

**DOCKETED**

<b>Docket Number:</b>	19-ALT-01
<b>Project Title:</b>	2020-2021 Investment Plan Update for the Clean Transportation Program
<b>TN #:</b>	232456
<b>Document Title:</b>	Transcript of 03-03-20 Advisory Committee Meeting
<b>Description:</b>	N/A
<b>Filer:</b>	Cody Goldthrite
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	3/18/2020 10:55:50 AM
<b>Docketed Date:</b>	3/18/2020

CALIFORNIA ENERGY COMMISSION

CLEAN TRANSPORTATION PROGRAM  
ADVISORY COMMITTEE MEETING

In the Matter of:	)	Docket No. 19-ALT-1
	)	
	)	
	)	Clean Transportation Program
2020-2021 Investment Plan	)	Advisory Committee Meeting
Update	)	Re: Clean Transportation
_____	)	Program

NOTICE OF ADVISORY COMMITTEE MEETING

CALIFORNIA ENERGY COMMISSION  
 THE WARREN-ALQUIST STATE ENERGY BUILDING  
 ART ROSENFELD HEARING ROOM - FIRST FLOOR  
 1516 NINTH STREET  
 SACRAMENTO, CALIFORNIA 95814

TUESDAY, MARCH 3, 2020

10:00 A.M.

Reported By:  
Susan Palmer

## APPEARANCES

COMMISSIONER:

Patricia Monahan, CEC Commissioner

GOVERNOR'S OFFICE

Tyson Eckerle, Governor's Office of Business and Economic Development

ADVISORY COMMITTEE MEMBERS:

Michael Pimente, California Transit Association  
Larry Engelbrecht, Engelbrecht Consulting  
Patricio Portillo, Natural Resources Defense Council  
Steven Cliff, California Air Resources Board  
Casey Gallagher California Labor Federation  
Morgan Caswell, Port of Long Beach  
Russell Teall, Private Citizen  
Jerome Carman, Schatz Energy Research Center/Humboldt State University  
Eileen Tutt, California Electric Transportation Coalition  
David Modisette, Modisette & Associates  
Rey León, The Latino Equity Advocacy and Policy Institute  
Mary Solecki, AJW, Inc.  
Alfred Artis, Consumer Reports  
Sandy Naranjo, Mothers Out Front  
Peter Cooper, California Employment Training Panel  
William Barrett, American Lung Association in California  
Bill Elrick, California Fuel Cell Partnership  
Matt Gregori, Southern California Gas Company  
Katherine Garcia, Sierra Club California  
Jimmy O'Dea, Union of Concerned Scientists  
Lori Pepper, California State Transportation Agency  
Tracy Stanhoff, American Indian Chamber of Commerce of California  
Daryl Lambert, Rising Sun Center for Opportunity  
Bill Magavern, Coalition for Clean Air  
Zac Thompson, East Bay Community Energy

APPEARANCES (Cont.)

ADVISORY COMMITTEE MEMBERS: (Cont.)

Ruben Aronin, Better World Group  
 Jose Tengco, BlueGreen Alliance  
 Jose Lopez, Private citizen  
 Richard Schorske, Zero Net Energy Alliance  
 \*Lucas Zucker Central Coast Alliance United for a  
 Sustainable Economy  
 Leslie Aguayo, Greenlining Institute  
 Kevin Hamilton, Central California Asthma Collaborative  
 \*Heidi Sickler, Silicon Valley Leadership Group  
 Robert Meyer for Peter Cooper, California Employment  
 Training Panel

CEC STAFF:

Patrick Brecht, Clean Transportation Program Investment  
 Plan  
 Kevin Barker, Fuels and Transportation Division  
 Charles Smith, Fuels and Transportation Division  
 Claire Sweeney  
 Tim Olsen

PRESENTERS:

Patrick Brecht, 2020-2023 Investment Plan for the Clean  
 Transportation Program  
 Jennifer Allen, Fuels and Transportation Division  
 Esther Odufuwa, Fuels and Transportation Division  
 Phil Cazal, Fuels and Transportation Division  
 Andrew Hom, Fuels and Transportation Division  
 Larry Rillera, Fuels and Transportation Division

PUBLIC COMMENT:

Jaimie Levin, Center for Transportation and the Environment  
 \*Jennifer Case, New Leaf Biofuel  
 \*Eleni Petrow, Self  
 \*James Dumont, Momentum  
 Reed Wildman, Self  
 \*Mark Roest, Self

I N D E X

	<u>Page</u>
1) Introductions and Opening Remarks	5
2) Presentation by CEC staff on the Clean Transportation Program, including proposed allocations included in the staff draft version of the 2020-2023 Investment Plan	
Patrick Brecht	17
Jennifer Allen	89
Esther Odufuwa	91
Phil Cazal	96
Andrew Hom	102
Larry Rillera	105
3) Advisory Committee discussion on the 2020-2023 Investment Plan	29, 108
4) Public Comments	182
Adjourn	196
Court Reporter's Certification	197
Transcriber's Certification	198

1  
2 P R O C E E D I N G S

3 MARCH 3, 2020

4 10:05 a.m.

5 MR. BRECHT: Hello. Good morning. Good morning  
6 everyone, my name is Patrick. Well, first of all I should  
7 say good morning to everyone here in the room, thanks for  
8 coming. And thanks to everyone who is joining us on WebEx.  
9 My name is Patrick Brecht and I'm the Project Manager for  
10 the 2020-2023 Investment Plan for the Clean Transportation  
11 Program. Anyway, I wanted to thank all of you for being  
12 here today. And I want to thank our new and returning  
13 Advisory Committee members and I will have some  
14 introductions in just a few minutes.

15 I just need to go over a few housekeeping rules  
16 or items first. The workshop is being recorded and  
17 transcripts will be available on the Energy Commission  
18 website. The restrooms and drinking fountains are located  
19 out at the main door here and just across to the left and  
20 there are vending machines just up the stairs in the  
21 second-floor atrium.

22 And finally, in the unlikely event of an  
23 emergency in which we need to evacuate the building please  
24 calmly and quickly follow Energy Commission staff -- yeah,  
25 staff employees I should say, Energy Commission employees -  
- to the appropriate exits. We will reconvene at Roosevelt  
Park, which is across from us here located diagonally.

1           At this point I'd like to turn over to our  
2 Presiding Member of the Clean Transportation Program Policy  
3 Committee Patty Monahan for introductions and opening  
4 remarks.

5           COMMISSIONER MONAHAN: Well, good morning  
6 everybody. I am so excited to see new faces and old  
7 friends as well. This is, as you all know we have  
8 refreshed the Advisory Committee. And we really tried hard  
9 to make sure that we were attentive to all the diverse  
10 stakeholders that we want to hear from as we figure out how  
11 to spend close to \$100 million per year to advance clean  
12 transportation in California.

13           And one of the areas that we were particularly  
14 excited to expand the Advisory Committee to include are  
15 community-based organizations. And we heard loud and clear  
16 from the Disadvantaged Communities Advisory Group that we  
17 needed to diversify. And that we need to think just more  
18 deeply about how we can use our investments to make sure  
19 that everybody benefits from clean transportation, not just  
20 people who can afford to buy brand-new personal cars. And  
21 so that's one of our key areas of emphasis going forward is  
22 equity, diversification, making sure that everybody  
23 benefits especially as we move towards an electric  
24 transportation future.

25           For the first time this Advisory Committee is

1 going to be informing us about a multiyear Investment Plan.  
2 So generally we publish an Investment Plan every single  
3 year, convene the Advisory Committee, go through kind of a  
4 laborious process. And this year for the first time we  
5 thought, "Well let's provide a little bit more market  
6 certainty going forward." And so I would say this  
7 Investment Plan compared to past years is going to be more  
8 important for setting this multiyear direction.

9 And we want to get feedback from you all about  
10 whether a multiyear direction makes sense. Like we're  
11 thinking, "Oh, this makes a lot of sense for the State of  
12 California," but we want to hear from you about what your  
13 opinions are about the pros and cons of that as well.

14 I want to make sure that we are as a group  
15 listening to each other, that we have a place where  
16 everyone's opinion is valued and matters and where we  
17 listen respectfully to what others are saying. I think  
18 we're not always going to agree about what we need at the  
19 end of the day, but we need to be able to listen to each  
20 other, adhere and adjust as we do.

21 I thought it would be helpful if we went around  
22 really quickly to say who we are, what organization we  
23 represent. And we have an icebreaker, so the icebreaker is  
24 -- and you can only do this in one sentence, so start  
25 thinking about what your one sentence is -- what your birth



1 order is and what you think that means for how you show up  
2 in a group. So I'll start.

3 Did you get that? I'll say it again, your birth  
4 order in your family, so were you the only child or are you  
5 one of six? Where are you in the family hierarchy and what  
6 that means when you show up in a group or in a work setting  
7 like this?

8 So I'll start just to make it easy for you. My  
9 name is Patty Monahan. I work at the California Energy  
10 Commission. I'm a new Commissioner and my one sentence is  
11 I am the youngest of seven, which means I'm very  
12 comfortable in large groups and I use humor and threats and  
13 whatever it takes to come to a resolution at the end of the  
14 day. And we're going to go around with Energy Commission  
15 staff as well, but it really -- one sentence, people, so  
16 really don't give us a paragraph.

17 MR. BRECHT: And your microphones have this  
18 little button there to turn on and off if you would like to  
19 speak.

20 MR. BARKER: Hi, Kevin Barker. I'm the Deputy  
21 Director for the Fuels and Transportation Division. I am  
22 the second of two, and that means I show up always wanting  
23 to prove that I can do something, just do it.

24 MR. SMITH: Hello. My name is Charles Smith.  
25 I'm the Office Manager in the Fuels and Transportation

1 Division. I was born two years after my parents had a cat  
2 that they dressed and clothed, and I'm not sure what that  
3 says about me.

4 MR. BRECHT: Again, my name is Patrick Brecht. I  
5 am the second child. I have an older sister and she had  
6 the pleasure of dressing me up in dresses and taking  
7 pictures, so I have a lot of pictures of me in dresses.

8 MR. PIMENTEL: Hi all, I'm Michael Pimentel with  
9 the California Transit Association. And I am a middle  
10 child, but I was bumped from my throne as a middle child by  
11 my little brother who was born 18 years after me. I think  
12 what that all means is that I'm comfortable with changing  
13 dynamics, willing to compromise, and be supportive of  
14 others in a group.

15 MR. ENGELBRECHT: Hello, I'm Larry Engelbrecht.  
16 The list has me as LA Community College District. I'm  
17 actually a contracted educational consultant and evaluation  
18 team leader for ASE Ed Foundation and NATEF. I am the  
19 first of two children and because I was always responsible  
20 for getting my sister to various things on time I learned  
21 to be prompt and on time.

22 MR. PORTILLO: Good morning, everyone. My name  
23 is Patricio Portillo with the Natural Resources Defense  
24 Council. I am the oldest of four, so I think I like to  
25 look out for everybody else. I think that's my role in the

1 group.

2 MR. CLIFF: Steve Cliff from the California Air  
3 Resources Board. I am the youngest of three. I have two  
4 older sisters, so I think that means I'm comfortable  
5 getting bossed around.

6 MR. GALLAGHER: Casey Gallagher, California Labor  
7 Federation, AFL-CIO, Workforce and Economic Development  
8 Department. I'm the youngest of two and I guess to torment  
9 and live the experience. I guess that leaves me to look  
10 out for the little guy.

11 MS. CASWELL: All right. My name is Morgan  
12 Caswell. I work for the Port of Long Beach. I am the  
13 youngest of three and my two older sisters are twins, so I  
14 am used to being wrong not once but twice. So I know how  
15 to pick my battles.

16 MR. TEALL: My name is Russ Teall. I am the  
17 oldest of four.

18 COMMISSIONER MONAHAN: Oh Russ, say what  
19 organization you represent.

20 MR. TEALL: Recreational Boaters, so I was the  
21 former president of the National Boat Owners Association.  
22 So I was always amazed at how easy my parents were on my  
23 youngest brother versus me.

24 MR. CARMAN: Hi. My name is Jerome Carman with  
25 the Schatz Energy Research Center at Humboldt State

1 University. I'm the oldest of one and I think I'm  
2 constantly trying to undo being spoiled.

3 MS. TUTT: Hi, I'm Eileen Tutt. I'm with the  
4 California Electric Transportation Coalition. I am the  
5 oldest of four and I think I come to this table with a  
6 great ability to manage constant chaos.

7 MR. MODISETTE: Hi. I'm David Modisette. I'm a  
8 private consultant. I'm the first of two children although  
9 my sister is eight years younger than I am, so I guess I'm  
10 used to getting my way.

11 MR. LEON: Rey Leon, youngest of seven and the  
12 seventh son. I guess I observed a lot from my siblings  
13 working in the field, but by the time it came to me I  
14 worked in the family restaurant. So I feel I've been  
15 serving my people my whole life. Thank you.

16 COMMISSIONER MONAHAN: What organization do you  
17 represent?

18 MR. LEON: I'm with the Mayor of the City of  
19 Huron. Also Executive Director and Founder of the Latino  
20 Equity Advocacy & Policy Institute, the LEAP Institute to  
21 make it quick. |

22 MS. SOLECKI: Hi. Mary Solecki. I'm with AJW a  
23 consulting firm, and we have different renewable fuel and  
24 vehicle technology clients. I am a child too, of two, and  
25 I have learned to manage upward.

1           MR. ARTIS: Hello. I'm Alfred Artis with  
2 Consumer Reports. And I'm a second of two and so I've  
3 learned how to cover up for other people's mistakes.

4           MS. NARANJO: Hello, good morning everyone. My  
5 name is Sandy Naranjo. I'm with Mothers Out Front. I'm  
6 the youngest of three, with my brother and I having a  
7 pretty wide age gap. So I have two nephews that I consider  
8 my brothers, so I'm used to being around love and having a  
9 crazy household. So I could handle anything.

10          MR. COOPER: Good morning, my name is Peter  
11 Cooper. I'm the Assistant Director at the California  
12 Employment Training Panel. I'm the fourth son and so I'm  
13 used to taking on challenges, especially when it has to do  
14 with food like Twinkies.

15          MR. BARRETT: Hi. Will Barrett with the American  
16 Lung Association. I'm third of four, and that tends to  
17 mean that I was in mostly an observational role for the  
18 rest of the sociology project in my house. And unlike  
19 normally, I'd usually sit on the corner of the table.

20          MR. ELRICK: Bill Elrick, Executive Director of  
21 the California Fuel Cell Partnership. I'm the oldest of  
22 two and my sister is a quiet but strong personality, so I  
23 think I've learned to be adaptable to lead or follow or  
24 anything in between.

25          MR. GREGORI: Good morning. My name is Matt

1 Gregori. I represent SoCalGas today. I am the middle of  
2 three boys, so I tend to stay quiet until the time is right  
3 and then I will strike with ferocity.

4 MS. GARCIA: Hi, I'm Katherine Garcia with Sierra  
5 Club California. I'm an only child and so I'm used to  
6 coming into situations bringing people together and being  
7 social and making new friends.

8 MR. O'DEA: Jimmy O'Dea, I'm a Senior Analyst at  
9 the Union of Concerned Scientists. Second of five, and I'm  
10 comfortable with something always going on in the house.

11 MS. PEPPER: Good morning. Lori Pepper, I'm the  
12 Deputy Secretary for Innovative Mobility Solutions at the  
13 California State Transportation Agency. I am technically  
14 an only child although my mother on many occasions felt  
15 like she had two children, myself and my father. So feel I  
16 got the best of both worlds and really growing up tried to  
17 disprove all those stereotypes of only children.

18 MS. STANHOFF: Good morning. I'm Tracy Stanhoff.  
19 I'm with the American Indian Chamber of Commerce. I'm the  
20 middle child of five children, so I kind of just go with  
21 the flow. But I'm Prairie Band Potawatomi and we're a very  
22 matrilineal society, so I'm a former chairperson of that  
23 and so it tells you kind of where we are in the family.  
24 We're four girls and we're all the bosses for our older  
25 brother.

1 MR. LAMBERT: Good morning, everybody. My name  
2 is Daryl Lambert. I work with Rising Sun Center for  
3 Opportunity. I am the youngest of five, much younger. My  
4 oldest brother is 18 years older than me, so Mr. Pimentel I  
5 hope your younger brother would say the same, but as a  
6 result of that I deeply respect to live the experiences of  
7 others.

8 MR. MAGAVERN: Good morning, Bill Magavern with  
9 the Coalition for Clean Air. I'm the second of four, so I  
10 learned how to thrive without getting much attention, and  
11 also learned the importance of getting to the food while  
12 it's still there.

13 MR. THOMPSON: I'm Zac Thompson. I'm with East  
14 Bay Community Energy. It's the CCA for Alameda County.  
15 And I am the youngest of three boys and although I always  
16 felt like I was more of a middleman, literally middle, I  
17 had to be in the middle of my two older brothers that were  
18 constantly fighting.

19 MR. ARONIN: Good morning. I'm Ruben Aronin with  
20 the Better World Group. We're a consultant group that  
21 works with environmental advocates and transit agencies in  
22 Southern California and statewide. I'm one of two, but I  
23 learned that beating people up didn't get me too far in  
24 life, so I've turned into more of a peacemaker now.

25 MR. TENGCO: Good morning. My name is JB Tengco.

1 I'm with the BlueGreen Alliance. I'm first of four so I'm  
2 used to sort of just jumping in and seeing where it goes.

3 MR. LOPEZ: Good morning everybody. My name is  
4 Jose Lopez. I am the fourth of six and I'm used to  
5 handling a lot of pressure. And today I'm representing  
6 Communities for a Better Environment and Urban Habitat.

7 MR. ECKERLE: I'm Tyson Eckerle with GO-Biz, the  
8 Governor's Office of Business and Economic Development.  
9 And I am the oldest and my sister is nine years younger.  
10 And I think by the time she came around I was more of a  
11 babysitter.

12 MR. SCHORSKE: Hi everyone. I'm Richard Schorske  
13 with the ZNE Alliance and the EV Alliance. I am the fifth  
14 of five and I think I get to notice everybody carefully and  
15 then make sure I get at least a little bit of attention at  
16 the end. Thank you, and this is the end.

17 COMMISSIONER MONAHAN: I just want to thank  
18 everybody. That was great and it was so fast, so kudos to  
19 all of you for really, really jumping in. And we're ahead  
20 of schedule, which is always nice.

21 I want to say before we begin that Charles is  
22 going to walk us through, or actually Patrick is going to  
23 walk us through the agenda. And we'll start the actual  
24 discussion of what we've put into our Draft Investment  
25 Plan. But I want to say that at lunch if anybody is really



1 spatially oriented and can figure out a better  
2 configuration for these tables we'll give you a little  
3 prize, all right? So anybody who is really good at that  
4 let me know.

5 Oh, hang on one second, because we forgot that  
6 there may be Advisory Committee members on the WebEx. So  
7 can we check to see if there's anybody on the WebEx who's  
8 on the Advisory Committee?

9 MR. ZUCKER: Am I unmuted now? Oh, great.  
10 Everyone, my name is Lucas Zucker. I'm the Policy Director  
11 at CAUSE, which is a social, economic and environmental  
12 justice organization in the central coast of California.  
13 Sorry I'm not able to be there today. Today is Election  
14 Day and we do a lot of work to get out the votes, so I'll  
15 be out canvassing today after this meeting is over. But  
16 I'm sorry I can't see you all and you can't see my face,  
17 but I am glad to be here.

18 I am the oldest of two with a single mom. And so  
19 I guess that means that I'm used to taking responsibility  
20 and taking blame for stuff. And I would say I think the  
21 growth order probably fills up less than how people show up  
22 in rooms like this than kind of the bigger social dynamics  
23 of race and class and gender and age. And so I'd just  
24 encourage everyone to be mindful of that as well.

25 MR. BRECHT: Okay. I'll start providing the

1 overview of the program in the Investment Plan followed by  
2 the Advisory Committee discussion as mentioned.

3 This will be followed by staff presentations on  
4 program funding areas with Advisory Committee discussions  
5 on each of the funding areas.

6 We will also take public comments after the  
7 Advisory Committee discussion. And since we have a lot to  
8 cover today we, and many interested stakeholders are  
9 present, we request that public comments are kept to two  
10 minutes or less.

11 If you would like to make a comment during the  
12 public comment period please fill out a blue card and  
13 provide it to Dorothy. Yep, there is Dorothy over there.  
14 And please specify on the blue card what subject you would  
15 like to speak on. And if you're participating by WebEx we  
16 would like you to comment please, and if you would like to  
17 comment, please use your "raise hand" feature. When we  
18 reach the public comment period we will call your name to  
19 speak and unmute you during the public comment period.

20 The Clean Transportation Program was established  
21 by California Assembly Bill 118 in the year 2007. The  
22 program is funded through a small surcharge on California  
23 vehicle registrations, which gives us a budget of up to  
24 \$100 million per year. California Assembly Bill 8 extended  
25 the program to January 1st, 2024. The program was

1 developed to provide funding support for projects that  
2 reduce greenhouse gas emissions within the transportation  
3 sector, which account for roughly 50 percent of state  
4 greenhouse gas emissions. The projects we fund also  
5 contribute to other complementary state goals. Included  
6 are improved air quality, providing investments in low-  
7 income and disadvantaged communities, economic development  
8 and reduce petroleum dependence.

9           Today we're here to talk about the staff draft of  
10 the 2024 -- excuse me -- 2023 Investment Plan for the Clean  
11 Transportation Program. This document is updated annually.  
12 It serves as the basis for the program's funding  
13 opportunities for each fiscal year. The Investment Plan  
14 lays out how the coming fiscal years' funds will be  
15 allocated across different categories such as  
16 infrastructure, fuels, technologies and supporting  
17 elements. The allocations reflect considerations of state  
18 and federal policies and regulations as well as  
19 coordination with other state agencies.

20           The document is vetted through a public review  
21 process that involves multiple iterations of the document  
22 in meetings with the Advisory Committee, one of which we're  
23 holding today.

24           And finally, the Investment Plan sets allocations  
25 for various funding categories and not individual projects.

1           There are a couple of new approaches within this  
2 year's Investment Plan and we touched on that earlier and  
3 it's worth calling out. First we've endeavored to broaden  
4 and diversify the Clean Transportation Program's Advisory  
5 Committee to better reflect California communities and  
6 provide increased representation of program beneficiaries,  
7 environmental justice communities, rural communities,  
8 tribes and others.

9           The plan now contains multiyear funding  
10 projections providing funding projections for three-and-a-  
11 half years, the remainder of our program, to base long-term  
12 and transformative goals, conveys funding certainty and  
13 provides transparency. We also try to make the documents  
14 more approachable.

15           The CEC released the Draft Staff Report just  
16 yesterday, March 2nd. We're holding our first Advisory  
17 Committee meeting today. Once we've incorporated feedback  
18 from this Advisory Committee meeting and reviewed all  
19 comments on the docket we then have an anticipated release  
20 of the Lead Commissioner Report in April. Followed by a  
21 second Advisory Committee meeting probably in May, the date  
22 and location of the meeting is still being determined. We  
23 then plan on bringing the Investment Plan Update to the CEC  
24 business meeting for approval in June.

25           Today the Energy Commission has provided over

1 \$865 million in funding through the Clean Transportation  
2 Program. This chart captures the total amount of funding  
3 allocated to various fuel types. A little over 20 percent  
4 has gone into biofuel production and distribution projects  
5 including biomethane, ethanol and diesel substitutes. Over  
6 a third has gone toward electric vehicle charging  
7 infrastructure, EV demonstrations and incentives and EV  
8 related manufacturing projects; 16 percent to hydrogen  
9 refueling infrastructure and vehicle demonstrations;  
10 another 13 percent for natural gas refueling -- excuse me -  
11 - natural gas fueling infrastructure and vehicles. And the  
12 remaining 15 percent to projects that either incorporate  
13 multiple fuel types or do not address specific fuel types,  
14 such as regional readiness planning or workforce training.

15           Looking at this graph shows the funds'  
16 distribution geographically. And you can see the program  
17 had distributed funding throughout the state with extra  
18 focus on areas with acute air quality needs, such as San  
19 Joaquin and the South Coast.

20           Finally, this chart shows program funds that have  
21 been awarded to projects located within disadvantaged  
22 and/or low-income communities, around 36 percent. When  
23 excluding projects that occurred statewide or without  
24 applicable site addresses this funding share is closer to  
25 50 percent.

1           The CEC's implementation of the Clean  
2 Transportation Program reflects the effect of numerous  
3 policies and goals by legislation, regulation and executive  
4 order. The net results of these policies have been to  
5 steer our program towards zero and near-zero fuels and  
6 technologies. Such policies include achieving 100 percent  
7 zero-carbon electricity as well as carbon neutrality by  
8 2045, by 2031 achieving 80 percent reduction in smog-  
9 forming NOx and reaching 1.5 million zero emission  
10 vehicles, or ZEVs by 2025 and 5 million ZEVs by 2030 and by  
11 2025 having 250,000 electric vehicle chargers and 200  
12 hydrogen refueling stations to support those ZEVs.

13           Our funding allocations are also informed by  
14 vehicle and fuel regulations developed by the California  
15 Air Resources Board, or CARB. These include the ZEV  
16 regulation for passenger vehicles, which requires auto  
17 manufacturers to offer for sale specific numbers of the  
18 cleanest cars available including full-battery electric  
19 vehicles, hydrogen fuel-cell electric vehicles and plug-in  
20 hybrid electric vehicles.

21           Shifting to heavy-duty vehicles the Innovative  
22 Clean Transit Regulation sets milestones for all public  
23 transit agencies to transition toward a 100 percent zero  
24 emission bus fleet. Beginning in 2029 any new buses must  
25 be zero-emission buses. And by 2040 all buses in operation

1 must be zero emission.

2           The Advanced Clean Truck Regulation, still under  
3 development, would require manufacturers to generate or  
4 procure ZEV credits beginning in 2024 and increasing  
5 through 2030.

6           Finally, the Low Carbon Fuel Standard requires a  
7 20% reduction in overall transportation fuel carbon  
8 intensity by 2030. And at the start of this year the  
9 credit prices for low carbon fuel providers were reaching  
10 new highs near 200 per metric ton of CO2.

11           A vital step in developing the Clean  
12 Transportation Program Investment Plan is to coordinate  
13 with other state funding programs. First, we have CARB who  
14 administers low-carbon transportation incentives focus on  
15 vehicles. For the current fiscal year CARB approved a  
16 funding plan that includes \$238 million for light-duty ZEVs  
17 under the Clean Vehicle Rebate Project, \$182 million for  
18 clean truck, buses, and off-road freight vehicles, \$65  
19 million toward clean transportation equity projects and \$48  
20 million per truck loan assistant programs.

21           The CEC must also consider major settlement  
22 agreements. For instance, under the Volkswagen Diesel  
23 Emission Settlement, Volkswagen has committed 800 million  
24 via Electrify America toward ZEVs and ZEV infrastructure  
25 within California. Separately an agreement with NRG

1 requires the investments of just over \$100 million to  
2 install electric vehicle charging infrastructure across the  
3 state.

4           Lastly the CEC must also plan its ZEV  
5 infrastructure investments with regard to investments of  
6 major investor-owned utilities. In 2014 the California  
7 Public Utilities Commission, or the CPUC adopted a decision  
8 allowing consideration of utility ownership of electric  
9 vehicle charging stations and infrastructure on a case  
10 specific basis. Subsequently the CPUC approved the  
11 Infrastructure Pilot Program for the Pacific Gas and  
12 Electric Company, San Diego Gas and Electric Company and  
13 Southern California Edison to install 7,500; 3,500; and  
14 1,500 charging stations respectively.

15           In considering the availability of funding for  
16 ZEVs and ZEV infrastructure, this graph shows some of the  
17 progress we've made. The key takeaway is that we are  
18 reasonably on track to reach our 1.5 million ZEV target by  
19 2025 with approximately 700,000 ZEV sales to date.  
20 However, our installed infrastructure has not kept pace  
21 whether in terms of charging infrastructure or hydrogen  
22 refueling stations. Without adequate charging and  
23 refueling opportunities the state risks losing momentum  
24 towards its long-term goal, including 5 million ZEVs by  
25 2030 and full decarbonization by 2045.



1           With all this in mind we are proposing four key  
2 priorities to guide our Investment Plan allocations.

3       First, we anticipate that within the area of zero-emission  
4 vehicles CARB will continue to lead on funding for vehicle  
5 incentives while our program focuses more on recharging and  
6 refueling infrastructure in addition to other priority  
7 needs.

8           Second, within the area of ZEV infrastructure we  
9 are proposing an early focus on light-duty passenger  
10 vehicle needs. This is intended to help mirror the  
11 charging cap anticipated by 2025. As depicted in the  
12 previous slide it is vital to ensure the public adoption of  
13 ZEVs is not stymied by lack of infrastructure. We expect  
14 to follow this and long-term focus of ZEV infrastructure  
15 for trucks, buses and off-road equipment.

16           In preparing for these investments, staff will  
17 benefit from the inaugural charging infrastructure  
18 assessment from AB 2127 of 2018. Previous charging  
19 assessments were focused exclusively on light-duty  
20 vehicles. However, estimating the charging needs for  
21 medium and heavy-duty vehicles will be a key area of our  
22 analysis or the analysis.

23           Third, we are interested in providing funding  
24 into projects that can help overcome barriers associated  
25 with zero, near-zero and zero-emission fuels

1 commercialization.

2           And finally we are seeking to prioritize our  
3 investments into project types that provide direct benefits  
4 toward disadvantaged communities as well as project types  
5 that can support the state's workforce and economic  
6 development.

7           This slide shows that we are proposing to  
8 translate the aforementioned funding priorities into real  
9 funding allocations. The table shows a proposed funding  
10 allocations table for fiscal year 2020 to 2021 as well as  
11 the proposed funding for the next two-and-a-half years.

12           As mentioned we are proposing to make big  
13 contributions toward reducing our light-duty vehicle  
14 charging infrastructure gap with the upcoming fiscal year  
15 while future fiscal years would focus more on funding  
16 toward medium and heavy-duty ZEVs and ZEV infrastructure.  
17 Allocations for hydrogen refueling infrastructure and zero  
18 and near zero-fuel production and supply would remain  
19 steady over time.

20           Finally, our allocations for ZEV and ZEV  
21 infrastructure manufacturing and workforce development  
22 would alternate in each fiscal year with the shared aims of  
23 supporting in-state economic development, hastening ZEV  
24 adoption.

25           And to end here we have some key questions to ask

1 you. In the afternoon you will hear more examples of the  
2 kind of projects we fund, or we might fund out of the  
3 categories. However, we wanted to provide a few questions  
4 for your initial consideration. First, is there additional  
5 context that we should factor into decision-making  
6 priorities? Second, do we have the right program funding  
7 priorities: ZEV, ZEV infrastructure, near zero and zero-  
8 emission fuels inequity? Are we missing any important  
9 activities? How should we approach the new concept of  
10 multiyear funding allocations?

11 And for your reference we have provided a pie  
12 chart that depicts the combined three-and-a-half years of  
13 funding for the proposed funding allocation.

14 COMMISSIONER MONAHAN: So I want to just  
15 recognize that we're asking a lot of you in terms of like  
16 right off the bat to give us some sense of are these big  
17 allocations right? So there will be time. We're going to  
18 dive deep into each individual category of activity, so  
19 there is time to give us input into what should we do on  
20 light-duty vehicles? What should we do on heavy-duty? And  
21 I think we can think about at the very end to maybe come  
22 back to this big question, are we missing anything?

23 But we wanted to lay out for you just the big  
24 context setting that we used to put out these draft  
25 allocations. And to get your initial sense of like well

1 what else should we be thinking about as we develop our  
2 Investment Plan for the coming years? And in general are  
3 these the right activities? Are we missing anything big  
4 that you think, "Oh we should be really thinking about  
5 this"?

6 And what I would recommend is as you give us  
7 feedback don't get too granular. Don't be like oh, it  
8 should be .3 and not .4 whatever million dollars. But just  
9 the big categories around are these the right sort of big  
10 suite of activities? And we'd love just to get your  
11 general reactions to this.

12 We have time until -- we've had a lot of time for  
13 comments. And we structured the agenda purposely, so that  
14 we would talk less, and you would have the opportunity to  
15 talk more. And I want to recognize everyone who is coming  
16 at this from a different level of familiarity with this  
17 program. Some groups have done this for a long time and  
18 they know. Others are coming in here cold. They don't  
19 know. So what I would say for the folks that are coming in  
20 cold trust your instincts around what are the big things  
21 that you want to communicate to us from your on-the-ground  
22 experience in communities. And we welcome that, that  
23 feedback.

24 And we didn't want to inundate folks with a lot  
25 of data. We actually struggled a lot with the agenda.

1 Like should we put a lot of PowerPoint slides up here and  
2 make you watch us and listen? I worried that I know  
3 personally I fall asleep, I don't pay attention, I'm on my  
4 phone, the more data I'm given the harder it is actually to  
5 listen. And our goal is really to listen to you. And so  
6 that's why we structured the agenda the way we did. We'll  
7 see how this works out and maybe we'll revise going  
8 forward, but we purposely structured the agenda, so that  
9 you would have more time to talk. We would have more time  
10 to listen and we tried not to get too data-heavy.

11 I want to make sure everybody has the slides on  
12 the table, because I think it will be easier to think about  
13 your comments if you can look at the slides and kind of  
14 mull them over. Yeah, so just a little bit more background  
15 on why we're structuring the agenda this way.

16 And I'm going to turn it over to Kevin who is  
17 going to give some information about how to make comments.

18 MR. BARKER: Great. Thanks, Commissioner.

19 So Claire if you can stand up and wave your hand,  
20 so Claire Sweeney, (phonetic) everyone welcome Claire. So  
21 she's not in the Fields and Transportation Division, but  
22 she is shadowing us today and so all be nice to her,  
23 because we want to make a good impression. Please, so  
24 she'll be sort of in the middle here, if you do have a  
25 comment to make please turn your name tag up like this,

1 make eye contact with her and then she'll call out your  
2 name in the order that she sees your name tag go up. And  
3 then we'll go from there.

4           So I see Tracy, so I'll just start it off with  
5 Tracy. But then Claire, over here we've got Eileen Tutt,  
6 we've got Magavern, Bill. And so we'll start with Tracy.

7           MS. STANHOFF: Thank you. In our community, the  
8 American Indian community here in California, you  
9 definitely have a group of haves and have-nots. And then  
10 we have the rural, the reservation and the urban, suburban  
11 folks. So we have a vast need in the community.

12           One of the big issues in our rural community is a  
13 lot of people don't even have infrastructure, so  
14 electricity is not even available for folks even in this  
15 day and age. So a lot of our folks are looking at  
16 microgrids and so forth to help alleviate the problem, but  
17 that's really not even anywhere near the needs that we  
18 have. So our feeling is a lot that our people are going to  
19 get left behind in certain areas on this issue. A lot of  
20 it is of course due to cost. A lot of it's due to a lack  
21 of infrastructure development by major utilities. And the  
22 third is because of again costs and being able to access  
23 resources to be able to do that. So I like the way you're  
24 approaching.

25           And then we have our urban area people who, some

1 of them are very impoverished and again are living in dense  
2 populations. So the question is how are they going to get  
3 access to charging stations, how are they going to get  
4 access to these vehicles? I like what you said at the  
5 beginning, Patty, that it's very expensive for these  
6 vehicles at times and so forth and so that's a challenge  
7 for us too.

8           The other thing that I wanted to make comment on  
9 is a lot of the utilities are starting to use our  
10 businesses in helping develop these electric charging  
11 stations, so we're very appreciative of that. And that's  
12 something that helps all of our community when they use our  
13 businesses and we can develop a sustainable infrastructure  
14 and a better, viable economy.

15           So there's just a lot of issues in our community  
16 that need to be developed that surround this development  
17 yet affect how this will be implemented for us. We feel  
18 like most of the time we're getting left behind on a lot of  
19 things, because we do not have the infrastructure  
20 (indiscernible) and it's a bigger issue than just charging  
21 stations for us. Thank you.

22           MR. BARKER: Claire, who is next?

23           MS. SWEENEY: Eileen.

24           MR. BARKER: Eileen Tutt.

25           MS. SWEENEY: (Indiscernible.)

1 MS. TUTT: I can use a mic, sorry, thank you.

2 Eileen Tutt with the California Electric  
3 Transportation Coalition, I think kind of building off --  
4 Tracy is it -- Tracy's comment I would just suggest that in  
5 your renewable zero and near-zero fuels that you include  
6 renewable electricity as well as renewable hydrogen. In  
7 part, because I think the degree to which we are trying to  
8 build out access to renewable energy in areas where there  
9 is no access, I think some of this funding might be able to  
10 help. So I like the idea if you're going to live in a  
11 place where you don't even have access to electricity you  
12 want to make sure that as that electricity is -- that  
13 access is built out it's actually renewable. So I think  
14 some of that funding could help with that.

15 Also just in terms of overarching, I think you  
16 really have the priorities right. Particularly I really  
17 appreciate the focus on equity and particularly around zero  
18 emission, because I think there's this concept out there  
19 that zero-emission transportation is only for wealthy  
20 people. And I think we really need to change that up and  
21 there's enough money here to help do that.

22 But the final thing that I would add maybe on  
23 Slide 15 or maybe just as an overarching direction since we  
24 did get \$51 million this year at least on the Governor's  
25 Proposed Budget, so everybody in this room ought to be



1 fighting to make sure it stays in there, because that is  
2 not a guaranteed. So please keep that in mind maybe as a  
3 member of this organization.

4 And you might want to say something about should  
5 additional funding come in, in the future where will the  
6 priority be? And I would argue that much like you did this  
7 year the priority should be in zero-emission infrastructure  
8 or zero emission vehicle technologies or zero-emission  
9 technologies and equity. So if there's additional money I  
10 wouldn't necessarily put that in near-zero, but I support  
11 the allocation here.

12 MR. BARKER: Thanks, Eileen. Claire?

13 MS. SWEENEY: Jerome Carman

14 MR. BARKER: Jerome Carman.

15 MR. CARMAN: Thank you. This is Jerome Carman  
16 with the Schatz Energy Research Center. A few comments, I  
17 guess one really quick I would like to echo what you just -  
18 - Eileen?

19 MS. TUTT: Yes.

20 MR. CARMAN: -- Eileen just said regarding should  
21 additional funding come available, making an indication of  
22 where those priorities might lie; I think that makes a lot  
23 of sense.

24 A couple of other points, high-level, regarding  
25 the decision process for allocating the amount of funds to

1 infrastructure, do you have measurement verification  
2 metrics for truth or ground-truthing the EVI-Pro  
3 recommendations? I'm assuming EVI-Pro is a primary source  
4 from where you're getting, as well as the Governor is  
5 getting projections for infrastructure? So I recommend  
6 thinking through those, a measurement verification for  
7 that.

8           And second, do you have a strategy for minimizing  
9 stranded assets? I think this goes towards an equity  
10 question. If you're putting charging stations in areas  
11 where people can't afford to use them -- and this is also a  
12 technology obsolescence question -- so thinking through  
13 steps that are needed to minimize stranded assets. Thank  
14 you.

15           MR. BARKER: Bill Elrick, all right. Hey, Bill.

16           MR. ELRICK: Bill Elrick, California Fuel Cell  
17 Partnership. I think generally this is a really good  
18 allocation. I'm pleased to see it. Overall, looking at  
19 some of the bullets on those key questions you had, I like  
20 seeing the separation of heavy-duty and light-duty. While  
21 you've made in, what I've gathered already in looking at  
22 this plan and some of the previous stuff, the opportunity  
23 to when you can leverage and co-locate when it does work.  
24 But really recognizing separate pots of money, because  
25 whether it's different technologies and codes and standards

1 most often exist for light-duty and heavy-duty and the  
2 consumer, being it a private citizen or a fleet, the  
3 operations are very different. So separating those pots I  
4 think is very important.

5           To the point earlier about looking at the fuel  
6 production, renewable pathways I think that's the end goal  
7 we're really going to make the biggest impact. So I don't  
8 know how you could put more money in this. I'm not going  
9 to say pull some from the other, but I think just  
10 recognizing keeping that in mind for the big energy  
11 transition as well as finding more ways to leverage other  
12 programs within CEC or the other state funding and how  
13 those can complement each other. The EPIC program comes  
14 right to mind when we look at electrification be it  
15 electrons or molecules of hydrogen. Both of those are very  
16 renewable pathways.

17           And then the other thing when looking at the  
18 multiyear funding allocations, just speaking from what I  
19 know of what you've done with hydrogen which has been  
20 really strong in looking forward multiyear market-based  
21 allocations, I think those are really good examples to see  
22 if you can replicate throughout the program. We'll see how  
23 that solicitation that's on the street now goes, but we're  
24 very encouraged by that. And I think the exciting part is  
25 really looking at all of this from a sustainability issue

1 meaning will these program activities continue after the  
2 CEC funding is gone?

3           And so I think having some sort of market-based,  
4 multi-year sustainability factors involved are really  
5 important to make sure that whether it's the upfront costs  
6 of private investment or that they're going to continue  
7 over time, so these aren't one-and-done type of things.

8           MR. BARKER: Okay, Mary Solecki?

9           MS. SOLECKI: Hello. I'm trying to decide  
10 whether to ask a question during this time as well. Okay,  
11 I'll start with my comments. I agree with Bill that the  
12 breaking things out into the medium and heavy-duty versus  
13 the light-duty and the ZEVs, that's very helpful and I  
14 think that's a very worthwhile differentiation.

15           I did want to point out within the medium and  
16 heavy-duty infrastructure component that you may want to  
17 consider some near-zero technologies as well. There are  
18 some really great technologies that may be able to stretch  
19 those dollars a lot farther and seriously reduce emissions  
20 out there. And maybe impact some sectors that some of the  
21 zero technologies would not be able to, so just a  
22 consideration for some near-zero allocations in those areas  
23 as well, or in that bucket.

24           And then to respectfully disagree with my  
25 colleague Eileen on the fuel production component, I think

1 that focusing on the liquid transportation fuels in that  
2 bucket is very important. There are hundreds if not  
3 thousands of new vehicles that are being sold today,  
4 tomorrow, the next day and those are largely running on  
5 combustion fuels. Those vehicles are going to be on the  
6 road for 10, 15, 20 years. We need to get them off of  
7 gasoline and diesel while those cars are still running. So  
8 how do we take the existing fleet and get them to utilize  
9 different fuels? And I think that is what that fuels  
10 bucket is trying to do is change the makeup of the liquid  
11 fuels that we have. And so I think that's a very important  
12 and laudable goal and so I just want to protect the space  
13 for that.

14 I am going to ask my question. The gaps that  
15 were identified towards the ZEV charging and the number of  
16 zero-emission vehicles, Slide 13, the progress towards  
17 those I guess I'm just wanting to understand. And you  
18 could answer this later however it makes sense. When I  
19 look at these multiyear allocations are you anticipating  
20 that these gaps still exist beyond the funding that you  
21 have allocated or is the funding that you've allocated  
22 trying to address these gaps? Did my question make sense?

23 MR. BARKER: Yes. Hi, this is Kevin. So it  
24 takes into account some of the funding identified. So we,  
25 in doing the gap analysis for the current -- excuse me the

1 plan, the 124,000 K then assumes \$30 million per year are  
2 spent on ZEV infrastructure. It does also include -- yeah  
3 sorry, it includes \$30 million. It doesn't include the \$51  
4 million that we have also identified, and it wouldn't  
5 include any additional. The \$51 million though would only  
6 result in about 4,000 chargers, so that just gives you a  
7 magnitude how large the 80,000 K gap is.

8 And I guess one thing I would also note is we  
9 want the car, at how I look at it is it's traveling kind of  
10 on the yellow brick road if you will on infrastructure. We  
11 want it on the green brick road and so you can see the  
12 vehicles are way outpacing the infrastructure. So in  
13 summary, it takes into account some, but not all of it.

14 Oh, and do you mind if I make just one quick  
15 clarification point? And, Mary, you may have been thinking  
16 through on the medium and heavy-duty when your comments  
17 were about near-zero. One thing I want to, and Patrick  
18 tried to allude to this, is we here at the Energy  
19 Commission are really trying to focus on the infrastructure  
20 side of the transportation equation. Steve's team at ARB  
21 are focusing a lot on the vehicle side. And so to the  
22 extent that you have specific comments when we get into  
23 that piece on near-zero, but infrastructure and how that  
24 might be unique, would be interesting especially for that.  
25 Okay?

1           And there's Bill.

2           MR. MAGAVERN: Yeah, Bill Magavern with the  
3 Coalition for Clean Air. My initial big picture reaction  
4 to the proposed funding allocations is to affirm the wisdom  
5 of the CEC staff in proposing the scaling up in the medium  
6 and heavy-duty sector in the future years. And I think  
7 that is warranted on climate and energy grounds, but  
8 especially on-air quality and equity grounds because the  
9 diesel exhaust coming from our current medium and heavy-  
10 duty fleet is a plague on communities that are near our  
11 freight hubs and freeways. And those are quite  
12 disproportionately low-income communities of color.

13           So we absolutely need to scale up the investments  
14 in clean vehicles and infrastructure. We've got a good  
15 clean transit rule at ARB, on the way to getting a good  
16 clean truck rule. And I think those rules need to be  
17 complemented by some investments in this area. So we're  
18 definitely behind what you're trying to do there.

19           MR. BARKER: Claire? Thanks, Bill.

20           Who's -- Richard?

21           MR. SCHORSKE: Hi, Richard Schorske with the ZNE  
22 Alliance and the EV Alliance. Thank you. I don't have a  
23 lot of comment on the overall funding allocations. I think  
24 they're basically sensible and they reflect trend lines and  
25 fine tuning that just makes good sense. I do have three

1 areas I want to comment on though. One is market  
2 acceleration for MUD dwellers, which is an equity  
3 consideration as well of course. And I also want to talk  
4 about leveraging more private finance and public finance  
5 throughout the program. And finally, height leverage  
6 policy drivers.

7           So I'll be quick about this, but on the MUD front  
8 we don't have good data in here. Good data is actually  
9 tough to come by. I notice that MUD and single family were  
10 conflated in one high-profile number. And we also have the  
11 distinction between make-readies and actual installed EDSC,  
12 which isn't always clear.

13           And finally and also very importantly, we don't  
14 have data on whether the installed EDSC is actually being  
15 utilized. So some of those data gaps actually can be  
16 addressed and really desperately need to be addressed. I  
17 think that that's an important role for the CEC in  
18 conjunction with other stakeholders is to really drill down  
19 and know what we're talking about when we're talking about  
20 MUD.

21           I have concerns that overall resourcing of MUD  
22 has not been robust. There is a line in that report that  
23 indicates that applicants are few and far between. I know  
24 that's true, so it's not all on the Commission per se, but  
25 we need to find out how new and different strategies can be



1 invented, because frankly what has been occurring is not  
2 working on so many levels. And it's been worked on by so  
3 many stakeholders. So I really feel like we need to focus  
4 on MUD and in effect some kind of an action squad that  
5 really looks at new strategies and investments that are  
6 skilled to match that problem.

7 We know from the data that we have a big gap an  
8 uptake of EVs for renters versus single family. And of  
9 course that becomes an equity issue right away as well. So  
10 I'd like to see a more nuanced discussion of that and more  
11 resourcing and more differentiation between a make-ready  
12 and an actual installation.

13 And also some look at whether the Title 24 is  
14 really helping because frankly from my observation it's not  
15 and it needs some refinement. And this Commission, and as  
16 this group has a lot say, I think it could help going  
17 forward with some enhancement of regulation.

18 Another question is about Level 1. That's been  
19 generally not tracked separately. And there's a lot of  
20 solutions that involve Level 1 for MUD that are really  
21 viable with power management and the light. And I think  
22 there's some discussion around that and maybe some specific  
23 resourcing or at least just raising awareness that Level 1  
24 really can be a solution. There's a market failure in  
25 Level 1 because there's not a lot of companies selling that

1 product. They don't like to sell that product, it doesn't  
2 have the same profit margin and has other issues of  
3 customer acceptance. But anybody that lives in an  
4 apartment likes a plug better than no plug, so that's an  
5 issue.

6 Finally, connecting MUD and shared mobility  
7 solutions I think we have a lot of opportunity with  
8 companies like Envoy that are actually deploying vehicles  
9 for shared use. And they need help with infrastructure  
10 like everybody. And I think having a program, a strategy  
11 and category that's specific to shared mobility in the MUD  
12 context, could be very powerful.

13 Do I need to stop here?

14 COMMISSIONER MONAHAN: Well my only comment,  
15 Richard, is that there's going to be a focus discussion  
16 about light-duty after this.

17 MR. SCHORSKE: Okay.

18 COMMISSIONER MONAHAN: So my recommendation for  
19 everyone is if you have very specific recommendations  
20 within a category, save it for that discussion. And also,  
21 just a recommendation because we're coming at this from  
22 very different levels of understanding of depth, and feel  
23 free to nerd out in terms of the Level 1 and MUD. But try  
24 maybe at the beginning just for the sake of everybody else  
25 to say what that is so that for folks that are new to this

1 we can just be as inclusive as possible.

2 But I want you to be able to make your remarks  
3 and I want everybody to. But it's just as you get very  
4 detailed about specific investments just save it for that  
5 discussion.

6 MR. SCHORSKE: Should I continue?

7 COMMISSIONER MONAHAN: You can continue, yes.

8 MR. SCHORSKE: All right. So just moving on then  
9 on the leverage question I think folks are aware that we've  
10 tallied up a lot of CCAs. I've gotten into the game with  
11 investment community choice aggregators with investment and  
12 programs. There are some that are still on the sidelines  
13 relatively speaking. And anything that we can do to  
14 channel investments to those that are really willing to  
15 also ante up locally can be a real force multiplier for the  
16 program and I think would be really, really important. And  
17 they are really making some serious investments there in  
18 many cases that are super-helpful.

19 Finally high leverage policy drivers, you know  
20 there is a lot of activity. But we all know there's a  
21 recent analysis by Hal Harvey at Energy Innovation, CARB  
22 has acknowledged that we are not on track. We are not on  
23 track for our 2040 goals. We're not on track for a lot of  
24 things in the transportation domain, in particular around  
25 emissions. And I think it's incumbent upon this group,

1 particularly the Advisory Group perhaps more than the staff  
2 in terms of statutory mandate, that we actually take a  
3 swing here for the fences on policy innovation, because  
4 we're not getting there from here. Even if we hit our  
5 250,000 EVs and we hit our 1.5 million ZEVS and it's on  
6 that isn't actually getting the job done because we have  
7 huge growth in the other vehicle segments, even as we have  
8 growth in EV.

9           And as somebody pointed out earlier each ICE sold  
10 is 12 years, 15 years on the road and they're being sold  
11 like hotcakes. We need to actually propose sunset policies  
12 around ICE, more a fee-beta approach that actually taxes  
13 ICE and rebates much more aggressively to EV. Some of  
14 those things that have been considered a little bit out of  
15 the mainstream from a policy perspective should be brought  
16 into the mainstream.

17           And I think we should do what we can here to see  
18 if we can get consensus and then champion those items,  
19 because this is still a debt shares exercise relative to  
20 even California climate goals. And it's not because  
21 they're the wrong strategies it's just because we need  
22 additional new, better, much, much higher ambition  
23 strategies. So I would invite everybody to weigh in on  
24 that and I'll bring it up again, but that's probably the  
25 most important thing that I noticed in all of this. Thank

1 you.

2 MR. BARKER: Thanks, Richard.

3 Michael Pimentel.

4 MR. PIMENTEL: Hi, all. Thank you, Michael  
5 Pimentel with the California Transit Association. So I  
6 have some very specific programmatic priorities I'll speak  
7 to later today. But in terms of just the high level, one  
8 of the things I do want to be mindful of and would  
9 encourage the CEC to be very careful about is the potential  
10 to crowd out investments from the investor-owned utilities.

11 The California Public Utilities Commission has  
12 just released their draft transportation notification  
13 framework. Within that they are looking to encourage  
14 further applications from the IOUs in investments like the  
15 make-ready infrastructure. And so as we look at the  
16 funding allocations that are presented here I think I agree  
17 generally with the sentiment that Bill had expressed, it's  
18 great that we're increasing funding level particularly for  
19 the medium and heavy-duty sector, because that is where the  
20 issues in terms of emissions are. But I am in some ways  
21 slightly worried that by back loading the investments and  
22 having the higher funding levels in those out years we  
23 might chill the ability for the IOUs to bring forward  
24 investments out of their dollars that are rate-based as  
25 opposed to from the state.

1           And so I don't know how you exactly address that  
2 within this conversation, but I do think that we should  
3 find ways to increase some funding in very near-term. And  
4 perhaps year one and year two, because at that point in  
5 time the IOUs won't be advancing applications that would be  
6 approved, monies that could go out the door. And we do  
7 know that the need is immense in these upcoming years,  
8 especially as transit agencies migrate to these zero-  
9 emission technologies as they look to comply with the  
10 Innovative Clean Transit Rules.

11           So I'll go into a little bit more specifics later  
12 this afternoon, but that would just be my one word of  
13 caution.

14           MR. BARKER: Thanks, Michael. We'll touch on it  
15 later. But one of the ideas and rationale was that we  
16 currently have 50 million available that you'll hear from  
17 Esther later today, for medium and heavy-duty that's going  
18 to be out on the table right now.

19           MR. PIMENTEL: Good. Perhaps one of the things  
20 that can be explored, and this is one of the things I was  
21 intending to mention later, is to find ways to direct those  
22 dollars towards purposes that are not funded by the IOUs.  
23 And there is an immense need for doing large-scale  
24 demonstrations, which the CPUC and the IOUs have not yet  
25 made any sort of investments in.

1           There's also a lot of concerns around resiliency  
2 planning and redundant infrastructure for transit agencies  
3 in particular who will be migrating to these technologies  
4 who have in addition to the service that they provide,  
5 often do fulfill an emergency response function. And so to  
6 the extent that their fleets are electrified they may not  
7 be able to fulfill that function.

8           And so there may be ways to take the monies that  
9 are available today and find ways to more finely tune them,  
10 again to purposes that are not being funded by the IOUs.  
11 And I'd also mention that there are a number of transit  
12 agencies that fall outside of the IOU territories who  
13 wouldn't be eligible for those make-ready programs. It  
14 might make good sense to model the IOU programs before  
15 those transit agencies and other fleet owners.

16           MR. BARKER: Good. Thank you. I think we'll  
17 have an interesting conversation with Esther later.

18           Who do we have next, Claire?

19           MS. SWEENEY: Rey Leon.

20           MR. BARKER: Rey Leon.

21           MR. LEON: Buenos dias, okay it works. That's  
22 wireless and it's clean energy.

23           So I'm the mayor of the City of Huron my  
24 hometown. It's on the west side of the San Joaquin Valley  
25 near the 5. If you ever go down the 5 you pass stinky cows

1 about 20 minutes past that.

2           So one thing that we've noticed is that the LEAP  
3 Institute is one of the recipients of the energy summit  
4 funds. So we established a rideshare program with electric  
5 vehicles and got 10 EV chargers set up in the headquarters.  
6 And through the Electrify America got another 12 chargers  
7 in three apartment complexes, so it is a community of 7,200  
8 on paper, probably more so 10,000 in reality. But it's I  
9 think effectively the city in the country with the most EV  
10 chargers per capita.

11           The only problem is that this is a farmworker  
12 town, the second poorest City in the state of California at  
13 about 21 K annual family median income. And we're kind of  
14 seeing I think one or two families that have already got  
15 some vehicles, but it's still a challenge. And I think  
16 this is going to be an interesting process and exercise to  
17 try to figure out how do we increase that number?

18           And you know, farm workers are getting paid  
19 minimum wage, they don't have a pension plan. They don't  
20 have health care. I mean they are the hardest working  
21 people on the planet yet the least acknowledged and valued  
22 for the work that they do for all of us, right? Who eats a  
23 salad here? Who eats a hamburger? Who eat a sandwich,  
24 right? So who likes tomatoes, cheese?

25           And so seriously though, we're undermining really



1 the onboarding of the communities that not just deserve it,  
2 but should have it due to the fact that on the west side of  
3 the Valley there's a lot of diesel emissions. I appreciate  
4 Bill's comments. I just learned the word "stranded  
5 assets," that's what we've got in Huron. But there's a lot  
6 of pollution out there as well. Pesticides are still an  
7 issue. I mean the cumulative emissions of different sources  
8 are just pounding on communities like Huron.

9           And I think it's not just about providing folks  
10 the ability to get their electric vehicles because I think  
11 that should happen and not the used, old ones that somebody  
12 else has finished using. These communities deserve the  
13 best and the best technologies. But also thinking into the  
14 future in terms of where how do we take it from an  
15 individual owning a vehicle to a community owning a fleet?  
16 And that would be electric.

17           And also, that Huron is somewhat well, not  
18 privileged yet, but we have a rail that goes all --  
19 connects about three counties and about ten cities. And  
20 plus it's over Hanford, which has an Amtrak station and  
21 will have a high-speed rail station. And so my thought is,  
22 "All right, well how can I still live in my town?" And  
23 other -- you go to Berkeley, one of the best universities  
24 it can be -- and come back and say, "You know what? I want  
25 to go back home because there are amenities, because it is

1 a place where I want to raise my children." And there is  
2 accessibility right?

3 And so I think how if I lived in Huron without a  
4 vehicle how could I get to Sacramento for our meetings? I  
5 carpooled this time around or get out later to the Bay?  
6 Because there is no taxi, there is no bus that takes you to  
7 Hanford, because Hanford is in Kings County. If you want  
8 to get the bus to Fresno to get to the Amtrak station it's  
9 going to take you three hours.

10 So there is just a huge gap in communities that  
11 are isolated, rural communities, farm worker communities.  
12 So in terms of that rail there is a plan that today the  
13 Council of Governments has across Valley Rail, Huron is the  
14 only city in Fresno County. So I'm working with my Council  
15 of Governments trying to figure that out. But I think  
16 there's funding in HSR, there's funding in the County  
17 Council of Governments and perhaps leveraging with CEC  
18 monies or something. I don't know, I'm here to learn as  
19 well, so I'm glad to be here with all of you. Thank you.

20 MR. BARKER: Thanks, Rey.

21 Will Barrett?

22 MR. BARRETT: Hi. Will Barrett with the Lung  
23 Association. First of all thank you for the presentation  
24 and that thoughtful discussion from all of the panel  
25 members. First off the Lung Association's annual report on

1 air quality, seven of the ten most ozone-polluted cities in  
2 the United States is in California, six are the most  
3 particle polluted. And we know that this is driven by  
4 transportation pollution. We also know as pointed out here  
5 that the transportation sector is the largest source of  
6 climate pollution that's threatening public health in  
7 California today in going forward. So I wanted to just  
8 kind of lay that out as kind of grounds for my comments.

9 First I wanted to say that we appreciate the  
10 reformatting of the panel. We think that the Disadvantaged  
11 Community Advisory Group last year played a very important  
12 role. And we're happy to see that voice carried forward  
13 here.

14 In this year's plan we are encouraging you to  
15 also kind of maintain the focus on air pollution impacts  
16 and benefits of these investments, especially in our most  
17 disadvantaged communities. As Mr. Magavern pointed out the  
18 diesel issue is top of mind for us as well and I want to  
19 make sure that we're making continued progress there. We  
20 do support the emphasis on zero-emission infrastructure,  
21 both in terms of filling gaps and creating new  
22 opportunities especially on the heavy-duty side to deal  
23 with that diesel issue.

24 And Mr. Pimentel mentioned this idea front  
25 loading. I know that that's kind of emphasized on the

1 light-duty side, but if as we are moving forward and there  
2 are ways to front load on the heavy-duty and medium-duty  
3 side we'd certainly support that as well. Again to really  
4 bring those community level benefits up earlier in time.

5 We'd like to make sure that we're ensuring the  
6 complementary nature of these programs with ARB's programs,  
7 especially around the equity side of things just to make  
8 sure that we are kind of building a bridge between the  
9 programs well.

10 And then finally looking at the multiyear nature  
11 of the proposal we've got some good stuff. I mean it's a  
12 good way to ensure some certainty on this, especially on  
13 the medium and heavy-duty side to make sure that we're  
14 making continued progress there. And I think that's a good  
15 step forward out of the gate. So I appreciate that. Thank  
16 you.

17 MR. BARKER: Thanks, Will. I would point out  
18 that if you took out the 51 million that's in the proposed  
19 budget, the reason why we're talking about front loading is  
20 we only have 95 million per year. And so I know you  
21 probably got it, but if we were to let's say front load  
22 multiple it would just be average loading kind of things.  
23 And so that's just one thing that we were kind of  
24 struggling with, anyway, yeah.

25 Who do we have next Claire? Patricio Portillo.

1 MR. PORTILLO: Hi, Patricio Portillo with the  
2 Natural Resource Defense Council. I just want to echo what  
3 a lot of other folks have been saying about generally how  
4 you looked at the priorities and split up the light-duty  
5 and medium. And especially with the ramp-up in the later  
6 years, I think that's great.

7 Just a couple of high-level comments, so the  
8 amount of funding that we're talking about obviously is  
9 pretty substantial, particularly in comparison to what we  
10 see other states being able to afford. But it's also  
11 pretty small relative to what the need is. So I think it  
12 would be helpful to have an additional conversation about  
13 sort of how spending can be maximized on ways that we can  
14 attract private capital, particularly as this market  
15 matures, also just looking at new funding or financing  
16 mechanisms as well.

17 In terms of the multiyear I think that's a good  
18 approach. It sends a clear market signal. It provides  
19 clarity and direction again to the market. But I think  
20 that there should probably be some opportunities to  
21 incorporate program feedback or market development and the  
22 flexibility to adjust the programs as needed.

23 There's also, I think someone else mentioned this  
24 earlier, but looking at market-based funding solutions  
25 especially in the future years to just ensure that the

1 longevity of these programs exists once funding runs out.

2 Thank you.

3 MR. BARKER: Thanks, Patricio. I would note and  
4 I really appreciate the comment on leveraging other funds.  
5 Tim Olson, we just released last week -- I'm looking at you  
6 Tim -- a request for information with regards to ideas of  
7 alternative funding mechanisms, whether they be using  
8 loans. We played with the loan loss reserve fund, have had  
9 limited success. And so there is another venue. We will  
10 hear it today and we're going to ask questions specifically  
11 around the fuel production. But we also have a request for  
12 information in that, and it's due sometime in April. Is  
13 that correct, Tim? But we can get more information on  
14 that. But I appreciate you bringing that up.

15 Who do we have next Claire? Say it again?

16 MS. SWEENEY: (Indiscernible.)

17 MR. BARKER: Say that again. Oh, online. Okay,  
18 can you unmute Lucas?

19 MR. ZUCKER: Okay, can I on unmute?

20 MR. BARKER: Yes, go ahead.

21 MR. ZUCKER: Okay, great. Thanks everyone. Just  
22 speaking as an organization really representing  
23 environmental justice communities in my region and really  
24 throughout the state through our partnerships with other  
25 organizations in SOHA (phonetic) definitely feel like

1 although hopeful about the future of costs falling for  
2 individual EVs, it is still really big cost barriers to a  
3 lot of our low-income families in my community.

4           As Mr. Leon spoke too, a lot of our membership is  
5 farm workers who just even with the subsidies even used EVs  
6 are pretty far out of reach for our folks. And so I'm  
7 thinking about how to not just encourage individual EV  
8 ownership, but how we're kind of be investing in zero-  
9 emission buses, school bus fleets, farm worker vanpools,  
10 any of those kind of shared transportation needs.

11           And I think particularly in some of our rural  
12 communities like where I work there is often a real lack of  
13 investment in public transit. And so that will really --  
14 making those investments through zero-emission buses can  
15 also just help address the kind of lack of (indiscernible)  
16 the general.

17           And for a lot of our environmental justice  
18 communities some of the biggest concerns is that some of  
19 the most notorious (indiscernible) communities in the state  
20 from West Oakland to Wilmington to Barrio Logan, to the  
21 community where I do a lot of work in South Oxnard are  
22 along ports, truck routes, warehouse distribution centers.  
23 Those kinds of freight corridors that deal with so much at  
24 diesel emissions. And so as some others spoke too, I would  
25 definitely advocate for kind of more front loading of the

1 heavy-duty in comparison to the light-duty.

2           Just because I think light-duty is still and  
3 those individual EVs are still fairly out of reach for a  
4 lot of our folks. Whereas the health impacts that we're  
5 dealing with from the heavy-duty freight in our communities  
6 is really real and really immediate. And in a lot of  
7 communities it's actually getting worse as kind of the  
8 logistics. In fact, it grows with Amazon and just  
9 globalization in general and lots of expansions of ports  
10 and warehouses and trucking through our neighborhoods.

11           And so folks may know that the California Office  
12 of Environmental Health Center Health Hazard Assessment  
13 estimated awhile back that 70 percent of the cancer is from  
14 toxic air contaminants for California residents is just  
15 from diesel exhaust. And so I think there is huge co-  
16 benefits in terms of health to making those investments in  
17 heavy-duty, that it's not just addressing their kind of a  
18 disproportionate share of greenhouse gas emissions, but  
19 also the really harmful health effects of diesel exhaust.

20           The last point I'd raised on heavy-duty is just  
21 around the nature of the industry and how in the last few  
22 decades there's been such a big shift to independent  
23 contractor owner-operator truckers. And that's created a  
24 huge barrier to kind of cleaning up those heavy-duty  
25 fleets, because the big companies that have the capital to



1 make those investments are classifying truck drivers as  
2 independent contractors. And so that burden of buying new  
3 trucks is on those drivers.

4 And so thinking about also from kind of a labor  
5 and workforce perspective how can we make sure those  
6 investments are really benefiting truckers, so that they  
7 are able to invest in clean trucks without the burden of  
8 our environmental standards kind of falling on them rather  
9 than falling on the companies that have had a lot more  
10 resources.

11 MR. BARKER: Thanks, Lucas. That was very  
12 helpful.

13 I would also note this is just talking about the  
14 ARFVTP, which stands for something I promise, which is the  
15 funds on the registration of vehicles. We are currently  
16 implementing a pot of funds that were Proposition 39 that  
17 were intended to clean up our public schools with energy  
18 efficiency and renewables. And so we have been able to  
19 utilize \$75 million for about 230 school buses for that and  
20 that's outside of this program.

21 COMMISSIONER MONAHAN: So we have a new Advisory  
22 Committee member who just stepped into the room. I hate to  
23 put you on the spot. We had an icebreaker question, but I  
24 feel a little guilty giving it to you.

25 MALE VOICE: You're laughing way too much here.

1           COMMISSIONER MONAHAN: Do you want to just  
2 introduce yourself, and did anybody else join later?

3           MR. BARKER: Yeah. We have two folks.

4           COMMISSIONER MONAHAN: Oh, we have two folks.  
5 Okay, well then I will go, and I will have the icebreaker  
6 question. So the icebreaker question since there's two of  
7 you is, so give your name and your affiliation. And then  
8 what your birth order is in your family and what it means  
9 for how you show up in group settings or in work settings,  
10 what it means for you. But in one sentence, only one  
11 sentence.

12           MR. BARKER: And using the microphone, please.

13           COMMISSIONER MONAHAN: Yeah, because we have  
14 folks on the WebEx.

15           MR. BARKER: We had two. I'll call on Table 4,  
16 so Leslie, yeah.

17           MS. AGUAYO: Hi. I'm Leslie Aguayo. I'm an  
18 Environmental Equity Program Manager at the Greenlining  
19 Institute. I am the first-born only daughter. I have  
20 three younger brothers, so I think that makes me show up as  
21 an advocate in many spaces and very aware of double  
22 standards as well.

23           MR. BARKER: Did everyone at that table introduce  
24 themselves? Yes, okay. And then we also have Heidi  
25 online, so we'll get to Heidi last, so Kevin?

1 MR. HAMILTON: Kevin Hamilton. I'm the Co-  
2 Director of Central California Asthma Collaborative. I'm  
3 the oldest. That means I'm in charge, just keep that in  
4 mind, and accountable even if I didn't do it. (Laughter.)

5 MR. BARKER: Great. Thank you.

6 And Heidi?

7 MS. SICKLER: Yes. Hi, Heidi Sickler, Director of  
8 Energy and Environment at the Silicon Valley Leadership  
9 Group. I am the first-born only daughter. My brother is  
10 the CEO in the family though, so he can (indiscernible)  
11 that.

12 MR. BARKER: Great. Thank you.

13 Who did we have next Claire?

14 MS. SWEENEY: (Indiscernible.)

15 MR. BARKER: Morgan?

16 MS. CASWELL: All right, Morgan Caswell, Port of  
17 Long Beach. I have a couple of comments. First I would  
18 just echo what everyone is saying that I'm glad to see  
19 equity at the forefront of how you're making decisions  
20 about investing in infrastructure. It's not a secret the  
21 seaports significantly impact our local communities and the  
22 impact is disproportionate to other sectors as well.

23 I would say that kind of in that vein there are  
24 multiple sources at the port, right? There's not just the  
25 off-road vehicles, which have been funded under this

1 program, there's also the harbor craft and the vessels  
2 coming in. And I would encourage you, when you're talking  
3 about context, to think about the other sources as well,  
4 because for us CARB is coming out with many rules, which  
5 will impact the ports in a good way, right? Reducing  
6 emissions from harbor craft, they will be coming out with  
7 their Commercial Harbor Craft Regulation. Their at-birth  
8 rule will be finalized probably the end of April, which  
9 will expand shore power at the seaports. They have the TRU  
10 regulation, the refrigeration units.

11           So I would encourage you to take a look at that,  
12 because in terms of how we look at electrical  
13 infrastructure we look at the whole ecosystem. And there's  
14 going to be significantly more infrastructure need than  
15 just for our off-road equipment. And when we size our  
16 infrastructure we're looking at the whole gamut of  
17 electrification. So that's my comment on context.

18           I'd also emphasize again, as William did, the  
19 importance of coordinating with CARB on that and getting  
20 information from them on their regulations and how you can  
21 complement one another when it comes to infrastructure. I  
22 won't get into a ton of detail and I know we're going to  
23 talk about it later, but I think you're probably going to  
24 hear a mix of responses on when you should time medium and  
25 heavy-duty infrastructure. And it will depend on the

1 industry and it will depend on the state of technology.

2           So for me for off-road cargo handling equipment  
3 the technology isn't quite there today. And I would want  
4 to do a full-scale terminal infrastructure master plan in  
5 the coming years before fully deploying infrastructure  
6 across the terminal. And then I'd also be able to  
7 incorporate the upcoming regulations on the other sources.  
8 So I'll leave it there.

9           I would also just say that the technology  
10 advancement funding has been critical for us and will  
11 continue to be critical for us.

12           MR. BARKER: Thanks, Morgan.

13           Russ.

14           MR. TEALL: Russ Teall, I'm bipolar. I'm  
15 representing Recreational Boaters and Biodico, which does  
16 all of the above. So I agree with Bill Magavern in that  
17 health effects are essential to disadvantaged communities  
18 and low-income communities. And in improving them I'm sure  
19 it's being addressed, but I would like to see an emphasis  
20 on near-term, mid-term and long-term health effects in our  
21 plan.

22           I look at the CalEnviroScreen. We're doing a  
23 project in Rey's community and he has EV chargers, but no  
24 renewable electricity onsite and no storage. And so it's  
25 grid charged. We're doing a project in La Colonia in

1 Oxnard and we're working on collecting food waste for  
2 digestion, running it through a capstone turbine and  
3 charging electric forklifts. And so I think that all of  
4 the above need to be taken into consideration in the plan.

5 I think that it's laudable doing a three-and-a-  
6 half-year plan in order to send a market signal. That's  
7 probably not long enough in that the PPA's are for 20 years  
8 at a time, so but it's better than a one-year at a time.  
9 The disadvantage is do we get to review the program as it  
10 goes through to make midcourse directions?

11 COMMISSIONER MONAHAN: Yes, we do. So annually  
12 we will look back and we'll convene the Advisory Committee,  
13 but it will be more in a are we going directionally in the  
14 right way? Do we need to make tweaks versus wholesale  
15 revisions is how we were envisioning it.

16 MR. TEALL: And finally, I read the RFI that Tim  
17 Olsen wrote or authored. And I think that's a good  
18 opportunity to send a long-term message to the investment  
19 community by leveraging CEC funds with investment funds.  
20 That's the kind of thinking that we need to do for  
21 leveraging \$100 million. It sounds like a lot, but it's  
22 nothing. And it needs to be used as wisely as possible to  
23 leverage other funds.

24 So is Tim going to do a presentation later on?  
25 No?

1           MR. BARKER: No. This is just on the Investment  
2 Plan, but thanks, Russ. I would maybe tongue-in-cheek  
3 agree that longer than three-and-a-half years would be  
4 nice. That's our sunset date.

5           So who do we have next, Claire? Jimmy.

6           MR. O'DEA: Hi. Jimmy O'Dea, Union of Concerned  
7 Scientists. Quickly I'll plus out the multiyear aspect of  
8 this, the focus on zero emission and also heavy-duty  
9 infrastructure being much more expensive, policies syncing  
10 up with the need for heavy duty, at CARB we're seeing lot  
11 of activity. One of the biggest concerns we hear from  
12 fleets is infrastructure, and so I think that more  
13 infrastructure for heavy-duty is certainly needed.

14           I want to also plus out something that Mike  
15 Pimentel said about filling in gaps and complementing other  
16 programs. You know, there's a lot of money on the table  
17 from other state agencies, certainly not enough. I guess  
18 that's a good ground setting thing. The money we're  
19 talking about today, 100 million, the money from the PUCs  
20 approved, CARBs H-FIT (phonetic) money, other investments;  
21 none of this is really enough. So we're all I guess  
22 operating in this context of limited pots of money and  
23 recognize that.

24           But I do want to just support the idea of  
25 complementing, I think a lot of folks are using that word.

1 Just for example, the PUC proposals, there is a lot a  
2 fleets that are not -- serving in territories that aren't  
3 PG&E, Edison or San Diego Gas and Electric. So there's a  
4 lot of opportunity for investments that aren't served by  
5 programs that already out there.

6 No one has really commented too much on the  
7 production of fuel supply manufacturing workforce  
8 development, so I'm curious to hear more about those.  
9 Particularly the manufacturing workforce development could  
10 be a high bang for your buck, type of investment that other  
11 agencies aren't doing. And so I do want to just raise this  
12 up that dollar amounts are smaller here. And maybe also  
13 just raise up the question about what the nature of the  
14 fuel supply is and what it does that LCFS doesn't, because  
15 that's certainly a big driver.

16 MR. BARKER: Okay. Yes, and we'll definitely get  
17 into that later. Thanks for raising that.

18 Who do we have Claire?

19 MS. SWEENEY: (Indiscernible.)

20 MR. BARKER: Zac, all right.

21 MR. THOMPSON: Hi, Zac Thompson with the East Bay  
22 Community Energy. First off I just wanted to say thank you  
23 all for putting this meeting together and for putting this  
24 document together. I think it looks really good and  
25 definitely support the multiyear approach. I think that's



1 a really smart way to go about it.

2           And I understand and agree with this approach of  
3 sort of front loading the light-duty EV infrastructure  
4 component and sort of back loading the medium and heavy-  
5 duty vehicle and infrastructure component. But I'm also  
6 just wondering if it's maybe a little bit too much front  
7 loaded on the light-duty EV infrastructure side and  
8 wondering if some of that money should just be spread out a  
9 little bit more.

10           And I understand that there is that \$51 million  
11 one-time appropriation in there, but even aside from that  
12 there still about \$42 million to work with. And I just  
13 have some pause about the feasibility of efficiently  
14 getting \$93 million worth of infrastructure projects sort  
15 of up and running at the same time. And so I'm wondering  
16 if it would make more sense to sort of spread that money  
17 out a little bit more, whether that's through the later  
18 years on the light-duty EV infrastructure side or whether  
19 some of that money gets shifted into the medium and heavy-  
20 duty vehicle and infrastructure side, particularly because  
21 that medium and heavy-duty bucket includes vehicles and  
22 infrastructure as I'm reading it.

23           And I think everyone here knows and has talked  
24 about this already to an extent that both those vehicles,  
25 and the infrastructure component behind those, both have

1 very high costs to them. So I'm just wondering if it would  
2 make more sense to take some of that money, the 93 million,  
3 and distribute that out a little bit more.

4 MR. BARKER: Thanks, Zac. That's helpful, one  
5 thing that just it's more of for your information for how  
6 the funding works. So we've received the 95 million in a  
7 specific fiscal year. We have then four years to encumber  
8 the funds, which means to lock up the funds, and another  
9 four years to spend them. So I'm not disagreeing with your  
10 comments, but just want to put that out there that any of  
11 the allocations don't mean that the money has to be spent  
12 necessarily that year. There is a little bit of wiggle  
13 room built into that.

14 Okay, who do we have next Claire?

15 MS. SWEENEY: Matt.

16 MR. BARKER: Matt.

17 MR. GREGORI: Thank you. Matt Gregori, SoCalGas.  
18 I want to commend the staff on putting together a very good  
19 overview of the program and the drivers behind the funding  
20 allocation.

21 I want to look at Slide 13 where you have the gap  
22 analysis, which I thought was particularly instructive.  
23 I'm struck that the gap in EV Chargers and hydrogen fueling  
24 infrastructure on a percentage basis is roughly equal. We  
25 have similar challenges across both technology platforms.

1 However, in regard to EV charging we noted on Slide 12  
2 there is \$100 million from the NRG settlement dedicated to  
3 EV charging infrastructure. There is \$1 billion for mostly  
4 EV charging infrastructure through SB 350 in the pilot  
5 programs established by the CPUC for the electric IOUs.

6 So there seems to be a lot of funding available  
7 to address the gap in EV charging infrastructure. However,  
8 the funding allocation that you've set, this staff has set  
9 forth, has pretty minimal or reduced funding for hydrogen  
10 refueling infrastructure. And it seems to me that given  
11 the need for hydrogen fueling infrastructure and the lack  
12 of other resources for advancing that infrastructure  
13 deployment that the budget should be reallocated to provide  
14 more funds towards hydrogen refueling infrastructure.

15 And then I think on the multiyear funding  
16 allocation, I support everyone who agrees that this is a  
17 good idea. It gives good market signals and provides some  
18 certainty into the future. I would say one of the values  
19 of maybe doing multiyear funding allocation is to do this  
20 sort of front loading and back loading activities. And I  
21 think a lot of what my impression is that a lot of the  
22 funding is sort of flat over the years. And maybe that's  
23 valuable. I just think there's another lever to pull there  
24 where you can sort of sculpture a funding allocation over  
25 the time period.

1           And then on the question of, "Are we missing any  
2 important activities?" I'm struck by the complexity of the  
3 discussion today regarding how do we get more ZEVs into the  
4 market. Is it an infrastructure thing? Is it how do we  
5 help disadvantaged communities? We have multi-unit  
6 dwellings. There are a lot of factors here. And I think  
7 there may be an opportunity to provide some analysis of  
8 what are the barriers to getting more ZEVs on the road.  
9 That seems to be the primary goal and metric of the  
10 program. So has there been sufficient market study and  
11 customer adoption studies to say what are the best uses of  
12 this fund in order to get the most advancement? And given  
13 everyone's acceptance that there are limited dollars in  
14 this phase, how do we use those dollars most effectively?

15           And that's all I have. Thank you very much.

16           MR. BARKER: Thanks, Matt. Just two points of  
17 clarification. So the funding that you pointed out from  
18 the settlements from the utilities, those are included in  
19 the planned chargers. So the yellow bar does include the  
20 estimated chargers from those. And so the 80,000 are  
21 unfunded charging.

22           I would note for the hydrogen there, yes it is  
23 flat at 20 million. There is a cap through the Assembly  
24 Bill 8 legislation that authorized this program. That does  
25 cap us at \$20 million for hydrogen infrastructure until

1 there are 100 retail stations open. So with that the  
2 Commissioner also has a note.

3 COMMISSIONER MONAHAN: Yeah, this is a process  
4 suggestion, because we want to make that everyone gets a  
5 chance to speak on the big picture before we get into the  
6 minutiae. So if you've already spoken put your card down  
7 and let's make sure that everybody else has a chance to  
8 speak. Also, we have folks on the phone that we want to  
9 make sure get a chance to speak if they want to.

10 I'm going to be pretty disciplined about the  
11 agenda so we can get out of here. Well we'll be done with  
12 all of the presentations and the comments of the Advisory  
13 Committee by 4:00 p.m., give the public a chance to speak  
14 and end by 5:00. I don't know about you guys, but I've got  
15 to vote. And so I'm going to be disciplined about this.

16 If somebody has already said something that you  
17 agree with, I've heard people say, "I agree with that  
18 person," let's do that so that we can make sure that  
19 everybody gets a chance to speak.

20 MR. BARKER: So Claire that's on you. I know you  
21 probably noted some folks that are going up a second time.  
22 But so who's next on the first-time speaker?

23 SW: (Indiscernible.)

24 MR. BARKER: Okay. Katherine.

25 MS. GARCIA: Hi. I'm Katherine Garcia with

1 Sierra Club California. Just real quick I wanted to note  
2 that we're very pleased with the equity component.

3 And I wanted to call out a statistic that is on  
4 the job report that was released yesterday, that 12 million  
5 Californians reside in areas that exceed ozone and  
6 particulate matter standards. It specifically calls out  
7 San Joaquin and South Coast. And for that reason we think  
8 that equity is super important, and we're pleased that it's  
9 a priority for this program, also very pleased about the  
10 multiyear aspect.

11 We are also very involved in the Advanced Clean  
12 Truck Rule over at CARB, the regulation is coming up. And  
13 one of the things that we've heard from a lot of  
14 stakeholders is that they want to make sure that this  
15 investment is on the table for medium and heavy-duty  
16 vehicles. And so since we're looking at the coming years  
17 for the Advanced Clean Truck rule it's very good that this  
18 program also has multiyear investments and that they are  
19 aligned.

20 Calling out Slide 10, I wanted to just emphasize  
21 the focus on climate and air quality. For that reason the  
22 goals here for 2045, 100 percent zero-carbon electricity,  
23 2031 80 percent reduction in smog forming NOx. That really  
24 justifies our position where our priority is zero-emission  
25 vehicles, zero-emission freight, zero-emission buses,

1 zero-emission cars.

2           And in terms of air quality again bringing up San  
3 Joaquin and South Coast and the emphasis on that, this is  
4 really the 2020s. Right now it is the decade for making  
5 progress, strong progress on reducing smog forming NOx.  
6 Just to illustrate this point, a child born today would be  
7 in about sixth grade in 2031. And so you can visualize a  
8 sixth grader playing outside, perhaps in San Joaquin and  
9 South Coast area. We want to make sure his area is clean,  
10 he or she is breathing clean air with his classmates and  
11 parents too.

12           And just one last thing in terms of I wanted to  
13 call out Rey Leon's comment. When he talks about EV  
14 ridesharing in Huron I really feel that that really  
15 illustrates the success that that tone has had. In these  
16 new modes of transportation EV ridesharing is really,  
17 really here and I think he studies illustrating these types  
18 of points. These types of success stories are really  
19 important. Thank you.

20           MR. BARKER: Thanks, Katherine.

21           Claire, who do we have next? JB.

22           MR. TENGCO: Hi, JB Tengco with the BlueGreen  
23 Alliance. We represent labor and environmental groups. So  
24 I wanted to add Tim we were excited about the equity piece  
25 in front and center. I'm excited that we're going to have

1 a conversation there on about workforce and that in and of  
2 itself, that it's vertical. I'd say that just to imagine  
3 its users thinking about it that workforce is a constant  
4 that should really be considered throughout the  
5 horizontals. And how do we think about workforce in sort  
6 of a double bottom line. And not only just in the  
7 investments of getting better technology on the road, but  
8 how do those technologies end up leading to creating and  
9 maintaining good jobs also ensuring that those jobs have  
10 access and lead to family-sustaining jobs.

11           Also I would say as you guys are working with  
12 other agencies that agencies like the Workforce Board, the  
13 Labor Agency -- we're seeing reports from AB 398 that will  
14 soon be coming out -- the Future of Work, are all really  
15 looking at how do we grow California in a way that leads to  
16 good jobs? And so as we're looking at this within this one  
17 sector of industry throughout California, we're really  
18 trying to think through all of our investments to lead to  
19 good jobs. And so I just want to raise that in this  
20 conversation.

21           MR. BARKER: Thanks, JB.

22           Daryl.

23           MR. LAMBERT: Some of the comments will help make  
24 mine very brief, because I agree with everything that you  
25 just said so that's very efficient.



1           I just want to add that I don't feel confident  
2 that I can answer Question Number 2 without having a little  
3 bit more of a disaggregation of context. I don't know if  
4 the right context is there. But I'd like to see a  
5 breakdown of the allocation of funding across those four  
6 priorities that are listed.

7           Acknowledging that equity is cross-cutting, I  
8 would like to see how much of the funds are actually going  
9 towards an equity funded, or an equity activity. And I  
10 want to point out that I one hundred percent agree with the  
11 concerns we're raising. We're focusing a lot on mitigating  
12 the negative impacts of our current fossil fuel driven  
13 transportation system. But I haven't heard much  
14 conversation or much mention of maximizing until now,  
15 maximizing those positive impacts of a switch to a cleaner  
16 economy or a cleaner transportation system.

17           I feel the key to increasing access to high-  
18 quality jobs is expanding that pathway to folks who are  
19 currently experiencing barriers to employment. And I'd  
20 like to see us discuss and explore options to leverage the  
21 existing funding allocation for EV infrastructure, EV  
22 adoption, as a way to bake in expanding access to those  
23 (indiscernible) pathways as long as they're family-  
24 sustaining, high-wage occupations.

25           MR. BARKER: Thanks, Daryl.

1 Larry.

2 MR. ENGELBRECHT: Hello, Larry Engelbrecht. I'm  
3 the Educational and Program Accreditation Consultant to LA  
4 Community College District currently. Regarding Slide 15,  
5 under workforce development I request that we consider  
6 raising the 2020 through 2021 amount from the 3.5 million.  
7 I don't know what we would want to increase it to.

8 There are several reasons. I'm not going to take  
9 up time this morning to get into details, but I'll just go  
10 over these very quickly. In California the ASC accredited  
11 truck programs, four of them are private-postsecondary and  
12 only one is a public one. Also the truck standards are  
13 going through some changes. And as far as light-duty  
14 programs go there has to be a change in what had currently  
15 been articulation agreements between high schools and  
16 college programs changing over to dual and concurrent  
17 enrollment to eliminate unnecessary duplication of  
18 instruction.

19 And also I noticed on the ATL lists of the  
20 programs that were funded before, about one out of three of  
21 the colleges were not nationally accredited through ASC.  
22 However for the high schools only about 11 percent of them  
23 were accredited. And the reason that is significant is the  
24 ASC certificate is considered to be the most employable,  
25 tangible certificate so to speak. And if the programs are

1 accredited then the experience requirements are waived to a  
2 significant degree.

3           So for example you take two programs, student  
4 graduates or completes a program at one college or another,  
5 one is accredited, one is not. The one that is accredited  
6 only needs one-year work experience versus two years.

7           So what I've seen in the past as a former high  
8 school teacher who had also sent out students to  
9 internships is that if they don't realize that there is a  
10 steady series of short-term returns on investments they're  
11 going to be leaving the industry. And so in one of the  
12 recent Advisory Committee meetings, and I hear this over  
13 and over again, is the good news is our technicians, our  
14 students are getting hired. The bad news is they're not  
15 coming back to complete the programs.

16           MR. BARKER: Thanks, Larry. And another Larry  
17 maybe he'll touch on that later in his presentation.

18           Who do we have next, Claire? Sandy.

19           MS. NARANJO: Hi, good morning. My name is Sandy  
20 Naranjo. I'm with Mothers Out Front. We're an  
21 organization dedicated to climate justice, on centering  
22 mothers and grandmothers to end the climate crisis.

23           And the question I have is in regards about how  
24 we can leverage more funding, specifically about 8617, that  
25 has goals of eliminating toxic air pollution in

1 environmental justice communities where there are sources  
2 of funding for transportation and how we can connect this  
3 program with that program to make sure that we're advancing  
4 our goals.

5 MR. BARKER: Casey?

6 MR. GALLAGHER: All right, Casey Gallagher with  
7 California Labor Federation. So yeah, I'm pleased to see a  
8 multiyear plan. But I think it's going to need to  
9 basically lay out vision, also mission and also  
10 coordination. So I'll go on to some of the other  
11 approaches mentioned by Mr. O'Dea or Mr. Pimentel, how  
12 these coordinate with other projects. I'm sitting next to  
13 someone from CARB that I'm thinking about the Innovative  
14 Clean Transit Regulation or say the Sustainable Communities  
15 Equity Project. My main thing is going to be manufacturing  
16 and workforce development. That's kind of where I cut my  
17 teeth at, and I'll go into with the weeds a whole lot more  
18 later on, not to bore you with all the details, that's for  
19 the afternoon show.

20 However, that being said \$6.5 million over three  
21 years is really not that much money. So I'm putting forth  
22 there needs to be some kind of coordination, because we're  
23 looking at every single component within the allocations.  
24 And I see a workforce development component in this. We're  
25 talking about major changes to technologies that California

1 workers need to actually see this. And when we speak of  
2 equity, we're not just speaking of health we're also  
3 speaking of expanding opportunity and access.

4 And for communities to be equitable and to  
5 reverse decades of disenfranchisement to disadvantaged  
6 communities we need to focus on how do we create these  
7 opportunities into good careers? Good union careers that  
8 will lead to family-sustaining wages and healthy  
9 communities. Thank you very much.

10 MR. BARKER: Thanks, Casey.

11 Claire how many do we have left on your list?

12 MS. SWEENEY: (Indiscernible.)

13 MR. BARKER: Okay, and so we've got about 20  
14 minutes before break, so let's just keep charging through.  
15 Who's next?

16 MS. SWEENEY: Ruben Aronin.

17 MR. BARKER: Ruben.

18 MR. ARONIN: Thumbs up to multiyear. I think  
19 it's a good signal not just for the private sector, but for  
20 other public agencies. One of the hats I wear is The  
21 Outreach Coordinator for the Mobile Source Air Pollution  
22 Reduction Review Committee that has similarly aggregated  
23 about 60 million in clean transportation and infrastructure  
24 investments in Southern California, Riverside, San  
25 Bernardino, Orange and LA counties.

1           And this need for pilot projects, and we'll talk  
2 more about it I expect in the afternoon, for heavy-duty  
3 there's a real need; particularly because there's such  
4 significant gaps between IOU, the independent utilities,  
5 SoCal, Edison and our territory, and then municipal  
6 utilities. And in figuring out particularly along the  
7 freight corridors how to get more key pilot projects that  
8 are expensive and have elements that are untested yet in  
9 the ground sooner rather than later, is going to be a real  
10 critical learning to gather from others.

11           And then I just want to make a comment on the  
12 light-duty side as we think about infrastructure  
13 investments. I drive a used Leaf. I get about 80 miles on  
14 a good day. And I mostly rely on home charging, but I'm  
15 constantly let down by infrastructure that hasn't been put  
16 in all that long ago: street chargers broken, charging  
17 units; it's not just wait time. And I think that for the  
18 first adopters that was acceptable.

19           But we're now getting to mass market adoption.  
20 And so as stewards of our investments how we're making sure  
21 that this infrastructure is going to last, is going to be  
22 maintained. I am concerned about the user experiences  
23 across the board on infrastructure. I think that needs to  
24 be thought of in some capacity. And in this gap filler  
25 because we don't have enough resources for the need, how

1 can the CEC aggregate the investments that it's attracting?  
2 Public and private sector, so that we can feel like we're  
3 not just spitting in the wind but really building and  
4 filling the gaps in that pie chart because we need to get  
5 there.

6 And I think we can find this as a worker or a  
7 jobs element. Not to get into a green new deal  
8 necessarily, but what are the job metrics of these  
9 investments? I think that would be useful across the board  
10 and then what are the workforce? I'm curious about what  
11 are the gaps that are needed versus a lot of skills that  
12 already exist to make this infrastructure real.

13 MR. BARKER: Great comments. Thank you.

14 MS. SWEENEY: (Indiscernible.)

15 MR. BARKER: Say that again? Alfred.

16 MR. ARTIS: Hello, Alfred Artis from Consumer  
17 Reports. First of all we do want to echo how much we enjoy  
18 this wonderful document. It's got a lot of great stuff  
19 about equity that we think is very important.

20 Furthermore, when it comes to these investments  
21 in the light-duty charging infrastructure space,  
22 specifically public charging and charging at MUDs we just  
23 want to make sure that there is a focus on making sure that  
24 consumers capture the fuel-cost savings that are promised  
25 by zero-emission vehicles. As everyone in this room knows

1 electric vehicles provide a lot of savings that lower the  
2 overall cost of the vehicle. And for consumers who won't  
3 have access to at-home charging , which is considerably  
4 cheaper than public charging we would want to make sure  
5 that these investments into the building out light-duty  
6 public charging infrastructure maintains cost savings for  
7 our consumers, especially those who will not have access to  
8 at-home charging. Thank you.

9 MR. BARKER: Thanks.

10 Tyson?

11 MR. ECKERLE: Hi, so Tyson with GO-Biz. I'll be  
12 quick. I think I agree with the long-term funding and a  
13 lot of consensus in this room, which is great. Just a  
14 couple of things for context, one of the things is the  
15 Climate Catalyst Fund in the Governor's Office Budget?  
16 It's the Governor's Budget, which hasn't gone through the  
17 Legislature but something to keep in context as we go here  
18 in kind of moving projects from that pilot phase to more  
19 scale, so it's something we want to make sure we have in  
20 our mind.

21 And the other one I wanted to highlight is kind  
22 of the medium and heavy-duty. And we should be thinking  
23 about how we might want to potentially split those funds up  
24 between plug-in and hydrogen, just some of the lessons  
25 learned from the light-duty sector, which stopped the



1 infighting between those fuels. And so that could be  
2 helpful especially as we try to increase certainty and  
3 investment. I don't know what that split looks like.  
4 There's a lot of analysis.

5           And then the final point being AB 2127 and all  
6 the great stuff that the Energy Commission staff is doing  
7 on plug-in charging analysis. I think we need to do a  
8 similar effort on hydrogen especially on the heavy-duty  
9 side. I think we've got a good handle on the light-duty,  
10 but figuring out how we can -- what is our state strategy  
11 there? That's kind of a challenge for all of us here in  
12 the stakeholder group.

13           Oh and then one last thing, Mayor Leon, I noticed  
14 that Huron is really close to the Coalinga Station, so you  
15 can take credit for that too for hydrogen. So it's for  
16 your per capita, it goes up. (Laughter.)

17           MR. BARKER: Thanks, Tyson.

18           Kevin?

19           MR. HAMILTON: So with regard to the first bullet  
20 and the additional context, I note that in the contextual  
21 slides we're mainly focusing at ARB's regs and rules and  
22 are leaning hard on our climate goals. I think there are  
23 other opportunities and we're going to have to think  
24 differently in moving forward.

25           Each of the agencies has the opportunity in their

1 regulatory capacity to make changes here. CEC just did a  
2 really fantastic update to the electrical building code for  
3 energy efficiency and lighting that in green buildings  
4 that's just awesome. But nowhere in that is a mandate that  
5 both new buildings and retrofits or remodels, at least that  
6 I know of, mandate the charging infrastructure be built  
7 into that new build again or remodel. Until we get to that  
8 point where that's mandatory we're never going to make  
9 this. There's no way this state can continue to pour an  
10 adequate amount of money into this to fund every bit of  
11 this infrastructure everywhere we go. So thinking of new  
12 ways of leveraging the existing dollars is going to be  
13 paramount. And if we don't put that to the forefront of  
14 this conversation we'll find ourselves back here in four  
15 years doing the same thing.

16           So the other piece is the equity lens that we're  
17 looking through now, we are all very happy with what we see  
18 there. How does that hit the ground? How does that create  
19 equity in those communities? What is equity in those  
20 communities?

21           We launched a program with our partner CSC on  
22 CaleVIP and CVRP where we're looking at talking to  
23 residents in communities to find out how they feel about  
24 these vehicles. But on the CaleVIP side there's no  
25 structure to do that. We have to create it. There's no

1 mandate in that program that we do these kinds of  
2 community-based assessments.

3           And again, if the residents in the neighborhood  
4 don't understand what this means to them, if I can't ask  
5 them, "What would it mean if in Huron I was to stick as Mr.  
6 Leon, Mayor and my colleague of the past 25 years in very  
7 many crimes -- I can't say, "government," just saying --  
8 what it means if they put charging infrastructure in the  
9 local market, would that actually move them to purchase an  
10 electric vehicle and use it? And I think that's the kind  
11 of understanding we need to have. And the guy that owns  
12 that market, what are we doing to go and talk to him and  
13 make sure he understands that? I see a whole legion of  
14 small businesses being left behind across the San Joaquin  
15 Valley.

16           And the shortfall in that particular program,  
17 whoever made the decision that somehow we would only go to  
18 San Joaquin County, Fresno County, and Kern County did a  
19 great disservice to folks in Kings, Tulare and Madera and  
20 Merced counties. I understand we have limited resources.  
21 However, that set up sort of in-fighting now within those  
22 counties about why us and why not them? I've got people in  
23 Farmersville, a very progressive City Council that really  
24 wants to access this funding, but they can't because of the  
25 way it's set up. So again, equity needs to be beyond

1 simply the local person, the local household, the local  
2 community and think more broadly about the region. And of  
3 course in this case I'm speaking to the San Joaquin Valley.

4           So interagency cooperation, Governor Brown,  
5 that's one thing he did get right. And I really feel  
6 strongly that we're not seeing that as well as it could be.  
7 Again, we're seeing one agency that basically anchors all  
8 of the rules and regulations in this. For the majority of  
9 them we need to see that continuity across agencies. All  
10 13 agencies were given GGR money. Some of them are still  
11 struggling to figure out how to spend it in a way that  
12 actually reduces greenhouse gas. And they come up with  
13 very interesting and almost fantastical ways to explain how  
14 that money is somehow going to -- I hope I'm not offending  
15 anybody. I don't think this is a big secret. They're just  
16 trying to meet their mandate, yet here is an asset that  
17 really needs that kind of funding, so how do we again  
18 leverage this money? Find a pathway forward to those other  
19 pots of money and show them how CalRecycle could for  
20 instance connect to this and leverage some of their dollars  
21 with these dollars to be able again to put this  
22 infrastructure down in some of these communities where it's  
23 most important.

24           And again I just want to reinforce one of the  
25 missing important activities here again is how do we fund

1 this outreach and education into these communities? Where  
2 is the money for that?

3 And I do want to make a pitch to agree with  
4 everybody here who said "workforce development." So.

5 MR. BARKER: Thanks Kevin.

6 MS. SWEENEY: (Indiscernible.)

7 MR. BARKER: Who's on the phone?

8 MS. AGUAYO: I'm right here.

9 MR. BARKER: Yes, Leslie, go ahead.

10 MS. AGUAYO: Hi, Leslie Aguayo from the  
11 Greenlining Institute. I also just wanted to highlight you  
12 are making a big effort to center equity in this program. I  
13 really appreciate that given that I represent a racial  
14 equity organization. It's super important to see and it  
15 shows a commitment from you all.

16 I would like to also have seen a breakdown of the  
17 funding in regards to which are directly applied to equity  
18 programs. I think a further discussion of the coordination  
19 of funding analysis would be really important to see as  
20 well, given that there are some programs that might not  
21 necessarily fully encompass our definition of equity such  
22 as CVRP, where we haven't seen income caps. And so other  
23 folks are still able to access rebates and not necessarily  
24 qualify as low-income folks.

25 I'd also like to double tap on the consideration

1 for how implementation education is going to be designed in  
2 programs. One of the things that we strive to see is how  
3 program designs consider geographies in their design. So  
4 if you're looking at a rural community it's very different  
5 from an urban center. And so sometimes a single-occupancy  
6 vehicle even though it's electric might not be the best  
7 solution for certain communities. And so investing in  
8 active transportation and public transportation and e-  
9 mobility and other options I think it's also something to  
10 consider.

11 As well as I know MUDs were being talked about  
12 earlier. And I think considering affordable housing  
13 development as part of this plan would be really important  
14 to look at. I don't know if there's some kind of way that  
15 we can figure out how to create investments or incentives  
16 within the light tech housing programs.

17 And then I don't know yet if this is irrelevant,  
18 but I don't think so. But I didn't really see much on the  
19 consideration of wind use moving forward in this proposal  
20 either. And given that we have a climate change crisis  
21 like the way that we use land will significantly change by  
22 2020 to 2030. And so how are investments and  
23 infrastructure going to be addressing the change in our  
24 landscape I think is important to consider too. Thanks.

25 MR. BARKER: Okay, thank you.

1           Let's see, well we only have two Advisory  
2 Committee members on the phone. Heidi or -- Lucas already  
3 spoke.

4           COMMISSIONER MONAHAN: I'm sorry, did everybody  
5 on the Advisory Committee who is on the phone get a -- does  
6 anybody on the phone who is on the Advisory Committee wish  
7 to speak or they both spoke?

8           (Off mic colloquy.)

9           MR. BARKER: Okay.

10          COMMISSIONER MONAHAN: Okay. Well, thank you  
11 everybody. I wanted to 1st say that we're listening very  
12 carefully to every comment and thinking about what  
13 adjustments we should make to our Investment Plan based on  
14 these comments.

15          I want to just emphasize that this is a real  
16 process. And we want to make sure that we are tailoring  
17 our Investment Plan to take your advice into consideration  
18 and also to take public comment. And there's an  
19 opportunity to send us written comments as well, so this is  
20 a live process. And we've never done a Multiyear  
21 Investment Plan. I'm very new to state government, so I'm  
22 not jaded to this process. (Laughter.) And we really are  
23 going to make adjustments based on the input that we get.

24          I've been looking at the afternoon and realizing  
25 there's no way we're going to get through everything if we

1 keep this process the same as we had thought, so we're  
2 changing the process. When we get back from lunch what's  
3 going to happen is the staff is going to run through the  
4 different categories of investments. And there's going to  
5 be some questions in there. We're going to ask again like  
6 this, you'll get a chance -- each person will get a chance  
7 if they want to, to react to the specific questions that  
8 we're raising among each of the activities that we are  
9 suggesting we're going to fund and we'll get through it.  
10 By 4:00 o'clock we'll be done with the Advisory Committee  
11 input into that.

12 We're going to break for lunch. We are  
13 reconvening at 1:15 sharp, sharp, sharp. We're going to  
14 start talking at 1:15.

15 And is there any other housekeeping that I'm  
16 missing? So thank you. I really appreciate it. Go get  
17 some lunch, get some air, go look at the -- you had a  
18 question?

19 MR. BRECHT: The only housekeeping thing is don't  
20 exit out this door over here.

21 (Off the record at 12:10 p.m.)

22 (On the record at 1:19 p.m.)

23 MS. ALLEN: Good afternoon, everybody.

24 MR. BARKER: Okay. For those folks on WebEx, we'll  
25 be starting in one minute. For those folks in the room, it



1 looks like Commissioner has brought some sweets. So.

2 COMMISSIONER MONAHAN: Only for people who are  
3 sitting down.

4 MR. BARKER: So if I -- Patty, is it okay if I just  
5 go through quickly logistics?

6 So we're going to get started and you'll notice  
7 that in the slide deck, we will have a number of questions.  
8 Please follow on your handout, write down your questions  
9 and comments that you have on each individual section.  
10 Sections being light duty infrastructure, medium, heavy  
11 duty infrastructure, zero, near zero field productions  
12 supplied, those would be the topic areas.

13 Our staff are going to read the questions to just  
14 spark some conversation. Let us in the -- because we have  
15 limited time and we know there's going to a robust  
16 discussion, let us run through the entire set. We will  
17 take clarifying questions, everything on all of the  
18 sections, however you want to ask them.

19 Our staff will stay up here so when a topic that  
20 they presented on, when you have questions and comments on  
21 that, they will be able to stay up here and to respond to  
22 them. And then the Commissioner, obviously, will be here  
23 from the dais so -- or at this table.

24 So with that, we'll have Jennifer start us off with  
25 a five- to ten-minute presentation on the light duty

1 infrastructure.

2 MS. ALLEN: Good afternoon, everybody, I'm Jennifer  
3 Allen, I supervise the Electric Vehicle Infrastructure  
4 Unit. This is the light-duty charging infrastructure and  
5 eMobility category with 92.7 million proposed for the 2020-  
6 2021 fiscal year and 40.2 million for the following two and  
7 a half years.

8 It's not moving.

9 So the California Electric Vehicle Project or  
10 CALeVIP provides rebates for chargers using a single and  
11 consistent application process. The project areas are  
12 ranked based in part on the need for additional chargers,  
13 what was referred to on the gap on Slide 13 and  
14 partnerships.

15 So CALeVIP currently has 71 million in leverages  
16 partnership funds but is still oversubscribed. CALeVIP  
17 requires between two to five years of active network  
18 agreements, which in part helps ensure a working charger  
19 for that period of time. Sixty percent of the rebates have  
20 been issued in disadvantaged communities.

21 It's not working. Oh, there we go. Okay.

22 The Equitable eMobility Projects are -- provide  
23 equitable clean transportation options to disadvantaged  
24 communities. And examples of eMobility projects shown here  
25 are electric car sharing and chargers placed to service

1 multiunit affordable housing complexes, clean mobility  
2 transport such as ridesharing or ride hailing services for  
3 rural communities to access the closest metropolitan area,  
4 and car sharing services located at centrally located  
5 refueling hub stations.

6 We're also looking developing, testing, and  
7 demonstrating novel charging technologies. The use of new  
8 and advanced technology charging systems and specific  
9 applications can test demonstrate commercial liability and  
10 grow a robust market in California for these innovations.

11 Examples of our funding include movable solar  
12 charging stations for Caltrans personnel at sites where  
13 there was no or inadequate electricity and curbside  
14 charging in Burbank where there was excess electrical  
15 capacity.

16 The San Francisco Municipal Utility District loans  
17 out mobile chargers shown here at the bottom for both  
18 vehicle charging and for onsite electricity where none  
19 exist. So the other ones are examples of projects that we  
20 have had both stakeholders and companies come to us to  
21 request the potential for funding opportunities. And these  
22 include automated and inductive charging.

23 So the key questions for light duty electric  
24 vehicle charging infrastructure and eMobility is  
25 frontloading our investments in this category the right

1 approach? How should we balance or prioritize project  
2 types? And these would be -- this charging infrastructure  
3 deployment, equitable eMobility projects, and innovative  
4 and pre-commercial charging technologies.

5 MR. BARKER: Thanks, Jennifer.

6 Esther.

7 MS. ODUFUWA: Good afternoon. My name is Esther  
8 Odufuwa with the Freight and Transit Unit. I'll be talking  
9 about the investment for medium duty and heavy duty.

10 The Investment Plan proposes 20 million in the \$20  
11 million in fiscal year 2020-2021 for medium duty and heavy  
12 duty zero emission vehicles and infrastructure.

13 This amount of funding is a decrease from last year  
14 that had 30 million, however, the plan also proposes to  
15 increase the funded category over the next two and a half  
16 years to almost \$150 million.

17 Now the reason for the decrease in funding next  
18 year and the increase in funding in the following years is  
19 due to the work we are currently doing in the program.  
20 This year the clean transportation program will administer  
21 nearly \$50 million in funds for a range of zero emission  
22 vehicle infrastructure projects to address a wide variety  
23 of (indiscernible) needs.

24 Now next year smaller amount of funding which you  
25 can see for the 2020-2021 for 20 million will help us to

1 administer the funds completely and analyze the project's  
2 effectiveness. This will also give us the time to better  
3 align our infrastructure investments with the vehicle  
4 investments coming out of the Air Resources Board. Staff  
5 hopes to use the project's successes and lessons learned  
6 from the 50 million in projects to replicate successful  
7 projects in the years following 2021 with the increase of  
8 amounts of funding.

9 Now Staff's goal is to effectively meet the growing  
10 needs of medium and heavy duty zero emission vehicles on  
11 the charging infrastructure as well as demonstrate the  
12 State's commitments to improving air quality.

13 Now as a background to this following category, the  
14 freight and transit vehicles appeal out to the California  
15 economy providing the necessary form shields for domestic  
16 good move, international trade, mass transportation, and  
17 other essential services. The medium duty and heavy duty  
18 vehicles which are defined as vehicles with a gross vehicle  
19 weight rating of above 10,000 pounds. They represent a  
20 small share of California's registered vehicles so which  
21 accounts for about 1 million out of 31 million vehicles or  
22 about 3 percent of California vehicles.

23 The medium duty and heavy duty vehicles  
24 additionally account for 70 percent of state's on road NOx  
25 emissions and 45 percent of on road diesel (indiscernible)

1 matter emissions. However, this small amount of vehicles  
2 is responsible for about 21 percent of on road GHG  
3 emissions in the states. And this is because of the  
4 comparatively low fuel efficiency and the high number of  
5 miles traveled per year.

6 For this one (indiscernible) the medium and heavy  
7 duty vehicles that represent a significant opportunity for  
8 us to reduce GHG emissions and criteria emissions. In  
9 addition I would say that California transit agencies are  
10 (indiscernible) and maintain about 12,000 transit buses and  
11 the current zero emission bus fleet is also growing.

12 However with the CARB's innovative clean transit  
13 regulation, which cited statewide requirement for public  
14 transit by 2040, public transit agencies bus fleets must be  
15 entirely zero emission buses.

16 To advance some of the (indiscernible) to medium  
17 duty and heavy duty, Staff held a workshop of the Energy  
18 Commission on October 25<sup>th</sup>, 2019 to solicit feedback from  
19 stakeholders on several medium duty and heavy duty ZEV  
20 infrastructure concepts. And there were five concepts.  
21 These concepts will focus on in the upcoming year and we  
22 hope to expand upon in the next three and half  
23 (indiscernible) cycles.

24 So as an overview for Concept Number 1, this  
25 concept proposes to focus on ZEV infrastructure for freight

1 demonstration vehicles. And for this concept, we have  
2 coordinating with the Air Resources Board on potential  
3 joint projects.

4 For Concept Number 2, this proposes to support  
5 transit with zero emission infrastructure. And earlier  
6 this morning we heard from the committee about considering  
7 (indiscernible) gaps and focusing on areas that are not  
8 covered by other programs. We are definitely considering  
9 on that Concepts 1 and 2, life scale demonstration for  
10 freight and transit fleets.

11 Now for Concept Number 3, this proposes to focus on  
12 ZEV blueprints or what you refer to as infrastructure  
13 planning projects. And we do have some of examples  
14 pictured here. At the top left is a Cavotec electric  
15 rubber-tyred gantry out of Port of Long Beach  
16 (indiscernible) which is funded. Below is the Proterra  
17 electric transit bus at San Joaquin Region Transit  
18 district. And on the right, we have an example of the  
19 blueprint for the part of Long Beach.

20 And Concept Number 4 is proposing to support  
21 deployment of hydrogen refueling infrastructure for rail  
22 and marine applications. And this will be coordinated with  
23 the CEC's Energy Research and Development Division.

24 Then we have Concept Number 5 which proposes to  
25 fund projects that will demonstrate innovating electric

1 (indiscernible) charging and hydrogen refueling solutions.  
2 And examples will include conductive and inductive charging  
3 and also pantograph.

4 Additionally, Staff is evaluating a block grant  
5 concept for medium duty and heavy duty ZEV infrastructure  
6 which will similar to the CALeVIP that Jennifer described  
7 on the light duty side. And the idea behind this concept  
8 is to be able to streamline the application process for  
9 fleets that are converting to zero emission records.

10 The block grant recipient will be responsible for  
11 identifying ZEV infrastructure opportunities and  
12 implementing projects for installation. This concept could  
13 potential partner with vehicle (indiscernible) program such  
14 as the ARB's Hybrid and Zero-Emission Truck and Bus Voucher  
15 Incentive Program popularly referred to as HVIP.  
16 Now the 20 million from the 2020-2021 funding allocation  
17 could be used to support this block grant concept.

18 Now additionally in the medium duty category,  
19 school bus replacement program has funded electric school  
20 buses. We allocated \$75 million to replace old, dirty,  
21 (indiscernible) school buses and we were able to replace  
22 more than 230 buses with -- that have vehicle to breach  
23 capabilities. However, applications for over 1500 buses  
24 were received from school districts throughout California  
25 and this is a small amount compared to the estimated 15,000



1 school buses, buses that are currently on the road.

2 Now to be able to fund this remaining buses on the  
3 application list, more than \$400 million dollars is needed.  
4 Now if you look at the Investment Plan, no funded is  
5 proposed for school buses in the current Investment Plan.

6 Now the key questions for this group will be: Is  
7 the funding approach that we're proposing with a decrease  
8 in the 2020-2021 and the increase in the following two and  
9 a half years the best approach for the medium duty and  
10 heavy duty sector?

11 Secondly, which of the following concepts should we  
12 prioritize? And we have this list, we went through all the  
13 concepts, which ones should we prioritize? Or are there  
14 others that we should consider as we go along?

15 And finally, how should we account for the impact  
16 of current and (indiscernible) medium duty, heavy duty CARB  
17 regulations which we've all been talking about this  
18 morning? For example, the innovative clean transit or the  
19 adverse clean (indiscernible)?

20 Thank you.

21 MR. BARKER: Thanks, Esther.

22 Phil?

23 MR. CAZEL: Good afternoon. Phil Cazal, Air  
24 Pollution Specialist with the Hydrogen Unit. Firstborn of  
25 three, so you can figure that out.

1           So the \$20 million proposed allocation for '20, '21  
2 under hydrogen refueling infrastructure aligns with the AB  
3 8 requirement to allocate \$20 million or 20 percent of  
4 funds allocated by the legislature until there are at least  
5 100 hydrogen stations available.

6           And to date, there have been 62 stations funded, 44  
7 of those are open retail, 18 are still under construction.  
8 And on the map you can see the locations, they're clustered  
9 in areas that are high density, high population areas.

10          There are a few stations that are scattered out that that  
11 are considered destination or connectors. And this mapping  
12 has been closely correlated and coordinated with CARB who  
13 does modeling and mapping for station locations. I should  
14 mention 11 of the existing funded stations are in  
15 disadvantaged communities right now.

16          So and also for the current solicitation which is  
17 I'll mention a couple of times, there's an open  
18 solicitation for our next round of funding. There are  
19 several areas highlighted throughout the state that we've  
20 noticed will require additional capacity even though there  
21 are a number of stations nearby. So it's not always just a  
22 spreading of the stations we're trying to backfill in  
23 capacity where those stations are overused right now.

24          So then going down to the chart, this shows the  
25 funding of stations over the years. And as the numbers

1 increase, the capacity increases. The blue lines are the  
2 funded stations, the blue plus the red are the funded, and  
3 the red is just the trend of stations as they've become  
4 open retail.

5 So the current stations can support 35,000 fuel  
6 cell electric vehicles and that's in contrast to today  
7 where there's a little over 7600 on the road, and that's as  
8 December 2019 DMV registration data. And CARB is  
9 projecting 48,000 fuel cell electric vehicles by 2025.

10 And also by 2025, the Energy Commission expects to  
11 fund a total of at least 100 stations to meet the AB 8  
12 goal. And that number of stations is expected to be able  
13 to support over 50,000 fuel cell electric vehicles at that  
14 time.

15 And then not on this slide but just an issue that  
16 we had over the last year between June and October 2019,  
17 there was a hydrogen supply disruption that affected the  
18 gaseous supply of hydrogen. And this caused many drivers  
19 to be unable to refuel because of inability of the hydrogen  
20 to be produced and then delivered to the number of stations  
21 that were in need.

22 And so this supply chain challenge is being  
23 addressed by industry. And recently, several large  
24 industrial gas companies such as Air Liquide, Air Products,  
25 Praxair, and Iwatani announced plans to invest and make

1 more hydrogen available to the refueling stations  
2 specifically. And this is in addition to recently funded  
3 renewable hydrogen production facilities that were funded  
4 under the clean transportation program's low carbon fuel  
5 production area.

6 So the other change in the stations as they have  
7 evolved over the years is the newer stations are coming out  
8 with the liquid technology which is a completely different  
9 supply chain.

10 So then over the course of funding stations, the  
11 Energy Commission has essentially funded stations based on  
12 daily capacity which translates into the number of fuel  
13 cell vehicles that a station can support. And the small  
14 early stations could each support about 250 fuel cell  
15 electric vehicles. And the larger stations as they have  
16 been applied for and awarded recently are able to support  
17 up to 1400 fuel cells each.

18 And so this increase in capacity kind of contrasts  
19 with the amount of funding, so the funding level for each  
20 station has been between 1.5 million and 2 million over the  
21 years. And so even though that has been a relatively  
22 narrow range, what we've seen is that the stations that we  
23 are funding are much larger and much more able these days.

24 The larger stations also had multiple fueling  
25 positions. They can store more hydrogen onsite and some as

1 I said are using the liquid technology which is just a  
2 completely different animal.

3 So then going to the chart, the chart shows the  
4 timing for station development. And so the bar to the far  
5 left is the earliest stations that were funded and then  
6 going toward the right. So you can see an improvement in  
7 the time that it's taken to get a station off the ground  
8 and open. The most dramatic improvement has been the green  
9 part of the bar there which is the time from initial  
10 funding until the initial permit was filed. So one reason  
11 for this technology is that the technology was new to fire  
12 and permitting agencies and so there was, you know, took  
13 longer for them to get on board and gear up for getting  
14 permits and plans evaluated for these stations. So.

15 A lot of these delays were overcome with early  
16 outreach by Energy Commission and the Governor's Office of  
17 Business and Economic Development. And also the station  
18 developers became much more aware and better at interfacing  
19 with the legal local agencies they have to deal with for  
20 permits.

21 So just as an aside, the fastest station to get a  
22 permit was recently funded and it was just over 200 days to  
23 get its permit and that was in Citrus Heights, that opened  
24 about a year ago, so we are seeing improvement there.

25 So the current solicitation as I mentioned was

1 released in December 2019, and it provides 115 million in  
2 grant funding and this was designed to span from 2020 until  
3 the end of the Clean Transportation Program in 2024. And  
4 based on stakeholder comments, this -- and discussion from  
5 several public workshops, this approach will allow  
6 developers to achieve economies of scale and reduce  
7 equipment costs. And out of that 115 million,  
8 approximately 45 million is available for the first round  
9 of funding and that's from prior funding allocations that  
10 have already come through and been approved.

11           So eligible costs include revealing infrastructure  
12 for transit bus and commercial fuel cell vehicles and this  
13 is expected to increase individual station throughput which  
14 again can achieve economies of scale for the developers.  
15 And this is because of increasing interest in fuel cell  
16 technology and heavy duty long haul applications as well as  
17 fuel cell electric buses that can help transit agencies  
18 meet the innovative claim trans regulation.

19           And as well, preference points are available for  
20 projects serving these commercial fuel cell fleets and bus  
21 fleets as long as it does not diminish the light duty  
22 customer experience. So again this is based on industry  
23 input, we believe the complimentary development of light  
24 duty and heavy duty infrastructure can bring down fuel cell  
25 component costs and hydrogen fuel prices across the board.

1           So the key questions to think about for this  
2 section since AB 8 requires 20 million annually until there  
3 are at least 100 stations, once we reach that goal of 100  
4 stations, should funding continue?

5           And then how much should the program focus on light  
6 versus heavy duty hydrogen infrastructure, especially given  
7 the new regulations that we know are coming down the line?

8           MR. BARKER: Thanks, Phil.

9           All right. Andrew.

10          MR. HOM: Good afternoon, everybody, Andrew Hom  
11 with the Advanced Fuel Production Unit.

12          The proposed allocation for the zero and near zero  
13 carbon fuel production and supply category is \$10 million  
14 for fiscal year 2020-2021, and \$25 million over the next  
15 two and a half years.

16          Please bear with me, I know there's a lot of  
17 information on this slide. Here's a bit of an overview on  
18 the low carbon fuel project benefits to date. For context,  
19 California only represents a half percent of the world's  
20 population but consumes almost five percent of all the  
21 biofuel in the global market.

22          For the entire transportation market for  
23 California, about 7 percent consists of low carbon fuels.  
24 This 7 percent displaced 1.7 billion diesel gallon  
25 equivalence of fossil fuel in 2017. Of the 1.7 billion

1 gallons of biofuel that was consumed in California, the CEC  
2 has funded 171 million gallons of that as in-state  
3 production. These 171 million gallons represents only five  
4 percent of California's total diesel demand so the  
5 remainder of that fuel was imported from out of state.

6 Out of the total waste base low carbon fuels that  
7 were produced in California, the CEC has funded almost 85  
8 percent of this production. The average carbon intensity  
9 of these fuels are very low, averaging 11.2 grams of CO<sub>2</sub>  
10 equivalence per megajoule or 90 percent lower than diesel.  
11 This results in a reduction of 4.6 million metric tons of  
12 CO<sub>2</sub> equivalence per year or about the same as 1 million  
13 passenger vehicles.

14 Besides the GHG reductions, these projects also  
15 provide large economic benefits by creating jobs many of  
16 which are located in disadvantaged communities. Over \$1.1  
17 billion in public and private investments have been made  
18 statewide with \$209 million of that total coming from the  
19 CEC.

20 And lastly, out of the \$209 million that have been  
21 awarded, \$152 million of that or 73 percent have gone to  
22 projects that were located in disadvantaged communities.  
23 Please note that the summary of these benefits include a  
24 \$12.5 million one-time infusion from greenhouse gas  
25 reduction funds.



1           Here are some examples of types of fuel production  
2 projects. And for clarification purposes, the title of  
3 this slide is "Low Carbon Fuel Production," but the funding  
4 activity is titled, "Zero and Near Zero Carbon Fuel  
5 Production." Zero and near zero carbon fuel production is  
6 meant to relate to the carbon intensity of the fuel and not  
7 emission of the fuel. So near zero production could also  
8 include fuels that have a negative carbon intensity.

9           With that said, there have been four main  
10 categories for fuel types which include gasoline  
11 substitutes, diesel substitutes, biomethane, and renewable  
12 hydrogen. The second column represents examples of  
13 different fees (indiscernible) to produce each type of  
14 fuel.

15           So these are the few key questions that we'd like  
16 the committee to address. First, the Investment Plan  
17 intends to fund zero and near zero carbon fuel production  
18 which includes negative fuels. These fuels may be used in  
19 zero-emission vehicles or combustion vehicles. How should  
20 we balance GHG emission reductions and technology  
21 flexibility?

22           Second, we have traditionally funded grants for  
23 biofuel production facilities but we are now considering  
24 expanding to address system barriers like the lack of  
25 blending equipment for biodiesel. Is this the right

1 direction?

2           And lastly, what is the best way to scale up in-  
3 state production of renewable fuels? Are there other  
4 funding mechanisms besides grant facilities that could be  
5 used a better scale of the market and allow California  
6 businesses to thrive, like loans or loan guarantees?

7           Thank you.

8           MR. BARKER: Thanks, Andrew.

9           Larry. Larry's going to cover the last two  
10 categories in the Investment Plan.

11           MR. RILLERA: Good afternoon, everyone. My name is  
12 Larry Rillera. I'm Staff with the Fuels and Transportation  
13 Division, and I lead our teams in ZEV manufacturing, work  
14 training and development and equity efforts.

15           Our manufacturing portfolio has developed over five  
16 separate solicitations since program inception for over  
17 \$54 million in project funding. Staff had note that match  
18 share provided by companies is significant, and over 700  
19 direct manufacturing jobs were created with these projects.  
20 Additionally, there is much variability in terms of product  
21 types, the status of commercialized technologies, and  
22 investment capacity of the companies.

23           California's home to many companies that  
24 manufacture commercialized light, medium, and heavy duty  
25 ZEV, ZEV components, and ZEV infrastructure. California's

1 zero emission supply chain benefits are several fold.  
2 Proximity to customers and markets, location of private,  
3 capital, and investors, and census provided by the state to  
4 help offset the cost of procurement and colocation near  
5 equity communities for workers and environmental benefits  
6 that accrue to product development.

7 Staff would offer a few reflections on the  
8 manufacturing portfolio to date. A couple of them the  
9 transportation program still provides a significant role in  
10 de-risking companies and projects as companies scale.  
11 Companies mature under the Clean Transportation Program.  
12 We are seeing an increase in private investors and amount  
13 of capital invested. Increase in strategic investors and  
14 partnerships. Increase in scale production for California,  
15 the U.S., and global markets. We are also seeing an  
16 increase in M&A or mergers and acquisitions.

17 I will now switch gears and address workforce  
18 training and development. As noted here, our workforce  
19 investments were approximately \$29 million through fiscal  
20 year 2016. The total up-to-date investment is about  
21 \$33 million. Staff would note that during the initial  
22 development of the Clean Transportation Program, most of  
23 the funding went through state entities. This was  
24 initially necessitated to leverage existing state programs  
25 and to learn about workforce training.

1           There are several current workforce projects that  
2 are at this this imaginative intersection of clean  
3 transportation, equity, and workforce. There was already a  
4 considerable return on this nominal investment by the Clean  
5 Transportation Program. First, the clean transportation  
6 training project is focused on ZEV curricula at community  
7 colleges in the state, located in equity communities by  
8 ethnic-serving institutions. We'd note that several of the  
9 colleges will focus on not just plug-in battery technology  
10 but also on ZEV heavy duty and fuel cell curricula as well.

11           The second project is focused on solely on  
12 developing ZEV curricula and programs at high school  
13 automotive programs, at Title I schools, and in equity  
14 communities. Twenty-seven high schools are in the process  
15 of establishing what I term Auto 3 ZEV technology.

16           The third project, the CEC's school bus replacement  
17 program, as was alluded to earlier, is providing workforce  
18 training component. The electric school bus training  
19 project is a separately focused effort on training for  
20 school bus maintenance and service technicians as well as  
21 bus operators. This training is part of a longer term  
22 strategy to link the high school ZEV Auto 3 programs in the  
23 ZEV curricula at the community colleges.

24           Finally, the Energy Commission with the Governor's  
25 Office of Business and Economic Development and their

1 Workforce Development Board is addressing freight workforce  
2 under the California's Sustainable Freight Action Plan. As  
3 a result, Staff is in the midst of planning a sustainable  
4 freight foundation certificate pilot project for managerial  
5 occupations with CSU Long Beach industry and labor.

6 In terms of the key questions, what considerations  
7 and priorities should guide the program's investment into  
8 the ZEV manufacturing supply train?

9 Second, what approaches or priorities should we  
10 apply toward future investments and workforce development  
11 and training?

12 And lastly, what are choosing to fund manufacturing  
13 and workforce development in alternating years, is this the  
14 right approach?

15 Thank you.

16 MR. BARKER: Thanks, Larry.

17 So if I could get Claire to come back up for the  
18 middle, we'll take questions in a very similar fashion,  
19 take your name card, make eye contact with her.

20 Our folks are going to stay up here, if there's any  
21 specific questions. And then -- and when you start your  
22 comments, if it's helpful, let us know which slide or set  
23 of questions you're commenting on and that will help us all  
24 focus.

25 So I saw Michael raise it first. So let's start

1 with Michael Pimentel.

2 MR. PIMENTEL: Thank you. Once again, Michael  
3 Pimentel with the California Transit Association.

4 My remarks are going to be focused primarily on  
5 Slide 27, the questions about the medium and heavy duty  
6 zero emission vehicle and infrastructure set aside.

7 As I a mentioned early, we do want to redouble on  
8 the notion of recognizing the shortfalls that do exist.  
9 Currently, in other programs one was be complementary as  
10 much as possible. I think if you data points are worth  
11 noting on here and why it may speak to the decrease in  
12 fiscal year 2020 and 2021 being wrongheaded is that  
13 California Resources Board recently moved to excise from  
14 the HVIP program, the voucher enhancement for the HVIP  
15 program. That means that for transit agencies, one of the  
16 dominant funding sources for funding infrastructure was  
17 taken off line.

18 And I'd mentioned earlier that the investment on  
19 the utilities programs set aside some money for investing  
20 in zero emission infrastructure for transit buses, for each  
21 of the programs under PG&E and SCE, there was a 15 percent  
22 set aside. What we're finding is that some of the  
23 requirements that were built into the proposed decision  
24 that authorized -- or I'm sorry, within the decision that  
25 authorized those investments are requirements for number of

1 sites that PG&E and SCE have to service to be deemed per se  
2 reasonable. And we're finding that on the ground, the cost  
3 of individual projects is significantly higher than what  
4 PG&E and SCE built in to the budgets that justified that 15  
5 percent set aside.

6 That means that rather than making the types of  
7 investments they intended to, just really to do fairly  
8 significant investments and make ready infrastructure,  
9 they're having to scale back the amount of funding they  
10 provide to any one site, meaning transit agencies are going  
11 to get less money from the investments, and again, that  
12 suggests that there was a shortfall in the very near term.

13 I'd also mention that as part of the transportation  
14 electrification framework, the IOUs would be compelled to  
15 introduce new transportation electrification plans, those  
16 would be introduced in 2022. And until that time and until  
17 the CPUC acts on approving future applications, there will  
18 be a funding shortfall into the sense that CEC is being  
19 viewed by the state as the dominant source of funding. For  
20 these purposes, we really have to find a way to increase  
21 funding for those years where funding looks to be lacking.

22 And that is separate from the general policy  
23 contacts that the state in passing the innovative transit  
24 will really emphasize that it is a V-check technology, I  
25 think that serves as good justification to try to make as

1 much investment as possible in the transit sector in the  
2 near term so that benefits can accrue to other sectors that  
3 are looking to electrify.

4           Let's see here. Under 2, they do ask, you know,  
5 what sector should be prioritized. I think my remarks here  
6 really do emphasize that the transit bus infrastructure  
7 needs to be focused for the CEC. I'll step back and say  
8 that we're looking at what the infrastructure needs as  
9 being two-fold. One is there is a need for tremendous  
10 investment and doing these large-scale projects that will  
11 prove the technology at scale. Right now the largest trans  
12 bus fleets that we have that are all electric have about 40  
13 buses in operations.

14           We don't yet know what happens when a transit  
15 agency endeavors to have 100 buses, 200 buses, or L.A.  
16 Metro's 2500 buses. And so we really do need to focus on  
17 resources there to understand what types of challenges  
18 might be on the horizon that aren't yet clear. And the CEC  
19 can be a good partner in that space.

20           And the second area of focus for these investments  
21 should be, and I do want to show some strong support for  
22 the block grant concept. We are looking to how best to  
23 move monies out the door quickly. The HVIP model that the  
24 ARB has used has proven to be very effective at getting  
25 dollars out the door. If we could see something similar on



1 the infrastructure end, have them on the line in terms of  
2 funding cycles, I think that would be the best case  
3 scenario in terms of making sure that agencies, transit  
4 agencies as they're entering the market and wanting to make  
5 procurements know where they can get funding for buses in  
6 addition to infrastructure.

7 And so with that, I'll end my remarks. And I went  
8 a bit long there, but if there are questions, I'd be more  
9 than happy to answer anything from CEC Staff.

10 MR. BARKER: Those are all great. Thanks.

11 Dorothy, (phonetic) who do we have? Casey, all  
12 right.

13 MR. GALLAGHER: All right. Good afternoon. Casey  
14 Gallagher, California Labor Federation.

15 My remarks will be focusing on the manufacturing  
16 and workforce development section of the plan. And I will  
17 focus on the questions. But I may kind of waver a little  
18 bit, but it's going to be structured by the questions, but  
19 thank you for that.

20 So number one within the manufacturing and  
21 workforce development component is consideration and  
22 priorities, should be guide the program's investment and  
23 ZEV manufacturing.

24 From our standpoint, we'd like to see focus on high  
25 road procurement. A policy that was almost kind of added

1 into the SB 100 school bus replacement, something that  
2 focuses on supporting and rewarding employers doing the  
3 right thing by the workers and also for our communities.

4           We stand that California money should always lead  
5 to  
6 good California careers. Always supporting some sort of  
7 high road advancement. Procurement can then be focusing on  
8 operation within the state or family sustaining wages or  
9 more scoring going toward fair scheduling will continue as  
10 direct employment, health and safety training, career  
11 opportunities and workforce development within the  
12 manufacturing plant or within the company and basically  
13 workers actually having a voice on the job leading up to  
14 almost collective bargaining or actually having the right  
15 to collective bargain.

16           So that being said, just kind of can go on and on  
17 if certain kind of a matrix that can go towards a high road  
18 procurement policy, I'd like to see that going, especially  
19 with this little, like 10 million's really not that much.

20           On the second question, so what approaches or  
21 priority should be applied to the future? Two things that  
22 I would love to see and also you need to reflect it within  
23 the draft plan is the role of organized labor in workers in  
24 California and also worker's voice. Worker voice is a key  
25 component in a lot of these things, especially when it

1 comes to training.

2           On page 59, one of the things I want to highlight  
3 of the draft staff report is that the element that was  
4 mentioned about Santa Clara Valley Transportation  
5 Authority, everything created within that was in  
6 partnership with the Amalgamated Transit Union Local 265.  
7 And it was in partnership that the agency and the union  
8 could actually figure out what are the broken pathways?  
9 What are the different forms of advancement? How can we  
10 actually figure out equity, equitable opportunities to the  
11 communities of actually bringing them in?

12           And that was kind of the source to actually  
13 creating the actual DA as apprenticeship program when you  
14 have an understanding that you need to have industry  
15 stakeholders to create apprenticeship programs, and  
16 industry stakeholders meaning the employers and also labor  
17 of the workers involved with this. And I think also  
18 outlining the importance of the California Workforce  
19 Development Board in this, because this project that's  
20 highlighted in paragraph 4 actually highlights the high  
21 road training partnership fund that's actually based on now  
22 it's GGRF, but before that, it was cap and trade dollars  
23 that was focusing on three main elements being equity,  
24 climate, and jobs and job quality, basically.

25           And that project was actually also funded by this.

1 So it's almost like all these different pieces all coming  
2 together and the role partnership of state agencies being  
3 ETP being one of them, the chances office supply and the  
4 CAI grant to help kind of lift up the 200-plus apprentices,  
5 the CWBD, and also all educational partners.

6 Not to go into too far into the weeds, but yeah, I  
7 think this is a key point of understanding the future of  
8 these things that it's through our partnerships and these  
9 high road partnerships that we develop. Through our  
10 agencies across the state or all high-road employers at the  
11 port that it would be great to see that so -- there's not  
12 very much funds going through this, so 6.5 million in a  
13 scheme of workforce development is not much. But what to  
14 do is complement in this high road programs that already  
15 exist.

16 For example, I see Port of Long Beach in here.  
17 Someone has mentioned that the machinist union actually has  
18 a programs that can actually be uplifted at both the Port  
19 of Long Beach, Port of L.A., and also Port of Oakland.  
20 That's for everything from crane mechanics to diesel  
21 mechanics, you name it.

22 Those already existing -- labor already has  
23 programs that's already been created. How can we figure  
24 out ways of actually supporting this all spending these  
25 high-road opportunities?

1           That being said, before I go deep into  
2 apprenticeship talk and such. I think the main thing is  
3 this is not a critique. I would like to actually -- and  
4 the Labor Federation would like to assist the CEC in any  
5 way that we can focus on organized labor's involvement in  
6 this and also how can worker voice actually play a role.

7           These technologies keep on changing. Like  
8 manufacturing keeps on changing that producing new and more  
9 and more products and how can we actually utilize that  
10 knowledge from folks on the shop floor to actually lead the  
11 future generations that desperately need these kind of high  
12 road careers.

13           On equity standpoints, I've also talked about this.  
14 I probably mentioned the statistic before in probably other  
15 advisory committee meetings but when I'm talking about  
16 public transportation and pathways into these good jobs,  
17 the public sector in the state of California has  
18 historically benefitted communities of color, disadvantaged  
19 populations, and particularly women of color into pathways  
20 and to good family sustaining jobs. So supporting this and  
21 the path, the partnerships that we create with our agencies  
22 in organized labor is huge.

23           That being said, I'd like to commend you on the  
24 statement very early on in the draft report that's  
25 basically stated that CEC is committed to ensuring all

1 Californians have opportunity to participate and benefit  
2 from programs and services. And the California Labor  
3 Federation supports you on this.

4 Thank you.

5 COMMISSIONER MONAHAN: Thank you. So Kevin and I  
6 have been doing the math up here. We want to make sure  
7 that everybody gets a chance to speak. So. Oh, that's --  
8 it's fine. But if you could try to hold your comments to  
9 around three minutes and then if somebody had said  
10 something previously, just say I agree with that.

11 MR. BARKER: Steve.

12 MR. CLIFF: Thanks. Steve Cliff, the California  
13 Air Resources Board.

14 First, thank you, Commissioner, for the cookies  
15 even though there was no milk. Oh, sorry.

16 COMMISSIONER MONAHAN: It's a classic remark from  
17 the Air Resources Board.

18 MR. CLIFF: We always want more.

19 Second, I just want to say how much I appreciate  
20 the partnership and the work between our respective staffs  
21 on developing not only this year's program but especially  
22 for the work that you guys have been doing on the  
23 infrastructure development related to clean mobility and  
24 clean transportation in general. So, you know, we're  
25 certainly committed to continuing that work.

1           And I think one of the things I wanted to highlight  
2 in particular is the eMobility and those programs, CARB has  
3 some specific programs that we're doing around eMobility  
4 and some new mobility pilot projects. And I think it's our  
5 hope that we can figure out a way to coordinate the  
6 infrastructure development and the technology development.  
7 So we're certainly committed to that.

8           We want to make sure that there's good  
9 opportunities for funding the infrastructure. And I don't  
10 know if that's a challenge because of the way we've done  
11 our program with kind of a first come, first serve  
12 approach, but we're certainly open to figuring out the ways  
13 to best leverage the two programs and certainly focus on  
14 equity is really critical. So we very much support that  
15 work.

16           Thanks.

17           MR. BARKER: In the back.

18           MR. O'DEA: Hi, Jimmy O'Dea, Union of Concerned  
19 Scientists.

20           This is an incredible overview of really great work  
21 that the Energy Commission's doing. I think it shows that  
22 the agency is on the right track for a lot of these  
23 projects.

24           Just some specific comments, I think the dollar  
25 amount in the eMobility programs is, you know, those

1 projects are a million dollars or so, just what we're  
2 seeing in trends in mobility. I think that there could be  
3 a greater need for those projects and certainly the  
4 projects that have invested in already have been  
5 successful.

6 I'd be curious to learn a little bit more about the  
7 blueprint concept just to evaluate what's behind that.  
8 Definitely support ideas around novel charging. Light duty  
9 has been -- sounds like invested in but I think heavy duty  
10 there's a lot of opportunities. We hear just challenges  
11 that fleets are having in thinking about using their space  
12 effectively in, you know, their parking garages. And I  
13 think that there's a whole industry waiting to be developed  
14 and take off in helping fleets, you know, manage these  
15 challenges. And I don't see a lot of investment in that  
16 area yet. And so this seems like a unique pot of money  
17 that could really address some of those challenges.

18 On the light duty side, I've heard a very positive  
19 story that the Energy Commission's investments in charging  
20 infrastructure have been much more cost effective than  
21 utility investments. And not to slander the utility  
22 investments at all because we're very supportive of those  
23 as well, that maybe just we'd love to see where the Energy  
24 Commission is getting more efficiency out of these  
25 investments and taking those to the utility so that they



1 can hopefully be more effective in their investments as  
2 well. And maybe it's an easy explanation, I just am not  
3 aware of that sort of the Energy Commission for that  
4 accomplishment.

5 Certainly support hydrogen infrastructure on  
6 medium, heavy duty side, I'll just plus that up. That's an  
7 area we see a lot of potential for. And I'll tie that in  
8 with the interest and direction for renewable fuels as laid  
9 out in this program. I think that renewable hydrogen on  
10 the medium, heavy duty side, you know, large volumes of  
11 fuel. I would say if investments are being made in  
12 hydrogen infrastructure, they should be associated with,  
13 you know, onsite renewable hydrogen production and  
14 combining those two goals in similar projects. And we've  
15 seen that in projects, AC Transit has onsite renewable  
16 hydrogen, et cetera.

17 The last thing again I'll plus up. I see a lot of  
18 bang for the buck in this workforce development and  
19 manufacturing. You had a slide that was just slashed  
20 through with all of the logos of all these companies that  
21 have been invested in. I mean, California is the leader in  
22 this industry because of these investments and because  
23 policy is driving. And so getting these companies off the  
24 ground, they're pushing the big companies to take action.  
25 I can't understate -- can't overstate the impact of these

1 companies. And we need more, we certainly need more.

2 And I'll say one, and we're hearing workforce, you  
3 know, issues. Fleets want their technicians to be trained.  
4 They're unsure how to, you know, get their technicians  
5 ready for these new technologies. I would maybe put a  
6 little pressure on companies to come with matching funds.  
7 You know, if you're Daimler, or Cummins, or Tesla, that if  
8 they're benefitting from employees that they should come  
9 with maybe some matching funds but certainly support those  
10 programs.

11 And the last one on the battery manufacturing, I  
12 would maybe put a plug in for manufacturing around battery  
13 recycling and reuse. That's certainly an area that we hope  
14 to see there will be a need for as we get a lot of these  
15 technologies on light and heavy-duty side. And at some  
16 point they're going to come off the road. And I would hope  
17 that California is a leader in companies thinking about  
18 what to do with those batteries, both on the recycle and  
19 the reuse. So investing in companies to do that in the  
20 state would be I think a very high bang for the buck  
21 investment with this money.

22 MR. BARKER: Thanks.

23 Okay. Russ.

24 And I would just one thing put a plug in, it's not  
25 ready yet but we are hoping to make aggregate data on

1 CALeVIP costs available soon.

2 MR. TEALL: Russ Teall, recreational voter.

3 I have trouble saying that with a straight face  
4 because I have so much experience in other types of  
5 renewable fuels and energy.

6 And first of all, this is a tremendous effort, the  
7 staff report is really comprehensive and goes through all  
8 the alternatives. And are we able to submit written  
9 comments later? What --

10 MR. BARKER: Yes. So we'll -- Patrick will be able  
11 to -- maybe if you could just pull that slide up. About  
12 two weeks from now, March 17th written comments are welcome  
13 by then for the docket. So feel free to follow up.

14 MR. TEALL: So in your -- I'll limit my comments to  
15 the biofuels recommendation. I know most of the people  
16 that have been involved in the biofuel industry throughout  
17 the world and I think that it's good that you're stopping  
18 funding for individual plants and focusing funding on  
19 infrastructure, especially blending.

20 I was talking to Tim Olsen over lunch and we went  
21 in in 2008, 2009 to see Jim Boyd about blending  
22 infrastructure for biofuels. And if that had been done at  
23 that point, all the blending, racks, and individual jobbers  
24 would be covered now. So there's an acute need for  
25 blending the different types of renewable diesel, HRD,

1 biodiesel, DME. I stopped at Love's with Ray on the way up  
2 and we filled up with 100 percent biomass diesel at a  
3 Love's truck stop. And that should not be unusual, that  
4 should be typical for California.

5 MR. BARKER: Thank you, Russ.

6 Eileen. Russ, can you --

7 MS. TUTT: Thanks, Eileen Tutt with the California  
8 Electric Transportation Coalition.

9 I just have a couple of comments that are  
10 responsive to the questions on various slides.

11 First I think I just want to say that you mentioned  
12 that you want to leverage the investor-owned utility and I  
13 would say public-owned utility investments and  
14 infrastructure.

15 But I just want to say that as we work on the  
16 medium and heavy-duty side, what we're learning is that the  
17 customer side costs are quite high. So even though the  
18 IOUs are investing, I would say quite effectively, Jimmy,  
19 in infrastructure, I think that there are real challenges  
20 that weren't anticipated in that the customers that we're  
21 talking about here are small fleets who may not own the  
22 sites that they -- that they need the infrastructure built  
23 on. It may be there may be barriers to them and then --  
24 and they just can't afford the additional costs.

25 So the degree to which this investment can use --

1 so you can't just see well, that side gets IOU money so it  
2 doesn't need -- if you can say the IOUs or the POUs are  
3 investing in infrastructure at this medium and heavy duty  
4 site and there's still additional need. That would be, I  
5 think, really important. Because what we're learning is  
6 it's a big barrier, a very big barrier, and we need to  
7 overcome it with all of the regulations that are coming  
8 down the pike from CARB.

9           And then I do want to say, somebody -- I think it  
10 was Pimentel, Michael, you mentioned the transportation  
11 electrification framework. We are very, very worried about  
12 that. That could cause a delay in infrastructure  
13 investments of five to six years. It could freeze IOU  
14 investments. That would be huge. It's just I want to come  
15 in separately and talk to you about that because we're very  
16 concerned about it.

17           And then in terms of the medium and heavy duty  
18 infrastructure needs, I feel like -- I want to say I think  
19 we do need to probably invest more in medium and heavy duty  
20 early, but I honestly don't have -- we don't have the  
21 analysis and data to know how, what the gap is there. So  
22 you had -- we had a lot of information on light duty, we  
23 have very little on medium and heavy duty.

24           So even though I think it's probably wise, I don't  
25 have the analytics to back up what that breakdown that

1 must -- needs to be.

2           Sorry, Mary Solecki, but I think that the  
3 alternative fuel side, when I looked at the slide and the  
4 questions, does actually include renewable electricity,  
5 even though it's not spelled out in our report. So thank  
6 you, I think that's included.

7           And then I agree with the workforce training, I  
8 really liked what the California Labor Association had to  
9 say so I won't repeat that.

10           I do think that this is -- I am so impressed by  
11 this plan and the three-year look at -- I think that has --  
12 I just -- it's long needed. What's also needed is a little  
13 more time to go through this. So we're going to -- I'm  
14 going to be putting together comments over -- before the,  
15 but we will have substantial comments.

16           Overwhelmingly I want to say thank you for that  
17 kind of vision because it was much needed and I wasn't  
18 expecting it. So really appreciate it and I will take the  
19 time to provide more substantial written comments.

20           Thank you.

21           MR. BARKER: Thanks, Eileen.

22           Just two real quick points, one of the beauties of  
23 CALeVIP does allow for the pancaking of different  
24 incentives. So at least on the light duty, it's we have a  
25 program that allows for to pancaking utility investments

1 with some of ours. And so having something similar to that  
2 on the medium and heavy duty, we at least have something  
3 that we can base that on.

4 And then I appreciate the comment of there not  
5 being an assessment on the medium and heavy duty. And I  
6 think that's a big piece of AB 2127 requiring the Energy  
7 Commission to really expand beyond light duty  
8 infrastructure needs for charging. And so we will --  
9 that'll be part of -- I can say part of the IEPR. I guess  
10 I said it. And the report, the final report is due at the  
11 end of this year. And so I think there will be a lot more  
12 that we can say throughout the year for medium and heavy-  
13 duty charging needs.

14 Who do we have next, Dorothy?

15 Richard.

16 MR. SCHORSKE: Hello, Richard Schorske, EV Alliance  
17 and ZNE Alliance.

18 Just want to address Slides 26 and 27 light duty  
19 space. First, the question was how should we balance or  
20 prioritize project types?

21 I just want to suggest a couple of metrics that I'd  
22 love to see highlighted and maybe made central to some of  
23 the evaluation activities on the Staff side prior to the  
24 applicants coming in. And the first one is cost per  
25 electric passenger mile enabled. We have things like cost

1 per EVSE deployed which is typically used. But that can  
2 cover up a multitude of sins. I think that notably things  
3 around the issue of stranded assets and whether or not the  
4 make ready becomes a real charger and whether the charger's  
5 actually used and so on.

6 Cost for electric pass per mile enable gets you to  
7 favor vehicles such as man pools, electric paratransit,  
8 shared mobility services, car sharing, ride-hailing  
9 services, and the like. And those are going to be both  
10 higher VMT, but also higher per passenger mile in terms of  
11 -- and therefore lower costs in terms of how the resources  
12 are deployed. I think that could actually steer a lot of  
13 resources into those shared mobility services would have a  
14 lot of equity co-benefits and cost efficiency benefits,  
15 obviously.

16 A second -- and this is specific to the MUD space,  
17 but cost per household enabled for EV procurement. So if  
18 you think about the fact that there's an issue with  
19 stranded assets, if you have a one-to-one relationship  
20 between the EV charger and a particular space, an assigned  
21 space, that's just a set up for a stranded asset as soon as  
22 there's any turn in the -- in the unit.

23 So what we would propose is a strong emphasis on a  
24 shared access to EV infrastructure in the MUD environment.  
25 It's a little less convenient, no doubt about it, but it



1 also can support right sizing of infrastructure in terms of  
2 lowering costs per household enabled for EV procurement.  
3 So in other words, anybody anywhere in the unit could use  
4 that infrastructure.

5           Moving on to Slide 26, 27, around the school bus  
6 replacement program and the medium duty, I would, you know,  
7 I'm just very concerned that we don't have a strategy for  
8 getting to 100 percent electric in the school bus domain.  
9 I presume that there might be a rulemaking in that soon or  
10 there should be. But most importantly I think some kind of  
11 a system in a room process where we bring the school bus  
12 stakeholders, including the Oyams, the District,  
13 financiers, and the like all together and say, you know,  
14 what is the goal? Is it 100 percent electric by 2033, for  
15 example, just to throw out a number. It's a \$4 billion  
16 build based on the numbers you guys have presented. You  
17 know, how much is HVIP is going to cover, how much CDC, how  
18 much private finance, how much District?

19           I mean, that's the discussion that needs to happen.  
20 We need to actually get real about the total all-in cost  
21 counting everything, infrastructure, and the like. And  
22 then what mechanism can get us there, a market-type  
23 mechanism, you know, or regulatory mechanism. So like no  
24 more (indiscernible) procurement after 2023 would be an  
25 example, diesels can't be relicensed for operation after

1 ten years would be another example. A heavy tax on  
2 diesels, you know, to help to fund the program.

3 So emphasis on expanding the pie, this is a policy  
4 proposal, I know it's not a funding proposal per se, but we  
5 need to expand the pie, funding pie for that segment and  
6 many others. And again, I would just say feebate is a  
7 great way to go and I think the politics are there for  
8 feebate unlike previous years.

9 Lastly, very quick, Slide 27, what concept should  
10 be prioritized? Planning blueprints aren't everybody's  
11 favorite way to spend money but it's very cheap relative to  
12 everything else we're talking about here. And there are a  
13 lot of cities, terminal ports, and cogs and the like,  
14 AQMDs, that can and need to be doing and want to be doing  
15 more for zero emissions zone planning.

16 This is a really complicated area. Zero emissions  
17 freight delivery in a region is a really complicated thing  
18 to get your head around and there's not a lot of planning  
19 money available for that and it's something that requires a  
20 lot of stakeholders.

21 So if you could set aside some funding for helping  
22 cities, ports, cogs, MTCs, and the like to get their arms  
23 what it would mean to have an accelerated approach to zero  
24 emission goods movement and faster movement for that  
25 matter, that'd be super, super helpful.

1           And last, data analytics on MD, I want to align  
2 myself with Eileen and Michael's comments about cost issues  
3 there being way bigger than we had any idea about on the  
4 bad news side. On the good news side, we know that better  
5 charging management can lower cost and some of that's not -  
6 - that knowledge isn't very fully deployed yet so some kind  
7 of, again, bringing stakeholders together to really get  
8 those numbers better tweaked and inform everybody about  
9 what it's going to cost to get there and be able to get  
10 CARB and the CPUC in the room with that conversation as  
11 well.

12           That's it.

13           MR. BARKER: Thanks, Richard.

14           Sandy in the back.

15           MS. NARANJO: Hi, good afternoon, everyone. Sandy  
16 with Mothers Out Front.

17           I agree with Richard what he just said about the  
18 electric school bus program. We've been working on a  
19 campaign to work with school districts who's transitioning  
20 their fleet. It's pretty concerning that there's not going  
21 to be more investment in this considering the impact that  
22 is has on children. Children are exposed to things every  
23 day, and so considering the health impacts it has on  
24 children, specifically that children in disadvantaged  
25 communities are riding school buses.

1           So if we're going to uplift equity and uplift  
2 disadvantaged communities of color, that should be  
3 investing in programs, especially helping children to have  
4 an opportunity to live a healthy, thriving life. So hope  
5 to see more investment in that and hopefully to see how we  
6 can work with schools to get them committed to have 100  
7 percent zero emissions school bus fleet.

8           Thank you.

9           MR. BARKER: Thanks, Sandy.

10          Leslie.

11          MS. AGUAYO: Hi, Leslie Aguayo from Greenlining  
12 Institute.

13           Yeah, I also really wanted to commend Energy  
14 Commission for all of these great policies. One of the  
15 things that I was thinking about in regards to increasing  
16 workforce development is considerations of community --  
17 community benefit agreements. And so really trying to hold  
18 private companies accountable for ensuring that local jobs  
19 are both given to the local economy but that they're  
20 quality jobs as well.

21           Another thing that we often hear in the climate  
22 change and green new deal is just transition. So ensuring  
23 that folks that are going to be retrained from internal  
24 combustion engine mechanics and moving into electric  
25 vehicles don't lose their jobs. So folks who currently

1 work in that state will also be considered in the  
2 transition.

3 Another thing could also be along with community  
4 colleges and younger folks to reintegrate folks coming out  
5 of prison. So people who have formerly been incarcerated  
6 possibly doing some kind of training or workforce  
7 development program for them to reintegrate them into the  
8 local economy.

9 And regarding the buses, we have been working with  
10 some folks on on-bill tariff financing. So that is one  
11 kind of financial model that you could consider as well.

12 And I also agree in terms of considering local  
13 policies about zero emission zones. Something else to  
14 consider is what -- what the role of car dealerships would  
15 be in those local policies. We know that they often don't  
16 have the information to give to local community members  
17 about how to purchase or how to use electric vehicle,  
18 that's where a lot of that trust is found is in people who  
19 work in the local community already. And so thinking about  
20 how to integrate local car dealerships would be I think a  
21 great strategy in thinking on how to capitalize sales tax  
22 and the fiscalization of land use would be something you  
23 could consider too.

24 So those are just some ideas.

25 MR. BARKER: Thank you.

1 MR. HAMILTON. Thank you. And thank you, members  
2 of the Commission and Staff for putting together this  
3 really great and concise, comprehensive approach to this.

4 A couple of comments on the CALeVIP side. When I  
5 look at future projects, I notice, you know, we're leaving  
6 too many Californians out here in the San Joaquin Valley  
7 and the future project planning. So obviously we'd like to  
8 see that addressed. You note the map on Slide 18, it's  
9 pretty clear. I'm not sure what kind of thinking went into  
10 that but it seems to be a theme. As we move on to  
11 hydrogen, you can see the same thing. In the hydrogen map,  
12 again, there are no plan facilities for the 99. In case  
13 you don't know it, it's the second most used truck route in  
14 the United States only to 95. And the East Coast has a  
15 higher number of vehicles moving up and down it every day.

16 So I rode with them today and I'll be riding back  
17 with them starting about 3:00 here so I too have to vote.  
18 In Fresno, though.

19 So I'd really like to see that addressed. I don't  
20 see how you can continue to move forward without that, it's  
21 been commented on that many times. Why anybody chose  
22 Coalinga originally for this is beyond my imagination. A  
23 majority of people we recreate use the 99 to get up to  
24 Sacramento and across into Reno. And if you want to --

25 UNIDENTIFIED SPEAKER: (Indiscernible) greener

1 city.

2 MR. HAMILTON: A greener city. Yeah, right, the  
3 wonderful, beautiful scenic city of Huron, California,  
4 where the number of charging -- charger infrastructure  
5 devices of various types actually outnumber the residents.  
6 We'll talk later, Ray.

7 Also I wanted to mention on the demonstrating novel  
8 charging infrastructures. You know, again, the county of  
9 Fresno, the Rural Transportation Agency there, I don't know  
10 if you're familiar with Moses who is essentially, that's  
11 actually the guy's name who leads that agency and how  
12 progressive he is. But he invested with this company early  
13 on and in the 15 incorporated cities is a solar arc with  
14 charging infrastructure available to the public downtown in  
15 every city now in Fresno County. And they have committed  
16 to convert the entire fleet for the World Transit Agency to  
17 electric by 2025. And he's already moved forward with that  
18 goal and I believe he'll meet it.

19 I think the induction charging for mass transit  
20 probably is the most inventive and creative thing that I've  
21 seen. We tried to push the city of Fresno into doing this  
22 with their rapid transit fleet development but they weren't  
23 willing to take that chance. I think it's probably where  
24 the future lies for that. I don't know about for  
25 automobiles, but if we had one for every traffic light I

1 suppose, and stop sign, it could be, but you're a long way  
2 from there.

3           School bus replacement. You know, AB 923 funding  
4 is still available. That's the \$2 registration fee that  
5 we're all paying on that funds school bus replacement.  
6 It's originally for 1993 and older, it's now been pushed to  
7 just 20 years back from the present date. So I would  
8 suggest, again, I mentioned leveraging earlier, this is an  
9 opportunity to add some funding but leverage this existing  
10 funding and maybe just work on the vehicles newer than 2000  
11 that need to be replaced. That gives you a more finite  
12 universe to target and you can probably wrap your hands  
13 around that more easily than the 15,000 approximate school  
14 buses statewide you have on the list now.

15           I think again another opportunity there that you  
16 could take advantage of. And that's old money, that's  
17 been around. The Air District in San Joaquin formulated  
18 the first School Bus Rule 9510, I know because I helped  
19 write it, back in 2005. So this is something that is very  
20 common.

21           By the way, just mentioning in Tulare County, the  
22 city of Porterville was the first in -- I don't know if the  
23 state, but certainly the valley to add nine electric buses  
24 to its transit fleet early on. And by the way, it  
25 surprised all of us. But just to show you again why we



1 need that charging infrastructure investment in other  
2 counties than Fresno, Kern, and San Joaquin. Sorry to keep  
3 beating that drum, but hey, that's what I'm here for,  
4 right?

5           Medium, heavy duty emissions vehicles and  
6 infrastructure. I really like this plan other than, again,  
7 the school buses not being funded. But I think blueprints  
8 for implementation are always well invested in just  
9 supporting that point that somebody else made. I can't  
10 imagine doing the work that I do without a blueprint moving  
11 forward. And I would like to think that we're doing that  
12 as well. We've had a number of those, though, who -- that  
13 have ended up on shelves within two or three years. So,  
14 you know, how do we maintain that blueprint, how do we  
15 build various indicators in it that demonstrate progress,  
16 so milestones along the way? I think all of those are  
17 critical pieces that need to be added to this plan if we're  
18 going to, again, get there.

19           And then the ability to be flexible along the way.  
20 We learn information that suggests this pathway is not  
21 working so well. What's the mechanisms built in place to  
22 pivot and do something else?

23           Last but not least, under the low carbon fuel  
24 project benefits. Feels like I've been facing this low  
25 carbon fuel standard forever now. We have some significant

1 issues in the valley, I suppose, and in California with  
2 some of the fuels that are considered low carbon fuels. I  
3 think the time has come and gone for liquid fuels. I, you  
4 know, I hate to see more money thrown after bad there.

5 I understand the whole thing, I come from farming  
6 family, both my wife and myself. You know this has been a  
7 great boon for the farming industry but I think combusting  
8 liquid fuels is pretty much something we need to put behind  
9 us no matter what. It's unfortunate and certainly  
10 unfortunate for those folks who are invested in it. But,  
11 you know, it's just unfortunately, it's all unfortunate.

12 And again reinforcing what everybody's been saying  
13 about workforce, manufacturing a workforce training and  
14 development. The biggest fear I heard from Huron Trucking,  
15 when we were working on AB 1383 trying to figure out how we  
16 could create a self-sustaining dairy digester universe for  
17 low carbon fuel standard eligibility and getting truck  
18 fleets that could actually be available to use that fuel  
19 that we're building. Their biggest worry is not having  
20 people who can fix these trucks and maintain these  
21 vehicles. And it's still a worry.

22 So when I have one of the biggest trucking  
23 companies in the country telling me we love the vehicle but  
24 we're afraid to buy more of them because, you know, we're  
25 not sure who's going to be able to fix them, I think that's

1 never money poor -- it's always money well spent, never a  
2 bad investment.

3 MR. BARKER: Thanks. And for those online, that's  
4 Kevin Hamilton.

5 MR. HAMILTON: My apologies, Kevin Hamilton, Center  
6 of California Asthma Collaborative.

7 MR. BARKER: Dorothy, who's next?

8 UNKNOWN SPEAKER: Tyson Eckerle.

9 MR. BARKER: Okay.

10 MR. ECKERLE: Down the line. Tyson Eckerle with  
11 GO-Biz. Thank you.

12 I feel like we're at this delicious buffet bar and  
13 we want to eat everything and all we have is this teeny  
14 little salad plate. And so I was trying to figure out --  
15 and so -- so yeah, so all these projects are amazing, it  
16 would be really great to invest in all of them. Try to do  
17 some prioritization type of stuff. But just going down  
18 through the list.

19 So on the EV charge, I think the frontloading is  
20 good. There's a tremendous, I mean businesses love  
21 CALeVIP, it's super effective, it goes deep. I think it's  
22 great. And I think that would just positive, you know, all  
23 categories in this questions are good but you can't have  
24 equity without infrastructure access. So I think that's  
25 where I'd put the priority.

1           The medium and heavy duty, I think there's  
2 certainly is an appetite for more funding today, you know,  
3 so if there was a way to get more into there. But of  
4 course it has to come from somewhere. And looking at that  
5 list, again, all those things are great, but if I had to  
6 pick, it would be the freight and transit. I mean, there's  
7 a lot of demonstration we need to get out there and prove.

8           I also agree with Jimmy on the innovation piece.  
9 This is a very unique pot of funding that we -- that you  
10 have here. I just -- and I mentioned this earlier, but I  
11 don't want to forget the hydrogen analysis just figuring  
12 out what our roadmap looks like there so we can help  
13 catalyze investment.

14           On the light duty hydrogen, I think just remind us  
15 that we are investing in an ecosystem so I don't -- I think  
16 we should continue beyond 100 stations, keep this 20  
17 million going as far as it can. Private investment is  
18 starting to come in but they are doing it in the context of  
19 kind of a rising tide just lifting all boats and so we want  
20 to make sure that those investments can come to fruition.  
21 I think that, you know, 200-station target is one that we  
22 should be targeting towards. I know the Energy Commission  
23 program's not going to get us there, but that coupled with  
24 LCFS capacity credits is really -- really good.

25           Want to make sure that that's leveraging kind of

1 going forward with the AB 8 reports, I think those are  
2 really great mechanisms to figure out what is the need  
3 going forward. For the light versus heavy on that, I think  
4 it's a both and type thing where there are opportunities  
5 to, you know, put those together, great, but also let's not  
6 forget that this is an ecosystem so that all the heavy duty  
7 and light duty do work together even if they're not on the  
8 same -- same location.

9           Then on the fuel production, probably no surprise,  
10 but I would definitely prioritize a renewable hydrogen  
11 piece of that. I think that, you know, kind of a green  
12 here, I think it's time to go to zero as much as we can.

13           And then workforce and manufacturing. So our  
14 office at GO-Biz does a lot of kind of retention and  
15 bringing communities here. And so the workforce part, you  
16 know, can't be underscored enough, it's incredibly  
17 important. In fact, like this, if you go back to the  
18 equity, like part of equity is having disadvantaged  
19 community members or, you know, members that have had less  
20 opportunity actually being out there doing the ones doing  
21 the construction. Right? So that's something that we  
22 should be focusing on.

23           And then we do have a real challenge in California.  
24 We have companies coming in. Great hub of innovation, we  
25 have all the engineers here and, you know, potential

1 manufacturing for ZEV than, you know, vehicles and stuff.  
2 But a lot of times, they'll look other places in the  
3 country where the supply chains are set up. And so I think  
4 that's something we need to pay attention to. And it might  
5 not be realistic for us to pull it in with \$3 million, but  
6 at least something we need to be focused in on.

7 MR. BARKER: Thanks, Tyson.

8 UNKNOWN SPEAKER: Bill Magavern.

9 MR. MAGAVERN: Thanks. Bill Magavern with  
10 Coalition for Clean Air.

11 First of all, Slide 27, I would, you know, tough to  
12 prioritize but I would go with transit bus infrastructure  
13 for the reasons that Michael Pimentel gave but also because  
14 all the transit provides an essential service with broad  
15 benefits, really benefits everyone.

16 On Slide 29, can I ask a question of Phil? How  
17 many of our hydrogen stations are available to buses and/or  
18 trucks?

19 MR. CAZEL: Well, the answer to that partially is  
20 where they're located and whether a truck or a bus could  
21 get to it, you know, to fit into the station. There are  
22 probably ten or more that could do that. And historically  
23 there have been maybe five that on a regular basis have  
24 filled buses especially.

25 MR. MAGAVERN: What I heard you say earlier is

1 we're going to try to expand those that are accessible to  
2 medium and heavy duty, right? To have more stations that  
3 our buses and trucks can access?

4 MS. CAZEL: Yeah, that's an option for the -- for  
5 the solicitation that's on the street right now.

6 MR. MAGAVERN: Okay. Well, that's definitely  
7 something that we would support.

8 And then another question on hydrogen. I think  
9 this one is for -- is for Andrew. How much capacity does  
10 California have currently? Like how many facilities that  
11 actually produce renewable hydrogen from electrolysis?

12 MR. HOM: So actual production, the facilities that  
13 we have funded most recently was only two. One was a 1,000  
14 kilogram production facility and the other one was 2,000.  
15 But the total -- the total class of the facility was 5,000  
16 but we only funded 2,000 of that capacity. But station --  
17 those production facilities aren't complete yet. So that -  
18 - I don't know if you want to count that capacity to your  
19 question.

20 MR. MAGAVERN: Well, thanks. So then my final  
21 comment is just to agree with Jimmy and Tyson that in the  
22 renewable fuels area, we should be prioritizing the ability  
23 to generate renewable hydrogen by electrolyzing water and  
24 of course working with our electricity goals by using that  
25 surplus that we often have in the afternoon of renewable

1 electricity. And instead of curtailing our renewable  
2 electricity, turning that into hydrogen.

3 MR. BARKER: Great. Thanks, Phil.  
4 Dorothy.

5 UNKNOWN SPEAKER: Katherine Garcia.

6 MS. GARCIA: Good afternoon. Katherine Garcia with  
7 Sierra Club, California.

8 On the light -- light duty side, I wanted to raise  
9 the Clean Mile Standard that I know CARB and CEC are both  
10 involved with. This is SB 1014. Just wanted to point out  
11 that there is a substantial amount of miles and GHG  
12 emissions that are associated with the vehicles that are  
13 being driven by TNCs, so Uber and Lyft, and these are all  
14 light duty vehicles. And so Sierra Club has been following  
15 this carefully to see how we can increase the number of EVs  
16 that are driven by TNC drivers and also looking to see how  
17 we can increase accessibility of charging infrastructure  
18 for these TNCs.

19 So I just wanted to raise this point to see if  
20 there could be some coordination with CARB. CARB had some  
21 analysis showing where the charging would be most affective  
22 so I think that would be good in terms of looking at  
23 charging infrastructure since there's so many miles that  
24 are associated with TNCs.

25 Secondly, on the medium and heavy duty side.



1 Wanted to mention the -- really looking at the equity lens,  
2 at this priority list and just wanted to highlight the  
3 transit bus infrastructure. Sierra Club is very dedicated  
4 to increasing electric transit buses, and so wanted to  
5 highlight transit buses and also school buses as a  
6 priority.

7 And then finally, in terms of workforce, just  
8 wanted to echo what's been said on the importance of  
9 workforce and manufacturing and also just echo what Leslie  
10 said about Green New Deal. Thank you.

11 MR. BARKER: Thanks, Katherine.

12 UNKNOWN SPEAKER: Bill Elrick.

13 MR. ELRICK: Thank you. Bill Elrick, California  
14 Fuel Cell Partnership.

15 High level. I think this is a great overall  
16 direction what the work that's been done thus far, it  
17 really looks at scaling up these alternatives and reaching  
18 California's environmental and economic goals. Speaking  
19 towards that multiyear program, we've seen that changeover  
20 in hydrogen and we're really excited about multiyear  
21 market-based and what that will do.

22 And I think that's a really important piece for all  
23 of these programs, looking at how you encourage more  
24 private investment and long-term sustainability and asking  
25 the question, what happens when the CEC funds run out?

1 And, you know, if the answer is, we don't know or it's not  
2 going to continue, that's something to question.

3 And with that, there are a lot of comments today I  
4 would echo back about the reality analysis, the gap  
5 analysis, the assessment. Is, you know, is this working in  
6 the real world, and after those funds are gone, again, what  
7 -- what happens beyond those? Especially in some of the  
8 equity questions. You know, we put a bunch of investment  
9 in there. Let's figure out right away which ones are  
10 working so we can keep encouraging that and transition if  
11 something isn't.

12 Looking specifically at some of the questions on  
13 here, looking at medium and heavy duty for Esther. I will  
14 say frontloading, you know, again that's sustainable  
15 concept, especially around transit and freight. Those I  
16 can speak mostly to hydrogen, but I think those are  
17 starting to see those first things come out.

18 I also think in the planning and blueprints, one  
19 thing to think is, maybe not committing everything right  
20 upfront knowing for say the ICT rules, CARB expects, I  
21 believe at the end of this year, to see the responses from  
22 all the transit agencies. So see what they're committing  
23 to, see what they find when they really dig down and make  
24 plans, how you build your investment around to support  
25 that.

1           And to that, I think colocation is interesting.  
2     But the real world -- the reality we've seen, at least in  
3     hydrogen is, you know, they're very different technologies,  
4     different codes and standards, and the use patterns, and  
5     don't go spending 85 percent of your resources chasing 15  
6     percent of the -- the payback.

7           Transitioning to fuel and hydrogen, again, I want  
8     to echo how wonderful the program has come over the years  
9     to really go towards we need to, which is to achieve these  
10    big long-term goals. The -- the GFO, the CARBS, HRI, and  
11    LCFS program, I think these will be really interesting to  
12    see how these play out and really move this away from being  
13    a -- a government-led activity. And that is appropriate.  
14    Government should take that lead, drive the market, and  
15    then be looking and asking how to back out.

16           However, I'm -- I'm frankly a little taken aback by  
17    the question of should you continue after a hundred  
18    stations. You know, we heard from Staff and these slides  
19    talk about we are way behind our goals, and to question  
20    continuing just undermines the entire program. Not to  
21    mention the signal it sends the consumers who invested or  
22    the industry that have invested or continue to make even  
23    bigger investments when -- when you're looking at  
24    questioning going beyond not just the 200 goal, which isn't  
25    embedded in here enough, but the big difference that I see

1 between what happens a lot  
2 is -- well, I'll come back to that.

3 I think what's really important is to look at the  
4 objectives of this program. It's ZEVs, it's clean, it's  
5 decarbonization, and those big program goals. And I think  
6 one of the reasons that might be coming is a fundamental  
7 thing I want to point out in the analysis. When you're  
8 looking at the battery side, I'm really pleased to see  
9 looking at what success is. How do we reach 1.5 million  
10 ZEVs? How do we reach five million ZEVs? You're not  
11 asking, do we get to that first milestone and quit? So  
12 what you're doing with hydrogen is you're asking if I quit  
13 after 100 stations and that's fundamentally going to cause  
14 failure.

15 So I think you need to look at that and think you  
16 need to consider both changing the overall approach to all  
17 ZEVs to be really all of this program to be how do we get  
18 success? And always asking how do we take the next step to  
19 get there? That's my biggest concern when I read this  
20 because everything else is wonderful. What you've done  
21 with hydrogen is wonderful. And it's time to scale up.  
22 Not question, you know, when do we stop before we even  
23 reach halfway to the first milestone.

24 MR. BARKER: Thanks, Bill.

25 UNKNOWN SPEAKER: Ruben Aronin.

1           MR. ARONIN: Thanks for all the hard work that went  
2 into this and I'm going to take a page from Eileen which is  
3 to say I'm still soaking it in and look forward to getting  
4 back to you and checking in with some trusted partners.

5           But at a glance, on the light-duty program, looking  
6 at the leverage benefits and the importance of making sure  
7 that we just aren't putting infrastructure investments, but  
8 that there are used programs, car sharing, innovations that  
9 are making sure that the vehicles are fully penetrating the  
10 communities that need electrification the most. So that  
11 would be kind of my guide point to frontloading. Are you  
12 really generating much more investment given that there's  
13 going to be a fall off? And then the way you structured  
14 the, you know, the cycle of actually identifying and  
15 getting funds out the door that can be up to four years,  
16 you know, from when funds are received. I would want to  
17 see how are you really taking advantage of putting those  
18 dollars up front?

19           Because if there isn't a significant advantage, my  
20 bias is to get the heavy and medium duty infrastructure  
21 investments moving sooner. I'm concerned that in our salad  
22 plate analogy that we're leaving those behind. And frank  
23 demonstration is critical, making sure we have our transit  
24 agencies' backs are critical, and our blueprint, maybe we  
25 should call them green prints. I think they need to be

1 dynamic tools because this is going to be a changing space  
2 and there's probably going to be different ways you could  
3 cut at this.

4           We don't know exactly how the market is going to  
5 transpire, but I think digging into those freight corridors  
6 and working with utilities and the stakeholders to help  
7 that process become defined. And it also will help channel  
8 other infrastructure investments. I think that can't be  
9 overstated. I think that's a really valuable use of  
10 resources and -- and mind power.

11           I noticed on Slide 34 that there's the aggregation  
12 of public and private investments on the low carbon fuels of  
13 a little over a billion dollars investments, hitting 750  
14 jobs. And you may have this, but I'd love to see the  
15 metrics of jobs that we're creating in this space.

16           And then the only other comment, and this is  
17 anecdotal, not my space. On workforce development and  
18 training, I've heard there's a mismatch. Right. The  
19 vehicles aren't on the road yet, yet we're training kids to  
20 take these jobs. And so right sizing kind of the  
21 curriculum needs that allows, you know, young professionals  
22 to work on vehicles today and be ready for the vehicles of  
23 tomorrow I think is an important modulation even as you how  
24 -- as you frame the investment pool and what that program  
25 is looking like.

1 UNKNOWN SPEAKER: Jerome Carman.

2 MR. CARMAN: Thank you. My name is Jerome Carman.  
3 The Schatz Energy Research Center at Humboldt State  
4 University.

5 First off, I want to echo Eileen's comment  
6 regarding appreciation and respect for this planning  
7 effort, and particularly the three-year vision. I think  
8 that's critical. So thank you.

9 So my set of comments is going to come, it's more  
10 from the perspective of the logistics and complexity of  
11 getting electrification technology into the ground,  
12 specifically with respect to thinking of them as  
13 distributed energy resources and taking a grid planning  
14 approach.

15 So first, addressing your questions, one from both  
16 a light duty and medium duty sector sections, they both are  
17 questions with related to timing. I would -- I recommend  
18 having a close collaboration with the PUC. I want to echo,  
19 I think it was Michael's comments regarding this. I think  
20 PUC coordination is critical, and specifically heavily  
21 leveraging their VGI working group, their Vehicle Grid  
22 Integration working group.

23 The technology around getting these distributed  
24 energy resources integrated into the grid is still very  
25 nascent in a lot of ways. The standardization is absent in

1 some of the critical technologies that are important for  
2 getting this infrastructure deployed in an intelligent way,  
3 in terms of thinking about the smart grid goals of the PUC  
4 and pre-utilities.

5           And, let's see, yeah, so I think that's -- that  
6 summarizes that point. And I think this goes back to my  
7 earlier comment about stranded assets and again, thinking  
8 through, making sure this equipment is deployed  
9 efficiently. And is, I guess on top of that, also noting  
10 that from the utility perspective, we are integrating a  
11 significant amount of load into their infrastructure. And  
12 the utilities are also early in their processes of thinking  
13 -- of figuring out how to think about distribution system  
14 management and dealing with distributed energy resources  
15 intelligently.

16           So just bring that perspective into -- as you are  
17 releasing these GFOs for this infrastructure, making sure  
18 that you're writing these GFOs in a way that has the -- has  
19 correct technology requirements in them, and coordinating  
20 with the PUC and the VGI working group to make sure we're  
21 wording that correctly.

22           My second comment is regarding the meeting heavy  
23 duty number two question, your priority projects. I want  
24 to highlight that very related to my previous comment that  
25 planning is critical. So having -- planning prior to



1 infrastructure deployment is going to be important. For  
2 example, we are taking a regional approach in Humboldt  
3 County for transit electric -- on route charging  
4 infrastructure. We're thinking about distribution  
5 requirements. We're thinking about neighboring county  
6 transit systems. We're thinking about school fleets, et  
7 cetera. And these are all important for understanding how  
8 to intelligently deploy this infrastructure. So my point  
9 being that I definitely emphasis planning. We have to do  
10 all of this, but planning is really, really important.

11 My third comment is regarding hydrogen. Your  
12 question number one. I think I want to echo Bill  
13 Magavern's points regarding medium, heavy duty and I think  
14 you -- and also your comments. I forget. Bill. Bill. I  
15 forget your last name. I apologize. Your comments  
16 regarding I think we have to continue funding in hydrogen.  
17 Particularly, unless we get some sort of clear signal from  
18 the battery technology space, that batteries are able to  
19 serve all of our mobility sector needs and I don't see that  
20 as being true. And hydrogen has a particular niche in --  
21 in the heavy duty sector.

22 And I think also we need to not forget that  
23 hydrogen needs to be renewable and electrolysis is one of  
24 those critical pathways. Electrolysis is a distributed  
25 energy resource from a utility perspective in the PUC. So

1 again, rope that back into coordinating with the PUC.

2           And then finally, a quick comment. The -- I just  
3 recommend clarifying that hydrogen is not included in your  
4 medium, heavy duty line item because -- or do I have that  
5 correctly? Because of your \$20 million cap?

6           MR. BARKER: No. So the 20 million are for the  
7 public stations. The medium and heavy duty are ZEV  
8 technologies so it would be infrastructure that includes  
9 battery and hydrogen.

10           MR. CARMAN: Okay. I don't think I -- maybe I just  
11 missed it. I don't know if I came across or comes across  
12 clearly in the Investment Plan.

13           Thank you.

14           MR. BARKER: Thank you.

15           UNKNOWN SPEAKER: Ray Leon.

16           MR. LEON: Buenas tardes now.

17           So earlier I mentioned the light passenger rail  
18 that has been -- they've been planning on for the past, I  
19 think it's 40 years now. It's a little bit different now  
20 because we're talking about the high-speed rail. And I  
21 think one of the interests is to provide feeders to that  
22 high-speed rail. Right.

23           Just a little bit a story. Back in 2009,  
24 collaborating with CERT, Center for Energy Efficiency  
25 Renewable Technologies, we had a forum at Fresno City

1 College on transportation and energy. So we were having a  
2 similar conversation but like, way before a lot of things  
3 existed, you know, but it was the first time I heard high-  
4 speed rail.

5 So we had some presenters to speak about high-speed  
6 rail and they were talking about how it was going to be the  
7 spine of the valley. And so my question was, where's the  
8 ribs? You know? Because on the west side and on the east  
9 side of the San Joaquin Valley, you have a lot of farm  
10 worker communities. A lot of communities. A lot of people  
11 that wouldn't, you know, have access to it.

12 So fast-forward, now I'm the mayor. In City of  
13 Huron, we have a rail that connects to ten other cities in  
14 three counties total and there's been a plan for a while,  
15 and from what I hear, HSR has some funding for it. Now, I  
16 also am on the San Joaquin Joint Powers Authority and  
17 that's, regards a rail from Bakersfield all the way to the  
18 Bay.

19 And so I'm trying to learn, how do we make this  
20 happen? You know, and for me it's a, you know, it's not  
21 always just about completing a project, but setting  
22 something up that provides an example, or it's a pilot so  
23 that it could be duplicated or replicated in another part  
24 where you have disadvantaged communities that are having  
25 the same connectivity issues.

1           And I just want to make sure that I mentioned that  
2 because I noticed it's a rail, but I think it should be  
3 alongside the issue of the port. I think there's --  
4 there's potential of having some light passenger rail for  
5 connectivity in disadvantaged communities and numerous  
6 communities which also works into HSR. We've mentioned  
7 leveraging resources. Right. And I think that provides  
8 some -- some opportunity there.

9           But the other thing I wanted to state is that I'm  
10 also on the Equal Opportunities Commission Board. Part of  
11 it is because what I've realized is that all the workforce  
12 training and the whole center that they're developing, I'd  
13 let you guess how many people are from Huron. Zero.  
14 Right. And Opportunities Commission, it's supposed to be  
15 for the whole county. But farm worker communities or the  
16 rural communities really aren't a part of it. And for me,  
17 it breaks my heart because it's these farm worker  
18 communities that are losing the jobs. You know, orchards  
19 are less labor intensive. And when you get a solar farm  
20 covering 1,000 acres, that's 250 jobs out the door and  
21 local economies getting hit. Right. And just mentioning  
22 that point, there's another whole conversation we could  
23 have there where we could bring about some equity but we're  
24 working on something with one of the farmers in the area to  
25 try to see what other pilot or example or something, you

1 know. Life is a lab, right. But.

2           So -- so I just wanted to pick that up because I  
3 think green light (indiscernible) are electric vehicles are  
4 for nonemergency medical. But we're trying to figure out,  
5 all right, well, you know, this -- I see it as one of the  
6 ribs, number one. The other thing is I see it as one of  
7 the extensions to be able to get some of our folks to those  
8 communities, you know. I mean, to the training centers  
9 because it's -- our folks have just been undermined and  
10 overlooked.

11           And so, I'm just one cat on that commission but  
12 there's some folks that are supporting, but. So it's --  
13 it's not, you know, it doesn't happen as fast as I would  
14 like to see it happen but I think, you know, we should know  
15 about it here. You know, folks should know about it here.  
16 That connectivity is really important.

17           Thank you.

18           UNKNOWN SPEAKER: Mary Solecki.

19           MS. SOLECKI: Hello. Good Afternoon. I won't  
20 comment on areas around light duty, ZEV infrastructure, and  
21 workforce training because I'm basically in -- I consent  
22 with many and align myself with many of the comments that  
23 have already been made and I'm trying to stay in my lane  
24 here. So I'll just run through a few of the topics  
25 briefly. I will submit written comments for more

1 substance.

2           But, quickly, on the school buses, in terms of the  
3 electric school buses for most communities in the state, I  
4 think that's -- it makes perfect sense and we should move  
5 forward with the plan as stated. But I understand that  
6 there are some rural districts in the state that have  
7 fundamental challenges utilizing electric school buses due  
8 to the nature of their routes and their geography. So I  
9 guess I would encourage the Energy Commission to talk to  
10 some of those rural districts and see what sort of  
11 technologies could be utilized in those areas that could  
12 also reduce emissions.

13           Moving on to medium duty and heavy duty. A little  
14 bit contrary to what a lot of people -- I heard a lot of  
15 people saying. I heard a lot of folks saying transit bus  
16 infrastructure. I am inclined to say freight  
17 demonstration, as well as marine and rail infrastructure,  
18 those are areas that, you know, in general, goods movement  
19 is a growing percentage of emissions, especially in the day  
20 of, you know, two-hour delivery by Amazon and Internet  
21 shopping. We're only seeing greater and greater emissions.  
22 And so I think that that's an area that we need to start to  
23 get ahead of before the I-5 and 99 corridors get even  
24 worse.

25           And then I will underline my comment that I made

1 earlier this morning just about leaving room in that  
2 program for near zero technologies. I'm -- I was trying to  
3 think of a way that I could more specifically state what I  
4 have in mind but I, you know, a few different client  
5 interests where they're moving towards these zero emission  
6 technologies but they for various reasons need to phase in  
7 the investments, or they need to build infrastructure that  
8 is temporarily going towards something that is lower  
9 emission, but it will eventually get all the way to zero  
10 emission. And I think that those also deserve sort of  
11 that, kind of, phased in development.

12           So moving on to hydrogen. The continuation of AB  
13 8. I found Bill Elrick's comments interesting about yeah,  
14 why are we stopping when we're only halfway there. Why are  
15 we contemplating stopping? I guess one of the things that  
16 I like about what we've done here is a multiyear planning  
17 exercise. That's extremely helpful and I know many  
18 companies will be digesting this plan very closely and  
19 making their own plans around it. So if we are honestly  
20 considering a change in AB 8 strategy, let's talk about it  
21 earlier than later so that industry can be prepared and  
22 decide how that they want to treat that post 2024.

23           And then on the light duty versus heavy duty  
24 infrastructure. I kind of think heavy duty. But it is a  
25 little bit of both and, so it's tough. And yeah, we've got

1 the salad plate at the delicious buffet, so I guess what I  
2 would put on my salad plate is heavy duty.

3 Finally, fuel production. Addressing system  
4 barriers. As long as that is in addition to production of  
5 fuels, yes, all for it. Love that idea. Think that's a  
6 great way to go, as long as it's not instead of.

7 Other funding mechanisms. I absolutely, I would  
8 love to see CEC go in that direction. Loans, perhaps  
9 production incentives for in-state fuel production, that  
10 those could be very successful ways to leverage fewer  
11 dollars to generate more activity.

12 So thank you very much.

13 COMMISSIONER MONAHAN: So I want to acknowledge  
14 we've been sitting for almost two hours and it's good to do  
15 a, like, two-minute stretch.

16 I also want to say really quickly that we didn't  
17 acknowledge that every single member of the advisory  
18 committee showed up for this meeting. It's the first time  
19 in the history of the program, according to Charles, that  
20 that has ever happened. So thank you. It's also the  
21 biggest advisory committee we've ever had so we -- and we  
22 want to hear from everybody.

23 So let's take a little bit of a stretch, two-minute  
24 stretch and then we'll come back and get to the finish  
25 line.



1           A few people have dropped off, so we'll be able to  
2 get to the entire Advisory Committee before 4:00.

3           (Off the record at 3:09 p.m.)

4           (On the record at 3:17 p.m.)

5           MR. BARKER: Okay, so we're going to get started.  
6 And we're going to go to one of our advisory committee  
7 members on the phone first to start with.

8           So Lucas Zucker, please state your comments.

9           MR. ZUCKER: Hi. Can you hear me?

10          MR. BARKER: Yes, go for it.

11          MR. ZUCKER: Great. Yeah, I just wanted to say,  
12 echo what some others have said and kind of reiterate some  
13 of my initial comments. I think I really, really would  
14 like to see kind of frontloading of heavy duty over light  
15 duty, if we're kind of talking about those priorities for  
16 all the reasons around health and air quality, for EJ  
17 communities and just the huge impact that those have on  
18 kind of GHGs and as well as other, you know, health-related  
19 issues.

20          In terms of heavy duty, like a lot of the different  
21 concepts there, I think, you know, one and two, both --  
22 both really important, with kind of the point three around  
23 kind of community, or around planning process. I really  
24 would like to -- if we're going to fund planning process  
25 making sure that kind of community driven planning

1 processes that -- that have really robust kind of public  
2 engagement and kind of equity elements to them, I think is  
3 really important for me.

4 I also think for Category Item Number 4, I think,  
5 yeah, there's some good potential to do kind of  
6 electrifying freight rail, given that it does often go  
7 through kind of residential communities. At least it  
8 certainly does in my area and, actually the freight rail in  
9 my community is owned by the harbor district. And so, you  
10 know, it could really have a lot of potential there.

11 Yeah, and then as well as kind of school bus and  
12 transit. As someone mentioned in the public comments, I  
13 think impacts to kids, and kind of sensitive protectors of  
14 schools of school buses I think makes that -- makes that  
15 important priority.

16 And then I'd also echo what, I think it was someone  
17 from morning said around community benefits agreements and  
18 kind of workforce standards and local hire. I think it's  
19 really important for us to talk about workforce development  
20 in terms of training, but I also think it's really  
21 critically for us to expand our thinking beyond that and  
22 really think about how are we getting jobs into our  
23 communities that are going to, you know, folks who often  
24 are needing that kind of transition from old technologies  
25 into new technologies. And I think, you know, we've

1 sometimes seen how training can fall short without those  
2 kind of protections around job quality and job access.

3           The last thought is just around biofuel and I know  
4 there's some concerns from environmental justice  
5 communities in the Central Valley. I'm on the Central  
6 Coast but, and we don't have as much, kind of dairies  
7 there, but around kind of dairies and biofuel and, you  
8 know, where that may be, you know, hopeful for emissions  
9 over all, whether they be negative for the communities that  
10 are most impacted by those dairy operations.

11           MR. BARKER: Thanks, Lucas.

12           Next in the room, Dorothy.

13           DOROTHY: Zac Thompson.

14           MR. BARKER: All right, Zac.

15           MR. THOMPSON: Yeah, I just had a couple comments  
16 on the light duty stuff on Slide 21 and medium and heavy  
17 duty on Slide 27.

18           But for the light duty first. I do think the  
19 priorities should be on the charging infrastructure  
20 deployment and equitable eMobility projects. And across  
21 the board, I think that the emphasis should be on providing  
22 infrastructure to our multiunit dwelling population that  
23 doesn't have quite as much of the ability to install  
24 residential charging. Whether that be through deploying  
25 fast charging hubs or streetlight and curbside charging or

1 the EV car sharing projects in multiunit dwellings.

2 And would also like to second what we heard earlier  
3 about the importance of electrifying the TNC vehicles, our  
4 transportation network companies. And we've heard a bit  
5 today about that some of the medium and heavy duty  
6 regulations that are coming out for those vehicles but  
7 then, you know, we also have what's coming out of CARB. I  
8 believe it's the clean mile standard. So we'll also need  
9 to think about how we align this Investment Plan with those  
10 regulations as well.

11 And then medium and heavy duty on Slide 27, we'd  
12 obviously fully support, you know, the projects to  
13 electrify transit and school bus, and those fleets. But  
14 would also like to encourage or see the grant funding  
15 opportunities that come out of this Investment Plan to  
16 encourage those types of projects to take advantage of  
17 daytime charging or to deploy storage technologies that  
18 would also be able to take advantage of the renewables that  
19 we have on the grid in the middle of the day.

20 And then, finally, just wanted to do a shout out  
21 for CCAs. I know we've heard a lot about aligning with  
22 IOUs and even our POUs, Investment Plans and their  
23 strategies. And I just want to remind everyone that CCAs,  
24 we also have -- we also make investments in these types of  
25 technologies and also have our own business plan. So, you

1 know, we collaborate with our IOUs also on these types of  
2 infrastructure projects. So just want to do that shout out  
3 real quick.

4 Thank you.

5 MR. BARKER: Thanks, Zac.

6 UNKNOWN SPEAKER: Patricio Portillo.

7 MR. PORTILLO: I just want to thank Staff for this,  
8 for all their hard work on this really thoughtful plan and  
9 presentation.

10 Also wanted to echo the need for medium and heavy  
11 duty funding. You know, we're seeing a lot of action and  
12 interest from the fleets for the heavy duty EVs,  
13 particularly because of the compelling economic case.  
14 Fleets are irrational on emotional actors. So the ramp up  
15 speed for EV, or ZEV truck adoption could be significant,  
16 but we're also hearing very real concerns about adequate  
17 infrastructure that exists. And we don't want to slow that  
18 adoption rate because of the lack of infrastructure.

19 Also, I want to talk about a slide that prompted  
20 this next comment, Slide 18. So GO-Biz has another map  
21 that shows jurisdictions that are not in compliance with  
22 the state infrastructure permit streamlining law. And  
23 Tyson may be able to speak more to this. But less than  
24 half of jurisdictions are in compliance with this law.  
25 Fourteen percent are in compliance? Okay. Yeah. So

1 that's tiny. Yeah.

2 So I guess looking at where the projects are funded  
3 and to Kevin's earlier point as we look to fill in more  
4 green on this map, are there ways to use the CEC funding as  
5 a carrot to entice noncompliant jurisdictions to adopt to  
6 streamline permitting for infrastructure. Just the way to  
7 get the CEC spending to accomplish multiple related goals.

8 Thanks.

9 UNIDENTIFIED SPEAKER: Robert Meyer for Peter  
10 Cooper.

11 MR. BARKER: Hold. One second, did you --

12 MR. ECKERLE: Just real quick. That is a great  
13 idea and we are doing that. And so we're seeing a lot of  
14 response. All else being equal, the funding would go to a  
15 county with more streamlining.

16 MR. BARKER: Thanks, Tyson.

17 MR. MEYER: Thank you. Robert Meyer. Thanks,  
18 Tyson, for the comment on the hydrogen permitting.

19 Thanks, Commissioner Monahan for the cookies, and  
20 not Tyson's idea of a small plate of salad being  
21 distributed this afternoon.

22 My comments are limited to Slide 42 regarding the  
23 workforce and manufacturing. I think a key in working with  
24 the manufacturers is going to be supporting the employer's  
25 investment in the programs that are invested in their

1 training. It should be tied as closely as possible to the  
2 training itself and that will maximize the benefit of the  
3 investment towards the employees and the employers and the  
4 communities in which they live and work.

5 ETP incidentally requires 100 percent match for  
6 every dollar we spend, and we find that that's a good  
7 compelling way to have them invest in a partnership.  
8 Additionally, I think that the program would benefit, at  
9 least in the manufacturing support from a higher level, and  
10 if possible, the highest level of control on the design of  
11 their training. Letting the employers have that control.  
12 It'll stoke their investment because it'll help them tailor  
13 based on the expertise and their own assessments of what  
14 they need. As much flexibility as possible, particularly  
15 in job creation areas.

16 We work closely with Larry and appreciate his  
17 guidance in this sector. But we have a number of employers  
18 in the supplier sector that have been supported in job  
19 creation because of the wider range of job skills that they  
20 need beyond the immediate technology. Often, it's  
21 retooling of manufacturing skills from other manufacturers  
22 that they worked in. So your guidance, your continued  
23 guidance in that would be appreciated.

24 On the performance level and the workforce  
25 development side, sorry the workforce development programs.

1 Performance-based programs we feel are the strongest  
2 measure and an opportunity uniquely to provide a  
3 replication opportunity into underserved communities.  
4 Areas of affluence or of, you know, a congregation of need,  
5 or a particular bandwidth, provide the opportunity to build  
6 out piloting programs. But extending those into the  
7 underserved communities, I think it, driven on a paper  
8 performance or otherwise performance-based program rather  
9 than strict grant, I think provides a real good opportunity  
10 to build off of a successful model or successful program.

11 I'd also, for its ability to emphasize job quality.  
12 We've heard that mentioned a couple of times. And most  
13 importantly, competitive employment opportunities for the  
14 underserved workforce. So we're not giving sign-holder  
15 jobs. We're not giving jobs with no path forward. This is  
16 entry points. This is retooling of workers that are going  
17 to be upskilled or moved into new technology areas.

18 I'd also like to -- I'd be remiss if I didn't  
19 mention the partnership both with GO-Biz, which has  
20 fostered a great deal of effort in recruitment and  
21 retention statewide, as well as permanent assistance. And  
22 most importantly in terms of leveraging the other resources  
23 and investment opportunities and programs available to the  
24 employers in this sector.

25 Lastly, regarding the staggered funding approach.



1 I would just say that ETB can use its \$103 million or a  
2 portion that's not going to apprenticeship training. Casey,  
3 towards the funding of core program eligible manufacturing  
4 skills training, we can fund the private side with our core  
5 program without a doubt. But the public sector will go  
6 unserved if we don't have continued access to the CTP  
7 funding.

8 We are interested in continuing the partnership.  
9 We have found it to be very successful. And we hope  
10 through the course of the plan that we will be able to  
11 continue funding through the community colleges' workforce  
12 development boards and the labor management partnerships  
13 moving forward.

14 And then just a couple -- two last comments. The  
15 emphasis has really been in upscaling existing workers with  
16 our investments. We have found that basically those are  
17 the people already implementing the technologies in the  
18 jobs. We support the continuation of that. As well as  
19 enhance support wherever possible for the apprenticeship  
20 training that requires a broader range of support.

21 And then regarding the Greenlining Institute, we  
22 agree both wholeheartedly with reentry employment  
23 opportunities and demonstration projects, including car  
24 dealerships, municipal permitting and construction.

25 Thanks.

1 UNIDENTIFIED SPEAKER: Larry Engelbrecht.

2 MR. ENGELBRECHT: Hello, Larry Engelbrecht.  
3 Educational and program accreditation consultant to L.A.  
4 Community College District.

5 Slide number 41, the fourth bullet mentions  
6 Sustainable Freight Foundation Certificate. I would just  
7 like to comment that on the two bullets above that, Clean  
8 Fuels Transportation Pilot Career Opportunity Project. On  
9 page 60 it mentions that there were 27 high schools that  
10 were involved in this project. And when I looked at the  
11 ATL website last night, only three of them were nationally  
12 accredited.

13 Imagine how much more advantaged these students  
14 could get if they graduated from an accredited program  
15 which allows them to get national certification a year  
16 earlier. So they would be employable with national  
17 certification, nationally recognized industry  
18 certification, right out of the gate when they graduate.  
19 Then continue on in college to go on to the more advanced  
20 programs.

21 If they would do that, I think that would just be  
22 an enormous advantage to them. And perhaps we might  
23 consider that in the future to maybe require that  
24 accreditation for the programs as sort of a -- to  
25 incentivize those programs. If we want to get these things

1 here, let's step up and get accredited.

2 I did a study. I posted on my LinkedIn page a few  
3 months ago, in the ten southernmost counties of California,  
4 I'm from San Diego, four of those counties have credited  
5 college automotive programs through ASC, but no feeder high  
6 schools. So these high school students, of course they're  
7 going to be going to the high schools in their  
8 neighborhoods, but then they have to wait an extra year to  
9 get the certification.

10 Whereas, if they did that in high school, completed  
11 the program, they come out with a -- and this is not a  
12 student or entry level certificate. This is a professional  
13 technician level certificate. Right out of the gate coming  
14 out of high school. And again, in college, if they redo  
15 their curriculum, which is a project I've been piloting in  
16 Los Angeles, they would be employable, even with a master  
17 certification an entire year earlier than other colleges.

18 MR. BARKER: So the question, for those online.  
19 Can you explain the automotive services technician -- can  
20 you explain what the ASC is?

21 MR. ENGELBRECHT: Many of you have seen the patch  
22 on the shoulder. If you look in your owner's manual on  
23 some of the GM ones on the back page, they actually show  
24 that.

25 ASC certification is for technicians. There's a

1 number of 40-some certifications, including advanced ones,  
2 and one of the advanced ones that ASC has is what's called  
3 L3, which is advanced level hybrid training. That's  
4 already done in a lot of the colleges.

5           The accreditation for the colleges, and that's  
6 what's called NATEF, or now the ASC Education Foundation.  
7 Those schools that have that training, first off, we know  
8 that they're up to the level. That's not saying that  
9 programs that are not ASE accredited are not up to speed,  
10 but in my experience of seeing them over the years, some of  
11 them are hobby shops, you know, and they're having fun  
12 doing these things.

13           But we want to get the students on a pathway to a  
14 career that is offshore proof and it's just, you know, a  
15 great thing all around. The industry is better served.  
16 Students have a solid career. The electrical and  
17 electronics, that's transferrable to many other fields,  
18 including engineering. So I'd like to see it go in that  
19 direction.

20           MR. BARKER: Thanks, Larry. So, we've got a few  
21 left. Who do we have next?

22           UNIDENTIFIED SPEAKER: Morgan Caswell.

23           MR. BARKER: All right, Morgan.

24           MS. CASWELL: Thank you. Couple of comments. I'm  
25 going to focus on the medium and heavy duty questions. And

1 I'll start with a little bit of context that I didn't  
2 provide before in case anyone in the room isn't aware of  
3 the Clean Air Action Plan that the ports of L.A. and Long  
4 Beach put together.

5           So we adopted an update in 2017 with new goals,  
6 including zero emissions, completely zero emissions for  
7 cargo handling equipment by 2030, and zero emissions for  
8 the heavy duty trucks visiting the ports by 2035. So  
9 that's in context for where I'm coming from on these  
10 comments.

11           I will put a plug for the planning blueprints. The  
12 Port of Long Beach executed an EV blueprint for port  
13 communities. The goal of this blueprint was to look at the  
14 port as a community, as an ecosystem. And the approach was  
15 to incorporate all of the stakeholders. So we brought  
16 folks together who aren't always in the same room to talk  
17 about our challenge. And that included environmental  
18 justice organizations, the public, our terminal operators,  
19 the utility, bringing in additional technology developers.

20           And what came out of that was a blueprint that  
21 looked at five areas. And that included infrastructure,  
22 financing, workforce development, the actual equipment to  
23 be used, and community benefits. Each one of those areas,  
24 we took an inventory of the work we've done thus far, and  
25 then we wrote out very prescriptive actions on the steps we

1 need to take to get to a zero emissions port community.

2           One of the larger actions that came out that we're  
3 really focused on right now is zero emissions  
4 infrastructure terminal master plans. And so that would  
5 look at infrastructure on a terminal by terminal basis  
6 because the operations are very different on a terminal by  
7 terminal basis. So it would look at equipment  
8 specifications, operational modeling, terminal layouts,  
9 which will likely change as a result of the increased  
10 footprint associated with the charging systems, a project  
11 schedule, an actual cost estimate. So we imagine  
12 significant engineering work to go into these master plans.

13           So this was part of a solicitation the CEC funded,  
14 and the blueprint was the first step. And we were told  
15 that the second step for those who completed the blueprint  
16 is that they would be able to compete for funding to  
17 actually implement actions in that blueprint. So I do want  
18 to highlight that I don't see that in here thus far, I  
19 don't see any mention of that commitment, and that I would  
20 encourage that.

21           I would also highlight that the way we wrote the  
22 blueprint is that it should be replicable. So other ports  
23 should be able to look at that blueprint and replicate it,  
24 and make it specifically tailored to their port. So that's  
25 something to consider when you're designing that

1 solicitation.

2 I also wanted to highlight the funding challenges  
3 that we're experiencing. So, you know, we talk a lot about  
4 charge ready and the availability of funding there and it's  
5 a very important opportunity for us, I don't want to  
6 downplay that. But in our estimates of what it would take  
7 just for the Port of Long Beach, not considering other  
8 seaports, you're looking at nearly a billion dollars in  
9 infrastructure to support the equipment. And again, that  
10 doesn't include additional infrastructure for at birth, or  
11 for the clean harbor craft, or for the TRUs.

12 So when you look at that program and you see that  
13 there's 356 million allocated, and that 25 percent is  
14 specifically allocated to ports and warehouses, you very  
15 quickly understand that that's not going to be it for us.  
16 So this program is very important to seaports, and so I  
17 wanted to highlight that.

18 In terms of timing, it sounds like it's a little  
19 bit different than maybe some of the other applications  
20 that would be funded under the program. I would like to do  
21 those terminal master plans first so that the state knows  
22 that we are cost effectively installing infrastructure,  
23 rather than doing these piecemeal deployments.

24 Lastly, I'll just ask kind of two questions for the  
25 CEC, and perhaps you commented on this before and I missed

1 it. But one question I have is relative to the liquidation  
2 deadlines. If we are looking at when to phase  
3 infrastructure funding, the liquidation deadline is  
4 important in that because any public entity has to go  
5 through the design, bid, build process. So if it's, you  
6 know, all of the funding must be used by 2025, I wouldn't  
7 put it in fiscal year 2023, because we couldn't do it.  
8 Folks couldn't do the project in that timeline.

9 And then my second question is to what extent there  
10 will be adjustments of this plan in the future. I'm not  
11 saying that's for good or for better to be able to go back  
12 and take a look at it because maybe there's some  
13 uncertainty if you go back and change it, but I'm just  
14 curious at what that process is if there is a process.

15 MR. BARKER: So I would just quickly comment.  
16 Statutorily we have to do an annual update, so we have  
17 that. This was to get out of, since there's so many food  
18 references, I guess a food fight every single year and to  
19 have some more, kind of, solid transparency moving forward.  
20 So, yeah, we will continue with this advisory committee.

21 With regard to the blueprints, one of the things we  
22 found was we'd utilize light duty. Well, I'll say the  
23 majority of the blueprints that we received were mostly for  
24 light duty. Yours was unique and because of yours, that  
25 made us think to expand to medium and heavy duty



1 applications. And hence that's why we had that  
2 specifically in our medium, heavy duty. So but that is to  
3 say that we still are planning on going forward with the  
4 Phase 2 of the one that you participated in, but that is  
5 with previously allocated funds.

6 Who's next, Dorothy?

7 Yeah. Sorry. So again, the encumbrance and  
8 liquidation, they're on the -- the year that the funding  
9 was allocated. So for the first year that we're looking at  
10 here, 2020 to 2021, those would be four years to encumber  
11 those funds, and then four years to liquidate. So a total  
12 of eight years.

13 The next year's funds, so that next piece of that  
14 pie, 2021 to 2022, again, that's four years from that date,  
15 and four years to -- so every single -- it's pretty much,  
16 it's an eight year -- it's a really, really large window.  
17 We haven't had that in the past. So we won't have the  
18 issue, I think, that you were noting.

19 UNIDENTIFIED SPEAKER: Jose Lopez.

20 MR. LOPEZ: Hi, Jose Lopez here with Communities  
21 for a Better Environment and Urban Habitat.

22 I do want to thank staff and Commissioner Monahan  
23 for, you know, getting us here. I do want to highlight one  
24 thing about the Staff reports, specifically Chapter 2  
25 section on Program Outreach and Inclusion. I really

1 appreciate that commitment to be more inclusive of  
2 different communities.

3           Just kind of adding to that, I want to emphasize  
4 the need that others have mentioned around doing an  
5 assessment, specifically thinking about incorporating clear  
6 metrics for doing an equity assessment when thinking about  
7 how some of these funding has benefitted or impacted some  
8 of the communities that been invested. So thinking about  
9 socioeconomic and environmental benefits in general.

10           I do want to add another comment around workforce  
11 development. I was really interested to see that other  
12 areas do have goals and milestones that want to be achieved  
13 and I didn't really see any of those for workforce  
14 development so I would encourage us to maybe think about  
15 what specifics we want to include. I think it will allow  
16 us more leverage to be more committed and definitely  
17 identify the workforce development needs in training of  
18 different communities throughout the state.

19           Thank you.

20           UNIDENTIFIED SPEAKER: Daryl Lambert.

21           MR. LAMBERT: Thank you to the Commission and staff  
22 for preparing this report and for all the presentations.

23           To start off, I just want to acknowledge -- Daryl  
24 Lambert with the Rising Sun Center for Opportunity. We  
25 fully agree with everything that was mentioned by the

1 California Labor Federation, especially pertaining to high  
2 road employers and incentivizing or rewarding them for  
3 taking the high road and investing in their beliefs.

4           Additionally, I want to acknowledge that we agree  
5 with GO-Biz and employing individuals from disadvantaged  
6 communities and doing the work.

7           We agree with everything that Greenlining mentioned  
8 in serving the reentry population, community benefit  
9 agreements, factoring in just transition, partnering with  
10 local businesses and community-based organizations. And  
11 then also ETP, with focusing on job quality and upscaling.

12           As I mentioned earlier today, I feel like a lot of  
13 workforce can be considered crosscutting across the  
14 different goals and activity areas. So I just want to  
15 mention that anytime we mention strategic investments and  
16 infrastructure, we should also consider adding strategic  
17 investments and workforce. Folks to do the work to build  
18 that infrastructure. And make a deliberate effort to  
19 involve local communities, especially the disadvantage  
20 communities, in accessing the benefit that comes out of  
21 that work.

22           This is not my area of expertise at all so I won't  
23 speak at length here but, and I'll also leave it to others  
24 who are more familiar with this area. But kind of in my  
25 mind I feel like when it comes to the question between

1 medium duty, heavy duty, and light duty, that maybe flip it  
2 or balance it a little bit more.

3           And from a workforce standpoint, and again this is  
4 not my area of expertise, but it appears to me that there  
5 is more opportunity at a larger scale project to involve  
6 more folks, to expose them to the industry, build skills.  
7 And then that can be leveraged to span like the smaller  
8 projects on the light duty scale. I don't know if anybody  
9 has anything to add to that, but I'll leave that to the  
10 experts in that field.

11           Moving on to Slide 36. I know we mentioned  
12 manufacturing, it was right -- maybe it was 35. No, go  
13 back to 36. We mentioned locations of manufacturing and  
14 hydrogen production plants. And I'm just curious, we talk  
15 about them being located and money being spent into Spanish  
16 communities. But I'm curious how many individuals from  
17 those communities are actually employed in those positions  
18 and how many are actually accessing that, that money that's  
19 being spent in terms of kind of a household budget  
20 standpoint, right. So are they getting the savings? Are  
21 they getting the benefits? Is that hitting their bottom  
22 line? And I'd like to see more analysis of that.

23           For all of the companies that are listed on page  
24 39, or Slide 39, I'm curious if there's any sort of  
25 incentive or local hire requirement that focuses on them

1 hiring from the local area. And also a protection to make  
2 sure they're not transporting workers there, which can  
3 accelerate electrification and leaves a whole other host of  
4 negative rationalities that we'd like to avoid.

5 And then finally on Slide 42, question number two,  
6 what approaches and priorities should we apply toward  
7 future investments and workforce development? I would  
8 encourage exploring ways to fund supportive services.  
9 That's job placement, barrier removal, making sure that  
10 we're focusing on soft skills development, especially when  
11 we're working with individuals from disadvantaged  
12 communities. That's more important. It's little more  
13 costly, but it leads to greater outcomes.

14 Quantifying impact with the inclusion of access to  
15 careers, not just numbers. Sorry, access of individuals  
16 from disadvantaged communities, access to careers. And  
17 also funding outreach and public education focused on  
18 individual communities outreach community about these  
19 career opportunities and the resources available to them to  
20 access them.

21 And I believe that was all I had.

22 MR. BARKER: All right. And we have another  
23 Advisory Committee member, Heidi, did you have any  
24 comments? Okay.

25 MS. SICKLER: Wonderful presentation.

1 MR. BARKER: Oops. Sorry. Go ahead.

2 MS. SICKLER: Thanks. I think I got cut off.

3 Heidi Sickler with the Leadership Group.

4 I just want to thank the Commissioner and thank the  
5 CEC Staff for a wonderful presentation and all of the work  
6 that you put into it.

7 My question is for your EVI pro team and average  
8 (inaudible) per customer. I'm wondering if the EVI pro  
9 makes any assumptions with regard to EV charging as a  
10 service. So, in other words, the EVSC provider would lease  
11 the EV infrastructure to site host, enabling use of their  
12 operating budget instead of their capital outlay. And  
13 wondering if there would be any costs savings associated if  
14 CALeVIP were opened -- open eligibility is EV charging as -  
15 - as a leasing service.

16 So we're seeing that currently in the heavy duty  
17 sector where the batteries are actually leased to transit  
18 agencies and that can lead to cost savings. So just  
19 something to consider.

20 I'm not looking for an answer today, but overall,  
21 just thanks very much for the opportunity.

22 MR. BARKER: Thanks, Heidi.

23 All right. So with that, I think we move on to  
24 public comment. Does that work?

25 So for those folks, I think we do have a couple

1 public comments. Dorothy? We're going to start with the  
2 folks in the room. Blue cards.

3 Dorothy, I think this gentleman right behind you.  
4 Didn't he turn one in? Okay.

5 MR. LEVIN: Slide 27. Jaimie Levin with the Center  
6 for Transportation and Environment. We're a nonprofit  
7 that's developing fuel cell buses, battery buses, trucks,  
8 off-road vehicles.

9 And I'd like to speak to what several have already  
10 commented on with respect to the priority of public  
11 transit. And to give you a sense of this, I'd like to  
12 explain what's evolving with the market. Fuel cell buses,  
13 thanks to CARB's funding for pilot projects, we're  
14 unveiling, as we speak vehicles that are meeting one-to-one  
15 replacement for conventional technology with over -- a  
16 capability of over a 300-mile range. And what this is  
17 doing is it's driving the transit industry. Michael  
18 Pimentel spoke about the industry's issues and their  
19 challenges, but it's driving them towards looking more  
20 seriously now at fuel cell buses because they can do what  
21 they need them to do.

22 And the real challenges in infrastructure, and  
23 luckily the priority should be given to infrastructure,  
24 given that CARB is already addressing the vehicle side, but  
25 no longer addressing infrastructure. And so with respected

1 to that -- that demand, we now have, we recently uploaded  
2 to the CEC docket, 18 letters from transit agencies in the  
3 valley, Southern, Northern California that want to deploy  
4 fuel cell buses. Some of these are agencies that already  
5 have electric, battery, electric vehicles deployed.

6 And we have just last week two transit agencies  
7 whose boards adopted approval to purchase 20 fuel cell  
8 buses each. One agency that already has fund -- capacity  
9 at their station of over 30, upwards of 50 buses. And  
10 another that needs funding for infrastructure.

11 So the demand is there. It's scalability and  
12 several of you have talked about the importance of  
13 scalability. Look, the real challenge here is we don't  
14 have enough money. In California, it spends more money on  
15 this than all of the federal government. We're kind of the  
16 Singapore of the United States here when it comes to clean  
17 energy. So we do need to have priorities. If we spread  
18 everything out so far, we're not going to be able to  
19 accomplish what we need to accomplish.

20 So I would emphasize, as a last point, that it's  
21 really important to have coordination with other funding  
22 sources. CARB's doing freight, freight with infrastructure  
23 is part of that. We need, CEC as you are working with  
24 CARB, to also coordinate with the air districts around the  
25 state. With their funding sources, Carl Moyer, et cetera.



1 And also there are county governments that have funding  
2 sources. Otherwise we're not going to be able to make the  
3 dent that we're trying to in commercialization.

4 One last comment is we should be looking at  
5 resiliency. As we develop these technologies, resiliency  
6 to respond to natural disasters. We know all about  
7 earthquakes. We are now faced with fire threats and we  
8 have to put our resources in the right direction.

9 MR. BARKER: Thank you, Jaimie.

10 Do we have -- I don't believe we have any other  
11 public comment in the room. We have some online. We are  
12 limiting public comment to two minutes.

13 COMMISSIONER MONAHAN: We'll start with Jennifer  
14 Case.

15 MS. CASE: Hello, can you hear -- hello, can you  
16 hear me?

17 COMMISSIONER MONAHAN: Yes, we can.

18 MS. CASE: Okay, great. Thank you to everybody. I  
19 really appreciate it. I'm going to talk pretty fast  
20 because I thought I had three minutes.

21 Specifically Slide 36 I was glad to see, which is  
22 the slide that talks about biofuel infrastructure. My  
23 company who is Biofuel, has been a biodiesel producer in  
24 San Diego since 2006, and we're grateful to have been the  
25 recipient of two clean transportation grants over the last

1 few years. We're currently executing on one of those,  
2 which is increasing our capacity from 5 to 12 million  
3 gallons.

4           Towards the end of last year, we reached out to  
5 Staff to make you aware of a unique problem that California  
6 faces with biodiesel producers. The problem is that  
7 California low carbon fuel standards have been trading at  
8 over 200 metric tons, which is great. But it's a good  
9 thing because it adds value to our very low carbon  
10 biodiesel. But the problem is, it also attracts biodiesel  
11 from all over the world since other markets are often not  
12 as profitable and far less expensive to operate in  
13 California. The result is that we get far more biodiesel  
14 coming into our state than the actual market infrastructure  
15 can absorb, resulting in a perpetual glut, which forces all  
16 of the prices to be deeply discounted sometimes to levels  
17 that become unprofitable for California producers. That's  
18 why we often see an underutilization of California  
19 biodiesel production capacity, even in our 3.5 billion  
20 gallon a year diesel market.

21           So the solution is to increase storage and blending  
22 distribution infrastructure in the state with an emphasis  
23 on nontraditional, nonpetroleum infrastructure development.  
24 New Leaf has been working on such a project with one of our  
25 partners, MHX Solutions, at their terminal in Fontana,

1 which is about ten miles west on the I-10 from Kinder  
2 Morgan BOLT fuel terminal in Colton. We've been  
3 transloading biodiesel there for several years to  
4 supplement our own production in anticipation of our  
5 expansion at our San Diego facility. We're also  
6 contemplating a further expansion to include storage at  
7 this Fontana, but we need some financial help to make that  
8 a reality.

9 We project that our MHX partnership will displace  
10 close to 100 million gallons per year of petroleum diesel -  
11 -

12 COMMISSIONER MONAHAN: So Jennifer.

13 MS. CASE: -- with one of renewable diesel and  
14 biodiesel. Yes.

15 COMMISSIONER MONAHAN: Sorry, you've  
16 been -- you've exceeded the two minutes, and we're -- do  
17 you have one final sentence?

18 MS. CASE: Yes, we project that MHX partnership  
19 will displace close to 100 million gallons per year of  
20 petroleum diesel. These renewable blends will be almost  
21 exclusively sold in seven -- Class Seven and Eight truck  
22 fleets to operate in California. So this will be a great  
23 use of the funds.

24 COMMISSIONER MONAHAN: Great. Thank you.

25 MS. CASE: Thank you.

1           COMMISSIONER MONAHAN: Our next public commenter is  
2 Eleni Petrow.

3           MS. PETROW: Hi. Thank you. Can you hear me?

4           COMMISSIONER MONAHAN: Yes, we can.

5           MS. PETROW: Hi, I just want to thank the Energy  
6 Commission and the advisory committee for holding this  
7 workshop. I also want to say that I appreciate the  
8 multiyear funding plan approach because it allows us to  
9 look ahead and plan better and provide better feedback.

10           And I also want to echo the comments we've heard  
11 about the medium and heavy duty infrastructure funding in  
12 the sense that I agree with moving up the timeline and not  
13 waiting too long to make funding available for medium and  
14 heavy-duty infrastructure.

15           Commercial production of electric trucks is  
16 continuing to grow and there's a critical need for medium  
17 and heavy duty infrastructure to support sustainable goods  
18 movement. And this is especially important when  
19 considering that key transit corridors run through  
20 historically disadvantaged communities with  
21 disproportionately poor air quality, and zero emission free  
22 transport is closely aligned with the CEC goals to  
23 prioritize investments that directly benefit these  
24 disadvantaged communities.

25           Thank you.

1 COMMISSIONER. MONAHAN: Great. Thank you.

2 The next public speaker, Mark Roest.

3 MR. ROEST: (Indiscernible.)

4 MR. BARKER: Okay. Mark, Mark?

5 MR. ROEST: (Indiscernible.)

6 MR. BARKER: Mark, can you hear me?

7 MR. ROEST: -- which is well under (indiscernible)

8 kilowatt hour and 36 percent less efficiency

9 (indiscernible) --

10 MR. BARKER: Mark, can you hear me?

11 MR. ROEST: -- (indiscernible) mass production in

12 one to two years.

13 MR. BARKER: Okay. Let's go back to Mark.

14 MR. ROEST: -- (indiscernible) meet needs.

15 MR. BARKER: Mark.

16 MR. ROEST: (Indiscernible) on rooftops and on

17 (indiscernible) canopies to provide the energy needed

18 (indiscernible).

19 MR. BARKER: Sorry, Mark, we couldn't hear you.

20 We're going to have to come back to you. We'll try again

21 later.

22 COMMISSIONER MONAHAN: So next, James Dumont.

23 MR. DUMONT: Good afternoon. This is James Dumont

24 with Momentum.

25 I wanted to briefly go through some of our

1 points. First, as to the hydrogen stations, we fully  
2 believe that funding should continue until after the  
3 state's achieved its goal of 100 operational hydrogen  
4 stations. Yet we would encourage the Commission to rapidly  
5 transition its focus on 2MHD -- sorry, medium and heavy  
6 duty hydrogen infrastructure upon achieving the state's  
7 station goal while striking a balance between the needs of  
8 the light duty and medium and heavy-duty.

9           On the medium and heavy duty infrastructure in  
10 ZEV manufacturing, we would like to suggest that the CEC  
11 funnel significant funding towards the ZEV blueprints,  
12 regional readiness, and large facility-level planning in  
13 2020 and 2021. And we'd also encourage the CEC to return  
14 to some of its roots to invest in hybrid and zero emission  
15 power train technologies for industries that have remained  
16 underserved and the hardest to decarbonize, including  
17 marine, rail, and agriculture.

18           And lastly on MHD, infrastructure, and vehicles,  
19 we'd like to encourage the CEC to continue identifying  
20 opportunities to support an early compliance with the  
21 forthcoming regulations. Yet I think we need to pay close  
22 attention to the forthcoming 2023 Clean Air Act, non  
23 (indiscernible) area targets, since there have been threats  
24 from the federal government to take repercussions against  
25 us.

1           On workforce development, we strongly all of the  
2 workforce development opportunities that have been funded  
3 by the Energy Commission. Yeah, I think it may be time to  
4 fund train the trainer programs to share curricula  
5 developed under CEC agreements, with additional high  
6 schools, community colleges, grade schools, and  
7 universities.

8           And lastly, on the low carbon fuel production  
9 front, we believe that the state investments and  
10 alternative fuels have been immensely successful in  
11 supporting the mason industries as they compete against the  
12 entrenched oil majors. We'll soon have significant amounts  
13 of low and negative carbon RNG available in California that  
14 could be used to also develop negative carbon or zero  
15 carbon hydrogen for the medium and heavy-duty industries.

16           Thank you very much, and we look forward to  
17 working with you on this over the coming months and years.

18           COMMISSIONER MONAHAN: Great. Thank you.

19           Next, Reed Wildman.

20           MR. WILDMAN: For the CEC to step aside 5 million  
21 of available prior year grant funds for a hydrofoiling fast  
22 ferry prototype. We submitted a proposal that -- it should  
23 be visible on the docket for more information after this  
24 meeting. We're both San Francisco Bay Area residents. I'm  
25 a former Air Force officer and ex-Bain consultants, and

1 Ander is a hydrofoil racing sailboat designer and Olympic  
2 sailing coach.

3           A grant of this size, if structured correctly,  
4 would be sufficient to demonstrate a passenger ferry with  
5 safe operating speeds of 50 knots versus 34 knots in the  
6 San Francisco Bay ferry fleet today, while reducing fuel  
7 consumption by 50 percent. This is newly possible because  
8 of the maturation of four key technologies, principally  
9 hydrofoiling that is used in America's Cup racing boats.  
10 That said, they still need to be demonstrated in a ferry  
11 prototype before they're ready for potential customers like  
12 San Francisco Bay ferries.

13           Five million should be sufficient to prototype a  
14 subscale model to demonstrate all key technologies, which  
15 they can then use to justify new fleet purchases at full  
16 size. This would enable a step change in ferry  
17 performance. Not only reducing emissions by 50 percent or  
18 more, but also making ferry transit more competitive with  
19 driving, shifting more users to public transit. You would  
20 cut the Vallejo to San Francisco ferry trip in half from 60  
21 minutes to 30 minutes. And enable new long-distance routes  
22 to San Francisco from Antioch, for example.

23           This is an equitable investment because it serves  
24 commuters and also has a number of other benefits from  
25 comfort to reducing environmental impact.



1           Thanks for your time.

2           COMMISSIONER MONAHAN: Great. Thank you.

3           We have three more public commenters. The next  
4 is Rustam Kocher. Is he gone? We have two more.

5           Oh, back to, well, let's try for Brian Goldstein.  
6 We have one more. We're going to try Mark again. Mark  
7 Roest? We're going to try to see if we can hear you this  
8 time.

9           MR. ROEST: So the PV can be used on rooftops and  
10 on solar canopies to harvest twice as much per square foot  
11 as with today's technologies, at lower cost. And that  
12 makes it possible to provide the energy needed for both  
13 buildings and the vehicles associated with them, stored in  
14 onsite batteries to hold for need. This should be financed  
15 especially for those least able to obtain financing. And  
16 we expect to have enough margin to be able to provide it  
17 once we are in sole production.

18           The canopy plan works residential, commercial,  
19 industrial, and even agricultural. Inhibits drying out of  
20 crops and supports crops that are -- need partial shade.  
21 This idea, this approach is ideal for truck stops, space  
22 between concentrations of depots and ports. The solar  
23 canopy would cover entire truck stops and can be extended  
24 over adjacent land and streets on street parking.

25           It can protect the grid from demand surges,

1 enable truckers who might form a cooperative with the truck  
2 stops to get out from most operating costs once the  
3 financing is paid off, and provide shade for people and  
4 refrigerated trucks, especially welcome in the great  
5 Central Valley.

6 By mass production, I mean tens of gigawatts gig  
7 solar and hundreds of gigawatt hours as batteries per year.  
8 It would be produced in mature production facilities  
9 adapted from other industries.

10 CHAIR MONAHAN: Mark, that's -- it's been two  
11 minutes so you're going to have to -- I'm sorry, we're  
12 going to have to --

13 MR. ROEST: You got my -- you got the shot.

14 CHAIR MONAHAN: So I just wanted to emphasize  
15 that for folks that were not able to -- either we had to  
16 cut you off, because it was longer than two minutes or you  
17 weren't even able to get on because there was something  
18 wrong with apps and sorry about that, we definitely --  
19 we're going to have a process around public comments  
20 received through written comments and Patrick is going to  
21 walk through next steps which will include how to submit  
22 comments to the docket.

23 MR. BRECHT: Yes. Thank you. Excellent meeting.  
24 We'll be incorporating the input from today's meeting along  
25 with the comments from the -- in the docket. We'll be

1 incorporating those into the next version of our Investment  
2 Plan. We will release the Lead Commission Report in April.  
3 We'll then hold a second advisory committee meeting and  
4 we're still determining where, exactly where and exactly  
5 when that meeting will be. We'll try to determine that as  
6 quickly as possible.

7           So let me show this slide. We encourage you to  
8 submit your comments to our docket. The deadline is the  
9 17<sup>th</sup> to ensure we incorporate those into the next Investment  
10 Plan, but we always will take your comments on the docket.  
11 So here we have just more information about our program.  
12 Of course, the e-comment link is mentioned in the middle.  
13 And if you have any questions, you can always contact me at  
14 that number or that e-mail address.

15           I guess I'll just turn it back over to you,  
16 Commissioner Monahan.

17           COMMISSIONER MONAHAN: Well first off, I want to  
18 acknowledge again how much we appreciate all your input. I  
19 mean, this has been a long day, and a lot of people to go  
20 through, you know, in terms of hearing. And as I said at  
21 the initial stage, we're all coming at this from a sort of  
22 a different understanding of this program, and we really  
23 appreciate the diversity of opinions that we've gotten.

24           I would encourage you, again, as you have  
25 thought, oh no, I didn't say this, or I want this, or I

1 should have elaborated on that, please send comments to the  
2 docket. We're looking at every single comment that goes  
3 through, we're going to evaluate what to do with every  
4 comment. So I would just strongly encourage you, if you  
5 feel like I didn't -- you didn't quite communicate what you  
6 wanted to, use our docket system.

7           If you feel like you did communicate what you  
8 wanted to, we've been recording so you don't have to say it  
9 again unless you really, really want to spend time writing,  
10 which some people do.

11           And, yeah, we look forward to getting, you know,  
12 together with you to the finish line on an Investment Plan  
13 for the next three and a half years that we can all feel  
14 proud of. And that you should all feel some sense of  
15 ownership over helping us to design a program that is going  
16 to be able to address, you know, California's needs to  
17 clean up our transportation system, and we're really  
18 motivated to bend the curve on transportation pollution.

19           Our number one source is going the wrong way and  
20 if we can't fix it here in California, we cannot fix it  
21 anywhere. So, I mean to me this is why I came to  
22 California. This is why I'm working on this issue.  
23 Because I am fairly optimistic that we're going to be able  
24 to do it. We have the right set of agencies. We have the  
25 right investment portfolios going forward. We have the

1 right groups engaged around the table to help us structure  
2 our investments to be the most effective.

3           So just want to thank you all. And more to come.

4           MR. BARKER: We're adjourned.

5           (The meeting was adjourned at 4:09 P.M.)

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

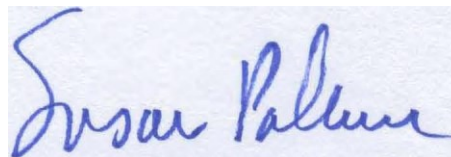
25

**REPORTER' S CERTIFICATE**

I DO HEREBY CERTIFY THAT THE TESTIMONY IN THE FOREGOING HEARING WAS TAKEN AT THE TIME AND PLACE THEREIN STATED; THAT THE TESTIMONY OF SAID WITNESSES WERE REPORTED BY ME, A CERTIFIED ELECTRONIC COURT REPORTER AND A DISINTERESTED PERSON, AND WAS UNDER MY SUPERVISION THEREAFTER TRANSCRIBED INTO TYPEWRITING.

AND I FURTHER CERTIFY THAT I AM NOT OF COUNSEL OR ATTORNEY FOR EITHER OR ANY OF THE PARTIES TO SAID HEARING NOR IN ANY WAY INTERESTED IN THE OUTCOME OF THE CAUSE NAMED IN SAID CAPTION.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS 16TH DAY OF MARCH, 2020.



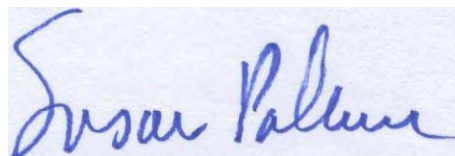
SUSAN PALMER  
CERTIFIED  
REPORTER  
CERT 00124

**TRANSCRIBER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of March, 2020.



Susan Palmer  
Certified  
Reporter  
CERT 00124