 increase, it is critical that all vehicles and equipment
17 moving that freight transition to zero-emission operation
18 to protect the health of all Californians.

19 Just last month, our Board heard the Advanced
20 Clean Fleets Regulation, which will lead to zero-emission
21 truck operation in California. The proposed rule we will
22 hear today will ensure that locomotive operations are not
23 left behind. The rule requires locomotive operators to
24 set aside funds for cleaner locomotive technology and
25 imposing -- imposes increasingly stringent operating

1 requirements on locomotives in California.

2 Because rail is also a critically important mode
3 for moving people in California, passenger rail is
4 included in the proposed rule. Community residents living
5 near facilities where locomotives operate are
6 disproportionately exposed to emissions from diesel
7 powered locomotives and experience related negative
8 healthy impacts. Over 60 percent of all California
9 railyards are in areas that have been designated by CalEPA
10 as disadvantaged communities. And almost all AB 617
11 community emission reduction programs to date have
12 identified air pollution from locomotives as a concern in
13 their communities.

14 Zero-emission locomotive operations is the only
15 way to eliminate exhaust pollution in communities heavily
16 impacted by locomotive emissions. Just last week, the
17 United States Environmental Protection Agency responded to
18 the locomotive petition sent by CARB in 2017. In their
19 response letter, U.S. EPA acknowledges the need to reduce
20 emissions from locomotives. And I want to particularly
21 acknowledge Senator Padilla's helpful attention to the
22 issue of locomotive emissions.

23 Today, the Board will hear staff's proposal to
24 reduce toxic air contaminants and greenhouse gas emissions
25 from locomotives operating in California. These

1 reductions are vital to further protect communities from
2 near-source pollution impacts as well as to help meet
3 health-based ambient air quality standards across
4 California and support the State's climate goals.

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

6 EXECUTIVE OFFICER CLIFF: Thank you, Chair
7 Randolph.

8 The cleanest locomotive engine standard today is
9 Tier 4. However, over half of the locomotives operating
10 in California still emit approximately 80 percent more
11 pollution than a Tier 4 locomotive. The proposed
12 regulation would apply to all switch, passenger,
13 industrial and line-haul locomotives operated in
14 California to address in-use locomotive pollution.

15 Staff worked with stakeholders throughout the
16 development process and included provisions that provide
17 compliance flexibility to address concerns related to
18 technology readiness and infrastructure availability. In
19 addition, the proposed regulation includes periodic
20 technology assessments to ensure zero-emission technology
21 and supporting infrastructure are available to meet the
22 proposed requirements.

23 This proposed regulation will reduce emissions of
24 criteria pollutants and toxic air contaminants in
25 communities near railyards and other facilities where

1 locomotives are operated. Many of these communities are
2 where Californians are disproportionately burdened by
3 toxics and are recognized as disadvantaged due in part to
4 impacts from locomotive related air pollution.

5 The proposed 2022 State strategy for the State
6 Implementation Plan approved by this Board last month
7 includes the proposed in-use locomotive regulation as one
8 of the most impactful strategies needed to support
9 attainment for the federal ozone standard. Without this
10 proposed regulation, California will not be able to meet
11 its 2022 SIP Strategy goals in the necessary time frame.

12 As Chair Randolph mentioned, CARB recently
13 received a response from U.S. EPA on our 2017 petition.
14 In that letter, U.S. EPA committed to develop options and
15 recommendations to address air pollutant emissions from
16 locomotives nationwide. In addition, EPA plans to propose
17 revisions to existing locomotive preemption regulations to
18 ensure they don't inappropriately limit California's
19 authority under the Clean Air Act to reduce harmful
20 emissions from locomotives.

21 We look forward to sharing information we have
22 curated during the development of this proposed regulation
23 with U.S. EPA.

24 I will now ask Layla Gonzalez of the
25 Transportation and Toxics Division to begin the staff

1 presentation.

2 Layla.

3 (Thereupon a slide presentation).

4 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

5 Thank you, Dr. Cliff. And good morning Chair
6 Randolph and members of the Board. Today, I'll present
7 the proposed In-Use Locomotive Regulation, an Air Toxic
8 Control Measure focused on diesel particulate matter, a
9 toxic air contaminant that has no acceptable level of
10 exposure.

11 We have identified potential impacts in the
12 environmental analysis prepared for this rulemaking, so
13 this is the first of two Board hearings on this item.
14 Staff plan to return with a final proposal for Board
15 consideration in spring of 2023.

16 --o0o--

17 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

18 Let'S begin with a short video.

19 (Thereupon a video was played).

20 (NARRATED BY TTD AIR POLLUTION SPECIALIST
21 JENNIFER KOZUMPLIK): This is a California railyard and
22 these are schools, hospitals and care facilities. These
23 are neighborhoods. Here's another California railyard,
24 and schools, hospitals, care facilities, neighborhoods.
25 Rail is a critical engine of economic and activity and

1 employment for the entire state.

2 The majority of locomotives run on diesel fuel.
3 Diesel particulate matter and the exhaust from these
4 locomotives is classified as a toxic air contaminant. We
5 know of no safe level of exposure for this substance.
6 Within a railyard, these giant diesel engines move back
7 and forth all day long creating emissions that move out
8 into the surrounding areas.

9 California is home to 18 major railyards, and to
10 many medium and small railyards, and to thousands of rail
11 spurs and sidings where locomotive activity occurs near
12 communities. Here are the sites where rail operators are
13 proposing to add new facilities or to expand existing
14 facilities to increase throughput.

15 In California, freight rail is projected to
16 increase by 50 percent within the next seven years. These
17 yards are an important component of California's freight
18 movement system, a system that is currently expanding
19 while its emission technology remains stagnant. Rail is
20 often characterized as the most environmentally friendly
21 way to move freight.

22 This portrayal focuses on greenhouse gases and
23 disregards community health impacts, because fuel
24 efficiencies that reduce greenhouse gas still do little to
25 address the harmful diesel emissions that directly impact

1 human health. The average freight line-haul locomotive is
2 now dirtier than the average freight truck in California.
3 And even the GHG advantage is shrinking and will
4 eventually disappear.

5 So what should we do? Should we move everyone?
6 We can't move every school and every hospital. And many
7 of California's most disadvantaged communities are located
8 near rail activity. Not everyone has the luxury to move
9 away from pollution. The ultimate answer is that we must
10 eliminate emissions from locomotives operating in this
11 state. To accomplish this, we need a plan, one that
12 includes requiring use of the cleanest commercially
13 available locomotives, elimination of unnecessary idling,
14 and a transition to the use of zero-emission fuel when
15 operating in the state.

16 This plan isn't easy, but it is achievable and it
17 doesn't require vast research into new technology, but
18 rather the application of technologies available today.

19 (Thereupon the video concluded.)

20 --o0o--

21 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: We
22 need to protect community health and support emission
23 reductions in communities most impacted by air pollution
24 such as those we just saw in the video. In fact, eight
25 community emission reduction programs approved by CARB

1 include strategies to reduce locomotive and railyard
2 emissions.

3 We also have federally mandated air quality
4 standards that we must meet through the State
5 Implementation Plan. In addition to reductions in diesel
6 PM, the proposed regulation would provide the largest NOx
7 reduction needed by 2037 for the 2022 State strategy for
8 the State Implementation Plan. Again, this is the largest
9 NOx emission reduction measure.

10 --o0o--

11 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: As
12 directed by the Governor's Executive Order, N-79-20, much
13 of the equipment at California's railyards will begin to
14 operate without harmful emissions, with the notable
15 exception of locomotives.

16 --o0o--

17 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:
18 Recent estimates show that rail contributes
19 roughly 11 percent of the PM2.5 and 15 percent of the NOx
20 emissions from freight in California. Rail will become a
21 larger contributor of emissions in the future, if left
22 unregulated. On-road emissions from trucks have been a
23 large focus of many of CARB's freight regulations over the
24 years. And as you know, staff are working to transition
25 trucks to zero-emission.

1 From the Advanced Clean Fleets Regulation and
2 others like it, on-road emissions will be shrinking,
3 making rail and other freight category contributions grow.
4 CARB needs to ensure the rail industry and other freight
5 categories also operate in California without emitting
6 harmful pollutants.

7 --o0o--

8 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

9 Now, let's go over what a locomotive is.

10 Locomotives contain powerful engines that are used to push
11 or pull railcars. The image you see here is of a typical
12 diesel electric line-haul locomotive. One or more of
13 these locomotives would be attached to railcars to create
14 a train. You may be surprised to hear that locomotives
15 are already electrically driven. Diesel fuel is combusted
16 with -- within the locomotive to create electricity. As
17 we move towards our zero-emission goals, it is the source
18 of power for the electric motors that will need to change.

19 --o0o--

20 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: The
21 proposed regulation includes the following types of
22 locomotives.

23 First line-haul locomotives. Usually, several of
24 these high-powered locomotives are used to power a train.
25 Line-haul locomotives are found operating nationwide or on

1 local routes, and are used by freight railroads, Class 1
2 being the largest freight railroads and Class 3 being the
3 smallest freight railroads.

4 Switch locomotives, also called switchers, are
5 smaller than line hauls. Switchers perform their daily
6 operation moving railcars within railyards, industrial
7 facilities, or maintenance yards. They work and idle
8 throughout long periods of the day and their emissions
9 impact nearby communities.

10 Passenger locomotives are designed to pull
11 lighter loads at higher speeds. Unlike switchers or
12 line-haul locomotives, these locomotives must provide
13 continuous power to connected passenger cars for comfort
14 such as lights and air conditioning. While stopped, many
15 passenger locomotives are equipped to connect to wayside
16 power, enabling them to draw electricity from the grid
17 rather than their diesel engines.

18 And finally, we have historic locomotives, which
19 are used by historical railroads for preservation and for
20 educational experiences.

21 --o0o--

22 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

23 Engine manufacturers must meet emission standards
24 set by the United States Environmental Protection Agency
25 at the time of manufacture. The different emission

1 an example of the remanufacturing process. In this
2 scenario, a locomotive operator has 100 Tier 0 locomotives
3 originally built over 20 years ago. There are two options
4 to upgrade them. The first option is to remanufacture and
5 include limited -- limited efficiency and emissions
6 improvements or the other option is to replace them with
7 Tier 4 locomotives, which, as you saw in the previous
8 slide, are over 80 percent cleaner than Tier 0. Both
9 options will result in fuel cost savings. However,
10 remanufacturing only costs about half as much as
11 purchasing new locomotives.

12 For most operators, this is where the calculation
13 ends. But if we factor in the cost to California
14 residents from operating these dirty old locomotives,
15 remanufacture will cost over 200 more premature deaths and
16 result in two billion more in health costs than the
17 purchase and use of Tier 4 locomotives. There is no right
18 to pollute in California. Yet, while rail operators
19 profit from the choice to operate old dirty locomotives,
20 California communities pay with the negative impacts to
21 their health.

22 --o0o--

23 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

24 Now, let's look at the fleet Class 1s operate in
25 the state. As part of a Memorandum of Understanding CARB

1 has with the Class 1 railroad operating in California, the
2 railroads annually report the tiers of their locomotives
3 and how much they're operated in the South Coast Air
4 Basin.

5 This graphic shows that over half of all the
6 activity is carried out by remanufactured Tier 0, Tier 1,
7 and Tier 2 locomotives. It also shows how little the
8 railroads have operated Tier 4 locomotives represented
9 here as the very small clean portions of the bars.

10 --o0o--

11 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

12 California's locomotive operators have made
13 varying progress on cleaning up their fleets. Class Is
14 line-haul locomotives have an average of Tier 2 emissions,
15 but Class I switchers are typically dirtier and on average
16 have Tier 0 plus emissions. Class III and industrial
17 locomotives use the oldest populations of locomotives,
18 mostly pre-Tier 0 locomotives.

19 Although Class I line-haul locomotives make up
20 the majority of California's locomotive activity, the
21 typical age of the Class I switchers, and Class III, and
22 Industrial locomotives is of particular concern. This is
23 because these locomotives perform all their work within
24 relatively localized areas, and their emissions impact the
25 same nearby communities every day.

1 Until now, we have focused on how little
2 operators used Tier 4 locomotives. However, passenger
3 agencies use by far the most Tier 4 locomotives. We want
4 to acknowledge the progress the passenger agencies are
5 making at cleaning up their fleets, but California's
6 passenger locomotives must also operate more cleanly and
7 eventually operate without harmful emissions to protect
8 communities and riders exposed to harmful diesel
9 emissions. This proposal would require all locomotive
10 types to eventually operate in a zero-emission
11 configuration while in California.

12 --o0o--

13 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

14 Let's now go through the main components of the
15 proposed regulation.

16 The spending account is designed to increase the
17 development and use of cleaner locomotive technologies and
18 support -- supporting infrastructure. The in-use
19 operational requirements would decrease the use of the
20 oldest and highest polluting locomotives unless they're
21 retrofitted to operate without emissions. Idling
22 requirements reduce avoidable idling and provide CARB with
23 the ability to directly enforce. And the recordkeeping
24 and reporting requirements would help our understanding of
25 locomotive emissions and their impacts throughout the

1 state.

2 --o0o--

3 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: The
4 spending account would require locomotive operators to set
5 aside funds annually based on the California emissions
6 from the prior year. The dirtier the locomotive, the more
7 that would need to be put into an internally held trust
8 account. The spending account calculation and annual
9 funding requirement reflect the estimated health cost
10 burden to Californians from locomotive emissions. Funds
11 can be used for Tier 4 technology until 2030, and could
12 always be used for ZE locomotives and supporting
13 infrastructure, including demonstrations.

14 --o0o--

15 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: To
16 incentivize early adoption of locomotives and rail
17 equipment capable of zero-emission operation and to
18 maximize the use of connecting to wayside power while
19 idling, the proposal includes a zero-emission credit as
20 part of the spending account calculation until 2030. To
21 encourage ZE technologies to be used in the most
22 disadvantaged communities first, the ZE credit is doubled
23 in areas designated as disadvantaged by CalEnviroScreen.
24 The credits would be used towards offsetting the spending
25 account funding requirement.

1 --o0o--

2 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

3 Beginning in 2030, only locomotives less than 23
4 years of age would be able to operate in California. This
5 requirement begins later than other requirements in the
6 proposal to allow locomotive operators time to plan and to
7 purchase newer current tier locomotives, if needed, for
8 the in-use operational requirements.

9 Additionally, in 2030, all passenger, switch, and
10 industrial locomotives with engine build dates of 2030 or
11 newer will need to operate in a zero-emission
12 configuration while in California. We anticipate that
13 zero-emission operations for line-haul locomotives will
14 require a longer technology development period because of
15 their long distances and higher power needs. Therefore,
16 starting in 2035, line-haul locomotives with engine build
17 dates of 2034 or newer will need to operate in a
18 zero-emission configuration while in California.

19 As a precaution, staff has included technology
20 assessments to be conducted in 2027 and 2032. These
21 assessments will include the status of ZE technologies and
22 support infrastructure. If either of the evaluations show
23 the 2030 or 2035 zero-emission dates to be too ambitious,
24 staff may propose to develop regulatory amendments.

25 --o0o--

1 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

2 Various ZE technologies will likely be used for
3 different locomotive types. Operators are free to choose
4 the ZE technology that is best suited for their
5 operations. Electricity stored in batteries may be good
6 for railyards in areas where locomotives have easier
7 access to charging infrastructure. Battery electric
8 locomotives are currently available for purchase and
9 California's Class 1 operators have already made
10 commitments to purchase several battery electric switchers
11 to reduce their environmental impact and to further
12 develop the technology.

13 Hydrogen converted by fuel cells may be better
14 suited for locomotives traveling longer distances, such as
15 line-haul and some passenger locomotives. Hydrogen fuel
16 cell technology has been successfully used in passenger
17 rail services in other countries for a few years now. In
18 California, one fuel cell passenger train is scheduled to
19 be in service in 2024, and four more hydrogen passenger
20 trains were ordered earlier this year, making California
21 the first in the U.S. with fuel cell passenger rail
22 service.

23 Other fuel cell locomotives are also currently
24 being demonstrated. Just last year, the California Energy
25 Commission provided funding for a Class 3 railroad to

1 build and test a hydrogen switcher.

2 --o0o--

3 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: We
4 are encouraged to see that interest and investment in
5 zero-emission locomotive operators have increased
6 remarkably in the last couple years. The headlines shown
7 on this slide represent just some of the progress that
8 Class 1, Class 3, and passenger railroads in California
9 and other states are making in integrating zero-emission
10 locomotives into their operations. Many of these
11 locomotives will be tested and will be ready for operation
12 before 2027.

13 --o0o--

14 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: The
15 projects shown on the previous slide may be in response to
16 many of the zero-emission plans that have been announced
17 by California's locomotive operators. Many California
18 passenger agencies have published future plans that
19 include strong growth in both Tier 4 and ZE purchases.

20 Additionally, all Class 1 railroads and some
21 Class 2 railroads have committed to greenhouse gas
22 reductions targets and the Federal Railroad Administration
23 has announced a climate challenge for the rail industry to
24 meet net zero greenhouse gas by 2050. To get to net zero,
25 all locomotives will need to operate without greenhouse

1 gas emissions. The proposed regulation will be a huge
2 stepping stone got getting all railroads to their net zero
3 goals.

4 --o0o--

5 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: Two
6 more important components of the proposed regulation
7 remain, the next being a restriction on excess idling.
8 The requirements are similar to U.S. EPA's 30-minute
9 idling limit. By including the idling requirements in the
10 proposed regulation, CARB would be able to enforce
11 locomotive idling.

12 --o0o--

13 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: And
14 finally, the proposed regulation includes registration and
15 reporting requirements that will create a complete picture
16 of the emissions created by all locomotives operating in
17 California and would insist -- assist with enforcement
18 efforts as needed. Each locomotive that operates in
19 California will be required to register one time. Then,
20 annually, each registered locomotive would need to report
21 all California activity by air district. Air District
22 level reporting is critical to understand where emissions
23 are happening, to better understand the connection between
24 diesel locomotive emissions and health effects. Each
25 locomotive that's reported to CARB would be required to

1 pay \$175 annual administrative charge to cover the
2 enforcement and implementation activities for the proposed
3 regulation.

4 --o0o--

5 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

6 From our extensive outreach efforts, we have
7 learned that certain flexibilities would be needed. The
8 temporary operating waiver would allow operators to
9 request an emergency provision to use a locomotive that
10 would otherwise be banned through the in-use operational
11 requirements. The small business hardship extension would
12 allow small businesses with an average gross revenue of
13 less than \$5 million annually to delay compliance with the
14 spending account and/or the in-use operational
15 requirements for up to three years at a time.

16 The historic low use exemption would recognize
17 the special work of operators such as museums, whose
18 mission is to educate the public and exhibit and operate
19 locomotives in original condition with some limitations.
20 Again, the 2027 and 2032 technology assessments will
21 evaluate the readiness of zero-emission locomotive
22 technologies and infrastructure and provide an opportunity
23 to adjust compliance deadlines, if necessary.

24 Finally, we've included an alternative compliance
25 plan option.

1 --o0o--

2 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

3 Similar to what the Board has previously approved
4 for other regulations, such as the Commercial Harbor Craft
5 Regulation, the alternative compliance plan would allow
6 operators to reduce emissions through a plan of their own
7 design. For a plan to be approved, it would need to
8 reduce equivalent emissions as would have been achieved
9 under the spending account and in-use operational
10 requirements. And the reductions would need to be within
11 three miles of rail activities. These plans can be
12 renewed every five years if requirements are met and
13 provide opportunity for adjustments due to delivery,
14 safety approval, and infrastructure delays outside an
15 operator's control.

16 Next, let's discuss the benefits from the
17 proposal we just reviewed.

18 --o0o--

19 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

20 Compared to the business-as-usual scenario, the
21 proposed regulation is estimated to reduce over 7,400 tons
22 of PM2.5 and about 389,000 tons of NOx through 2050. As
23 was mentioned previously, the proposed regulation is a
24 toxic control measure focused on the reduction of diesel
25 particulate emissions and is the largest NOx reduction

1 measure in the State SIP strategy. However, because of
2 zero-emission locomotive operations, there would also be a
3 co-benefit of 21.9 million metric tons greenhouse gas
4 benefits.

5 --o0o--

6 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

7 Staff characterized cancer risk within one mile
8 of two representative California railyards, one in
9 Northern California and one in Southern California. The
10 study compared baseline conditions to what would happen if
11 locomotives operating at those railyards were all Tier 4.
12 The results showed that cancer risk from exposure to
13 diesel locomotive PM emissions would be decreased by over
14 90 percent. Use of ZE locomotives would reduce cancer
15 risk even further. Eventually, with all ZE operations in
16 California, cancer risk from locomotive emissions could be
17 reduced completely.

18 --o0o--

19 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

20 From 2023 to 2050, staff estimates the total net
21 cost of the proposed regulation to be 13.8 billion and
22 have a health cost savings of approximately 32 billion.
23 Health cost savings are realized through the reductions of
24 PM and NOx emissions and are estimated to result in fewer
25 deaths, fewer hospital stays, and fewer trips to the ER.

1 If the cost of the proposed regulation were fully
2 passed on to consumers, it is estimated that each
3 California household could pay approximately \$32 annually
4 and passenger fares could increase by \$0.39 for local
5 routes and little over \$2 for longer routes. But if we do
6 nothing, it is California's low-income and communities of
7 color that will continue to bear the majority of the
8 health costs.

9 --o0o--

10 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ:

11 While the benefits of the proposed regulation are
12 over two times more than the cost, we realize the
13 transformation of California's locomotive fleets to
14 cleaner operations will be costly, and some operators may
15 need funding assistance. In fiscal year 2022, there is as
16 much as \$40 billion in incentives available for
17 locomotives and Z -- zero-emission infrastructure. This
18 funding comes from many government programs such as the
19 Inflation Reduction Act, Consolidated Rail Infrastructure
20 and Safety Improvements Program, and the Clean
21 Transportation Incentives and more.

22 The Federal Railroad Administration's CRISI
23 Program currently has an open solicitation offering \$1.4
24 billion in incentives to move from older tier technology
25 to Tier 4 and zero-emission locomotives. This could go a

1 long way to help Class 3 and industrial locomotive
2 operators to make the leap to newer technology.

3 --o0o--

4 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: In
5 accordance with California Environmental Quality Act
6 guidelines, staff prepared a draft Environmental Analysis
7 for the proposed regulation and released it for public
8 comment. We will present the final environmental analysis
9 and written response to comments received at the second
10 Board hearing planned for spring of 2023.

11 --o0o--

12 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: The
13 next steps are to: make any changes in response to Board
14 direction, including clarifications to improve
15 implementation, since the publication of the proposed
16 regulation; clarify our intent in the proposed regulation
17 to collaborate with transit agencies as the State
18 increases ridership on rail and transitions to zero
19 emission; incorporate federal safety approvals for rail as
20 part of the technology assessment; evaluate comments that
21 have come in during the comment period, including requests
22 to strengthen and accelerate the proposal, and then return
23 with a final proposal for adoption in spring of 2023.

24 --o0o--

25 TTD STAFF AIR POLLUTION SPECIALIST GONZALEZ: And

1 that brings us to the end of the presentation. So to
2 summarize, there is no safe level of exposure for diesel
3 particulate matter, a toxic air contaminant. And CARB's
4 efforts to reduce community exposure to diesel PM, all
5 other equipment at railyards, and many other categories
6 have been regulated and are transitioning to zero
7 emission, including trucks, leaving locomotives as the
8 primary source of harmful emissions at railyards
9 throughout California.

10 Communities surrounding railyards and areas where
11 locomotives operate are often some of the most heavily
12 burdened by pollution. For years, many of these
13 communities have come to us with their concerns about
14 locomotive emissions and asked us to act.

15 In giving the clear signal to locomotive
16 operators that zero-emission operation -- operations will
17 be required, the proposed regulation provides California
18 railroads the opportunity to lead the nation in adopting
19 cleaner locomotive technologies and protect communities
20 directly impacted by the diesel emissions from their
21 locomotives.

22 Cleaner locomotive technology is already here.
23 And as we've shown you, zero-emission technology is
24 available and more options are on the way. To help with
25 the purchase of these new technologies, billions of

1 dollars of funding is available from the federal
2 government and the State of California. The use of
3 cleaner technology means healthier people. Today, we are
4 asking you to please support the proposed in-use
5 locomotive regulation. Thank you for your consideration.

6 CHAIR RANDOLPH: All right. Thank you very
7 much. We will now hear from the public who signed up to
8 speak on this item, either by submitting a
9 request-to-speak card, or by raising their hand in Zoom.
10 I will ask the Board clerks to begin calling the public
11 commenters.

12 BOARD CLERK HARRINGTON: Thank you. I would also
13 like to announce that we will be closing the speaker
14 sign-ups for this item at 9:45.

15 Our first speaker is Mike Hart.

16 MIKE HART: We're good. Good morning. Thank you
17 all very much. I appreciate the opportunity to speak this
18 morning. For starters, by way of introduction, I'm the
19 CEO Sierra Railroad Company. And we're a parent company
20 that have a number of subsidiaries, one of which is Sierra
21 Energy.

22 But I'd just like to remind folks from the
23 excellent presentation that's been made, that there's a
24 very high correlation between public funding and Tier 4
25 locomotives. Passenger railroads are run by public

1 agencies, which have a lot of public money and that's why
2 there's so many Tier 4 locomotives coming in. So do bear
3 in mind that we operate Class 3 railroads which are very
4 small and very limited resources.

5 Obviously, we care a lot about the environment.
6 I'd sort of like to remind you just some of the things
7 that we've been doing in this space. In 2001, we were
8 named an environmental hero for the work we've done with
9 the U.S. EPA to be the first railroad in the world to run
10 at 100 percent biodiesel.

11 After that, we worked with Bill Gates
12 Breakthrough Energy Ventures with our Sierra Energy
13 Division, and the idea there is to create carbon negative
14 fuel for locomotives. And the idea was to take garbage
15 and turn that into hydrogen. Now, we've gone a long way
16 with demonstrating that and we can show that we take one
17 ton of garbage and make 100 kilograms of hydrogen from
18 trash.

19 Our first facility is built and operating in
20 Monterey, California by a partnership with the U.S. Army
21 and the California Energy Commission. And the idea is to
22 create fuel for locomotives from garbage. And as you know
23 with CARB, you did the joint study with NASA and JPL
24 showing that in 2019 that just 30 landfills in California
25 are creating over 40 percent of our point source emissions

1 from methane. And so the idea is why not solve both
2 problems and that is take waste from our landfills and
3 turn it into hydrogen for zero-emission fuel for
4 railroads.

5 Towards that direction, our Sierra Northern
6 Division, we've already done two locomotives under the
7 Carl Moyer Program doing rebuilds. And working with the
8 Cal -- Sierra Energy Commission -- I'm sorry, California
9 Energy Commission, they've funded us to build our first
10 hydrogen locomotive conversion, which is underway right
11 now in West Sacramento. So that's underway now for what
12 we're doing.

13 And the process that we're proposing, and we
14 would love to get an engagement with CARB about, is we see
15 the transition for Tier -- Class 3 locomotives -- I'm
16 sorry, Class 3 railroads to transition from Tier 0, in
17 other words high emission locomotives, to transition to
18 Tier 3 locomotives, which are very inexpensive relative to
19 these Class -- Tier 4 locomotives. We've already acquired
20 34 of these engines for making that transition to
21 dramatically reduce emissions. It's called the Sierra
22 Plan. You guys have received a copy of it. They'll be
23 more discussion -- does that mean I'm done?

24 Okay. I'm sorry. But our plan is to transition
25 to low-emission locomotives through this step and then

1 zero with the work that we're doing now.

2 Thank you very much.

3 BOARD CLERK HARRINGTON: Next up is Graham Noyes.

4 GRAHAM NOYES: Thank you, Chair Randolph, members
5 of the governing board. Glad to be hear today. Graham
6 Noyes, Noyes Law Corporation on behalf of Sierra Northern
7 Railway. I'm going to try and reserve time for any
8 questions or feedback on this.

9 We have been engaged with the -- with the staff,
10 and management, and the governing Board since well before
11 the rulemaking speaking about the Tier 3 strategy
12 specifically. And as my Mike Hart pointed out, the Sierra
13 companies have a long history of both innovation and
14 practicality.

15 The core of the Tier 3 strategy is really taking
16 advantage of the very low cost availability of Tier 3s,
17 which are obviously much cleaner from a PM and NOx
18 perspective than of the dominant fleet now which is
19 pre-Tier 0. There's an opportunity to have a fully
20 refurbished Tier 3 locomotive online for about \$350,000.
21 That's about one-tenth of the cost of where a
22 zero-emission locomotive is likely to be.

23 Rapid deployment of Tier 3s allows immediate
24 reductions. The Sierra Plan looks at a deployment in 2024
25 as opposed to a CARB plan that starts mainly in 2031.

1 It's 84 percent more cost effective from a -- using the
2 Carl Moyer Program methodology or about six times more
3 cost effective per ton looked at another way. So if you
4 implemented their 2024 versus 2031, and these are all
5 shared in written comments as well, you could achieve 60
6 tons additional PM10 reduction during those first seven
7 years and 1,600 tons of NOx reduction.

8 The other thing I'd point out, which Mike Hart
9 also emphasized is the importance of funding in this
10 sector. And several of the passenger and public agencies
11 raised the disconnect between the 23-year useful life rule
12 and the requirements under some of the federal grant and
13 loan requirements, which can range from 25 to 39 years.
14 Obviously, a California rule that does not align with the
15 minimum use requirements and could put either an agency or
16 a company in position of having to forgo these massive
17 federal funds that are now available or refund back funds
18 that have been received would be extremely problematic.

19 And we look forward to further engagement. Glad
20 to take any questions or feedback at this time.

21 CHAIR RANDOLPH: I don't think we have anything.
22 Thank you though.

23 GRAHAM NOYES: Thank you.

24 BOARD CLERK HARRINGTON: Thank you.

25 Next is Eddy Cumins.

1 EDDY CUMINS: Thank you, Madam Chair and members
2 of the Board. I'm Eddy Cumins, General Manager for Sonoma
3 Marine Area Rail Transit District, also known as SMART.
4 SMART is unique as we operate both commuter rail and
5 freight.

6 To begin, I want the Board to know that SMART is
7 dedicated to getting to zero emissions, and I appreciate
8 all the conversations that we've had with staff. However,
9 I have some serious concerns about the proposed timeline
10 due to market availability of zero-emission locomotives,
11 FRA approval, federal useful life, and Buy America
12 requirements.

13 The Board should know that the proposed
14 regulation rests on assumptions about the market
15 availability and technology readiness of zero-emission
16 locomotives in the United States that are not sound.
17 Although this technology has been demonstrated in Europe,
18 it has not been intro -- demonstrated or introduced into
19 passenger service in the United States. Before that could
20 happen, we would need the FRA to provide safety clearance
21 for the use of these technologies for passenger service,
22 and we would need the manufacturers to demonstrate that
23 they meet Buy America requirements.

24 To address our concerns, we urge CARB to work
25 with us to conduct a market assessment before implementing

1 the regulation. This exercise would help identify and
2 address the obstacles rail agencies would face in
3 deploying zero-emission locomotives. More specifically,
4 the market assessment would analyze Federal transit and
5 railroad requirements, technology availability of
6 zero-emission locomotives, infrastructure requirements to
7 support charging capability, overall cost of operation,
8 funding capability, and the financial impact associated
9 with not running vehicles to the end of their useful
10 lives.

11 We anticipate the results of this market
12 assessment would identify weak points in the regulatory
13 approach, which could be used to inform the development of
14 a more workable framework. To be clear, we are in full
15 support of expanding zero-emission technologies. However,
16 and again, we urge CARB to work with us to conduct a
17 market assessment before implementing the proposed
18 regulation.

19 Thank you for your time.

20 BOARD CLERK HARRINGTON: Thank you.

21 Next is Michael J. Rush.

22 MICHAEL RUSH: Good morning, Chair Randolph and
23 members of the Board. My name is Michael Rush, I'm
24 representing the Association of American Railroads and its
25 member railroads. There could be no doubt that the staff

1 proposals are preempted under federal law. The railroads
2 have discussed the proposals with staff and explained why
3 they are preempted. Were the Board to adopt these
4 proposals, the inevitable result will be litigation and
5 judicial decisions prohibiting the Board from proceeding.
6 This is disappointing, given the long collaborative
7 relationship the railroads have had with the Board.

8 The railroads are committed to doing their part
9 to reducing emissions. Railroads have been conducting
10 demonstration projects on battery electric locomotives and
11 hydrogen fuel cell powered locomotives. Every Class 1
12 railroad is participating in the science-based targets
13 initiative.

14 Railroads have also undertaken other initiatives
15 to reduce their environmental footprint, including
16 reducing emissions from railyard equipment, such as cranes
17 and hostlers, and using lower emitting fuels. While the
18 railroads are investing ways of reducing emissions,
19 including zero-emission locomotives, there should be no
20 illusion that the zero-emission locomotives will be ready
21 for wide-spread use for the foreseeable future.

22 Switcher locomotives may be the first to reach
23 commercial readiness, but line-haul locomotives will take
24 significantly longer given the demands placed on those
25 engines. Furthermore, CARB must not overlook the

1 infrastructure that will be necessary should a viable
2 alternative to the diesel locomotive be developed.
3 Whether it be charging stations or locations for supplying
4 locomotives with an alternative fuel, a nationwide network
5 must be deployed for any technology that is proven to be
6 an effective alternative to the diesel engine. Any
7 timeline must take infrastructure needs into account.

8 As discussed in AAR's written comments, the staff
9 proposal would create havoc within the railroad industry
10 and the North American supply chain. Given that railroads
11 are three to four times more fuel efficient than trucks,
12 that should be unacceptable to the Board.

13 Unlike the efforts of the railroad industry, the
14 staff proposals will not result in reduced emissions. The
15 only result will be litigation. Instead of adopting these
16 proposals, AAR urges the Board to instruct staff to work
17 with the railroads to achieve a win-win result as we have
18 in the past.

19 Thank you. I would be happy to answer any
20 questions.

21 Thank you Chair Randolph.

22 BOARD CLERK HARRINGTON: Thank you.

23 Next, is Lean Kent.

24 LENA KENT: Good morning. My name is Lena Kent
25 and I represent BNSF railway. Thank you for the

1 opportunity to speak with you all today.

2 The rail industry, as noted in staff
3 presentation, has been investing significantly in the next
4 generation of zero and near-zero technologies to help
5 accelerate the commercial viability. However, generally,
6 the technology simply isn't ready for commercial
7 deployment.

8 As a result, staff's framework for zero-emission
9 locomotives is simply not realistic. The locomotive
10 manufacturers note they currently produce an 8 megawatt
11 hour battery electric locomotive. And they project they
12 could potentially reach 15 megawatts by 2030. That's
13 likely enough energy for yard and local rail service, but
14 insufficient for line-haul locomotives.

15 Even with the inherent efficiencies associated
16 with battery electric technology, you would still need
17 more than 100 megawatt hours of battery storage in a
18 line-haul application. Battery charging is still a major
19 obstacle for battery electric locomotives requiring a
20 hundred times the amount of time currently spent on
21 refueling operations. Hydrogen technology is still very
22 early in development. It's far too soon to predict how
23 this technology will evolve. The first demonstration
24 project for hydrogen is not planned until 2025. A more
25 achievable path to reducing emissions in the time frame

1 CARB proposes is using low carbon fuels and combustion
2 engines.

3 Thank you for your time today.

4 BOARD CLERK HARRINGTON: Lupe Valdez.

5 LUPE VALDEZ: Good morning. Chair and other
6 members of the Board. It's a pleasure to be here with you
7 this morning. Union Pacific supports CARB's efforts to
8 improve California's air quality as demonstrated in our
9 efforts to upgrade locomotive fleets and pilot new
10 electric locomotive technologies. However, the
11 infrastructure required to meet the energy demand for
12 these new electric technologies does not exist today. As
13 long-haul locomotives operate continuously across all
14 states nationwide, infrastructure is required to ensure
15 railroads can continue to meet the demands of the global
16 supply chain.

17 And it is well documented that the current
18 electricity demand on California's grid surpasses what the
19 existing grid is able to support, and as seen as are
20 rolling brownouts. CARB has, from our perspective, not
21 adequately addressed how the energy infrastructure needed
22 for this regulation to be successful will be met. The
23 nation's rail network cannot rely on battery electric
24 technologies if forced to depend on inadequate supply of
25 energy, forced brownouts, and demands to refrain from

1 charging electric vehicles as we saw this past summer.

2 California must make significant investments in
3 their infrastructure before industry is able to rely on it
4 as a stable source of electricity to power locomotives and
5 other equipment. Hydrogen technology, also imagined as a
6 near-term solution by CARB requires a massive
7 multi-billion dollar public investment in infrastructure
8 on a national basis to produce and transport hydrogen
9 safely.

10 Zero-emission hydrogen fuel cells technology also
11 requires a significant amount of infrastructure that also
12 does not exist and will need to be developed, permitted,
13 and installed before any significant investment is made in
14 that technology. As published in our climate action plan,
15 UP has a -- has been a proactive leader by stating our
16 goal of net zero by 2050. This announcement preceded the
17 federal government's goal of 2050, which is based on
18 science-driven expectations for technology and
19 infrastructure. UP's commitment to ZE technology,
20 zero-emission technology, is broader than just
21 locomotives. We are continuing to pilot, test, and invest
22 in alternatives to internal combustion engines across all
23 fleets.

24 Thank you very much for this opportunity to
25 address the Board this morning. Thank you.

1 BOARD CLERK HARRINGTON: Thank you.

2 Chuck Baker.

3 CHUCK BAKER: Good morning. My name is Chuck
4 Baker. As President of the National Short Line
5 Association, I'm here to speak to the alarming impact of
6 this proposed rule on a critical part of the nation's and
7 California's freight rail system, the 27 small business
8 shortline railroads that serve hundreds of crucial
9 agricultural, industrial, and manufacturing customers here
10 in California.

11 If this rule is enacted without an exemption for
12 shortlines, it would threaten the very viability of
13 shortlines in California. We request an exemption of
14 shortlines from this rule. Shortlines provide first and
15 last mile service to rail shippers typically in small
16 towns and rural areas. These lines are basically the old
17 unprofitable branch lines of the larger Class 1 railroads.
18 And shortlines largely came into existence to save these
19 lines from abandonment.

20 In the decades since, shortlines have
21 rehabilitated much of their infrastructure, scraped and
22 clawed for new customers, built tremendous relationships
23 with their local communities, and developed a reputation
24 for providing flexible and responsive service. They allow
25 their customers to stay connected to the national freight

1 rail network and maintain their competitiveness in the
2 global marketplace. They've managed to keep and grow
3 these lines to the benefit of California and the nation.

4 Shortlines are committed to lowering their
5 environmental impact. In addition to upgrading
6 locomotives to higher tier levels when they can afford it,
7 shortlines are exploring hydrogen and battery electric
8 powered locomotives with government funding, installing
9 fuel optimization software and anti-idling technology,
10 testing biodiesel -- biodiesel and renewable diesel, and
11 exploring fuel additives to lower omissions. We do this
12 with our own funds when possible and also work through
13 programs like CRISI, DRI, and Carl Moyer.

14 We are committed to environmental sustainability
15 and, in fact, share many of CARB's goals. We are,
16 however, extremely concerned that this rule is too
17 draconian and would lead to the elimination of many
18 shortlines in California.

19 The rule itself states, and I'm quoting, "If
20 Class 3 locomotive operators are unable to pass on the
21 cost of the proposed regulation to customers, it is
22 possible some of these businesses would be eliminated". I
23 can tell you unequivocally that shortlines will not, in
24 fact, be able to pass on these costs to our customers and
25 that some of them would, in fact, be eliminated by this

1 rule. If shortlines were eliminated, it would result in
2 higher greenhouse gas emissions nationally, and here in
3 California shippers would either need to move their
4 freight by truck -- by truck instead of rail or pack up
5 and abandon California.

6 If the freight moves by truck instead of rail,
7 the will result in more fatalities and injuries, more
8 congestion on California's roads, more burden on the
9 California taxpayer to pay for road damage, and more
10 microplastic from shredded truck tires in the environment.
11 The better option would be to entirely exempt shortlines
12 from this proposal and then partner with us through CRISI,
13 DRI, and Carl Moyer to help accelerate our efforts to get
14 cleaner.

15 Thank you.

16 BOARD CLERK HARRINGTON: Thank you.

17 Donald Norton.

18 DONALD NORTON: Good morning. I'm Donald Norton,
19 Executive Director of the California Short Line Railroad
20 Situation, which represents small railroads in California.
21 These small businesses who are shortline railroads connect
22 hundreds of California companies to the national rail
23 network. Shortlines are a critical piece of the supply
24 chain in California. And many of our members have been
25 leaders in the transition to lower emission locomotives,

1 including Pacific Harbor Line, Sierra Northern Railway,
2 and the Modesto and Empire Traction Company just to name a
3 few.

4 However, the proposed In-Use Locomotive
5 Regulation is financially impossible for most small
6 railroads. Using the notional small business shortline
7 described in your SRIA document, if you run the
8 calculations, this business's available funds would be
9 \$321,269 short of its required spending account
10 contribution for 2023. The three-year hardship delay
11 allowed in this regulation will not make this situation
12 workable. The alternative compliance plan won't help a
13 small company's available cash problem and the prescribed
14 regulation review in 2027 will come too late to save small
15 railroads from bankruptcy. Meanwhile, adopting this
16 regulation will also end the use of our most successful
17 grant program for upgrading shortline locomotives, which
18 has been the Carl Moyer Program.

19 Discontinued rail service by small railroads will
20 cost significant job losses. It will also cause plant
21 closures by customers that can no longer compete in their
22 markets. And a massive modal shift by cargo that is able
23 to change from rail to truck. This modal shift will cause
24 additional damage to roads and bridges, greatly increase
25 roadway congestion, and cause a significant rise in

1 highway deaths and injuries. And to put a number on it.
2 Caltrans estimated in 2019 that there were 9.3 million
3 truck trips per year in California that were avoided by
4 use of rail and a significant portion of those are on
5 shortlines.

6 Bottom line, don't cause all this financial
7 disaster and supply chain disruption in pursuit of only
8 two percent of the locomotive emissions in California that
9 are attributable to shortlines. Instead, exempt shortline
10 railroads from the regulation.

11 Thank you.

12 Any questions?

13 Thank you.

14 BOARD CLERK HARRINGTON: Thank you.

15 Kennan Beard.

16 KENNAN BEARD: Good morning. My name is Ken
17 Beard and I'm the President of the Sierra Northern
18 Railway. I urge you to exempt the shortlines from this
19 regulation. Many shortlines in California have
20 voluntarily stepped up and changed a portion of their
21 fleet to Tier 3 and Tier 4 locomotives. Most of these
22 were done using Carl Moyer funds over the last few years.

23 While we would love to change the rest of our
24 fleet over, it's financially impossible without Carl Moyer
25 fund or some other sort of fund process, and the Carl

1 Moyer rules make it almost impossible with the lower use
2 locomotives. We still need them, but we can't get them
3 funded. What would save the problem there is if there was
4 more money in Carl Moyer and there was less restrictions
5 on how the money was spent.

6 This regulation all man -- also mandates the move
7 to zero-emission locomotive technology. This technology
8 just does not exist today. My company, Sierra Northern
9 Railway, is building the first-of-its-kind hybrid hydrogen
10 fuel cell electric switcher locomotive in partnership with
11 the California Energy Commission. This locomotive under
12 construction today will not be going under test until the
13 end of 2023 or middle of 2024 at the earliest.
14 Commercialization of this technology will be many years
15 behind that assuming it works as planned.

16 Battery powered electric locomotives and that
17 technology trails the hydrogen even further. The cost to
18 upgrade to these new zero-emission locomotives in today's
19 dollars is estimated to be between five and six million
20 dollars per locomotive.

21 Even given grant programs like the CRISI grant,
22 that costs to us is going to be huge. A competitive CRISI
23 grant still requires a 50 percent match on locomotives.
24 That's going to be two and a half to three million per
25 locomotive to each of these small businesses. This alone

1 will kill the shortline railroad industry. We just can't
2 afford it.

3 Again, I urge you to exempt the Short Line
4 Railroad Association -- members from this regulation.

5 Thank you.

6 BOARD CLERK HARRINGTON: Thank you.

7 Andrew Antwih.

8 MR. ANTWIH: Thank you, Board members. And kudos
9 to staff for the correct pronunciation of my last name.
10 Andrew Antwih on behalf of Southern California Regional
11 Rail Authority otherwise known as Metrolink, the largest
12 passenger rail operator in the state, serving six Southern
13 California counties.

14 Metrolink has the largest Tier 4 fleet in
15 California. Transitioning to 100 percent renewable fuel
16 this year, they've already done that, and supports the
17 goals of zero-emission locomotives. CARB staff proposes a
18 rule that forces passenger rail to divert funds to
19 spending accounts. Diverting funds desperately needed to
20 recover ridership will devastate agencies facing fiscal
21 cliffs with federal rescue funds having been exhausted.

22 Metrolink and CARB staff work together on
23 alternatives to the spending accounts, but the alternative
24 plans proposed could result in negative fiscal impacts
25 similar to a spending account. And our appeals for safety

1 valves, such as if locomotive funding is not available
2 have been rejected to date.

3 Your staff this week verbally offered a third
4 alternative, commit to a fully Tier 4 fleet by 2035 and to
5 a fully zero-emission fleet by 2045. We find this offer
6 promising, but have some concerns. Metrolink anticipates
7 a fully Tier 4 fleet by 2035. We could accede to a
8 mandate start date for zero-emission purchases, but ask
9 for a financially and operationally sustainable transition
10 to zero emissions. It would be unconscionable to commit
11 to a fully zero-emission fleet by 2045, given the immature
12 state of the technology, limiting funding available for
13 new purchase, age of the fleet, and requiring the place --
14 replacement of Tier 4 locomotives well in advance of their
15 end of useful life.

16 Finally, staff has insisted on a requirement that
17 locomotives be retired in 23 years, despite being in
18 direct conflict with federal grant repayment requirements
19 when locomotives are retired earlier than 25 years.

20 We urge the Board to direct staff to continue
21 negotiating on a more reasonable rule modifications that
22 will allow our sector to recover while achieving shared
23 greenhouse gas goals. And I just point out that the
24 ridership in Metrolink, they're choice riders. These are
25 folks that have the option to drive. Any rule that has

1 the effect of diverting operating dollars actually removes
2 the larger goal of having this mode shift option be
3 available. And so it's worth it to take additional time
4 to get this regulation right, because passenger rail is a
5 partner in achieving the Board's goals.

6 BOARD CLERK HARRINGTON: Matt Robinson.

7 MATT ROBINSON: Thank you, Chair Randolph and
8 members. My name is Matt Robinson and I represent the
9 California Transit Association.

10 As you are aware, we submitted a letter to the
11 Board outlining in detail our concerns with the proposed
12 draft regulation, as well as our commitment to
13 zero-emission rail in California. We appreciate the Board
14 members and the staff that have engaged with us over the
15 last several weeks to hear our concerns and work towards a
16 path forward. Many of the Association's member rail
17 agencies are working to pilot zero-emission locomotives or
18 are actually building zero-emission rail facilities.

19 However, as stated in our letter, we have
20 significant concerns with the spending account and
21 alternative compliance plan provisions of the draft
22 regulation. We appreciate that in responding to our
23 concerns, CARB staff presented us with the conceptual
24 alternative for compliance under the regulation, which
25 would establish stringent fleet requirements for 2035 and

1 for 2045.

2 We engaged with CARB on this conceptual
3 alternative in earnest and offered several modifications
4 to it that would address the real constraints we face
5 relative to the commercial availability of zero-emission
6 locomotives and federal requirements for useful life.

7 CARB staff has not yet agreed to the requested
8 modifications and our justification for them. And so we
9 must continue working to find agreement on staff's
10 conceptual alternative. As current plea -- sorry. As
11 currently proposed, this conceptual alternative would
12 force the retirement of locomotives before their federally
13 mandated useful life and lead agencies to violating
14 federal law and grant terms and returning funding to the
15 federal government. This may include locomotives recently
16 purchased with State Cap-and-Trade funds and reflect
17 limited operations -- oh, I'm sorry -- redirect limited
18 operations funding away from service, potentially
19 contradicting CARB's recently passed draft Scoping Plan,
20 which calls for an emphasis on transit operations.

21 The compliance -- Or, I'm sorry, the comp -- this
22 complication has been central to our message, to CARB
23 staff, and was the basis for our proposed modification.
24 We are committed to working with CARB staff on an
25 alternative compliance path, but request that the Board

1 direct staff to continue to engage with us with the
2 necessary sensitivity to federal law and grant terms and
3 review and agreed upon path forward at a future meeting.
4 Thank you for the time today and I appreciate you hearing
5 my comments.

6 BOARD CLERK HARRINGTON: Thank you.

7 And just a reminder that speaker sign-ups are now
8 closed for this item.

9 Next up is Chris Orlando.

10 CHRIS ORLANDO: Thank you very much. I am Chris
11 Orlando, Chief Planning and Communications Officer for
12 North County Transit District. I want to start by
13 thanking the CARB staff for working with us over the last
14 several weeks on this proposed rule. The staff has been
15 very collaborative with our industry as we've worked to
16 understand, shape if we can, and implement this rule.

17 Next, I would like to say that we share your
18 goal. We want to move our fleet to zero emissions. And I
19 can tell you I've been on more than a dozen calls about
20 the rule with my colleagues in the public transit industry
21 and not once has there not been a wholehearted commitment
22 to make the transition to zero emissions. We are there
23 with you.

24 We do have some concerns. I want to start by
25 telling you a little bit about our service. So we operate

1 over a thousand square miles. We have bus, paratransit,
2 light rail, commuter rail, and we also operate the
3 railroad from the San Diego Orange County line down into
4 San Diego with freight, Metrolink, LOSSAN Rail Line, and
5 our COASTER train. These rules would not only impact our
6 rail operations, but also our other public transit
7 services.

8 So you've heard a number of concerns about it --
9 about the rule, so I won't repeat those. What I will do
10 is ask the Board for a couple of things. We've had a very
11 good collaborative relationship with staff to this point.
12 I would encourage you to give us more time to let those
13 discussions come to fruition. I think we're on a good
14 path and we can get there.

15 The second request is to allow more time for the
16 implementation of the spending account. I know that all
17 of the agencies are committed to and would like to work
18 towards an alternative compliance plan, but that will take
19 time. And the moment the spending account goes into
20 effect, we have to encumber that money, which affect all
21 of our operations, not just our rail operations, and
22 negatively impact public transit.

23 The third is to align the useful life
24 requirements to match our federal obligations. As public
25 transit operators, we have federal public -- we have

1 federal useful life obligations that we need to meet. So
2 we want to make sure we align those operate --
3 obligations.

4 I will say our agency has been proactive in
5 transitioning. Our fleet, I am proud to say, by the end
6 of next year will be a hundred percent Tier 4 and we want
7 to get to zero, but we need some help in getting there.

8 So thank you very much for your time and I hope
9 you will consider our perspective as you consider this
10 rule.

11 Thank you.

12 BOARD CLERK HARRINGTON: Thank you.

13 Next is Jan Victor Andasan.

14 JAN VICTOR ANDASAN: Hello. Can you hear me?

15 Cool.

16 Good morning, Chair, Board members, and those in
17 the audience. My name is Jan Victor Andasan -- no H -- a
18 resident of Carson and a community organizer and member
19 with East Yard Communities for Environmental Justice here
20 to advocate for a stronger locomotive rule.

21 I was born in the Philippines and had the
22 privilege to immigrate to the U.S. Where I grew up in West
23 Long Beach. Our apartment was located right next to the
24 Union Pacific Intermodal Container Transfer Facility,
25 ICTF. I thought it was normal growing up next to these

1 sites. I could go out of my house and see the railyard.
2 Walk to school, and I would have to walk through rail
3 tracks. Going out on the playground in my elementary
4 school, you could see the trains right across our
5 playground.

6 I did not know the health impacts that these
7 sites were ravaging on my body, my family, and my
8 community. My brother was conceived and born when we were
9 living next to this railyard. Growing up, I was
10 fascinated and anxious every night, because he would have
11 to get on his nebulizer so he could breathe. I didn't
12 understand why he needed this machine. I was eight years
13 old and this was normal to us. Every night for his young
14 life, he continued to rely on a machine just to breathe.
15 I didn't understand back then goods movement, trains,
16 ports, railyards.

17 But what I know now is that the poor air quality
18 that we were exposed to was not normal. It was
19 responsible for why we couldn't breathe. It doesn't have
20 to be a struggle for a child when they are just born into
21 this world to simply breathe. But my brother and I grew
22 up with asthma and it's become normal for many families
23 and communities adjacent to railyards and rail lines have
24 some type of respiratory issues.

25 At the beginning of the pandemic in 2020, my mom

1 was also diagnosed, on the 65 years she's been on the
2 planet, with adult asthma. We can prevent this. Our
3 communities can breathe cleaner air. We deserve to
4 breathe cleaner air. I came to the U.S. in '97. My
5 brother was born in '98. As much as the air has improved
6 in our state, and we have passed policies for cleaner air,
7 it's 2022 and we are still behind the curve. We deserved
8 cleaner air decades ago. And this is why we need you to
9 adopt this rule to make it stronger, to invest in
10 technology so that my body, my brother, and those will not
11 have to be collateral damage for profit.

12 We ask the Board to strengthen the rule in three
13 ways. Accelerate the zero-emission requirements up to
14 three years to 2027. The cost of doing business should
15 not be at the expense of my body and my community's. We
16 need to invest in technology. They exist. We need to put
17 the down payment for people that have been paying the
18 rice.

19 We include interim timelines for zero emissions,
20 because what is a plan without actual benchmarks to see
21 that it's happening, because we've been waiting way too
22 long.

23 And finally, reduce the idling limit to 15
24 minutes, because this is something that's become normal in
25 the communities and it should not.

1 Pass a stronger locomotive rule now. We cannot
2 wait any longer and you have the ability to do something.

3 Thank you.

4 BOARD CLERK HARRINGTON: Thank you.

5 Next is an Andrea Vidaurre.

6 ANDREA VIDAURRE: Ready? Okay. Cool.

7 Hi, Board members. My name is Andrea Vidaurre.

8 I am with The People's Collective for Environmental
9 Justice out of the Inland Empire of Southern California.
10 I feel actually pretty honored to be commenting on this
11 rule, because I've been hearing about railyards and
12 railyard pollution for many, many years. And I have met
13 many people that have fought I'm sure at this place years
14 ago for regulations on locomotives that are not here right
15 now. But I feel honored that I hope that they're seeing
16 this now from wherever they are.

17 I was here last month when we were discussing the
18 need to strengthen the Advanced Clean Fleet Rule. And
19 during my testimony, I touched on that although it's great
20 to see great goals on drayage, I wish that was the only
21 thing we had to worry about, but it's not. We've got
22 thousands of regional trucks, major freeways, mega
23 warehouses, and the worst actor in my opinion, the trains,
24 that travel everywhere around the Inland Empire poisoning
25 the entire region.

1 The graphs that you guys showed me about what
2 tiers are being used right now by the freight companies
3 anger me. They anger me, because we know the technology
4 exists. We know these companies have the money. We know
5 it's being done around the world. And most importantly,
6 we know verbatim from CARB that there is no safe level of
7 exposure to diesel.

8 So if there's no safe level exposure to diesel,
9 then why do we live, breathe, eat, and play in it? Why
10 don't -- do we let kids play with toxic materials? Then
11 why do we let them live in it?

12 There was a study done 10 years ago by the San
13 Bernardino BNSF yard that show that there are cancer
14 clusters in the region, cancer clusters next to day cares,
15 elementary schools, and homes. And it's not just a
16 statistic. Families have to go celebrate Mother's Day at
17 cemeteries. They carry round oxygen tanks. And the kids
18 grow up getting diagnosed with industrial allergies by the
19 age of three.

20 And this reality is -- and with this reality, the
21 railyards are growing, proposed railyards and tracks in
22 both Colton and San Bernardino and more throughout the
23 State. When do the millions of people living by these
24 rail yards throughout the State finally stop being taken
25 advantage of, finally get to close -- open their window

1 and not have soot cover their entire kitchen.

2 I want to go back to the Inland Empire to our
3 communities in San Bernardino and Colton and tell them
4 that we finally have an end date for diesel use on all of
5 these trains; that we're going to accelerate zero-emission
6 requirements for switcher locomotives by 2027; that we're
7 going to include interim timelines for zero-emission
8 locomotives and we're going to reduce the idling limit to
9 15 minutes, which by the way 30 minutes never gets
10 followed in these communities.

11 All railyard commute -- all railroad companies
12 provide a public service, and they have an equal
13 responsibility, as the State does, to the public to not
14 infringe on our right to breathe clean air. And I really
15 appreciate the presentation and the way that it was
16 presented, and I thank you for capturing it. Now, we just
17 need the Board members to push this forward for our
18 communities.

19 Railroad companies have been threatening to sue
20 for years, for decades, and it's nothing new. But what's
21 also isn't new is that our communities have been suffering
22 and that we have to exhaust all actions to fight climate
23 change. So no more time wasted. Thank you.

24 BOARD CLERK HARRINGTON: Thank you.

25 Ma Carmen Gonzalez.

1 MA CARMEN GONZALEZ (through interpreter): Good
2 morning, Board. My name is a Ma Carmen Gonzalez. I'm the
3 organizer for the Collective for Environmental Justice,
4 and I've been a resident of San Bernardino, California for
5 17 years. And for this entire time, I've been a witness
6 to how bad air pollution and contamination has been taking
7 lives. As many of you know, we've had the worst air
8 pollution in our area in the Inland Empire. And that's
9 why I'm here today. I'm here and this is my objective
10 today is to ask you, CARB, please to accelerate the
11 requirements for zero-emissions for locomotives to change
12 the requirement year from 2030 to 2027.

13 And I say this because there's no -- there's no
14 limit or date on illnesses. Many people in our
15 communities continue having these health problems. We are
16 seeing asthma. We're seeing respiratory problems. And
17 it's happening more and more, even premature deaths. And
18 so I ask you, please for provisions -- provisional
19 timelines for locomotives, 50 percent for all new
20 zero-emission vehicles -- excuse me, locomotives, by 2025.
21 And also establish a requirement -- or rather a rule that
22 locomotives cannot be idling for any more than 15 minutes.

23 And that's why we're asking CARB to do this. You
24 have the authority and the power to do this and we ask
25 please that financial gain not be more important than

1 human life. My son is starting to show the beginning
2 signs of asthma. And what can I tell him? I can't tell
3 him wait, because CARB's rules aren't strong enough right
4 now. What can I say? And I repeat it, health -- or
5 excuse me, illnesses have no date. They come when they
6 come. And so I think if other countries already have
7 zero-emission trains, why can't we? We're a first world
8 country. Why are we so behind?

9 Please no more deaths caused by contamination and
10 pollution. I ask CARB please more strict guidelines and
11 rules.

12 Thank you.

13 BOARD CLERK HARRINGTON: Thank you.

14 Next is Yasmine Agelidis.

15 YASMINE AGELIDIS: Good morning, Chair Randolph
16 and Board members. My name is Yasmine Agelidis and I'm an
17 attorney with Earthjustice. I'm here today with a caravan
18 of 15 community members from Southern California. We
19 wanted to be here in person, because we need to urgently
20 communicate to you just how Desperately we need to clean
21 up rail pollution in our state.

22 Diesel pollution is diesel pollution. It is
23 deadly whether it comes from freight trains or passenger
24 trains. All of these trains need to be cleaned up. To be
25 frank, the situation with rail pollution in California is

1 dire. It's been 14 years since there have been any new
2 regulations for rail at any level federal, State or local.
3 So we are really, really grateful that the time has come
4 for rule here now.

5 Staff have done a really great job and I really
6 want to commend them for building a strong rule, meeting
7 with community members, and updating advocates throughout
8 this process. This has been a model for how to develop a
9 strong regulation.

10 The benefits from this rule are truly staggering.
11 This locomotive rule will have the single largest NOx
12 emission reduction benefits in the entire State SIP
13 Strategy, and it's by a lot. It will be 63 tons per day
14 of emission reductions from NOx, even greater than the
15 Advanced Clean Fleet Rule.

16 This plus the \$32 billion in health benefits
17 means we absolutely cannot afford to delay adopting a
18 strong rule. Now, even with all these benefits, we urge
19 the Board to strengthen this rule to clean up diesel
20 pollution from all trains and that's because we're really
21 long overdue for any regulation.

22 First -- so I've got three asks. First,
23 accelerate the timeline for switcher trains to go to zero
24 emission. Now switchers are the oldest and the dirtiest
25 trains, and they're the ones that operate in railyards,

1 which are closest to communities. You know, these trains
2 traveled very short distances within the boundaries of a
3 railyard, just, you know, a few miles back and forth, so
4 they're really perfectly suited to connect to overhead
5 power lines that have a constant source of power or to be
6 powered -- or to be charged easily within the railyard.

7 Now second, set interim timelines for
8 transitioning locomotives to zero emission. Interim
9 timelines are going to be important to send signals to the
10 market and to create a smoother shift to zero emissions.

11 And then finally, reduce idling limits to 15
12 minutes. Pollution from idling diesel trains, whether
13 again from freight, or passenger, or industrial trains is
14 so harmful. I've heard stories of schools that are just,
15 you know, right in front of them, there's these trains
16 idling for a really long time and it's really shocking to
17 hear. It's one of the community's top concerns.

18 You know, there's no safe level of exposure to
19 diesel, period, so we're asking you to direct staff to
20 include these three targeted changes in the 15-day changes
21 to this rule. And again, we hope that EPA's response
22 issued last week that, you know, Chair Randolph you
23 mentioned at the start of this, we hope it gives you a
24 renewed sense of the need for California's leadership here
25 in cleaning up our air pollution, not only for our state,

1 but really to be a leader across the country. We need
2 you. Community is relying on you. Thank you so much.

3 BOARD CLERK HARRINGTON: Thank you.

4 Next is Yassi Kavezade.

5 YASSI KAVEZADE: Good morning. My name is Yassi.
6 And thank you so much for your attention today. I'm with
7 Sierra Club National and of course with the caravan
8 traveling from the Inland Empire and all over Southern
9 California here today. And I'm also here representing the
10 work that many community members before me worked on to
11 clean up rail and hold rail companies accountable for
12 their business practices.

13 In the South Coast Basin, we have over 18
14 intermodal freight facilities and that largest port
15 complex in the country, the San Pedro Bay. Locomotives
16 are novel technologies that need major upgrades to zero
17 emissions yesterday. I'm excited to see this rule growing
18 the market for zero emissions, more jobs, more grid
19 integration. And we cannot afford any more delays. We've
20 been working on this rule for years, so please keep it
21 timely.

22 Thank you, CARB staff, for capturing the effects
23 of locomotives. I think that was the first time I've seen
24 a video like being presented a part of the rulemaking
25 process. And that was such a incredible way of describing

1 our stories and putting us in -- and giving a face to the
2 regulation. So I hope that can be an ongoing trend.

3 This year alone, we've had experience over 120
4 dirty air days in the South Coast Basin for smog. So I'm
5 urging that CARB, EPA, and the air districts can also help
6 smaller rail companies transition soon with funding and
7 innovation technologies.

8 The Class 1 railyards have no excuse and can
9 afford using zero-emission locomotives in California now.
10 Our communities living near these intermodal facilities in
11 the greater state cannot stand idling, plumes of
12 emissions, around the clock noise, and ancient workings of
13 older technology. We are working hard for stronger
14 emission caps and zero-emission's infrastructure, and the
15 South Coast Air Quality Management District's Indirect
16 Source Rule. And we can help -- and we hope that CARB can
17 support zero emissions sooner rather than later.

18 As early as 2027, idling limit reductions from 30
19 minutes to 15 minutes and interim report backs from rail
20 operators on their progress towards zero emissions.
21 Today, you can see that we are a tiny but mighty group and
22 we hope to continue to working with you all on innovative
23 progress like this. We will continue to show up at EPA
24 and our local air districts do the right thing and grow
25 solutions for our communities that can be proud of us in

1 the next generation.

2 So I encourage you all to lean into your courage,
3 away from fear. No one is going anywhere. California is
4 the fourth largest economy in the world and we can
5 continue to do business and towards a better future. So
6 thank you so much for your time today.

7 BOARD CLERK HARRINGTON: Thank you.

8 Next, is Marcos Lopez.

9 MARCOS LOPEZ: Good morning. My name is Marcos
10 Lopez, a community member with East Yards Communities for
11 Environmental Justice. I live in Long Beach, California,
12 ground zero for dirty air from one of the largest ports in
13 California. I live on Loma Vista Drive. If you look that
14 up on a map, you'll see that behind my bike yard is the
15 710 freeway, followed by the Port of Long Beach, and
16 several other giant infrastructure projects that affect
17 the health of my community. This includes a railyard
18 leading to and from the Port of Long Beach.

19 I grew up in South Gate, California. My
20 elementary school, Independence Elementary, was next to a
21 Union Pacific Railroad. My middle school and high school
22 were next to the Alameda freight corridor. The emissions
23 these trains are releasing have followed me my entire life
24 in Southern California.

25 Your online purchases are killing me and my

1 community. This is not normal. I'm tired. I'm tired of
2 breathing in thick dirty air. I'm tired of my days being
3 wasted from allergy attacks. I'm tired of knowing that my
4 community will live significantly less years than the
5 affluent side of Long Beach. And I'm tired of having to
6 remind you all that my health and my community's health is
7 more important than the wants of a large corporation.

8 Thank you, staff, for developing the
9 zero-emission locomotive rule, but it needs to be
10 stronger. To ensure that community health comes first,
11 set a strong example and ensure that we have clean air. I
12 urge you to accelerate CE requirements for switcher
13 locomotives up to three years, provide interim timelines
14 for zero-emission trains, and most importantly, you all
15 need to reduce idling for locomotives to be limited to 15
16 minutes. Again, thank you.

17 BOARD CLERK HARRINGTON: Thank you.

18 Gem Montes.

19 GEM MONTES: I can't read off little -- the
20 little tiny phone, so I have to bring my whole iPad out
21 here. I've got the senior eyes going on.

22 (Laughter).

23 GEM MONTES: Gem Montes from Colton, California,
24 located in the Inland Empire in Southern California. I'm
25 also with this amazing caravan of people. I'm here as an

1 advocate, a citizen scientist, but most importantly as a
2 mother. I was previously diagnosed with breast cancer and
3 I live with chronic asthma and eczema. Additionally, five
4 of my six children are plagued with asthma and eczema.
5 This health history is common in the Inland Empire and I'm
6 one of the luckier ones.

7 Studies have shown that PM2.5 has been found
8 lodged in mother's placenta. It contributes to premature
9 births and low birth weights. And these toxins have been
10 found to contribute to high rates of ADHD in surrounding
11 areas. This is in addition to asthma, COPD, heart
12 disease, and more, and all of you are aware of that.

13 Our children are immersed in this toxic air.
14 Some schools are surrounded by active train tracks. They
15 go to school, play sports, engage in extracurricular
16 activities and simply hang out with friends in this
17 solution. Their young lives are threatened on a daily
18 basis. As a child with asthma, you often have asthma
19 attacks at night when 2.5 concentrations are high and you
20 miss school the next day, parents miss work, you struggle
21 in school for missing so much time, and probably will not
22 continue on to college. And ultimately, you'll be forced
23 to take a job that will continue to harm your health and
24 the cycle continues.

25 We need your help. We need this rule to be put

1 into place sooner than later. We can't hold our breath
2 until the air is safe enough to breathe. Waiting for the
3 railroads to do their part is not an option or we wouldn't
4 be meeting here today. As I'm listening to railroad
5 representatives say that the technology is not available,
6 and submit as a viable excuse, I have to laugh.

7 We all know that when there's a demand for
8 something, incentives, and the desire to make money
9 propels people to action, and they figure out a way. I
10 mean, this is California. How much more time do we need
11 to make this transition? We all knew this was coming and
12 it's not okay for people to live with ill-health and even
13 die, while they see how long they can prolong the
14 transition to cleaner options.

15 This connectivity they are speaking of is far
16 from what type of connectivity we as people need to see.
17 Being connected for our communities at its bare minimum is
18 being able to breathe and to go outside, to walk in the
19 grass, and take your dog out. It's having parties at the
20 park. It's planting gardens. It's hiking in clean air.
21 Most days, we can't do that in the Inland Empire. We're
22 trapped inside our homes, while our homes shake by nearby
23 trains and soot invades our homes, our land, and our
24 bodies.

25 We should not bear the burden for the companies

1 who have no respect for the lives of my community and
2 other marginalized communities. All I've heard today are
3 excuses and to not save lives. Why are we making excuses
4 to not save lives. Is this really what we're debating
5 here? History has shown that these same railroads were
6 literally built by people of color.

7 This blatant disregard for life is disgusting. I
8 truly appreciate the opportunity to be heard and to
9 elevate community voices. Railroads let's stop the
10 whining. That's what I've heard. We need more money. We
11 need more time. We need more negotiations.

12 BOARD CLERK HARRINGTON: Thank you. That
13 concludes your time.

14 GEM MONTES: You know what, our communities need
15 clean air.

16 Thank you.

17 BOARD CLERK HARRINGTON: Next is Benjamin Luna.

18 BENJAMIN LUNA (through interpreter): As I arrived
19 here this morning in the hallways, I greeted someone. I
20 could feel the warmth in their hands. They even gave me a
21 hug, as if they were telling me welcome. Thank you for
22 coming. I'm going to look after you. And then I come
23 into the room and I her name right up there, Diane
24 Takvorian. Thank you so much for your love.

25 I'm so excited to be here in front of you, all of

1 you, because of your humanity, your desire to protect us,
2 but I also feel sad, sad and even disillusioned because of
3 those big, big companies that for their want of money,
4 they poison the air. They hurt us. And to them, we are
5 just numbers. I've been living next to the train tracks
6 for four years. And in those four years, my wife, my
7 children, now all of them suffer from allergies. We have
8 to deal with the sound, the noise, 24 hours a day. We
9 feel our house shake, as these tremendous machines go by
10 us. Just a few weeks ago, we had a meeting with
11 representatives of this company. They have three rails
12 already and they say we're going to build one more. They
13 didn't consult with us to ask if it was okay. They just
14 tell us we're going to do this.

15 And I tell them that pollution is horrible in our
16 area. And they say, no, we're within the limits that
17 we're allowed. I remember the name, Sandra. Can you send
18 me personally a study, something that shows the quality of
19 the air that I'm breathing? She said give me your email
20 and I'll send it to you. Weeks went by, nothing arrived.
21 The second meeting, she didn't come, but others did.
22 Again, give us your email, we'll send it to you, and again
23 nothing.

24 So then a company, a private company comes, does
25 the study and tells us, you're dying, little by little.

1 They're killing you little by little. To those companies,
2 we're nothing but numbers. And hence my emotion being
3 here in front of you. You are going to protect us. But
4 what I do tell my family, do we have to wait another eight
5 years, pray to God that we have good health and we don't
6 die during that time. I've seen friends die of lung
7 cancer and they don't even smoke. I am full of emotion
8 being here.

9 And interpreter correction, I'm excited to be
10 here, but I also feel sad thinking that when I go home,
11 thinking of all those people who are still being affected
12 by what's going on that we're just numbers. We trust you.
13 We put all our hopes in you. I am a citizen of this
14 country. I work and I fight every day to better my
15 community. May God bless you and bless this great
16 country.

17 Thank you for listening.

18 BOARD CLERK HARRINGTON: Thank you.

19 Next is Charlotte Mourad.

20 CHARLOTTE MOURAD: Hello, all. My name is
21 Charlotte Mourad. And I'm a student and academic
22 researcher at UC Berkeley at the air quality modeling
23 exposure lab. I'm here with The People's Collective for
24 Environmental Justice. And before coming to school in
25 Berkeley, my family and I are long-time residents of

1 Riverside when it was primarily rural.

2 Now, with the boom of E-commerce over the last 10
3 years, our Inland Empire region has become the shopping
4 cart of the America filled with warehousing, diesel
5 trucking, and rail to transport goods from the port to the
6 rest of the county. Due to this, my family and I
7 personally have over the years developed a slough of
8 symptoms due to high air pollution.

9 Currently, at my lab, I'm one of the lead
10 researchers conducting a study on PM2.5 exposure in the
11 community of West Side San Bernardino around the BNSF
12 railyard. It's a cancer cluster in that neighborhood, as
13 demonstrated by a Loma Linda study. Our participants have
14 the railyard in their backyard. And we know that PM2.5
15 causes the most harm to those living directly next to the
16 source and close by. Our preliminary results are showing
17 us that alarmingly high average concentrations in
18 participants' homes, as well as hot spots near the
19 railyard.

20 And you heard Layla Gonzalez earlier, there is no
21 safe PM2.5 exposure. Our participants are exposed to
22 extremely high levels of PM2.5 in their homes 24/7. And
23 despite this, BNSF was granted an expansion on their San
24 Bernardino railyard when they know though that there are
25 high concentrations of lung cancer right next to the yard.

1 I'm asking you to listen to the community members
2 that have come out here and that live next to these
3 railyards and to support a strong locomotive rule. We
4 need to electrify these dirty switchers and we need zero
5 emissions now. Peoples live are at stake and we need to
6 avoid these preventable deaths. We need a faster timeline
7 with 27 -- 2027 deadline for zero emissions instead of
8 2030. We should have had this a long time ago. We cannot
9 delay. The air is already toxic. Thank you.

10 BOARD CLERK HARRINGTON: Thank you.

11 Next is William Barrett.

12 WILL BARRETT: Hi. Good morning and thank you
13 for the opportunity to speak today. Will Barrett with the
14 American Lung Association.

15 And first, I want to say what an excellent
16 presentation that was, excellent framing of the health,
17 imperative of this process. I would say slide 9 was one
18 of the most impressive slide discussions I've seen in
19 quite a long time here. So thank you for that. It really
20 framed the fact that this is a health issue at its core.
21 There is widespread health support for moving forward with
22 this rule as quickly as possible. Asthma experts from the
23 San Joaquin Valley, health experts from Southern
24 California, physicians from Sacramento and the Bay Area
25 all voiced their support for this important rule. We

1 support it. We would also encourage you to take looks at
2 ways to strengthen the rule as have been outlined by
3 several speakers already, in terms of any opportunities
4 for timeline to adjust or the idling limits.

5 This proposal is really a necessary step to
6 address the immense harm caused by locomotive pollution in
7 California. We encourage you to move forward with it. We
8 encourage you to come back early next year to adopt the
9 rule. And ultimately, we're talking about reducing
10 idling, establishing trust accounts that support healthier
11 technologies and phasing in zero-emission technologies.
12 These are all critical public health interventions. Given
13 that we haven't seen strong effort to date from the
14 federal government on this, the fact that we still have
15 near -- or, I'm sorry, zero and pre-zero engines running
16 in California is outrageous. This needs to change. This
17 policy can do that.

18 The strength of the rule really is that all
19 locomotives are included. For more health protective
20 operations, we would oppose any delays or exemptions, and
21 again support any strengthen that the Board can do between
22 now and adoption.

23 As was discussed in the -- in the discus -- in
24 the presentation, this is the largest chunk of the SIP.
25 This is critically important to get these NOx reduction

1 benefits, but it's also a critical cancer reduction
2 opportunity. We saw 90 percent or more reduction in
3 cancer risk near the railroads -- railyards. This is
4 huge. This is exactly what CARB's job is to do protect
5 community health.

6 The locomotives -- or I should say, the Lung
7 Association's Annual Lung Cancer Report came out this
8 year -- this week, and basically what we saw is that
9 there's a huge disparity still in who's getting lung
10 cancer and the negative health outcomes. This policy
11 really gets to the core of that. We see it in the AB 617
12 communities calling for more attention to the locomotives.
13 It's a -- (coughing) -- excuse me -- and environmental
14 justice issue. It's something that needs to be moved
15 forward quickly.

16 I spoke for about two minutes. Every two and a
17 half minutes in the United States, somebody is diagnosed
18 with lung cancer. This policy can really get to the heart
19 of that and really help to make a dent in it. So thank
20 you very much. Move forward, adopt a strong rule.

21 BOARD CLERK HARRINGTON: Thank you.

22 Next is Angie Balderas.

23 ANGIE BALDERAS: Good morning, Board and
24 community. My name is Angie Balderas. I'm here on behalf
25 of the Sierra Club and I'm also here with the caravan. I

1 am here to encourage the Board to adopt a strong
2 Locomotive Rule. This rule, if adopted, will save many
3 communities and residents. We need zero emissions now. I
4 just can't help but get so pissed off and just mad just
5 listening from the speak -- to the speakers from one
6 through 12. All they talked about with their little scare
7 tactics and talking about we're going to leave California,
8 and -- they're so -- and everything they said and all
9 their points, not once did they give a dam about the lives
10 that are being -- they care more about money.

11 And they're so disconnected from community, and
12 you could -- I'm more than sure that most of them don't
13 even live in communities like the ones that I lived in,
14 and most of the folks here, and San Bernardino, and
15 Colton, because you're so disconnected that the whole time
16 they've been stuck on their phones, glued on it, instead
17 of listening to the community. If you really gave a damn
18 and you're willing to do whatever it takes to bring clean
19 air and get to zero emissions, where there's a will,
20 there's a way.

21 And, you know, what's more important -- what's
22 more alarming, it's not money, it's the lives of the
23 residents in the communities that I grew up in and worked
24 in, like Bloomington, like Colton, the west side of San
25 Bernardino. I lived by the railyards in Bloomington. I,

1 too, have a sibling with asthma. I also have respiratory
2 concerns. I worked in the west side of San Bernardino,
3 where I saw kids with asthma every day bloody noses,
4 co-workers dealing with respiratory concerns, and who are
5 no longer here today, and didn't even smoke at all in
6 their lives.

7 While working at -- I worked Alessandro
8 elementary. I lost all these co-workers who worked at
9 Alessandro Elementary and the Ruben Campos Center, which
10 is a park that's right in between the San Bernardino
11 Intermodal Hub. And you see this park, it's so sad.
12 Everything is dying all around. It's just a space where
13 the kids could go and play. But right along all these
14 polluted -- I mean, all this pollution, this heavy
15 pollution that they have to -- it's just a cluster --
16 excuse my language, but a cluster fuck of pollution that
17 these kids every day -- like there's no safe haven. Like
18 they go to school, they go home, it's pollution
19 everywhere.

20 And you know what CARB? We need you to do better
21 and be better. I'll tired of being in this toxic
22 relationship with them. If they want to go, let them go.
23 If they really love us, we could have both. We could have
24 zero emissions and healthy communities, we could have
25 both. So if they don't want to commit, if they don't want

1 to be, if they don't really love us, let them go. Get
2 your stuff and get on packing.

3 Thank you.

4 BOARD CLERK HARRINGTON: That concludes your
5 time.

6 Next is bill Magavern

7 BILL MAGAVERN: Good morning, Board members.
8 Bill Magavern with the Coalition for Clean Air. We have
9 an air pollution crisis in California and we need to
10 address it with the kind of urgency that that requires.
11 And that means especially cleaning up the freight sector.
12 And I think there's a perception among many that moving
13 freight by rail is actually cleaner than moving it by
14 truck. And unfortunately, as your excellent staff
15 presentation showed, that is not true, as long as the
16 railroads are using old dirty diesel locomotives, which is
17 what too many of them are doing.

18 And, you know, we supported CARB's petition to
19 U.S. EPA in 2017 and we will continue to urge the federal
20 government to take action against rail pollution. But the
21 very fact that it took them five years just to send you a
22 response to the petition, not actually doing anything, but
23 actually sending you a response, shows that we cannot
24 afford to wait for the federal government to act. And we
25 also can't rely on the railroad industry to voluntarily

1 clean up their act, because we've seen that what happens
2 is that many of them will actually bring in some of the
3 oldest dirtiest engines and use them in California spewing
4 toxic diesel exhaust on our communities.

5 As you've heard, this measure is by far the
6 biggest item in your State Implementation Plan approved
7 two months ago, when it comes to reducing NOx. And it's
8 essential for cleaning up the air, both at the regional
9 level, to meet those national air quality standards, and
10 at the level of community air protection, as we've seen so
11 many of the AB 617 communities have been calling for a
12 measure like this.

13 It's important that the rule includes all sectors
14 that use locomotives. It will save thousands of lives and
15 so we urge you to come back early next year considering
16 the strengthening amendments that have been proposed by
17 the community members who came up in the caravan, who
18 you've heard from this morning, and to take strong and
19 effective action early next year.

20 Thank you.

21 BOARD CLERK HARRINGTON: Thank you.

22 Daniel Barad.

23 DANIEL BARAD: Bill is so tall, it stinks going
24 after him.

25 (Laughter).

1 DANIEL BARAD: Daniel -- whatever, it's fine.
2 I'm -- okay. Well, this is now embarrassing.

3 (Laughter).

4 DANIEL BARAD: Good morning, Chair and members.
5 Daniel Barad on behalf of Sierra Club California and our
6 500,000 members and supporters throughout the state. We
7 strongly support CARB's efforts to curb locomotive
8 emissions through this proposed regulation and we
9 appreciate all the work that staff has put into this rule
10 and for the excellent presentation this morning. We have
11 heard this a lot today, but it bears repeating that this
12 rule is the single greatest source of NOx reductions in
13 the SIP that the Board adopted a couple of months ago.

14 Without this regulation, California will not be
15 able to comply with federal air quality standards and
16 millions of California -- Californians will continue to
17 breathe toxic air. We appreciate that this rule includes
18 a spending account which will transition locomotives to
19 zero emission. And as the spending account works to get
20 cleaner locomotives on the tracks, in-use requirement is
21 critical to making sure that the oldest and dirtiest ones
22 can no longer pollute California communities.

23 Finally, the idling requirement is a no-brainer
24 as it will reduce emissions that are often completely
25 unnecessary in the first place. For this regulation to

1 deliver its maximum benefits and give California a chance
2 of meeting its SIP commitments, all the measures in this
3 regulation must remain and they must apply to all
4 locomotives operating in California.

5 We also think that this proposal could be
6 strengthened by moving up zero-emission switcher
7 requirement by three years, setting interim zero-emission
8 sales targets, and reducing the idling limit from 30 to 15
9 minutes. These changes would further reduce emissions and
10 accelerate zero-emission deployment. But overall, we
11 strongly support this long overdue effort to reduce
12 locomotive emissions in California. We urge you to move
13 forward today with the most stringent rule possible and
14 then adopt this rule as early in 2023 as possible.

15 Thank you.

16 BOARD CLERK HARRINGTON: Thank you.

17 That concludes our in-person speakers for this
18 item. We will now hear from our Zoom commenters.

19 BOARD CLERK GARCIA: Thank you. And we currently
20 have 18 commenters in Zoom with their hand raised. And
21 just a reminder, the speaker sign-ups have been caught off
22 for this item.

23 So first, we will hear from Ian MacMillan,
24 Adriana Rizzo, Cynthia Pinto-Cabrera, Teresa Bui, and
25 Tracy Alves.

1 So Ian, I have activated your microphone. Please
2 unmute and begin.

3 IAN MACMILLAN: Good morning. Can you hear me?

4 BOARD CLERK GARCIA: Yes, we can.

5 IAN MACMILLAN: Great. Thank you so much. Good
6 morning. My name is Ian MacMillan and I'm an Assistant
7 Deputy Executive Officer for Planning at South Coast Air
8 Quality Management District. Thank you for the
9 opportunity to comment today.

10 We support CARB's overall proposed approach to
11 regulate in-use locomotive emissions. We recognize, of
12 course, that no single regulation can achieve all of the
13 emission reductions needed from railroad operations. The
14 partnership between local agencies, such as ourselves,
15 CARB, and the federal government is therefore critical to
16 achieve our legal requirements. We are encouraged to see
17 EPA's announcement that they plan to pursue new actions on
18 locomotive emission standards. We look forward to
19 continuing to partner with CARB in advocating for the
20 federal government to do more to reduce emissions from
21 sources like locomotives, as well as other sources
22 primarily regulated at the federal level.

23 We will continue to push for additional emission
24 reductions given the pressing need for achieving State and
25 federal air quality standards and the persistent air

1 quality impacts in our environmental justice communities.
2 As part of our effort to achieve the necessary emission
3 reductions, South Coast AQMD is working on proposed -- on
4 proposed -- pardon me, proposed Indirect Source Rules for
5 new and existing railyards as well as marine ports.

6 We believe our proposed ISRs can be built to work
7 together with the regulatory framework in CARB's proposed
8 In-Use Locomotive Rule. We look forward to continuing to
9 work with CARB staff as both agencies work to finalize our
10 rules in parallel.

11 Thank you.

12 BOARD CLERK GARCIA: Thank you.

13 Adrian -- oh, I'm sorry, it's Adriana.
14 Apologies. I have activated your microphone. Please
15 unmute and begin.

16 ADRIANA RIZZO: Hi, everyone. Thank you for
17 having me here today. My name is Adriana Rizzo. I am a
18 member of Common Ground California and also -- I am a
19 resident of Riverside -- live in Riverside, California.
20 It's really -- I'm really grateful to all my neighbors who
21 have come out from the environmental justice community
22 today to speak about the impacts of rail pollution on
23 their communities. I used to live within two blocks of
24 one of the heaviest BN -- BNSF rail line -- freight lines,
25 one of the heaviest in the country. I currently live two

1 blocks away from a passenger rail line. And I highly
2 support CARB's efforts to reduce emissions from -- from
3 freight and passenger rail. The Inland Empire is the
4 nexus of the company -- of the country's logistics --
5 logistics industry and consistently has the worst air
6 quality in the country and action is urgently needed to
7 make a difference on this problem, as we've seen from so
8 many speakers already.

9 I want to point out -- highlight -- so I support
10 a shorter timeline for implementation of zero-emissions
11 technology. I also want to highlight a particular
12 zero-emissions technology that is -- already has been
13 available for decades, is available off the shelf and is
14 widely used for freight -- both freight and passenger rail
15 in other parts of the United States as well as widely in
16 use internationally. That technology is overhead electric
17 catenary -- catenary lines. This is -- this is technology
18 that could be purchased today, if there is the motivation
19 to. We have no need to wait for other speculative lighter
20 duty technologies like hydrogen when this -- when this
21 technology is available today. And I would like to see
22 greater emphasis for catenary electrification in these
23 standards, as well as support for the implementation of
24 this infrastructure.

25 This is -- this is not only -- not only is it

1 available and easily -- and easily implemented, it also
2 has many advantages over existing diesel, such as faster
3 acceleration that would allow -- particularly for
4 passenger rail for us to have better service, which would
5 get -- which would addition -- provide additional
6 reductions to air pollution and greenhouse gas emissions
7 by enabling shorter travel times on rail that would get
8 people out of their cars, reducing vehicle miles traveled
9 from automobiles in addition to freight and logistics.

10 We really need to see changes made today. Our
11 lungs cannot wait and neither can the planet.

12 Thanks.

13 BOARD CLERK GARCIA: Thank you.

14 Cynthia, I have activated your microphone.
15 Please unmute and begin.

16 CYNTHIA PINTO-CABRERA: Thank you. Hello. Good
17 morning Chair Randolph and Board members. Cynthia
18 Pinto-Cabrera, Policy Coordinator with the Central Valley
19 Air Quality Coalition, or CVAQ, as CVAQ has worked as a
20 broad and adverse coalition unified in our advocacy to
21 restore clean air in the San Joaquin Valley for 20 years.
22 And as an asthmatic and somebody who has lived next to
23 train trucks for half their life, thank you for taking
24 action on a major source of pollution that has significant
25 impacts on the health of valley residents and for being a

1 leader on this issue.

2 This is a much needed regulation as the valley
3 continues to struggle to meet our clean air standards. We
4 support CARB adopting this regulation. And again as many
5 have stated, ask you to strengthen the rule with the
6 accelerated zero-emission requirements, the interim
7 timelines -- include interim timelines for new
8 zero-emission locomotives, and a 15-minute idling
9 requirement.

10 The valley is home to one of the railyards with
11 the highest diesel particulate matter emissions, Union
12 Pacific Railroad in Stockton. They've played a role in
13 contributing to Stockton asthma problems with the
14 community facing some of the highest asthma rates in the
15 State. And this is a similar situation for communities
16 across the valley with major railyards located in Fresno
17 and Bakersfield. And as the valley faces a growing goods
18 movement industry, this will likely just mean more train
19 traffic and more pollution for our health. We need
20 regulations like the In-Use Locomotive Regulation to
21 reduce dangerous emissions, emissions from locomotives
22 that severely impact the health of the communities in the
23 valley, especially those living in close proximity with
24 children and people of color being the most impacted by
25 the source of pollution, according to the CARB staff

1 health analysis.

2 They're being exposed to dangerous pollution that
3 has been directly linked to increased asthma visits, ER
4 visits, and especially in children and Black residents.
5 You know, CARB has the authority to regulate locomotives
6 pursuant to its duty to meet ambient air quality standards
7 under the Clean Air Act. And adopting the rule will
8 result in significant emission standards for a region --
9 for the San Joaquin Valley region and will help prevent
10 hundreds of hospitalizations and even early death. The
11 valley urgently needs regulations like this to protect
12 their health and well-being.

13 And again, thank you, staff, for all the hard
14 work on this. And we look forward to continuing on this
15 path of strong regulations.

16 Thank you.

17 BOARD CLERK GARCIA: Thank you.

18 Teresa, I have activated your microphone. Please
19 unmute and begin.

20 TERESA BUI: Great. Thank you. Good morning,
21 everyone. My name is Teresa Bui with the environmental
22 organization Pacific Environment. Thank you so much to
23 staff for all their hard work on this and thank you to the
24 leadership taken by the CARB Board in developing the
25 Zero-Emission Locomotive Rule. We are in strong support

1 of the rule. As was directed by the Governor in his July
2 letter, he was calling CARB to urgently move away from
3 fossil fuel especially in the electricity and
4 transportation sector. And this rule would definitely get
5 us moving in the right direction. The opportunity to
6 reduce NOx is huge. Staff's proposed Locomotive Rule
7 would result in a 63.2 tons per day and statewide NOx
8 emission reduction. And the health benefits from this
9 rule is also massive. It will be a reduction in about
10 3,200 fewer premature death and almost \$32 billion in
11 health benefits.

12 And second to ocean-going vessels, this rule
13 offers the single largest reduction of any other rules
14 included in CARB's State SIP strategy. So California
15 cannot afford to forgo any of these reduction. And with
16 that, we also ask the Board to strengthen the rule in
17 three ways. One is to accelerate the zero-emission
18 requirements for switcher locomotives up three years to
19 2027, instead of 2030. And then include interim timelines
20 for zero-emission locomotives, such as 50 percent of all
21 new switchers are zero emission by 2025 and 50 percent of
22 all new line hauls are zero-emission by 2030. And reduce
23 the idling limit to 15 minutes.

24 It has taken a decade to get this rule on the
25 books, so we're asking the Board not to delay any adoption

1 of the rule, and CARB has the authority to regulate rail
2 in this way, which U.S. EPA has confirmed in a response
3 filed last week.

4 So thank you so much for your consideration.

5 BOARD CLERK GARCIA: Thank you.

6 And I just wanted to note for our Zoom
7 commenters, if you have raised your hand after the cutoff,
8 which was 9:45, I'm going to lower your hand and ask that
9 you submit written comments to the docket. Now, the
10 docket will remain open until the conclusion of public
11 comment. And the website is shown on the screen, also on
12 the public agenda.

13 So after Teresa[SIC], we will hear from Mark
14 Mollineaux, Anthony Molina, Jason Jewell, Mark Twain, and
15 Christopher Chavez.

16 So Tracy, I have activated your microphone.
17 Please unmute and begin.

18 TRACY ALVES: Good morning. Can you guys hear
19 me?

20 BOARD CLERK GARCIA: Yes, we can.

21 TRACY ALVES: Okay. Perfect. Okay. So my name
22 is Tracy Alves. I am the Vice President of sales and
23 marketing for the Modesto and Empire Traction Company, or
24 MET. We are located in Modesto, California and are a
25 private family-owned business. We are a Class 3 railroad

1 serving approximately 30 rail customers. We connect to
2 two Class 1 railroads, Union Pacific and Burlington
3 Northern Santa Fe.

4 Our company utilizes nine 3 Tier locomotives.
5 These locomotives were upgraded to a Tier 3 in 2008 and
6 2011. All of our locomotives were Tier 0 at that time.
7 Our company wanted to be aggressive in reducing emissions
8 and were able to secure grants to become an early adopter.
9 In addition, we have two 1500 switch engines which are
10 Tier 0s and are rarely used. Our company has applied for
11 a CRISI grant to upgrade these two Tier 4 locomotives.
12 This is another proactive effort by the MET to further
13 reduce our greenhouse gas emissions.

14 Our company is not opposed to working towards
15 improved air quality in California, as is illustrated by
16 our previous efforts. However, we do have concerns with
17 the approach CARB has outlined in the rulemaking,
18 specifically with the useful life restrictions placed on
19 locomotives and the required spending account.

20 The CARB limitations on locomotives useful life
21 is a significant concern with this proposed regulation.
22 The Federal Railroad Reg -- Administration has established
23 a longer life of 30 plus years, which more accurately
24 matches the locomotive's performance. The cost to upgrade
25 these two Tier 1500 engines is approximately \$4 million.

1 Limiting a locomotive's useful life will force railroads
2 to start over again possibly before zero emissions are
3 available.

4 The required spending account will be detrimental
5 to our cash flow, as we operate under very slim margins.
6 We are a private company and we do not rely on taxpayer
7 funds to assist with safety, infrastructure, maintenance,
8 or human capital needs. This investment, coupled with
9 additional mandates to a spending account for future
10 improvements has long-term business impacts. Our railroad
11 proves the first mile and last mile service to our
12 customers. MET is fortunate to have Class -- access to
13 Class 1 railroads, providing our customers with
14 competitive options.

15 However, our customers do face the daunting task
16 of funding an alternative mode of transportation. Many
17 customers are set up to accommodate a mix of rail and
18 truck traffic. However, few, if any, have the footprint
19 to shift completely to truck transportation.

20 The typical railcar holds three and a half to
21 four truckloads and the average train is 100 railcars.
22 Without railroad service, California highway systems will
23 see additional tens of thousands of trucks per month in
24 the Modesto Area alone, which only causes more congestion
25 and safety concerns on the highway systems.

1 In closing, I'm thankful for your time today.
2 Our railroad, along many others, remains optimistic that
3 we can work together to reduce our emissions and still
4 allow businesses in California to thrive.

5 Thank you.

6 BOARD CLERK GARCIA: Thank you.

7 Mark, I have activated your microphone. Please
8 unmute and begin.

9 MARK MOLLINEAUX: Hi, there. My name is Mark
10 Mollineaux. I'm a member of Common Ground California as
11 well as several other organizations. I'd like to thank
12 all the environmental justice groups as well as everyone
13 else who came here. We have a very urgent issue here and
14 we're at a very important juncture. I think, at this
15 time, it's important we look at previous mistakes we've
16 made in other fields. There's a consensus at this point
17 that we've wasted a generation of rail projects by looking
18 at vaporware, such as -- such as the Hyperloop. This was
19 never a serious solution to our rail projects, but people
20 who didn't want to do things right, said, oh, we'll solve
21 it with this novel technology.

22 We're seeing that same mistake here in the -- in
23 the line of hydrogen and battery use, which is simply not
24 a serious electrification solution for main lines.

25 I think it's very important to look at harm

1 reduction in the short term, in the immediate term, which
2 is to say, even without zero emissions, we need to have
3 much cleaner trains in our railyards and so on. But we
4 can do both. We can make it cleaner and go all the way to
5 zero emissions now without novel technology. This is a
6 solved issue. Electrification running overhead wires,
7 possibly batteries in shorter distance places that can
8 recharge more frequently. But for main lines, overhead
9 wires, catenary's, are the only real way.

10 We can see this in projects, you know,
11 established passenger trains in the U.S. Northeast
12 corridor where we're seeing electrification for Caltrain
13 here. Even new projects such as the Denver commuter rail
14 is using electrification. To go internationally, look at
15 freight rail internationally in Japan, they run on
16 passenger rail and the Japan freight and national railway
17 is almost entirely electrified through overhead catenary.

18 And I think it's very interesting that the rail
19 industry lobbyists agree with this. They say that the
20 timetable for using hydrogen and/or batteries is simply
21 unrealistic. They're correct. We cannot use that as our
22 zero-emissions policy. We need to use what is shown to
23 work, electrification through overhead catenaries.

24 The way we approach this is up -- is up in the
25 air. Should we have subsidies? I think that's fair.

1 My -- the preferred solution I would have is to actually
2 look at making public the right of way and making this
3 basically a public infrastructure project. And that's I
4 think a fairly realistic option, but let's look at all the
5 things on the -- on the table.

6 The main thread here is we have no excuses for
7 not going to zero emissions at a much more just serious
8 and fast timetable than we're proposing here, which will
9 clean up our cities and just lead to a future that we need
10 desperately. So thanks for your time.

11 BOARD CLERK GARCIA: Thank you.

12 Anthony, I have activated your microphone.
13 Please unmute and begin.

14 ANTHONY MOLINA: Good morning, Madam Chair, CARB
15 Board members, and staff. Anthony Molina on behalf of the
16 California Grain and Feed Association. I will keep my
17 comments brief and would like to (inaudible) several
18 meetings of the grain and feed industry and taking the
19 time to come out and tour two feed facilities in the San
20 Joaquin Valley.

21 We appreciate our communication on the proposed
22 In-Use Locomotive Regulation and look forward to continued
23 negotiations on the regulations related to locomotive
24 reliability for feed operations, the spending account, the
25 small business hardship exemption and zero-emission

1 technology.

2 Thank you.

3 BOARD CLERK GARCIA: Thank you.

4 Jason, I have activated your microphone. Please
5 unmute and begin.

6 JASON JEWELL: Good morning, Chair Randolph and
7 members. My name is Jason Jewell, Managing Director for
8 the Los Angeles, San Diego, San Luis Obispo Rail Corridor
9 Agency, otherwise known and the LOSSAN Rail Corridor
10 Agency. And I'm here today representing the three
11 California Joint Powers Authorities that oversee and manage
12 Amtrak Pacific Intercity Passenger Rail Service. The two
13 other JPAs include the Capital Corridor JPA and the San
14 Joaquin JPA. As you all may be aware, the State of
15 California hosts three State supported intercity rail
16 corridors, the Pacific Surfliner Capital Corridor, and San
17 Joaquin's. These three corridors represent approximately
18 30 percent of the total national state supported intercity
19 passenger rail ridership and are all in the top five of
20 the most successful state support corridors in the nation.

21 We collectively support and share the goal to
22 reduce and eventually eliminate locomotive emissions and
23 have and will continue to work with Caltrans and other
24 operators in the State to take steps toward achieving
25 these goals. While we appreciate that CARB staff

1 presented a conceptual alternative to compliance under the
2 regulation, we continue to have concerns regarding the
3 commercial availability of zero-emission locomotives and
4 the federal requirements for useful life.

5 The CARB imposed useful life requirement for
6 locomotives is significantly shorter than federal useful
7 life standards that can last as long as 39 years for some
8 FTA locomotive grant programs and could force agencies to
9 repay federal funds if locomotives are retired early.

10 There are agencies who have procured Tier 4 locomotives
11 that have been in use only since 2018, which will affect
12 agency's ability to retire these vehicles within the
13 regulation. The JPAs are working with Caltrans to fully
14 convert the remaining intercity fleet to Tier 4 by 2026.

15 We appreciate CARB's willingness to conduct an
16 analysis and reevaluate in 2027 and 2032. But we request
17 that a neutral independent market analysis be completed by
18 an informed third party before a rule is adopted by the
19 CARB Board. This analysis will help to better inform the
20 timelines, the funding, incentives, and technologies that
21 may be necessary to meet the needs of operators across the
22 state.

23 As the Board is aware, the California State
24 Transportation Agency and Caltrans are moving toward the
25 procurement of several zero-emission multiple vehicle

1 units to help kick-start the testing and transition to
2 zero emission, but the first for transits are not planned
3 to be available for operational testing until 2024 and do
4 not provide the range or seating capacity necessary for
5 intercity rail corridors. This highlights the need for
6 the technology to be developed which is capable of
7 operating the distances that will be required on our
8 corridors. Thank you for the opportunity to speak before
9 you today. And on behalf of the three California JPAs, we
10 are committed to working with CARB staff and request that
11 the Board direct staff to continue to engage with rail
12 stakeholders on this regulation prior to adoption.

13 BOARD CLERK GARCIA: Thank you.

14 Mark, I have activated your microphone. Please
15 unmute and begin.

16 MARK TWAIN: Good morning, Chair Randolph and
17 members of the Board. I'm Mark Twain. I represent the
18 Locomotive Emissions Watchdogs, a new national advocacy
19 group for practical public policy and incentives to
20 stimulate the rapid improvement of air quality around
21 freight railyards, passenger train stations, and urban
22 rail corridors.

23 Like many speakers in this forum today, we are
24 encouraged by the way the proposed In-Use Locomotive Rule
25 attempts to put a proportional user fee on the toxic air

1 pollution that the current locomotive fleet carries. And
2 then let the technology experts in the rail industry just
3 decide how to spend those funds to get the most emissions
4 reductions at the lowest cost. But we feel that the new
5 rule falls short in two ways.

6 First, the rule does not allow spending account
7 funds to be spent on the most promising ways to quickly
8 and cost effectively reduce emissions in the short term,
9 which is after-treatment retrofits and hybridization.

10 Further, it continues to rely on the faulty
11 emissions certification duty cycle that EPA came up with
12 and will undercount emissions from Tier 4 line-haul
13 locomotives used as switchers, and Tier 4 passenger
14 locomotives.

15 We request that the Board consider adding
16 emissions retrofits to the spending accounts, promote
17 hybridization of locomotives, and most importantly fix the
18 certification loopholes that certain Tier 4 switcher and
19 passenger locomotives are abusing.

20 We have submitted a detailed public comment
21 attachment as Item 37 that details these recommendations
22 and EPA certification loopholes.

23 Thank you for your time.

24 BOARD CLERK GARCIA: Thank you.

25 And after Christopher, we will hear from Steve

1 Birdlebough, Marven Norman, Beverly DesChaux, Brian
2 Yanity, and Oscar Garcia.

3 So Christopher, I have activated your microphone.
4 Please unmute and begin.

5 CHRISTOPHER CHAVEZ: Yes. Good morning, Board
6 members. This is Chris Chavez, Deputy Policy Director, at
7 Coalition for Clean Air. We have -- Bill Magavern already
8 mentioned that we are supportive of this rule, but wanted
9 to also chime in.

10 You know, I grew up near the ICTF facility and
11 currently live near the proposed SCIG site, which, if
12 built, will be adjacent to two schools, a park, and
13 hundreds, if not thousands, of residents. Like many of
14 the people who grew up in this region, I have asthma. And
15 I can tell you from experience, there isn't anything much
16 more terrifying than being woken up because you can't
17 breathe.

18 But as others have also noted, breathing problems
19 aren't the only threat to our communities. People in this
20 area and people in areas near goods movement hubs and
21 corridors suffer from elevated cancer risk. Just this
22 week, there was a funeral for a young person, a new father
23 actually in my community who died from a rare cancer. And
24 there's growing evidence that diesel particulate matter
25 increases the risk for the type of cancer he had. In

1 considering that diesel particulate matter is the number
2 one air toxic contaminant in our air, it makes you wonder
3 if he'd still be here if our air were cleaner.

4 We're well aware of California's failure to
5 attain air quality standards. Just yesterday, this Board
6 approved a redesignation of the Coachella Valley as being
7 in extreme non-attainment bringing it in the rest -- in
8 line with the rest of the South Coast Air Basin.

9 California needs to get every ounce of emission
10 reductions it can. And as we -- and as we've seen, the
11 transition to cleaner locomotives won't happen on their
12 own. Despite the commercial availability of higher EPA
13 tier engines, the vast majority of locomotives are still
14 from the dirtiest tiers and will continue to be so absent
15 action from CARB.

16 Furthermore, there are two proposed railyard
17 projects into the South Coast Air Basin alone. One, the
18 SCIG project I mentioned is in the middle of
19 Wilmington-Carson-West Long Beach AB 617 community. The
20 other, in Colton, is right next to the San
21 Bernardino-Muscoy AB 617 community. Additionally, a third
22 proposed facility in Barstow will likely increase traffic,
23 both rail and truck traffic, in the harbor region.

24 Through this rule, CARB has the opportunity to
25 achieve the largest NOx reductions identified in the SIP.

1 It also has the ability to protect the health of its most
2 vulnerable communities. For those reasons, we strongly
3 urge the CARB Board to approve of this rule and to make
4 sure that it is strong and not watered down between now
5 and when it comes back up before you all.

6 Thank you for your time.

7 BOARD CLERK GARCIA: Thank you.

8 Steve, I have activated your microphone. Please
9 unmute and begin.

10 STEVE BIRDLEBOUGH: Thank you for this
11 opportunity to speak on this issue. As you've heard from
12 many of the speakers, there are many, many problems that
13 affect the shift of locomotives. One of them is that you
14 can end up shifting some of the freight to less efficient
15 trucks. The second one is that you can shift the
16 locomotives to other states. The railroads are not simply
17 going to scrap these locomotives. They're going to use
18 them elsewhere. And so nationally, we're not having a big
19 effect on the reduction of GHG emissions.

20 The last one is that you can shift riders to cars
21 if you reduce the availability of trains. Several
22 speakers have suggested that we have to focus more on
23 catenary. Other countries are far ahead of us in that and
24 we need to catch up. I hope that you'll begin to put as
25 much effort into electrification of the rail system as

1 you're putting into this project.

2 Thank you.

3 BOARD CLERK GARCIA: Thank you.

4 Marven, I have activated your microphone. Please
5 unmute and begin.

6 MARVEN NORMAN: Hello. Yes. Good morning. My
7 name is Marven Norman. I am a resident of San Bernardino
8 and policy specialist with CCAEJ.

9 And in general, we are supportive of CARB and the
10 push to do more. And so we support the move to -- for
11 example, to put in idling limits. That would be very
12 useful for like our railyard here in San Bernardino, which
13 as a commenter mentioned earlier, studies were done. It's
14 the most polluting railyard in the state. And generally
15 is -- doing grave harm to the community in San Bernardino
16 and surrounded.

17 And we know some of the harm is happening to
18 other communities throughout the region. And so I think
19 we need to maybe step back and take a look at what's going
20 on. There are two issues that are being addressed really,
21 one is the impact of diesel pollution and the other one is
22 the overall climate change issue, carbon issue.

23 And so we -- we have the technology to solve the
24 diesel issue tomorrow by -- as others have mentioned,
25 stringing up wires above the trains and transitioning them

1 out of using diesel. And while it's true that they might
2 use the grid, they would be at least not polluting the
3 diesel pollution directly into the communities any more.

4 And then as we know, the grid is already
5 scheduled to become cleaner. They would become --
6 transition to zero emissions that direction. And so we --
7 it would be good to have CARB do more to help encourage
8 that solution, both because it is questionable if the
9 technology of the development of other technologies will
10 allow this time frame to be met, and also because we know
11 those other technologies are not as efficient as just
12 running straight from wire.

13 You know, there's talk about we need places to
14 charge battery locomotives. We could just charge them
15 like the whole time they're driving and that would just be
16 the same.

17 So it would great if CARB would start putting
18 funding into, as others mentioned, the -- a public
19 corridor essentially of electrification, and especially
20 salient with the addition of -- of new railyards. And
21 like -- for places like Barstow, for example, which are
22 supposed to be extensions of the port, where it sounds
23 like they would just running up and down from the port to
24 Barstow. You could put wires and run them the whole way.
25 A hundred percent no new impacts in our communities and

1 the transition to zero as the grid cleans up.

2 And finally, we support -- it also mentioned that
3 if the rule incentivizes -- punish passenger railroads for
4 getting increasing service out to get cars off the road,
5 that is also a step backwards. So hopefully that can be
6 fixed. Thank you for your time.

7 BOARD CLERK GARCIA: Than you.

8 Beverly, I have activated your microphone.
9 Please unmute and begin.

10 Beverly, are you there? It looks like you've
11 unmuted.

12 BEVERLY DESCHAUX: Yes, I'm here. I'm here.
13 Can you hear me?

14 Excuse me, one second

15 BOARD CLERK GARCIA: There's a --

16 BEVERLY DESCHAUX: I'm sorry. I had to
17 disconnect my other device. Beverly DesChaux, Electric
18 Vehicle Association of the Central Coast. I grew up
19 outside of Philadelphia, a block away from rail lines.
20 The smell was always there with these trains just passing
21 by. So that you state that there's no safe level of
22 diesel -- locomotive diesel. Why would you allow for
23 30-minute idling time?

24 I mean, just passing by, you could smell them. I
25 have asthma. I have allergies. They don't get worse when

1 you move away either. Once it's affected you, it's there
2 for your life. I have -- I'm -- I'm allergic to more and
3 more things all the time, even the gas heater in high home
4 I'm allergic to.

5 So, okay, there's that.

6 What I want to speak to also is biodiesel. While
7 the biodiesel may be solving some issue with the landfill,
8 taking the garbage, it's still burning. You're still
9 burning and still producing emissions, so I don't think to
10 replace it with that is a good idea.

11 We are -- someone stated it takes a hundred times
12 longer to charge it up -- charge up the vehicles. No, we
13 could have wireless technology and/or the over-the-head
14 wires, but right now, we are simultaneously needing to
15 decarbonize transportation and the grid, so they could be
16 working together. Solar panels along the entire rail line
17 could be the answer. You could charging up as you go by
18 with wireless technology. It would solve everything as
19 far as The emissions go.

20 The longer that you wait and postpone these
21 targets, the worst our issues become with the environment.
22 We are hitting tipping points that have no return. We
23 must address it as quickly as possible. The waiting
24 around is not -- is not an option. And I appreciate all
25 the work that you've done. You've done a tremendous

1 amount of work. And I admire you for that and I thank
2 you.

3 BOARD CLERK GARCIA: Thank you.

4 Brian, I have activated your microphone. Please
5 unmute and begin.

6 BRIAN YANITY: Good morning and thank you, Madam
7 Chair and Board members. My name is Brian Yanity. And I
8 live in Fullerton, a about a block from the mainline
9 railroad tracks.

10 Rail transportation is the most energy efficient
11 form of powered land transportation. Diesel powered
12 trains emit only a third of the greenhouse gas emissions
13 of petroleum powered auto and truck transportation per
14 passenger mile or ton mile due to the low friction of
15 steel wheels on rails.

16 CARB needs to support a holistic strategy that
17 recognizes the greenhouse gas emission benefits of rail
18 transportation in general by working with Caltrans and
19 other agencies to encourage mode shift from road
20 transportation to rail whenever possible, but we need to
21 push for rail electrification at the same time. CARB also
22 needs to encourage decision-makers and government agencies
23 to stop wasteful highway expansion, which diverts riders
24 from transit and rail and increases greenhouse gas
25 emissions, vehicle miles traveled, and fossil fuel use.

1 I am very concerned by CARB staff's presentate --
2 prescription for zero-emissions rail being entirely based
3 on two unproven technologies with serious limitations,
4 battery and hydrogen powered trains with no con -- serious
5 consideration given to the technology proven to work for
6 mainline rail, overhead wire electrification.

7 The CARB staff report states that zero-emission
8 line-haul interstate locomotive operation may be feasible
9 by the year 2035. They're off by about 120 years. The
10 first zero-emissions line-haul long distance electric
11 freight trains in this country were running on the
12 Milwaukee road back in 1914. It is off-the-shelf
13 technology proven to be economical for many different
14 types of rail operations all over the world. It is also
15 well established with many decades of experience and a
16 large diverse pool of vendors and equipment providers
17 worldwide.

18 It is unfortunate that Caltrain is our only rail
19 electrification cost benchmark in the U.S. and California
20 of late, because it's probably the most expensive rail
21 electrification project in the history of the world. It's
22 largely due to poor planning and construction project
23 management, and not really due to the overhead wire
24 electrification technology itself.

25 Recent rail electrification projects in Germany,

1 Denmark, and elsewhere have cost about \$1 million per
2 track mile or less than one-tenth of Caltrain's cost. And
3 these places have very similar material and labor costs
4 and stringent environmental requirements as California.

5 Battery and hydrogen rail propulsion is likely to
6 be practical only for specialized applications, such as
7 freight yard switching or lightly used branch passenger
8 lines, not mainlines with frequent trains. It is implied
9 by the CARB staff report that conventional overhead wire
10 electrification is too expensive to pursue and that
11 battery and hydrogen will be cheaper. However, battery,
12 and especially hydrogen, require very expensive supporting
13 infrastructure as well.

14 The laws of physics and the energy density of
15 hydrogen batteries also severely limit their range. They
16 can only go a small fraction the distance of diesel
17 powered train using the same size fuel tank. The rolling
18 stock up-front costs, capital costs of battery hydrogen
19 trains are much higher than for all electric trains. The
20 same is true for operating and maintenance costs.

21 Thank you.

22 BOARD CLERK GARCIA: Thank you.

23 And after Oscar, we will hear from Devon Ryan,
24 Tom Helme, And Dave Cook.

25 So Oscar, I have activated your microphone.

1 Please unmute and begin.

2 OSCAR GARCIA: Hi. Good morning. My name is
3 Oscar Garcia. And I represent Neste, the world's largest
4 producer of renewable diesel and sustainable aviation
5 fuel.

6 Neste applauds CARB's commitment to being the
7 world leader in addressing climate change and air
8 pollution in disadvantaged communities. We would like for
9 CARB to consider adding renewable diesel as a compliance
10 option in the in-use locomotive regulation. So that
11 significant emission reductions can be achieved more
12 quickly and without the need for new infrastructure.

13 Locomotive manufacturers are on track to release
14 renewable diesel locomotives that are shown to reduce PM
15 by up to 80 percent and NOx by 13 percent. The rail
16 sector has also expressed a strong interest in using
17 renewable diesel. And this regulation could create the
18 necessary incentives. So please consider adding renewable
19 diesel as a compliance option in the In-Use Locomotive
20 Regulation.

21 Thank you.

22 BOARD CLERK GARCIA: Thank you.

23 Devon, I have activated your microphone. Please
24 unmute and begin.

25 DEVON RYAN: Good morning, members. I'm Devon

1 Ryan, Government and Community Affairs Office with
2 Caltrain. Caltrain is extremely committed to the State's
3 vision of a zero-emission future. Our agency is currently
4 engaged in a \$2.44 billion electrification project that
5 will replace 75 percent of our diesel fleet with new high
6 performance zero-emission electric trains running service
7 from San Francisco to San Jose with revenue service
8 expected in fall of 2024.

9 However, our corridor south of San Jose to Gilroy
10 is owned by UP and that line will not be electrified for
11 sometime. Thus, we will still need to run diesel service
12 to those communities until we have the funding, testing,
13 and FRA approval for battery equipped electric trains,
14 which are currently not federally vetted for passenger
15 service in the U.S.

16 Caltrain also faces a funding gap with its
17 electrification project of \$410 million and a fiscal cliff
18 in terms of cash flow in June of 2023, given the impacts
19 of the pandemic.

20 The regulation as proposed is not in keeping with
21 federal requirements around useful life and replacement
22 for real vehicles, which is one of several issues we
23 detailed in our comment letter. It also requires the Z --
24 credits for zero-emission vehicles expire in 2030, which
25 means that after spending billions of dollars to electrify

1 as much as possible, Caltrain would still be subject to
2 the encumbrance of tens of millions of dollars in needed
3 operations funding.

4 While we appreciate that CARB staff did offer an
5 alternative proposal yesterday afternoon, that proposal is
6 still not consistent with federal requirements, meaning
7 the loss of millions of repayment and replacement costs,
8 the ineligibility for federal funding programs and a host
9 of other issues.

10 We and other agencies offered changes that would
11 help address these issues and we would like the
12 opportunity to continue -- to continue to work with staff
13 to pursue those changes. We understand that rail vehicle
14 procurement procedures, federal funding, and safety
15 regulations are different for passenger rail agencies and
16 that CARB staff was unaware of these requirements when the
17 proposed regulation was released. Caltrain and other
18 passenger rail agencies, which take cars off the road, and
19 are a net reduction of emissions in the State, have
20 reached out to CARB staff and offered to be a resource to
21 develop a regulation that could work for passenger rail
22 operators.

23 We really want to be -- to comply with this
24 regulation. We are doing everything we can to get to zero
25 emission, but we cannot get there with this regulation as

1 written, because we can't go against federal requirements.
2 And we do not have the funding or the federal approval to
3 move forward with replacing our remaining fleet. And so
4 we are asking the Board to direct staff to continue to
5 work with us and allow us the opportunity and time to
6 reach a path forward, so that we can be in compliance and
7 reach a point where this regulation can be successful.

8 Thank you so much for your time and consideration
9 and happy to answer any questions.

10 BOARD CLERK GARCIA: Thank you.

11 Tom, I have activated your microphone. Please
12 unmute and begin.

13 BIANCA LOPEZ: Good morning. My name is actually
14 Bianca Lopez. I'm not sure how Tom's name came up here.
15 That is my husband.

16 But I live in Stanislaus County. I am a resident
17 here and been here for a little over a decade. I was
18 raised in LA near the 710. My mom lived in the Exide
19 cleanup site in Maywood Huntington Park area and passed
20 away from cancer. I have two little boys and one of them
21 is coughing now. He is a five-year old with asthma, which
22 I transferred my asthmatic genes on to. And so I think
23 I'm here today to, you know, learn. I appreciate the
24 parti -- the presentation that you made. It was very
25 clear in one of the slides that you understand that our

1 health is at cost. It has the highest cost here.

2 And for many years, we've seen agencies fail to
3 implement and enforce laws that protect our communities
4 and our families.

5 My child has actually been missing school for
6 over two weeks because of his asthma. We live in
7 Riverbank, where the railroad is our backyard. And when
8 we first moved here, we called CARB to file a complaint
9 about the stench here, which gave us a headache after
10 smelling it for just a few seconds.

11 So that is my reality here and I am -- I'm here
12 in support of the rule to improve the railroad business
13 and also to call bullshit on the comments made by some of
14 these big corporations, like the Sierra Railroad Company
15 who claims that these are financial disasters. We can no
16 longer put profits ahead of people's health and lives.

17 I am also in a community where shortline
18 exemptions are not going to be acceptable. Shortline
19 companies who provide services to local and small
20 businesses may be should have some more incentives to be
21 cleaner, but they should not be exempt from this rule.

22 It is those shortline companies who are polluting
23 my communities here in Stanislaus County, Riverbank,
24 Empire, Modesto. And I understand that small businesses
25 will have a hardship to comply and maybe I am also in

1 support for, you know, support to them. I'd like to, you
2 know, just add that a 30-minute idling limit is
3 ridiculous. I can -- you know, I get reactions to the
4 smell within seconds of smelling what is happening in my
5 backyard. Thirty minutes is too much and maybe even is 15
6 minutes. But please continue to educate us on what you're
7 doing for infrastructure and setting milestone to reach
8 the goals that you are proposing in this rule.

9 Thank you.

10 BOARD CLERK GARCIA: Thank you. And can you
11 please state your name for the record one more time.

12 BIANCA LOPEZ: Bianca Lopez.

13 BOARD CLERK GARCIA: Okay. Thank you.

14 Alrighty. Next, we -- lastly, we will hear from
15 Dave Cook. So Dave, we are pulling up your slides and I
16 have activated your microphone. You can unmute and begin,
17 and It looks like your slides are up.

18 (Thereupon a slide presentation).

19 BOARD CLERK GARCIA: Are you there, Dave?

20 DAVID COOK: Yes. Sorry. Mute button got stuck.

21 Good morning, Madam Chair and fellow Board
22 members. My name is David cook and I am the CTO of Rail
23 Propulsion Systems. We are encouraged to see the Board
24 working on ways to put an externalized cost on toxic
25 locomotive emissions, while allowing the commercial market

1 to determine how to best spend those funds to lower
2 emissions.

3 Next slide, please.

4 --o0o--

5 DAVID COOK: One of the rail industry
6 applications that will be hardest hit by these regulations
7 are the Class 3 industrial facilities that operate very
8 old equipment sorting railcars at small railyards, like
9 the picture below. These are not only some of the
10 dirtiest locomotives, they typically operate in urban
11 disadvantaged communities.

12 Next slide, please

13 --o0o--

14 DAVID COOK: On the positive side, these small
15 railyards and industrial facilities would capture
16 switching locomotives or promising applications for
17 battery powered locomotives. RPS has been operating a
18 zero-emissions locomotive intermittently in the LA Basin
19 for over two years now. With incentive funding under the
20 CORE Program, this locomotive could go into regular daily
21 a service and be an example for other small railyards and
22 industrial customers. We are also working on an Energy
23 Commission funded project to wirelessly charge battery
24 locomotives.

25 Next slide, please

1 --o0o--

2 DAVID COOK: Like other public commenters, we
3 support the in-use rule, but believe the spending accounts
4 are too restrictive and overlook practical solutions. We
5 are also starting the process to apply for multiple CORE
6 vouchers in hope that CARB leadership staff move that
7 process forward quickly to put this zero-emissions
8 locomotive into regular daily service before the end of
9 the year.

10 Thank you for your time and I'd be happy to
11 answer any questions.

12 BOARD CLERK GARCIA: Thank you. And that
13 concludes the commenters for this item.

14 CHAIR RANDOLPH: All right. Thank you much very
15 much. Unless there are any factual issues that staff
16 needs to address, I will go ahead and close the record on
17 this item.

18 So this is the first of two Board hearings, so
19 I'm closing the record on the agenda item now. However,
20 if it is determined that additional conforming
21 modifications are appropriate, the record will be reopened
22 and a 15-day notice of public availability will be issued.
23 If the record is reopened for a 15-day comment period, the
24 public may submit written comments on the proposed
25 changes, which will be considered and responded to in the

1 Final Statement of Reasons for the regulation.

2 Written or oral comments received after this
3 hearing date, but before a 15-day notice is issued, will
4 not be accepted as part of the official record on this
5 agenda item.

6 Okay. I think we are ready for our Board
7 discussion. Board Member Riordan.

8 BOARD MEMBER RIORDAN: Thank you, Madam Chair.
9 First, let me just say to the staff, a very fine report.
10 And I would say that I'm very pleased with the
11 recommendations that you've made, particularly as it
12 relates to our transit agencies or our passenger
13 locomotives. The -- I have some concerns as you well
14 know, because I've talked to you about it, about working
15 with them to understand some of the difficulties of
16 requirements that are made upon them by, one, the federal
17 government, and just other -- other issues that make them
18 rather unique from any of the freight lines.

19 In thinking about some of these issues, useful
20 life is one of their issues that they've raised today.
21 And I'm thinking that we need to work that out. And it
22 may not be that we change our thinking, but ask the
23 federal government is there any opportunity for
24 understanding what we are requesting and not penalizing
25 the transit agencies for the useful of like a locomotive

1 purchased in the past.

2 Many of them, as they testified today, are
3 running almost totally Tier 4, and so I think we need to
4 the work with them and try to figure that ought, as well
5 as the other unique category that I think needs some work
6 on behalf of yourselves and the transit agencies is the
7 spending account issue, because if it does affect their
8 operations, and we want and encourage them to operate as
9 efficiently as possible, so that they can gather more
10 passengers, which makes it all work better for everybody,
11 we may need to make some adjustments. So I'm hopeful that
12 you will do that.

13 Otherwise, I'm very impressed with the suggestion
14 of the technology assessments. Those should be done, you
15 know, with real -- you know, complete. And when I say
16 complete, I think those studies need to interview all of
17 the stakeholders that are involved, and -- but those are
18 critical, I think, for the success of this regulation.

19 With that, I'll close and say thank you for
20 working with the transit agencies in California.

21 CHAIR RANDOLPH: Thank you. Dr. Sperling.

22 BOARD MEMBER SPERLING: Thank you very much.

23 So I've got three questions. The first one is --
24 it really is a question, is that we've heard a lot of
25 testimony today or some testimony today questioning our

1 authority. And if staff can explain what do we clearly
2 have authority over, what do we maybe have authority over,
3 I mean, with respect to like switcher locomotives, for
4 instance, shortline rail? That's my first question. Do
5 you want me to do all three or...

6 Did I freeze?

7 CHIEF COUNSEL PETER: So, Dan, why don't you do
8 all three. The first question was do we have -- what is
9 the limitations of our legal authority?

10 BOARD MEMBER SPERLING: Exactly, especially with
11 respect to --

12 CHIEF COUNSEL PETER: Everything we're proposing,
13 we think we have legal authority to. We have obviously a
14 disagreement with the railroads on how we're approaching
15 it, but we think that everything we have is totally
16 appropriate.

17 Thanks.

18 BOARD MEMBER SPERLING: Okay. You know, kind of
19 a question on that is how come we didn't move sooner on
20 some of these pieces, if we clearly had authority over it,
21 because, you know, we've been hearing about this for a
22 long time. And I remember -- I have these vague memories
23 of MOUs and so on.

24 CHIEF COUNSEL PETER: Right. There have been, in
25 my view -- let me -- unless. Okay. Let me just continue

1 on. I got involved in this actually a number of years
2 ago. And we've had different MOUs, as you're correct.
3 And the last ones were not finalized, because by the time
4 there were so many changes -- this is my personal
5 perspective from back, you know eight, ten years ago, that
6 the problem was that by the time the MOU was acceptable to
7 the railroads, that it really didn't move the needle at
8 all. And so the last set was not actually finalized. And
9 then since then, we've been looking at different kinds of
10 approaches.

11 And I want to give credit to the TTD staff and to
12 one of my lawyers Rhead Enion, who's sitting behind me,
13 for coming up with some really interesting spending
14 accounts and other kinds of approaches. And I think those
15 save the legal problems. Now, obviously the railroads
16 disagree, but I do think that part of the reason of these
17 proposals is that we have been looking at different
18 options, including asking the federal government to do
19 more.

20 So anyway, that's a longer answer than you
21 probably wanted, but I think, A, everything is authorized.
22 Undoubtedly, we'll get sued. Maybe they will decide not
23 to do that, but that's their choice. And I think over
24 time we've come up with some very innovative ideas that
25 solve the legal problems.

1 Thanks.

2 BOARD MEMBER SPERLING: Okay. So thank you.
3 That was useful. Actually, I would have enjoyed even a
4 longer one, but thanks.

5 The second question is about it's related to
6 this. It's -- these Class 1 railroads that are national
7 railroads, and they're running these trains, these
8 locomotives across the country, if we regulate them in
9 California, how does this work? I presume, you know, that
10 means there has to be charging stations everywhere outside
11 California or hydrogen stations. Am I missing something
12 here?

13 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:

14 Professor Sperling, this is Ajay Mangat, Manager
15 of the Freight Systems Section, and the SRIA, as we've put
16 it together, assumes Hydrogen stations and hydrogen
17 locomotives for Class 1 line-haul locomotives. That's the
18 current understanding, but that's also subject to change,
19 as technology develops.

20 BOARD MEMBER SPERLING: So that means -- so if we
21 adopt this rule, it means that hydrogen stations will have
22 to be created across the country for -- at all the
23 terminals and for the freight railroads, is that what
24 you're saying?

25 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:

1 Although we are focused on operations just in
2 California for this rulemaking, the SRIA does acknowledge
3 that there would be potential for locomotives to operate
4 in zero-emission configuration outside of California, but
5 we also don't cost that and we also don't include the
6 benefits from the health benefits outside of California.

7 BOARD MEMBER SPERLING: Okay. Okay. My last one
8 is really just re -- just supporting what Barbara -- Board
9 Member Riordan just said, and I'll just add a little color
10 to that. So I agree with everything she said and I really
11 strongly encourage staff to work with -- staff to work
12 with the transit operators. And I just add a little color
13 to that, that is, you know, this -- these are public --
14 you know, these are government public entities providing a
15 public service. Their ridership is down 50 percent, you
16 know, 25 to 70 percent across different operators. Their
17 revenue is much lower. They have been getting federal
18 support, but that's probably going to run out and
19 especially now with house -- with a Republican controlling
20 the House, even more likely that -- not to get any more
21 funding. They're providing a public service. And at the
22 end of the day, they've made much more progress than the
23 freight railroads.

24 And, you know, they're -- and all -- but
25 everything they've done is because they've gotten special

1 funding, you know, such as Caltrain. And Caltrain, as an
2 example is the leader, most of the locomotives -- electric
3 locomotives that have been bought were by Caltrain. And
4 even Caltrain, which is a service between Silicon Valley
5 and San Francisco, even Caltrain says they can't comply.
6 And, you know, given their precarious situation, it just
7 adds more weight to the -- to the, you know, concern that
8 Barbara -- Board Member Riordan has suggested and that I
9 support.

10 Thanks.

11 I guess -- I guess we should let -- before this
12 is over, it would real -- be really good to hear staff
13 response to this. I know others are going to raise this
14 as well. But sometime before this is over, I would like
15 to hear a staff response to this concern about the --
16 about the public -- the passenger rail systems.

17 Thank you.

18 CHAIR RANDOLPH: Board Member Eisenhut.

19 BOARD MEMBER EISENHUT: Thanks, Chair.

20 First, I need to hear from staff some -- I heard
21 testimony today regarding the potential conflict between
22 the funding -- the spending account -- the reserve account
23 and the qualifications for Carl Moyer. Is there a
24 conflict there between those two concepts, and if so, what
25 does it look like?

1 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:

2 Thanks for the question. I believe you're
3 referring to whether Carl Moyer grants could be included.
4 When -- if someone -- if a railroad is following the
5 spending account, the money that's being -- so they would
6 be on the hook for the emissions they created in the years
7 past -- or the year past. If they meet that obligation
8 beyond that, Carl Moyer funding could be provided. Does
9 that make sense?

10 BOARD MEMBER EISENHUT: Okay. I think I got it.
11 Thank you.

12 So I'd like to -- I'd like to -- first of all,
13 I'll just indicate, I am supportive of this -- of this --
14 of -- it's not a resolution yet, of the process. I have a
15 specific current -- concern about a very small tranche in
16 the industry, and that is the grain elevator operators.
17 And there are about two dozen in the state. I believe
18 staff has visited at least one of those facilities to have
19 a look, but they're a very specific use. They are small
20 in number but critical to the logistics of California
21 agriculture and food product. They pretty much move
22 everything coming in to the state and exiting the state.
23 And so it's a choke point.

24 They have a very specific and I think unique
25 operating methodology, where a unit train, a whole hundred

1 car train would show up at their facility. They have a
2 limited amount of time to unload that train, and that --
3 and then it goes back onto the mainline track. So they've
4 got to stop and start the whole hundred-car train with --
5 to unload each individual car. There's a lot of energy
6 requirement in that process and a specific amount of time.

7 And the reason I go through this is it's a --
8 it's a very specific locomotive need. And while these
9 folks are small in number, they're important. They handle
10 a high value of commodity, so they can't be classified as
11 a small business. And in the exemption process, they
12 would be large businesses, even though they're limited in
13 number.

14 And I highlight this, so that when we reach the
15 point in the -- in the exemptions, and which I remember as
16 27 and 32, and we're doing the technology assessment, that
17 we pay specific attention to the needs of these operators,
18 because I think they're unique and specific to this one --
19 one use

20 And in that same context, when we -- when we do
21 have influence on funding, since they are large
22 businesses, its -- you can't make an argument that they're
23 small businesses, because they are significant, but when
24 compared to the two dominant railroads, they're minuscule.
25 And I would hope that our funding processes would take

1 account some tranches and their ability to access funding
2 for subsidy -- for incentivizing or for specific unique
3 programs.

4 So those are my comments. Thank you.

5 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT: And
6 we absolutely appreciate that. If I could just have a
7 second. We did go visit two of those grain and feed
8 operations. And you'd be happy to hear that one of the
9 two, while we were there, had already been approved for a
10 grant and their Tier 4 locomotive was on the way. So it
11 was very encouraging for us on the team to see that.

12 Another thing is we have this open solicitation
13 currently with the federal government, with the Federal
14 Railroad Administration, \$1.4 billion solicitation closing
15 at the end of this month. But that funding amount is also
16 going to be around in subsequent years. So that's also
17 very encouraging for -- especially for smaller operators
18 that operate Tier 0, Tier 1, and Tier 2 locomotives to
19 move to clean technology.

20 CHAIR RANDOLPH: All right. Thank you.

21 Board Member Kracov.

22 BOARD MEMBER KRACOV: Okay. Thank you, Chair.
23 Thank you to staff. Thank you to all the stakeholders,
24 all the folks that caravanned up from the South Coast that
25 have been dealing with pollution from the railyards all

1 these years.

2 There is no doubt that we have to take action
3 today, if you look at the emissions inventories, for
4 example, in the South Coast. I mean, if we do nothing,
5 the locomotives alone are going to be a quarter or more of
6 our entire NOx carrying capacity in the south coast in
7 2037. In other words, the locomotives themselves, if we
8 do nothing - we don't get better here - are going to be 25
9 percent or more of what we're allowed to have for our NOx
10 inventory. Putting aside all the stationary sources, all
11 the cars and trucks, the aircraft, the ocean-going
12 vessels, I mean, we have a serious issue here with the
13 locomotives.

14 How bad is it? This measure is estimated in our
15 SIP and today to address 63 tons a day of NOx statewide,
16 11 tons a day in the South Coast, 11 tons a day in the San
17 Joaquin. I mean, those numbers are just absolutely
18 enormous. The data shows what a problem this is and that
19 more certainly has to be done. We see this as a
20 cornerstone strategy perhaps in our statewide SIP. We see
21 it as one of the key parts of the forthcoming South Coast
22 AQMP, which is going to include a proposed indirect source
23 rail[SIC] for new railyards. We're going to see it in the
24 San Joaquin SIP that Dr. Pacheco-Werner is working on.

25 We also saw some encouraging news on this

1 recognizing the extent of the problem and how we're never
2 going to get to attainment unless we address this from the
3 federal government with the correspond the wrote last week
4 with regard to the locomotive petitions and request for
5 rulemaking, which I think is very encouraging.

6 You know, as for the Class 1 railroads, Union
7 Pacific made more than \$6.5 billion in net income last
8 year. BNSF made almost \$6 billion in profit last year.
9 Yet, we look, and there's more or less close to no Tier 4
10 locomotives in the fleet in the South Coast. Almost
11 really nothing, maybe 5 to 10 percent of Tier 4
12 locomotives running in the South Coast in these Class 1
13 fleets.

14 There's so many adjectives that come to mind
15 about this situation. BNSF's SCIG project did not gain
16 community support down in the San Pedro harbor and hasn't
17 got off the ground.

18 Union Pacific's ICTF modernization went nowhere.
19 BNSF now has expansion plans in Colton and in Barstow. I
20 just do not understand why the railroads leadership cannot
21 see that the goods movement industry, their continued
22 success in California, needs far cleaner, far more
23 sustainable equipment in order to be successful. We need
24 you to grow. You will be able to grow. But you cannot
25 continue to have these kind of significant impacts. Can't

1 we see that cleaner locomotives, finding a new paradigm
2 here, getting out of court and working better together is
3 the only solution to your continued business success in
4 California. And that if we can do that, it's going to put
5 us on a much more sustainable foundation to grow our
6 economy and grow your businesses here in California.

7 All I can say is I would like to work
8 constructively with the American Association of Railroads,
9 with UP and BNSF, as a member of this body and at AQMD.
10 I've know Lupe Valdez from UP for 20 years. You know
11 where to find me. But I can tell you that in the two and
12 a half years I've served on South Coast, you folks haven't
13 reached out one time. In the two years I've been working
14 at CARB, working on this rule, which I'm so happy to see
15 today, you haven't reached out one time.

16 The Chair, the Mobile Source Committee at South
17 Coast that's considering the Indirect Source Rule, you
18 haven't reached out one time. And I'm just so hopeful
19 that we can change that paradigm working together to make
20 this intolerable situation improved.

21 As for Metrolink, very much appreciate the
22 extensive Tier 4 investments that Metrolink has made.
23 I've met wet Metrolink probably 10 times about this rule.
24 I would have liked a little bit of acknowledgement today
25 from Metrolink about the extensive effort that this Board

1 member and our staff have put to work with them. I
2 thought that the negativity that they spoke to today was a
3 little bit unfair and not acknowledging all the work that
4 has been done.

5 We've spent a lot of time trying to figure out
6 with them because of the Tier 4 investments, and this was
7 available to everybody in the rule, the alternative
8 compliance plan. We got assurance to them this week that
9 what does the alternative compliance plan mean for
10 Metrolink? It means that by 2028, they have to turn over
11 their remaining Tier 4 and -- Tier 2 engines, there are 15
12 of them, to Tier 4. So 15 locomotives would have to
13 turned over to Tier 4 by 2028. And the ACP means that
14 there would be no additional turnover until 2040. That
15 does not sound like an extreme rule to me, especially
16 since we're helping to fund the turnover to Tier 4 and
17 there are billions of dollars out there.

18 So I think there's some exaggeration frankly
19 coming from Metrolink and some of the others about what
20 the alternative compliance plan means for them. In
21 addition, we have put in there manufacturer delay
22 provisions. We've put in there a strong off-ramp, which
23 we usually don't do for this 2027 tech assessment. Read
24 it. It's a very strong off-ramp if the technology is not
25 available. We've even now offered to push the date for

1 full ZE into 2045. I mean, 23 years from now, well past
2 the Governor's Executive Order.

3 So I'm confident that with our staff working with
4 Metrolink and CTA and others, that we're going to come to
5 a good accommodation that treats everyone fairly, but
6 including the passenger rail and those that have made
7 these investments in Tier 4, that are making investments
8 in zero emissions, and that this alternative compliance
9 plan will work for them and frankly anybody else who can
10 apply, including the Tier 1s -- the Class 1s, but of
11 course they're so far from getting anywhere near where the
12 passenger folks are, that they're a different category
13 self-created.

14 So I'm confident, Chair, that we can work this
15 out. Happy to continue meeting with Metrolink. Board
16 Member Larry McCallon, Mayor from Highland, on the South
17 Coast and Metrolink Board is certainly making sure that we
18 are listening to Metrolinks' concerns. Happy to continue
19 to participate with them. And I, too, like Board Member
20 Sterling -- Sperling would like to hear, and maybe now is
21 a good time, what staff thinks about our approach with the
22 passenger rails. But for all these reasons, I very much
23 appreciate listening to all this today and look forward to
24 trying to finalize these rules as soon as possible.

25 CHAIR RANDOLPH: Okay. I think we'll do a few

1 more Board Members comments and then kind of dig into some
2 of the discussion. So let's go with Board Member Hurt.

3 BOARD MEMBER HURT: Thank you, chair. Coming off
4 the heels of this historic vote day for 2.6 billion in
5 incentive funding, I think that was a vote that was a
6 strong statement of our values. And this is another
7 regulation where we have to live our values of doing all
8 we can to clean up the air. Doing nothing in this sector
9 sooner than later is not acceptable, especially when you
10 look at the chart of dirty diesel and the engines used in
11 and around highly impacted communities.

12 I'd like to thank staff for bringing this reg
13 forward and being really thoughtful about this initial
14 draft and timing. I want to also thank all the public
15 commenters for sharing your lived experiences and just how
16 this regulation impacts you.

17 But with that said, I don't want to pile on too
18 much with Board Member Riordan and Dr. Sperling, but I,
19 too, have strong concerns around our public passenger rail
20 fleets. They're already at financial cliffs. They have
21 reduction of ridership, some of which these folks are
22 trying to do electric zero-emission, but already
23 struggling in funding. Folks know that I'm a big
24 supporter of mass public transit and I am also very much
25 interested in making sure we clean up air in the most

1 impacted communities. But in that -- in that same breath,
2 if there's a reduction or, worst yet, elimination of
3 service or a great increase in price, this is also
4 negatively impacting those highly impacted communities who
5 rely on passenger rail to get to jobs, et cetera.

6 So I'm hoping staff can meet with the
7 stakeholders some more to find more precision in the
8 regulations to keep these folks afloat and move us to
9 cleaner engines. We heard from Caltrain, folks in my
10 backyard. I know we celebrated the kick-off of their
11 electric project of I think it's 410 million and that's
12 not even the entire line. And there's still more funding
13 needed. And now we're fast forwarding other requirements
14 on them. So just again, I'd like to see the staff work
15 with the public transit space.

16 I also am curious from staff if they could talk a
17 little bit more around the idling and how they arrive to
18 the regulation section on idling, and maybe speak a little
19 bit to the public on why that piece is in the regulation.
20 And then also if staff could talk about market
21 availability and this concept of the Feds requiring
22 different laws and -- with passenger rails that it needs
23 to be United States purchased, and there aren't that many
24 manufacturers of trains. And the timing would make it
25 difficult to meet the regulation. So if staff could talk

1 about those things, that would be great. Otherwise, those
2 are -- those are all my comments. Thanks.

3 CHAIR RANDOLPH: Okay. Thank you. I'm making a
4 list of questions to follow up on.

5 Supervisor Serna.

6 BOARD MEMBER SERNA: Thank you, Chair. And
7 first, let me thank staff for the presentation. I want to
8 apologize for missing the first part of it. I also want
9 to thank everyone who took time to address the Board this
10 morning, especially the caravan of folks who traveled a
11 great distance to be here to impress upon us in person
12 their concerns. And again I've said this in the past
13 about other matters before us, hearing the personal
14 testimonies of people that either themselves suffer from
15 acute respiratory issues related to their local
16 environments where they work, live, and play is always to
17 me some of the most -- it's some of the most real and
18 convincing testimony to hear. It resonates with me,
19 especially having lost a number of family members to
20 disease. And so I want to thank you for being here.

21 I have a few questions to add to the Chair's list
22 here. The first is -- and again apologize for missing the
23 first part of the presentation. It may have been in
24 there. But having looked at the presentation slide deck
25 myself, I didn't see it. But do we have a comprehensive

1 cartographic impression of where switching yards are in
2 California relative to disadvantaged communities in
3 particular.

4 I would be suspect if this agency did not have
5 that, but it seems to me that that would be great to have
6 or at least reference a set of maps that shows us where
7 people are presiding, especially near switching yards.
8 And I say that because probably the most deeply concerning
9 slide of the presentation for me was slide 11. And slide
10 11, you'll recall, shows that Class 1 switchers, Class 3
11 industrial still continue to use substantial numbers of
12 Tier 0 and below locomotives. And so if there is
13 low-hanging fruit, so to speak, to be addressed, it seems
14 to me based on at least anecdotally suggesting that the
15 communities that live, work, and play round switching
16 yards in particular are really kind of dealing with almost
17 a source of pollution, a source of health compromising air
18 quality defects that, you know, we should be especially
19 focused on. And I know we are, but it would be helpful to
20 kind of understand again the geography of that, that is
21 involved.

22 Relative to the switchers, and the yards, and how
23 they really function as a non -- almost a non-mobile
24 source of pollution, I'd like to also add to what Board
25 Member Hurt mentioned in terms of better understanding the

1 idling section of the regulation, especially what is magic
2 about 30 minutes? We heard testimony and suggestions
3 about lowering that time frame. And I just don't know the
4 technology of locomotives well enough to understand that
5 they perhaps need time to warm up or what -- you know,
6 what's behind that figure. So that's another question,
7 specific question.

8 And then Ms. Agelidis brought up the issue of the
9 time frame for implementation again specifically relative
10 to switching yards. So I'd like to understand that if we
11 have some general agreement that because of the amount of
12 older diesel technology that is being used, especially in
13 switching yard applications, why we would not be even more
14 aggressive when it comes to that aspect of the -- of the
15 rule.

16 So those are my questions. Thank you, Chair.

17 CHAIR RANDOLPH: Okay. I can answer your first
18 one, which is before you came in, staff had a really
19 impressive video with maps showing the location and the
20 impact. So staff you guys make sure and get Supervisor
21 Serna the Video. It was -- it was very good.

22 Yeah, for sure.

23 And I have the idling on the list and then the
24 implementation timeline on the list.

25 Vice Chair Berg.

1 VICE CHAIR BERG: Good morning. I think -- oh,
2 we're almost at good afternoon. Just a second, we're --
3 okay. Okay. Thanks, I had some background noise.

4 I would like to add to the list. First of all, I
5 really want to thank everyone, including staff. Staff has
6 been extremely diligent in trying to really not only
7 understand, but come as -- well, actually, I'll use one of
8 Board Member Hurt's favorite savings that I like, and she
9 says often how are we going to thread this needle? And if
10 there's ever a needle in a haystack, and thread that needs
11 to go through it, the railroad has been number one since
12 I've been on the Board for 18 years.

13 And I know there's two other Board members that
14 will remember the MOU process to understand that to get
15 people to the table and try to make progress was
16 incredibly painful. And it was painful for the
17 communities, because it felt like we were buddying up with
18 the railroads to allow them to move slower. It was
19 painful for us, because we couldn't quite figure out where
20 the legal authority was. And although we made some
21 progress, it fell apart around 2010. And we have not been
22 really at the table with the railroad since, to my
23 knowledge.

24 And those are the national railroads. I think
25 again it is critical to under -- to acknowledge that our

1 transit partners have really stepped up. As we looked at
2 slide 11 and you look at the passenger, they have a
3 significant percentage of Tier 4 engines. And that truly
4 is impressive. They have worked hard diligently without
5 regulation utilizing funding to get those Tier 4 trains.
6 And that -- I want to recognize them for that.

7 Also, I do want to recognize the communities.
8 Being part of Boyle Heights for my whole working life --
9 and I went on tours. I saw those communities that are
10 backed right up against the railyards. It is all that
11 they say it is. And I agree that we do have
12 responsibility to address this and as quickly as possible.
13 The problem is it's trains. And quick and trains do not
14 move together. It didn't move when we were doing the MOUs
15 in the early 2000s and it still is complicated.

16 So with that background, Chair, I am really
17 interested in understanding specifically how getting to
18 Tier 4 in everything as quick as possible, what kind of
19 emissions reductions will we get going full Tier 4 and how
20 does that impact the SIP?

21 I am very supportive of the technical assessment
22 and the detail which staff has put around not one, as
23 Board Member Kracov pointed out, but two technical
24 assessments. And one before 2030 and one after, and very
25 supportive of that.

1 I'm also supportive of staff going back and just
2 taking a look at the idling again. We have the same
3 problem with truck idling. And 30 minutes, I agree, is a
4 long time. Fifteen minutes is a long time. But however
5 we can look at the data, as Board Member Serna has pointed
6 out, to be as aggressive as possible, I'd be really
7 interested on some restrictions as to where they can Idle.
8 I agree with Board Member Kracov and my other fellow Board
9 members. It is time for the national rails to become
10 more -- absolutely become community sensitive. And as we
11 as business people have to endure more inconvenience, some
12 more disruption that we have to figure out, that is on us.
13 And that is not the first time I have said this. And I
14 fully agree with Board Member Kracov's statements that the
15 rail -- the national rails have to come to the table and
16 they have to be more willing to do more for these
17 communities.

18 I also want to join my fellow Board members in my
19 concern for passenger, and specifically transit. I
20 understand I'm not -- I'm not supportive of giving anybody
21 exemptions out of the program. That said, we need to
22 align our useful life to all incentive programs, whether
23 they're national, and if we can get the Feds to change, as
24 Board Member Riordan suggested, that's a great idea, but
25 we need to be aligned on useful life as it pertains to

1 incentive and grant programs.

2 And then I am -- I understand the value of
3 putting a stake in the ground for 100 percent electric
4 fleets. I think that there -- for me, I agree with
5 actually all industry and I agree with the industry
6 position, including transit, that we don't know what that
7 looks like yet. And so that's why these technical
8 assessments are going to be critical. But specifically,
9 going on the option three going from Tier 4 at 2035 to 100
10 percent, you are going to greatly reduce the -- you're
11 going to strand assets. Now, if there are stranded assets
12 on public money, and we're saying that that is worth the
13 stranded assets, that's one thing.

14 But stranded assets at the dis-benefit of
15 transportation, that especially so many Board members,
16 and -- have stated how important transit is to our Scoping
17 Plan, to our communities, to reduce VMT, we do have
18 to not -- we have to consider this holistically. We
19 cannot create these regulations anymore in a silo, in a
20 bubble. We have to look at the alignment of what we're
21 doing because we are transforming everything that is
22 possible to a full new energy source, and that is on us.

23 And when it takes us eight years to figure out
24 what our authority is or in the case of when we're talking
25 about ACF, it's going to take us six months to come up

1 with an aligned program with our sister agencies that we
2 can, you know, put out there, things take time, and they
3 take time at the other end too.

4 So I will end with that I was extremely
5 encouraged by the stakeholders, the number of stakeholders
6 that were talking about multi-solutions, and pilot
7 programs, and were excited about our future
8 electrification or options to get us much more reductions
9 along the way. That was really, really exciting to me.
10 And we have heard bits and parts of that, over various
11 public testimony, but this was the first time that so many
12 people came out to testify with ongoing solutions and
13 things that people are working with.

14 So that to me was -- is the way to end my
15 comments is I am excited about the possibilities and
16 getting to the endgame. We don't have a crystal ball. We
17 can't lay everything out perfectly. I am telling
18 stakeholders you're going to have to work with us. We are
19 going to be here for you, and we have to reduce these
20 emissions for our communities.

21 Thank you, Chair.

22 CHAIR RANDOLPH: All right. Thank you.

23 Dr. Pacheco-Werner.

24 BOARD MEMBER PACHECO-WERNER: Thank you, Chair.

25 And, you know, first of all, thank you to staff. This

1 is -- this is so great. I'm so excited and thank you for
2 meeting me -- with me throughout the last couple months on
3 this, and trying to help me understand this a little bit
4 better.

5 Also, I want to thank everyone who came and
6 testified and just, you know, thank you for your continued
7 advocacy and use of your voice. Also, thank you to the
8 industry who has engaged our staff and helped them
9 understand your issues a bit better, and helped them
10 refine this regulation in a way that makes sense and is
11 able to be implemented.

12 I want to -- I had a couple of questions in terms
13 of some of the comments that were made. And so on one of
14 them, in terms of there was -- there was this comment
15 around the disparity between our useful life requirements
16 and then their federal grants. Can you -- can staff speak
17 a little bit more to that? And would there be a scenario
18 where they could sell those vehicles out of state and
19 still continue to be within the -- you know, not have to
20 pay money back as was said many times here today or some
21 other scenario where they could get around this federal
22 State requirement disparity?

23 My second question is around the technology
24 review, and -- in terms of what are -- what are we looking
25 at in terms of scenarios in the technology review? If

1 there is -- if some of what we're requiring isn't quite
2 ready by 2030, would it be that we require folks to do --
3 to purchase Tier 4? Just trying to understand that a
4 little bit better in terms of like what happens next or is
5 there a plan yet into what happens next?

6 And then the last one is around the public
7 transportation. The transit agencies, which has been
8 talked about a lot today. If staff could speak a little
9 bit about other State investments that are also happening
10 on the public transportation, because I thought we -- when
11 we just had our meeting -- our joint meeting earlier this
12 month, there was already a lot of investment that -- in
13 the updated -- the annual reporting CAPTI was saying that
14 was already underway. So I'm trying to understand where
15 there is a gap or if indeed there are already ongoing
16 opportunities that are helping accelerate this for the
17 public agencies -- transit agencies that take into account
18 all of this ridership and all of that issues.

19 So yeah, so thank you so much.

20 CHAIR RANDOLPH: All right. Thank you.

21 Board Member Takvorian.

22 BOARD MEMBER TAKVORIAN: Thank you, Chair. I
23 just want to express gratitude to a lot of folks starting
24 with staff. This is long overdue, and really complex, and
25 I think we all get that, not just from your presentation,

1 but all of the stakeholders. We appreciate -- I
2 appreciate Vice Chair Berg's reminding us of this journey
3 that probably started long be -- anyway before I got here,
4 but not before I got here on the planet.

5 (Laughter).

6 BOARD MEMBER TAKVORIAN: I want to express
7 gratitude to everyone who has participated in the last
8 several months, folks who are impacted by these emissions,
9 those who run the trains, and locomotives that we're
10 concerned about, and everyone who traveled here today to
11 be with us. It means a lot. I know we're all used to
12 Zoom and all of that. But to hear your stories in person
13 is, as Supervisor Serna said, I think moving, inspiring,
14 and I want to particularly appreciate Señor Luna's
15 comments, and those of many of you. But it just reminds
16 me, and I think all of us, that we're really entrusted to
17 deliberate and determine the path forward on these
18 critical health issues. And, you know, that's our job and
19 it reminds us how we really need to take this very
20 seriously, because the health impacts of this rule can't
21 be overstated.

22 We're talking about 400,000 tons of NOx
23 reductions and 3,200 fewer premature deaths. And I think
24 the doc here will tell us that's probably an estimate --
25 underestimate of -- and again, those are numbers, but

1 they're people. They're people that are in all of our
2 lives.

3 And I just -- I want to take just a minute and
4 say my local experience related to rail is typical for
5 many impacted communities, but I think it's smaller. I
6 want to acknowledge Board Member Kracov's discussion. I
7 know that South Coast and San Joaquin have much greater
8 problems. But just in San Diego, a tiny example, is that
9 there's an elementary school that's half a mile from the
10 park where they have to go to play, because there isn't
11 one blade of grass on the school grounds, because it's all
12 concrete and it's all temporary buildings.

13 So these children have to navigate a half mile
14 route, which means they cross a four lane truck route,
15 where they wait on the sidewalk while the trucks are all
16 going by. Then they have to cross the passenger rail
17 line, and then they have to cross the freight rail line.
18 And then they get to the park, where they're feet from the
19 port, where there are ocean-going vessels that are
20 delivering goods and emitting diesel emissions if they're
21 not plugged in.

22 So that little microcosm reminds me of what the
23 challenges are, but also what CARB has addressed. So we
24 have addressed ocean-going vessel. We are addressing
25 trucks. We are addressing cargo handling equipment. We

1 are addressing commercial harbor craft. So trucks -- so
2 trains, it's your turn. We have to take this seriously, I
3 think, and that's the next huge challenge that's in front
4 of us.

5 At this train yard, the trains are often stopped
6 and idling and I have questions about the idling. The
7 switchers are almost always in operation. So I have
8 questions about both of those. I want to look at what the
9 health impacts would be of making the switch from 2030 to
10 2027 for the switchers, and how we could really improve
11 health in that way, if we were to be able to make that.

12 I'd like to know about idling, as everyone else
13 has said, why -- what's magic about 30 minutes, can we
14 reduce it to 15 minutes, and what's the enforcement
15 mechanism? I mean, we have our own experience with
16 trucks, and the idling requirements there, and the lack of
17 enforcement because it's hard. I mean, because they move.
18 They idle. Somebody figures it out. They make the call.
19 Somebody shows up an hour later and they're gone. So
20 what's that mechanism going to be that will make this real
21 for our communities?

22 And then my last question is around alternative
23 compliance plans and how that -- what's the transparency
24 in that process and how will community be involved in
25 looking at those alternative plans, and ensuring that

1 these aren't off-ramps that leave communities still
2 impacted and exposed?

3 So those are my questions. And I want to also
4 express that I'm in support of the proposed rule. I want
5 to make it work and I appreciate the importance of rail in
6 our economy, and our ability to move people, and freight
7 in alternative ways. We do support transit, as Board
8 Member Hurt said, and its -- and the use of it. We need
9 it, but we recognize that the impact of these emissions is
10 often for the people who use transit and transportation
11 the most. So they -- they're the ones who are on transit,
12 but they're also sitting right next to the railyards, and
13 they're the ones whose health is compromised by it. So I
14 think we can make it happen. I have a lot of confidence
15 that we can make it work together, so thank you all.

16 CHAIR RANDOLPH: Thank you.

17 Dr. Balmes.

18 BOARD MEMBER BALMES: Thank you, Chair Randolph.
19 And because my fellow Board members have been very
20 eloquent, I think I can keep my comments short.

21 I did want to correct Vice Chair Berg. There
22 weren't just two other Board members that remember the MOU
23 process. I came on the Board in 2008. I'm a little
24 junior to Vice Chair Berg, Professor Sperling and Ms.
25 Riordan. But I do remember that painful process and I

1 actually was involved with this issue of idling before I
2 even came on the Board. As an air pollution physician
3 scientist, I was asked by LA County District of Attorney
4 -- District Attorney to weigh in about excessive idling
5 that was in violation of I think a South Coast Air Quality
6 Management District rule. I won't mention the railroad,
7 but it's one of the two big ones. And I, too, think, as
8 Dr. -- as mr. Kracov said as well as anybody, it's time
9 that the rail -- the national railroads come to the table.
10 You say that we should give you more time. We should --
11 you, that it's too hard. Well, where have you been for
12 the last two decades.

13 And so I'm very strongly supportive of putting
14 it -- our stake in the sand, as somebody said. We have to
15 move forward. Now, the specifics I think are totally
16 negotiable in my view, but you need to come to the table
17 and negotiate with use and not threaten lawsuits. What's
18 the going to do? It's just going waste money, your money,
19 and the public's money. So, you know, you probably will
20 go that route. I think it's really stupid and not helpful
21 to either the public in terms of health or the State in
22 terms of how we spend our money.

23 And I just have to say as -- again as the public
24 health expert on the Board, the amount of emission
25 reductions that this rule would put forth in terms of fine

1 particulate and NOx, as Ms. Takvorian just said, it's
2 huge. It's huge. And it's -- to respond to the eloquent
3 testimony from community members, it's real people that
4 get cancer. We're not just talking about asthma
5 Exacerbations, which is, you know, something that I care
6 deeply call about. Diesel exhaust causes cancer and we
7 have to reduce the risk of cancer for folks in
8 disadvantaged communities who live around these railyards.

9 And I agree with Supervisor Serna that we should
10 focus on the dirtiest engines, which are often the
11 dirtiest engines that I think are amenable to improved
12 technology, which are the switcher engines. That's what
13 really was involved in the idling issue that I helped the
14 LA County District Attorney about. So I don't even have
15 to go to the total health benefits that have been
16 monetized. Those are huge. But people's health should
17 come before profits. I agree with that. I don't want to
18 destroy the railroad industry. I agree with Ms.
19 Takvorian. We need it. But like really come to the table
20 and not just talk.

21 And then I would -- the last thing I like to say
22 is I do feel that we need to be -- we need to be as
23 helpful as possible, worked together with public transit,
24 which have the cleaner veh -- engines already. So I don't
25 know anything about Metrolink that Mr. Kracov talked

1 about, but I take Amtrak California to these meetings, and
2 I would like to make sure that we don't reduce service
3 unnecessarily by being too hard on public transit agencies
4 that are often budget limited.

5 You know, one example I would say, again I don't
6 know details. I may be misspeaking, but SMART, that's in
7 my neck of the woods, Sonoma, Marin, even though I live
8 in Alameda County. And I think SMART has made a big
9 difference with regard to the passenger side of SMART in
10 terms of getting people out of their cars coming from
11 Sonoma and Marin to San Francisco.

12 So I think I'll stop there. Thank you.

13 CHAIR RANDOLPH: All right. Thank you.

14 Board Member De La Torre, are you able to speak
15 now?

16 Okay. He was briefly in transit, so I think he
17 was unable to speak at the moment.

18 Okay. I agree with my colleagues that it's time
19 to move forward on this and make some real progress in the
20 locomotive sector. And the staff report was incredibly
21 eloquent and really helpful in providing real data that
22 kind of helps us understand what are our options here
23 and -- are here and what some of the challenges are.

24 So given that, I will now ask the list of
25 questions that I've been tracking so carefully. Why don't

1 we start with the useful life issue and the issue of
2 federal grant money and how that plays into all of us.

3 TTD CHIEF ARIAS: Okay. Thanks, Chair. Heather
4 Arias, Transportation and Toxics Division Chief. I'll
5 start and then staff and legal can add on if they would
6 like.

7 The first thing that I want to talk about is the
8 useful life, and whether or not we align with the federal
9 government. And the first thing that I want to point out
10 is that we first went to EPA's definition of useful life
11 and how they defined it in their regulation associated
12 with rail. That equates to approximately 18 years. And
13 we already talked about what fleets in California have
14 determined that that is too short, and as such, we put a
15 higher useful life in our rule of 23 years.

16 As it relates to federal grants, we have asked
17 for and received the information from the transit agencies
18 of the -- how the federal transit agency administers their
19 grants. The lives of those grants can be anywhere from 20
20 to 39 years. There are provisions in the language that
21 allows for prorated pay back. And as the engine gets
22 older, there's -- the equation is basically less payment.
23 Those engines can be transferred to other passenger
24 agencies. There are opportunities for the agencies.

25 This issue also came up under the Commercial

1 Harbor Craft Rule. You may recall that we discussed this
2 with the transit agencies at that time. So this is not
3 something that's new. The agencies have worked with us
4 under several regs on how we process the grants.

5 We've also had many discussions about the
6 structure of the rules. The alternative compliance plan
7 itself we believe would be a great mechanism for the
8 fleets to come in and work with us to ensure a longer life
9 for any one particular engine, as long as their fleet as a
10 whole is still achieving the reductions we needed for the
11 program.

12 Anything else that I'm missing?

13 Nope. Okay. That's it.

14 CHAIR RANDOLPH: Okay. Thank you.

15 Then I had a question about -- a few commenters
16 raised the question of renewable diesel and how that might
17 play into this. I think that's probably particularly
18 relevant to the alternative compliance plan, so would --
19 I'm curious.

20 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:

21 Absolutely. You did hear about renewable diesel.
22 And it is not disallowed within our regulation within an
23 alternative compliance plan. The -- right now, we have
24 information on one locomotive testing. And it is
25 promising to provide, I believe it's around a 30 percent

1 PM reduction as a drop-in fuel, and the NOx maybe at a
2 five percent range.

3 So one, with further testing of more engines, we
4 could get more of a consensus. It also -- if a -- an
5 entity came to us with an alternative compliance plan with
6 renewable diesel and had the testing data, we would
7 definitely encourage that and look towards that data.

8 CHAIR RANDOLPH: Okay. We have a follow-up on
9 that from Supervisor Serna.

10 BOARD MEMBER SERNA: Thank you.

11 So harkening back to yesterday, does that testing
12 include cold weather testing?

13 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT: The
14 testing that was performed was at Southwest Research that
15 I'm aware of. And it was done -- I don't think it was
16 under real life -- you know, it was test data, so I -- it
17 very -- I can double check on that one. Why don't I
18 double check on that one for you.

19 BOARD MEMBER SERNA: Well, I mean, based on the
20 fact we had the -- we had industry kind of clue us in on
21 some of the challenges as it relates to trucks using
22 renewable diesel, we might want to just make sure that
23 that question is asked and answered.

24 Thanks.

25 CHAIR RANDOLPH: Okay.

1 Next, let's talk about the 30 minute idling rule,
2 how that relates to enforcement, and what are the options
3 for a different idling time?

4 TTD CHIEF ARIAS: Yeah. Heather Arias again. So
5 the proposal --

6 CHAIR RANDOLPH: Heather, can you pull your mic
7 up a little bit and speak more directly into it.

8 TTD CHIEF ARIAS: Never been told I'm too quiet.
9 (Laughter).

10 TTD CHIEF ARIAS: This is the first time ever,
11 Chair.

12 (Laughter).

13 BOARD MEMBER KRACOV: That's for sure.

14 TTD CHIEF ARIAS: Yes. A lot of people right
15 now, they're listening are like, what?

16 Okay. Sorry. So Heather Arias.

17 And as it relates to the 30-minute idling, we are
18 adopting the federal rule as it stands, so we can
19 implement that. We are also going to be collecting a lot
20 of data once we adopt it and can then start enforcing it,
21 so that we can do further analyses to determine what would
22 be a lower threshold that we would recommend to the Board.
23 But at this point, we do not, ourselves feel like we have
24 possession of enough data to be able to recommend a lower
25 threshold. But what we could recommend and would

1 recommend at this point is that we include that as part of
2 the 2027 technology assessment, because we will have
3 several years of data that we can analyze and come back
4 and provide a recommendation to you, should we need to
5 amend that portion of the rule.

6 CHAIR RANDOLPH: Okay. Thank you.

7 And then I'm going to take a break from the
8 questions, because Board Member De La Torre is now online
9 and wanted to say a few words.

10 Are you there?

11 BOARD MEMBER DE LA TORRE: Thank you. I hope I
12 can be heard. I love the questions from my colleagues. I
13 had a few of those myself, so thank you for asking them.
14 On just overall, I think Board Member Berg hit the nail on
15 the head in terms of our experience. I came in when that
16 MOU -- I came onto the Board when that MOU was being
17 discussed and we were talking about it for a long time,
18 and then we were going to do it. And then it got pulled
19 because there was some analysis being done. And it turned
20 out that basically we were going to get no benefit from
21 that MOU. That was a good faith effort on the part of
22 CARB to interact with the railroads to get a deal done.

23 We heard today what the good faith got us. It
24 got us a number of threats with this regulation, which was
25 always going to happen. And so I'm very pleased that

1 we're finally here. There was someone who spoke who said
2 the grew up in South Gate near the railroad tracks there.
3 I grew up two doors away from those same train tracks, but
4 that's not why I want to do this. As a legislator, over
5 18 years ago, I was looking at issues related to
6 railyards, because of the commerce railyards that were in
7 my district and the Hobart Yard that was in my district.

8 And so all of this time there's been precious
9 little action regarding locomotives and rail in general.
10 So I'm very pleased that we're here. I'm very pleased
11 that the federal administration has voiced their views on
12 this effort. I think it is absolutely time that we take
13 action.

14 In terms of those who are complaining about the
15 technological feasibility, there are two technology
16 reviews built into this regulation. Two. Not one, two.

17 And secondly for the folks from the passenger
18 rail we met, I told them to keep working with staff. I'm
19 pleased that that -- those conversations are ongoing for
20 the 15-day review. But as I told them, compliance is not
21 an option. There will be some measures that need to be
22 taken. I think the 2035, 2045 offer that was made by
23 staff is phenomenal. I think they get a little longer
24 with their equipment in terms of getting to zero rather
25 than a polluting vehicle. That's -- I think that's very

1 fair. I think that's a very generous offer from staff.

2 So I was pleased to see that. I'm not saying
3 that that's the end-all be-all, but I want to see that on
4 the table as an option. And I want staff to continue to
5 work with them to work something out in the 15-day
6 changes.

7 With everyone else, you know, we will continue to
8 talk. As I mentioned earlier, there are these two
9 technology reviews. We are not the only government entity
10 that is moving in this direction. As with passenger
11 vehicles, as with heavy-duty trucks, there are many other
12 jurisdictions around the planet that are moving in this
13 direction. And zero-emission, whether it's hydrogen, or
14 battery electric, or something else that we don't even
15 know of yet are going to be the answer and are going to
16 get us to zero in the time frames we've laid out here.

17 So thank you, staff. I know it was very
18 difficult. I know it's been a long time coming and that's
19 why I'm very supportive of this measure.

20 Thank you.

21 CHAIR RANDOLPH: Okay. Board Member De La Torre
22 teed up my next question, which is can staff talk a little
23 bit about this initial proposal you all have discussed
24 with the transit agencies? Maybe describe it a little bit
25 and obviously there's going to need to be a lot more

1 discussion and work around that, but I just wanted to make
2 sure all the Board members sort of knew kind of what
3 everyone was speaking about as it relates to this concept.

4 TTD CHIEF ARIAS: Let me get closer again. Sure,
5 Chair. Heather Arias again.

6 And, you know, we've received lots of written
7 comments and testimony today asking for an additional
8 option that doesn't require the funds to be deposited into
9 a spending account, that ensures the full useful life for
10 an existing engine, that provides consistency for all
11 fleets in 2035, that provides more certainly for a plan of
12 15 years or more, that ensures that reductions for the
13 community, and most certainly regarding zero emissions.

14 To address these and some other issues that we
15 had heard, we recommended a third option for compliance.
16 This option would fall both under the spending account and
17 the in-use operations of the reg. Currently, the draft
18 allows for two options, so they would follow the reg or
19 the alternative compliance plan. This would be a third
20 option.

21 The pathway that we were suggesting would require
22 a fleet to operate only Tier 4 or cleaner engines by 2035
23 and all zero-emission operations by 2045. The reason that
24 we recommended this is because we believe this pathway
25 will ensure that we achieve the reductions necessary for

1 our SIP by the 2035 timeline as well as help us with our
2 carbon neutrality requirements in 2045.

3 It will provide the certainty that folks are
4 asking for. It would allow the existing Tier 4 engines to
5 operate for an additional 22 more years from today and it
6 allows time for zero-emission technology to advance before
7 fleets need to buy it to meet the 2045 deadline. It will
8 also allow fleets to take advantage of the unprecedented
9 amount of funding that we talked about yesterday, as well
10 as today, with the federal funds.

11 And as a reminder, as we've already talked about,
12 it would allow time for us to complete our tech
13 assessments in 2027 and 2032, which gives us the chance to
14 track the technology and come back and recommend changes
15 to this and the other pathways, if necessary.

16 CHAIR RANDOLPH: Okay. Thank you. And I
17 understand that there have been conversations. The
18 agencies aren't necessarily signing on the dotted line,
19 but you guys will continue to try to address any issues
20 they have and see if you can I reach a resolution.

21 Okay. Following up on that, a couple of the
22 Board members asked sort of what would be the health
23 benefits from -- if that third path were an option to move
24 Tier -- to Tier 4 by 2035, do you happen to have those
25 numbers handy in terms of what the early emissions

1 reductions options would be, as it relates to that?

2 TTD CHIEF ARIAS: As it relates to the third
3 pathway option?

4 CHAIR RANDOLPH: Right. As it relates to getting
5 to Tier 4 faster.

6 TTD CHIEF ARIAS: Well, overall, if everybody in
7 the reg were to choose the third option, we would lose
8 some near-term benefits, because if you follow the
9 spending account in the in-use requirement, there would be
10 turnover sooner than what would be required if they all
11 chose the third option and waited until 2035. However, we
12 would make up for that significantly by meeting zero in
13 2045, because as the rule is currently written, we would
14 not start requiring the zero-emission operation until 2030
15 and its -- and it phases in over time.

16 So lose some in the front end, but gain
17 significant towards the 2045 timeline. And it's really
18 hard to give you a range, because we really don't know who
19 would all take this, when they would turnover between now
20 and 2035, but that's the short of it.

21 CHAIR RANDOLPH: Okay. And I guess that relates
22 to both the technology assessment, right, because we are
23 still sort of trying to understand what the deployment of
24 zero emission is really going to look like. But it also
25 relates to the -- to the question from community about

1 accelerating the switcher transition to 2027, what are
2 staff's thought on that?

3 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:

4 Well, currently, within -- one thing that kind of
5 gets lost is within the spending account, there are
6 bonuses to move to zero emissions sooner, that are also
7 doubled if those zero-emission operation occurs around
8 disadvantaged communities. So in -- built within the
9 spending account, if someone were to replace a switcher,
10 which Supervisor Serna called the low-hanging fruit, you
11 know, switchers as we mentioned we think are going to be
12 the technology that are available zero emissions sooner.
13 So we'd rather have those go to zero emission than Tier 4,
14 specially for the long term. So if -- if there's -- if
15 switchers are deployed around our railyards, there'd be
16 credits within the spending account, which would reduce
17 the spending account obligation.

18 So I wanted to make that clear, that it's built
19 in. Staff thought about it within the design of the
20 spending account. So zero-emission credit and double
21 credit within disadvantaged communities.

22 BOARD MEMBER SERNA: Just a follow-up to that.
23 Thank you for the response. Do we have any idea how
24 effective that particular incentive is likely to be in
25 terms of the -- if I heard you correctly, the enhanced

1 credit value for switching to zero emissions sooner,
2 correct?

3 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:
4 Loaded question, Supervisor Serna.
5 (Laughter).

6 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT: But
7 at the same time, keep in mind that the switchers as you
8 saw in that bar chart are pre-Tier 0, Tier 0, a lot of
9 them, right? So those would have the highest charge,
10 because they have the most PM and NOx from -- you know,
11 that's what we're charging in the spending account, so
12 they would require the most obligation, right? So in
13 order -- if they were replaced by -- you would imagine --
14 naturally you'd want to get rid of the dirtiest and oldest
15 soonest. And this is another drive to move it to zero
16 emission. So in the grand scheme of things, it could be
17 really valuable.

18 BOARD MEMBER SERNA: Thank you.

19 CHAIR RANDOLPH: So basically, the way the
20 spend -- the whole spending account is structured, you
21 would want to move those switchers out. You'd want to
22 get -- lower your obligation and get extra credit for
23 transitioning those engines.

24 Okay. Excellent.

25 VICE CHAIR BERG: Chair Randolph, this is Board

1 Member Berg.

2 CHAIR RANDOLPH: Yes.

3 VICE CHAIR BERG: Yeah, I'm sorry. I had raised
4 my hand. I would just like an opportunity, when
5 appropriate, to circle back to Ms. Arias's chatting about
6 the Tier 4.

7 CHAIR RANDOLPH: Okay. Why don't we do that now.

8 VICE CHAIR BERG: Okay. So my question was
9 really about what are the benefits if we -- if on -- if we
10 were to look at that slide 11 and everyone were to go to
11 Tier 4 as fast as possible, that was my question.

12 TTD CHIEF ARIAS: Well, I'm sure that all the
13 stakeholders would very much disagree with our assumption
14 on this, but --

15 VICE CHAIR BERG: (Inaudible).

16 TTD CHIEF ARIAS: Let's pretend that money was no
17 object --

18 VICE CHAIR BERG: Right.

19 TTD CHIEF ARIAS: -- and that the industry
20 representatives went to the OEMs and ordered Tier 4, we
21 have seen the OEMs deliver hundreds of engines within a
22 year's time frame. We have not asked the OEMs though if
23 everybody were to turnover. So it would take probably a
24 few years, but I'm going to look to Ajay and see do we --
25 if -- I believe if we go all the way to Tier 4, we achieve

1 a 90 percent reduction from business as usual today.

2 VICE CHAIR BERG: Okay. That's really what I'm
3 looking for.

4 TTD CHIEF ARIAS: Okay.

5 VICE CHAIR BERG: That Tier 4 can give us a 90
6 percent reduction.

7 TTD CHIEF ARIAS: Yep.

8 VICE CHAIR BERG: The sooner we can do that, the
9 more impact there is to our communities and I think the
10 Board and -- and I think this is an important point. This
11 isn't the near-zero truck discussion. This is about
12 bringing reductions quickly. And nobody is arguing over
13 if the technology is there for Tier 4. And so I really
14 think it's worth a discussion by the Board to look at how
15 fast can we go to Tier 4. Thank you, Chair.

16 CHAIR RANDOLPH: Okay. Thank you.

17 Okay. Dr. Pacheco-Werner had asked about the
18 funding opportunities for transit agencies as it relates
19 to our discussion at our joint meeting a few weeks ago.
20 Do you have anything to add in terms of funding for that?

21 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT: It's
22 probably discussed a few weeks ago as well, but there is
23 the TIRCP program that has I think it's 3.8 billion or 3.6
24 billion available for transit agencies. I want to
25 acknowledge that all 3.6 isn't for equipment, right? It's

1 for existing projects, so it's kind of difficult to
2 decipher and it's also based on applications. So -- but
3 we did confirm that locomotive purchases could be eligible
4 costs for programs like that, so...

5 CHAIR RANDOLPH: Okay. All right. Thus far our
6 discussion has focused on the big guys and the transit
7 agencies. There were a couple of other categories that we
8 talked about, you know, the grain hauling that Board
9 Member Eisenhut mentioned, and, you know, some of these
10 smaller shorter haul operators. So can you talk a little
11 bit about how you see that transition working for those
12 kind of companies, and some of the issues that they
13 raised.

14 TTD FREIGHT SYSTEMS SECTION MANAGER MANGAT:
15 Yeah. So we've met with as many of these folks
16 as we can. We continue to meet with folks. The Class 3 I
17 think we have -- we're convening a meeting with Sierra
18 Railroad in a couple weeks. We couldn't fit it in this
19 week, but we've been in communication. Interested to see
20 alternative compliance plans potentially also for the
21 smaller industrial operators as well, and to understand,
22 you know, the -- when we went out to visit the grain and
23 feed, we got a little bit better understanding of their
24 operations.

25 So we continue to have that -- you know, we're

1 still under -- trying to understand. At the same time, as
2 we've mentioned, those federal funding opportunities we
3 want to make sure they're aware of it, the funding
4 opportunities as well. We sent out a listserv blast
5 yesterday to make sure the folks that we've been engaging
6 with know that there's a deadline coming up and have a
7 game plan.

8 So our -- my team is individually outreaching as
9 much as we can as well to understand. And the interesting
10 with these operators, they're also potentially most primed
11 to go to zero emission from a -- amount of operation they
12 do. So it's interest -- I'm interested to continue the
13 conversation and look forward to those.

14 CHAIR RANDOLPH: Okay.

15 All right. I think I hit all of the questions
16 everyone raised. Let me just double check.

17 Yes, I did.

18 Okay. So as we have discussed, there's a lot of
19 work to do between now and when this item comes back to
20 the Board, a lot of discussion, but I think we have -- you
21 have some really clear guidance from the Board that we
22 really do want to move forward. We want to make this rule
23 as effective and as useful as possible. So I think all of
24 us as Board members stand ready to help in any way we can.
25 Board Member Kracov in particular mentioned, you know,

1 being willing to engage with some of the transit agencies
2 and others out there. So please feel free to call on us
3 if you need any assistance and I appreciate your work on
4 all this.

5 Okay. I think that is it for this item.

6 The next item on the agenda is open comment for
7 those who wish to provide a comment regarding an item of
8 interest within the jurisdiction of the Board that is not
9 on today's agenda. The Clerk will call on those who have
10 submitted a request to speak card. And if you are joining
11 us remotely and wish to comment, please click the raise
12 hand button or dial star nine now.

13 Clerk, will you please call the commenter.

14 BOARD CLERK GARCIA: We have no commenters.

15 CHAIR RANDOLPH: Okay.

16 Well, with that, we will now adjourn to closed
17 session. As indicated in the public notice of today's
18 meeting, the purpose of closed session is for Board
19 members to confer with or receive legal advice from legal
20 counsel regarding pending litigation listed on the agenda.
21 After closes session, the Board will reconvene in the
22 auditorium to adjourn the meeting.

23 All right. Thank you very much.

24 (Off record: 12:41 p.m.)

25 (Thereupon the meeting recessed

1 into closed session.)

2 (Thereupon the meeting reconvened

3 open session.)

4 (On record: 2:11 p.m.)

5 CHAIR RANDOLPH: Please come to order. The
6 November 18th meeting of the California Air Resources
7 Board is now in session.

8 The Board met in closed session to confer with
9 legal counsel and no reportable action was taken by the
10 Board. The November 18th CARB Board meeting is now
11 adjourned.

12 Thank you.

13 (Thereupon the Air Resources Board meeting
14 adjourned at 2:11 p.m.)

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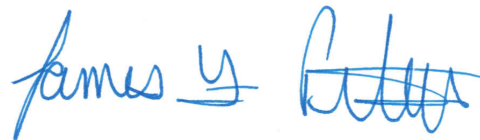
CERTIFICATE OF REPORTER

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

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 6th day of December, 2022.



JAMES F. PETERS, CSR
Certified Shorthand Reporter
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