

**DOCKETED**

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CALIFORNIA ENERGY COMMISSION

In the matter of:

2022-20236 Investment Plan        )  
Update for the Clean                )        Docket No. 22-ALT-01  
Transportation Program             )  
\_\_\_\_\_                                  )

CLEAN TRANSPORTATION PROGRAM ADVISORY COMMITTEE MEETING

REMOTE VIA ZOOM

THURSDAY, OCTOBER 6, 2022

9:00 A.M.

Reported by:

Martha Nelson

APPEARANCES

COMMISSIONERS

Patricia Monahan

ADVISORY COMMITTEE

Eileen Tutt, Electric Transportation Community  
Development Organization

Zac Thompson, East Bay Community Energy

Craig Segall, CARB

Heather Hickersen, GO-Biz

Lori Pepper, California State Transportation Agency

Bill Magavern, Coalition for Clean Air

William Barrett, American Lung Association

Katherine Garcia, Sierra Club

Samantha Houston, Union of Concerned Scientists

Miles Muller, NRDS

Leslie Aguayo, The Greenlining Institute

Lucas Zucker, Central Coast Alliance United for a  
Sustainable Economy

Casey Gallagher, California Labor Federation

Larry Engelbrecht, Engelbrecht Consulting

John Frala, Professor at Rio Hondo College

Morgan Caswell, Port of Long Beach

Jerome Qiriazzi, Humboldt Transit Authority

Michael Pimentel, California Transit Association

APPEARANCES

ADVISORY COMMITTEE (cont.)

Dylan Jaff, Consumer Reports

Mary Solecki, AJW

Ruben Aronin, Better World Group

Joel Levin, Plug In America

Tracy Stanhoff, Indigenous Post

Robert Meyer, Employment Training Panel

Morris Lum, Recreational Boaters of California

Kevin Hamilton, Central California Asthma Collaborative

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Patrick Brecht, Fuels and Transportation Division

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Elizabeth Pham, Energy Assessments Division

Mark Wenzel, Fuels and Transportation Division

Charles Smith, Fuels and Transportation Division

Tami Haas, Fuels and Transportation Division

Benjamin Tuggy, Fuels and Transportation Division

APPEARANCES

PUBLIC COMMENT

Kitty Adams, Adopt a Charger

Adam Browning, Forum Mobility

Tom Mack, Zero Locomotion Technologies

Dan Chia, Chia Strategies

Heidi Sickler, Amply Power

Peter Jordan

Renee Samson, FreeWire Technologies

Kevin Hamilton, Central California Asthma Collaborative

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P R O C E E D I N G S

9:03 A.M.

THURSDAY, OCTOBER 6, 2022

MR. BRECHT: Good morning. Welcome everyone to the Clean Transportation Program's 2022 to 2023 Investment Plan Update. I'm the Investment Plan project manager, and I want to thank you all for being here.

I'll start off with a roll call. I will say your name and perhaps you can repeat your name and affiliation.

I should also add we have four new members, and I want to just say a special hello to you and welcome. And those new members are John Frala, we have Dylan Jaff, Morris Lum, and Joel Levin.

Okay. I will start with roll call.

Mary Selecki?

1           Okay. I'll come back to Mary.

2           And Bill Elrick RSVP'd that he will not  
3 be here, but David Park from the California Fuel  
4 Cells Partnership will make some comments later  
5 in the presentation.

6           Eileen Tutt?

7           COMMITTEE MEMBER TUTT: Hi Patrick.

8 Eileen Tutt with the Electric Transportation  
9 Community Development Corporation.

10          Thank you.

11          MR. BRECHT: Thanks Eileen.

12          And Matt Gregori from SoCalGas RSVP'd no.  
13 So we'll move on to Zac Thompson.

14          COMMITTEE MEMBER THOMPSON: Yeah. Hi  
15 everyone. Zac Thompson with the East Bay  
16 Community Energy.

17          MR. BRECHT: And Tyson was not able to be  
18 here from GO-Biz, but Heather Hickersen is.

19          Heather?

20          COMMITTEE MEMBER HICKERSEN: Good  
21 morning. Heather Harrison from GO-Biz.

22          MR. BRECHT: Craig Segall?

23          COMMITTEE MEMBER SEGALL: Hi, Craig Segall  
24 from CARB.

25          MR. BRECHT: Thanks Craig.



1           Lori Pepper?

2           COMMITTEE MEMBER PEPPER: Morning. Lori  
3 Pepper with the State Transportation Agency.

4           MR. BRECHT: Robert Meyer?

5           COMMITTEE MEMBER MEYER: Morning  
6 everyone. Robert Myer, Director of Economic  
7 Development with the Employment Training Panel.

8           MR. BRECHT: Bill Magavern?

9           COMMITTEE MEMBER MAGAVERN: Good morning.  
10 Bill Magavern, Coalition for Clean Air.

11          MR. BRECHT: Thanks Bill.

12          William Barrett?

13          COMMITTEE MEMBER BARRETT: Good morning.  
14 Bill Barrett with the American Lung Association.  
15 Thanks.

16          MR. BRECHT: Katherine Garcia?

17          COMMITTEE MEMBER GARCIA: Good morning.  
18 This is Katherine Garcia with Sierra Club.  
19 Thanks.

20          Samantha Houston?

21          COMMITTEE MEMBER HOUSTON: Good morning.  
22 Sam Houston here from Union of Concerned  
23 Scientists.

24          MR. BRECHT: Miles Muller?

25          COMMITTEE MEMBER MULLER: Good morning.

1 Miles Miller with NRDC.

2 MR. BRECHT: Leslie Agauyo? We'll check  
3 back with Leslie.

4 Kevin Hamilton? We'll check back with  
5 Kevin.

6 Lucas Zucker?

7 COMMITTEE MEMBER ZUCKER: Good morning  
8 everyone. Lucas Zucker, Central Coast Alliance  
9 United for a Sustainable Economy.

10 MR. BRECHT: Jose Lopez? Okay.

11 Ruben Aronin? Okay, we'll move on.

12 Casey Gallagher?

13 COMMITTEE MEMBER GALLAGHER: Yes. Good  
14 morning, everyone. Casey Gallagher with the  
15 California Labor Federation, AFL-CIO.

16 MR. BRECHT: Jose Tengo? Okay, we'll  
17 check back with Jose.

18 And Micah Mitrosky from IBEW District 9  
19 RSVP'd no.

20 We'll move on to Darryl Lambert? `

21 Okay, we'll move on to Larry Engelbrecht?

22 COMMITTEE MEMBER ENGELBRECHT: Good  
23 morning, everyone. Larry Engelbrecht, Evaluation  
24 Team Leader with the ASE Education Foundation.

25 MR. BRECHT: John Frala?

1 COMMITTEE MEMBER FRALA: Good morning  
2 everyone. This is John Frala. I'm a professor  
3 at Rio Hondo College, Alternative Fuels.

4 MR. BRECHT: Morgan Caswell?

5 COMMITTEE MEMBER CASWELL: Good morning.  
6 Morgan Caswell with the Port of Long Beach.

7 MR. BRECHT: Jerome Qiriazzi? Did I get  
8 that right, Jerome?

9 COMMITTEE MEMBER QIRIAZI: Jerome  
10 Qiriazzi. No problem. Humboldt Transit  
11 Authority. Good morning, everyone.

12 MR. BRECHT: Michael Pimentel?  
13 Tracy --

14 COMMITTEE MEMBER PIMENTEL: Michael  
15 Pimentel, California Transit Association.

16 MR. BRECHT: I'm sorry, Michael. I  
17 interrupted you. Excuse me.

18 Tracy Stanhoff? Okay.

19 Dylan Jaff?

20 COMMITTEE MEMBER JAFF: Hey, good  
21 morning. Dylan Jaff with Consumer Reports.

22 MR. BRECHT: And Joel Levin?

23 And Morris Lum? Okay.

24 Well, that is our Advisory Committee. I  
25 guess we can move on. We do have a quorum.

1 I just need to go over a couple  
2 housekeeping items first.

3 This meeting is being recorded. We ask  
4 that you mute yourselves when you are not  
5 speaking; star six for those who are on  
6 telephone.

7 The transcript of this meeting will be  
8 made available on the Energy Commission website.  
9 There will be an opportunity for public comments  
10 at the end of the meeting.

11 And written comments submitted to the  
12 docket are strongly encouraged. This slide  
13 provides the location of the docket, which is 22-  
14 ALT-01, as well as the location to submit  
15 comments. I should add, the deadline to submit  
16 comments to doc to the docket is October 25th at  
17 5:00 p.m.

18 We ask the Advisory Committee members to  
19 indicate they would like to speak or comment by  
20 using the raise-hand feature. We'd also like you  
21 to identify yourself before you speak.

22 Telephone participants dial -- or excuse  
23 me, will dial start nine to raise your hand.

24 Okay, as for the agenda, we'll have  
25 opening remarks from Commissioner Monahan. I'll

1 provide a brief overview of the Clean  
2 Transportation Program and Investment Plan  
3 process. I will also include legislative changes  
4 affecting the program. And I will highlight the  
5 additional state budget funding.

6 I will then recap recent program funding  
7 and innovation -- information on active and  
8 upcoming program funding. CEC staff will present  
9 on recent federal funding. We'll then transition  
10 to ZEV planning and analysis activities, which  
11 will include Assembly Bill 2127 report, EV  
12 impacts on the grid, Senate Bill 643 which is a  
13 hydrogen assessment, and ZEV medium- and heavy-  
14 duty sleep dashboards. We will pause for  
15 questions.

16 We will then provide an overview of the  
17 revised staff report version of the '22 to '23  
18 Investment Plan update, including proposed  
19 funding allocations. We'll then have an Advisory  
20 Committee discussion on the '22-23 Investment  
21 Plan update, followed by a public comment, and  
22 ending with closing comments.

23 And for that, I will turn it over to  
24 Commissioner Monahan for opening remarks.

25 COMMISSIONER MONAHAN: Thanks, Patrick.

1           And I just wanted to check in because I  
2 know Morris is on the -- he's on the Zoom,  
3 showing up on the Zoom, but I want to make sure  
4 his audio works.

5           So, Morris, if you're on the phone, you  
6 can hit pound six to get audio. But otherwise,  
7 maybe put in the chat if you're having audio  
8 problems, and our team can help you. Because I  
9 want to make sure that our new member is able to  
10 talk.

11           So I'm thrilled, honestly, to be able to  
12 have this conversation with all of you. And  
13 thanks for everybody who participated in advocacy  
14 around the budget for this year and supported the  
15 Governor's proposal and, in fact, we've expanded  
16 it.

17           You know, so we have a record budget.  
18 You know, when we met in April, we didn't know  
19 what was going to happen. And now we know we  
20 have over \$2 billion spread over multiple years  
21 for ZEV infrastructure in this budget package, in  
22 addition to the over \$1.1 billion last year. And  
23 we still have the \$100 million from the Clean  
24 Transportation Program that expires at the end of  
25 2023.

1           And I want to emphasize that the money  
2 that we can really control in terms of putting it  
3 in different categories is just the funding from  
4 the Clean Transportation Program. We can't  
5 control, of course, what the General Fund dollars  
6 do because the legislature and the Governor were  
7 very prescriptive in terms of the categories.

8           Where we do have flexibility is within  
9 the categories. So I mean, generally, the  
10 Advisory Committee weighs in on just like how  
11 much money should go to each category, but we  
12 welcome sort of broader feedback within the  
13 category, as well.

14           So we have, you know, we just have  
15 limited time because in a Zoom meeting, you can  
16 only sit for so long. So I just want to  
17 emphasize, you know, we'll make sure that  
18 everybody has an opportunity to weigh in, it just  
19 won't be that long.

20           So what we're hoping is, you know, we can  
21 give -- we're going to give you a lot  
22 information, a lot of things to digest. We  
23 welcome initial verbal feedback, and then  
24 encourage you to cogitate further as you hear  
25 others and you think more deeply, and you hear

1 more about what we are currently investing in and  
2 what we're planning to invest in. And, you know,  
3 please do submit written comments if you feel  
4 like your verbal comments were not sufficient or  
5 you want to embellish in any way.

6           So this is also an exciting moment just  
7 because ZEV sales are, you know, on a record  
8 pace, over 16 percent new vehicle sales in the  
9 first half of the year, which is the best ever,  
10 pretty much doubling, I think, what sales share  
11 was in 2020.

12           We also, for the first time, had data on  
13 medium- and heavy-duty vehicles. We'll be  
14 talking about the ZEV dashboard and the data in  
15 terms of what DMV says is on the road. Of  
16 course, CARB is funding other vehicles that are  
17 not yet on the road but will be soon, or are not  
18 yet registered, so this is just a recording of  
19 the registered vehicles. But we really want to  
20 be able to use the ZEV dashboard to track  
21 progress in terms of meeting the goals of the ZEV  
22 Executive Order and the goals in the regulations  
23 that CARB is setting.

24           I just want to congratulate CARB and  
25 Craig for just all the progress on the vehicle



1 standards. It's tremendous. And now we have to  
2 make sure there's infrastructure available to be  
3 able to meet those goals.

4           And that's the challenge of this group;  
5 right? We want to make sure that we are spending  
6 money as wisely as possible, that we are really  
7 attentive to equity. And as you'll hear later,  
8 you know, we're required to do reports on the  
9 equity implications of at least charger  
10 distribution. And we're finding it's not  
11 equitable, you know, that we have work to do. We  
12 have work to do in terms of Level 2 access in  
13 low-income communities. We have work to do in  
14 rural communities, particularly low-income rural  
15 communities, who have very long drive times to  
16 reach a DC fast charger.

17           And, you know, we also are trying to like  
18 make the investments, make smart investments  
19 today to meet the market today, but also make  
20 smart investments for the future. Where is  
21 charging going in the future? And how do we make  
22 sure we're keeping an eye on how technology is  
23 changing, what we're learning about consumer  
24 preference in terms of ZEV infrastructure? And  
25 that we're really constantly reevaluating our

1 investments to make sure that we are  
2 incorporating the best data that we have, we're  
3 listening carefully to what you and other  
4 stakeholders are saying, and we're really trying  
5 to make sure that this works for everybody.

6           And, you know, what keeps me up at night  
7 is how do we make sure people who live in  
8 multifamily dwellings, and that rent, have  
9 access? How do we make sure lower-income  
10 families who are struggling today with the  
11 highest-ever gasoline prices -- I mean, gasoline  
12 prices are astronomical, and ZEVs save money.  
13 But I don't want this solution to be something  
14 that works for rich people who have homes and can  
15 charge their vehicles. That's not what we want.

16           We want to make sure that lower-income  
17 families who are struggling to pay rent, and to  
18 pay their transportation expenses, benefit and  
19 save money. So how do we do that? We're going  
20 to be listening to you to give us thoughts for  
21 that.

22           So the last thing I want to emphasize is  
23 this concept of high-road jobs and how we can  
24 simultaneously rapidly scales zero-emission  
25 vehicle infrastructure while also promoting good

1 jobs wherever we can. And some of that is job  
2 training. Some of that is how we do our grants  
3 to incentivize high-road jobs. So we'll be  
4 listening attentively to ideas on those fronts as  
5 well.

6 So that's it. I want to make sure I  
7 don't talk too long and you have more of an  
8 opportunity to talk.

9 But before that, we're going to be  
10 presenting a lot of information. So just like  
11 you know, get some tea or coffee, whatever you  
12 need, some food, because we have a lot of  
13 information. And we want to make sure you have  
14 all this information in order to really be able  
15 to provide advice that's tailored to, you know,  
16 sort of the investments that are already  
17 happening on the ground.

18 And that's it.

19 MR. BRECHT: Great. Thanks, Commissioner  
20 Monahan.

21 Since earlier, we have a few more members  
22 who've joined, so let me get to that first before  
23 we go.

24 Mary Selecki, if you want to say your  
25 name and affiliation?

1 COMMITTEE MEMBER SELECKI: Hi. Good  
2 morning. Mary Solecki with AJW. Sorry to be so  
3 late. I don't know how I overlooked this, but I  
4 was looking for you all in the CEC building and  
5 the NRA building.

6 COMMISSIONER MONAHAN: Oh, Mary, sorry.

7 MR. BRECHT: Oh, Mary.

8 COMMISSIONER MONAHAN: Sorry about the  
9 confusion.

10 COMMITTEE MEMBER SOLECKI: Yeah. Sorry  
11 about that. I was just in sort of my normal  
12 mode.

13 COMMISSIONER MONAHAN: It's a cool  
14 building, though.

15 MS. SOLECKI: Beautiful building.

16 MR. BRECHT: Okay. And Ruben, did you --

17 MR. ARONIN: Hi. Ruben Aronin with the  
18 Better World Group.

19 MR. BRECHT: And Joel Levin, sorry I  
20 didn't get you in earlier.

21 MR. LEVIN: Okay. Yes. Hi. I'm Joel  
22 Levin with Plug In America. I apologize for  
23 being late. A had a little problem sorting out  
24 the link but happy to be here.

25 MR. BRECHT: Great. Okay. Well, I'll

1 just provide some information. Some of you have  
2 heard this before but it's important to go over  
3 it again.

4           The Clean Transportation Program was  
5 established by California Assembly Bill 118 in  
6 2007. The program is funded through a small  
7 surcharge on California vehicle registrations and  
8 provides up to \$100 million per year. California  
9 Assembly Bill 8 extended the program to January  
10 1st, 2024.

11           The Clean Transportation Program provides  
12 funding support for projects that reduce  
13 greenhouse gas emissions within the  
14 transportation sector, which accounts for roughly  
15 eight -- excuse me, 50 percent of state  
16 greenhouse gas emissions.

17           Furthermore, the program plays an  
18 important role in improved air quality,  
19 investments in low-income and disadvantaged  
20 communities, economic development and recovery,  
21 job growth and workforce development, petroleum  
22 production, and adoption of zero-emission  
23 vehicles.

24           Next slide.

25           Now in its 14th year, the program has

1 provided over \$1 billion in alternative fuel and  
2 vehicle technology projects in communities that  
3 can mutually accrue health, environmental, and  
4 economic benefits from these investments. The  
5 Clean Transportation Program has been essential  
6 in making California a leader in near- and zero-  
7 emission transportation.

8           This slide shows key outcomes from the  
9 program through spring of 2022. The program has  
10 funded over 17,000 installed or planned chargers  
11 for plug-in electric vehicles, sufficient funding  
12 to reach the 2025 goal of 250,000 goal of  
13 chargers, created an innovative and efficient  
14 block grants for light-duty and medium-duty ZEV  
15 infrastructure.

16           We've also supported the largest network  
17 of hydrogen fueling stations in the nation with  
18 79 funded hydrogen fueling stations, plus an  
19 approval to an additional 74 stations based on  
20 deployment progress, funding availability, and  
21 Clean Transportation Program investment funding  
22 allocations. Of these stations, 13 will  
23 accommodate medium- and heavy-duty vehicles, as  
24 well as passenger vehicles, sufficient to meet  
25 the 2025 200 hydrogen stations.

1           The program has created workforce  
2 training for more than 22,000 trainees and 277  
3 businesses and launched 71 projects to promote  
4 the production of sustainable low-carbon  
5 alternative fuels within California, with a  
6 cumulative annual production capacity equivalent  
7 to more than 158 million gallons of diesel fuel.

8           Next slide.

9           Today we'll be discussing the revised  
10 staff report version of the '22 to '23 Investment  
11 Plan update for the Clean Transportation Program.  
12 The program funding allocations remain the same  
13 as indicated in last year's multiyear plan. This  
14 document, updated annually, serves as the basis  
15 of the program's funding opportunities for each  
16 fiscal year. However the Clean Transportation  
17 Program is set to sunset at the end of 2023,  
18 unless extended by the legislature.

19           The allocations reflect considerations of  
20 state and federal policies and regulations, as  
21 well as coordination with state agencies such as  
22 the California Air Resources Board and the  
23 California Public Utilities Commission, among  
24 others. The Investment Plan lays out how the  
25 coming fiscal years will be allocated across

1 different fuels, vehicle sectors, and supporting  
2 activities.

3           The document is vetted through a public  
4 process that involves multiple iterations of the  
5 document and meetings with our Advisory  
6 Committee, one of which we're holding today.

7           And finally, the Investment Plan sets  
8 allocations for various funding categories and  
9 not individual projects.

10           Next slide.

11           In preparing the Investment Plan, the CEC  
12 seeks to increase the participation of the  
13 disadvantaged and underrepresented communities  
14 from a diverse range of geographical regions.  
15 The CEC also seeks to effectively engage  
16 communities disproportionately burdened by  
17 pollution and improved economic resiliency,  
18 including rural and tribal communities.

19           And this effort includes consulting with  
20 the Disadvantaged Communities Advisory Group for  
21 guidance and recommendations on program  
22 effectiveness as it relates to disadvantaged  
23 communities and other vulnerable and  
24 underrepresented groups, consulting with the  
25 CEC's public advisors office, that's the Tribal



1 Program, and the Tribal Lead Commissioner for  
2 assistance with outreach and promotion of  
3 transportation-related funding opportunities to  
4 tribes, and assessing whether electric vehicle  
5 charging stations infrastructure is  
6 disproportionately disputed, as examined by our  
7 SB 1000 analysis.

8           Next slide.

9           This slide reflects the community's  
10 benefits which include seeking to provide more  
11 than 50 percent of funds to projects that benefit  
12 low-income and disadvantaged communities,  
13 planning a process to define, measure, track and  
14 target more community benefits, and explore  
15 community benefits that go beyond project  
16 location and greenhouse gas reductions, such as  
17 health, mobility options, economic and more. We  
18 expect to host a public workshop on community  
19 benefits later this year.

20           Next slide.

21           Let me shift to provide context for  
22 developing the program.

23           The allocations and implementation of the  
24 program reflects the effect of numerous policies  
25 and goals by legislation, regulation, and

1 executive order. The net result of these  
2 policies has been to steer our program towards  
3 zero-emission fuels and technologies.

4           Such policies include reducing greenhouse  
5 gas emissions by 40 percent below 1990 levels by  
6 2030, reducing short-lived climate pollutant  
7 emissions such as methane to 40 to 50 percent  
8 below 2013 levels by 2030, achieving a carbon-  
9 neutral economy by 2045, setting specific goals  
10 to boost the supply of zero-emission vehicles, or  
11 ZEVs, as well as charging and fueling stations,  
12 including by 2025, having at least 1 million ZEVs  
13 on the road, installing 200 hydrogen fueling  
14 stations and 250,000 battery-electric vehicle  
15 chargers, including 10,000 direct-current fast  
16 chargers by 2025, and by 2030 having at least 5  
17 million ZEVs on the road.

18           Next slide.

19           By 2035, transitioning to 100 percent of  
20 new sales of passenger vehicles and trucks to  
21 ZEVs. This is strengthened by CARB's Advanced  
22 Clean Cars II regulations, which we'll discuss  
23 later in this presentation. Transitioning 100  
24 percent of drayage trucks. Transitioning 100  
25 percent of operating offroad vehicles and

1 equipment to zero-emissions wherever feasible --  
2 everywhere feasible, I should add. And this is  
3 strengthened by CARB's Advanced Clean Trucks  
4 regulation.

5 By 2045, transitioning 100 percent of  
6 operating medium- and heavy-duty trucks and buses  
7 to zero-emission by 2045. That would be where  
8 feasible.

9 Next slide.

10 What informs the Investment Plan? We  
11 have the AB 2127 report, or the Electric Vehicle  
12 Charging Infrastructure Assessment, analyzing  
13 charging needs to support zero-emission vehicles  
14 in 2030. And we'll have an update on this, the  
15 planning and the timeline, later in the  
16 presentation.

17 There's also the SB 1000 Report, or  
18 Electric Vehicle Charging Infrastructure  
19 Deployment Assessment, which the most recent  
20 edition was published in '20 -- in July of 2022.

21 Then there's consulting and coordination  
22 with other state agencies through the Zero-  
23 Emission Vehicle Infrastructure Plan, or ZEVIP  
24 for short, as well as consulting with the  
25 Disadvantaged Communities Advisory Group, the

1 Deputy Public Advisor and Tribal Liaison, and the  
2 CEC's Office of the Public Advisor, Energy Equity  
3 and Tribal Affairs, and the Tribal Lead  
4 Commissioner.

5 Next slide.

6 This slide shows the Investment Plan  
7 process. The CEC published the staff draft on  
8 April 5th. The first Advisory Committee meeting  
9 took place on April 12th after a lead  
10 commissioner-level review of the comments from  
11 the Advisory Committee meeting, plus docket  
12 submissions from the public.

13 We published the revised staff draft on  
14 September 29th. We're holding the second  
15 Advisory Committee meeting today. And, once  
16 again, they review feedback in consultations with  
17 the Disadvantaged Communities Advisory Group.

18 The Lead Commissioner Report is then  
19 brought -- will be published and brought to the  
20 CEC business meeting for approval, currently set  
21 for December. The approval provides the plans  
22 funding allocations for Fiscal Year '22 to '23  
23 and signals the plan funding allocations for the  
24 subsequent half of the fiscal year.

25 Next slide.

1 I'll just go over a few bills that are  
2 affecting the Clean Transportation Program.

3 We have Assembly Bill 1389. This bill  
4 expands the program's list of criteria that the  
5 project is required to meet in order to be given  
6 preference for funding to include that the  
7 project is in a non-attainment area, i.e. an  
8 area considered to have air quality worse than  
9 the National Ambient Air Quality Standards, and  
10 that the project advances comprehensive  
11 strategies for vehicle.

12 Next is Assembly Bill 2061. This bill  
13 would require the CEC -- or will require the CEC,  
14 in consultation with the CPUC, to develop an  
15 uptime recordkeeping and reporting standards for  
16 electric vehicle chargers and charger stations  
17 that received an incentive from the state agency  
18 or through ratepayers by January 1st, 2024, to  
19 ensure the equitable access to reliable charging  
20 stations in low-, moderate- and high income  
21 communities.

22 Assembly Bill 2007 -- or 2700, excuse me,  
23 this bill will require that the CEC, in  
24 collaboration with the State Air Resources Board  
25 and CPUC and other relevant agencies or groups,

1 to annually gather fleet data for vehicles in the  
2 medium- and heavy-duty sector from state  
3 agencies, and share that data with electrical  
4 corporations and local publicly-owned electric  
5 utilities to help inform electrical grid planning  
6 efforts.

7           Next slide.

8           And here's the exciting things that  
9 Commissioner Monahan mentioned in the transition,  
10 again, to talk about this exciting time for us --  
11 or all of us.

12           As mentioned, the Clean Transportation  
13 Program has baseline funding of approximately  
14 \$100 million per year.

15           The state Budget Act of 2021 provided an  
16 additional funding for clean transportation  
17 projects to be administered by the CEC using  
18 monies from these state general  
19 funds -- using money from the state fund, the  
20 General Fund. This is referred to as ZEV 1.0 and  
21 began with last year's Investment Plan. Across  
22 three fiscal years, this amounts to over \$1.1  
23 billion in additional funds targeted to expanding  
24 the state's ZEV refueling network for passenger  
25 vehicles and building new ZEV infrastructure for

1 medium- and heavy-duty bus and trucks and  
2 expanding the state's ZEV manufacturing supply  
3 chain.

4           Then there's the state Budget Act of 2022  
5 which builds on these investments by including an  
6 additional \$2.4 billion over multiple years  
7 through Fiscal Year '25 to '26 for the CEC to  
8 further accelerate ZEV transportation through  
9 infrastructure deployment. These investments  
10 will focus on equitable ZEV transition with the  
11 goal of infrastructure for all. All of this, of  
12 course, is referred to as ZEV 2.0.

13           There's also federal funding. Electric  
14 vehicle charging infrastructure will see  
15 significant new funding with \$5 billion to  
16 accelerate EV infrastructure deployment,  
17 nationally titled the National Electric Vehicle  
18 Infrastructure Funding Program, or NEVI.  
19 California's share is expected to be \$384 million  
20 allocated over five years. An additional \$2.5  
21 billion nationally is available on a  
22 comprehensive basis for EV and hydrogen  
23 infrastructure, and we'll have a presentation on  
24 this a little bit later in the meeting.

25           Now let me turn it over to Phil Cazal,

1 who will present on light-duty funding updates, a  
2 recap from the first Advisory Committee meeting  
3 which was held April 12th, which will be followed  
4 by presentations on medium- and heavy-duty and  
5 ZEV manufacturing.

6 Thank you.

7 Go ahead, Phil.

8 MR. CAZEL: Good morning. Thank you.

9 Phil Cazal with the Fuels and Transportation  
10 Division.

11 So the goal of using block grants is to  
12 provide rapid deployment of infrastructure. And  
13 as you may know, block grants are a good way to  
14 streamline funding with simplified standardized  
15 processes, including applications, grant  
16 management, and reporting.

17 So next slide, please.

18 The first block grant for light-duty  
19 charging infrastructure was created in 2017. It  
20 was called the California Electric Vehicle  
21 Infrastructure Project, or CALeVIP.

22 These days we tend to refer to it as  
23 CALeVIP 1.0 to distinguish it from a new set of  
24 block grants currently underway that I'll cover  
25 in just a minute.



1           To date, this project has provided over  
2 \$226 million in incentives for nearly 7,000 light  
3 duty chargers that are either installed or in  
4 progress. This amount includes \$40 million in  
5 funding provided through regional partners and  
6 has covered 36 California counties. This program  
7 is still active and has funding available for  
8 some counties.

9           Next slide, please.

10           There are two new block grants that each  
11 have the potential to implement and manage up to  
12 \$250 million in incentives. Based on CEC  
13 approval and future funding applications --  
14 allocations, sorry, both block grants will use  
15 readiness requirements as a means of attracting  
16 higher quality projects but minimize charger  
17 installation times. This was a lesson learned  
18 from CALeVIP 1.0 which had many good projects,  
19 and some that were not ready to go.

20           The Center for Sustainable Energy is  
21 implementing this block grant for DC fast  
22 chargers and has its first project set to accept  
23 applications in the first quarter of 2023. This  
24 first project includes \$30 million for chargers  
25 that must be installed in disadvantaged or low-

1 income communities.

2           The CALeVIP 2.0 bullet at the top is a  
3 link to the CEC website where you can find more  
4 information, so hopefully that will come through  
5 with the slides.

6           Next slide, please.

7           This second new block grant is managed by  
8 CALSTART. And the two block grants are  
9 coordinated with one another through the CEC to  
10 make sure their project designs complement one  
11 another rather than overlap or compete. The  
12 CALSTART project is called Communities In Charge,  
13 and will also begin accepting applications in the  
14 first quarter of 2023.

15           The first \$30 million in incentives will  
16 be available for Level 2 chargers and will  
17 prioritize community-based sites, as well as  
18 disadvantaged and low-income communities.

19           `There will be a public workshop on  
20 October 18th to share and discuss the complete  
21 details of this project. Again, the Communities  
22 In Charge bullet on this link is for additional  
23 information.

24           Next slide, please.

25           These are three solicitations designed to

1 target specific needs for charging  
2 infrastructure. Some of the agreements have  
3 kicked off their activities, but many more will  
4 be presented for approval at upcoming business  
5 meetings.

6           The REACH solicitation, Reliable,  
7 Equitable, and Accessible Charging for  
8 Multifamily Housing, resulted in 13 agreements  
9 proposed for funding, totaling over \$26.6  
10 million. The solicitation's focus is to increase  
11 charging access on electric vehicle adoption for  
12 multifamily housing residents within  
13 disadvantaged or low-income communities. In  
14 addition, all of these projects will include  
15 community engagement and outreach to nearby  
16 residents on the benefits of electric vehicles.

17           The CARTS solicitation, Charging Access  
18 for Reliable On-Demand Transportation Services,  
19 resulted in ten agreements proposed for funding,  
20 totaling over \$16.6 million. This solicitation's  
21 focus is to fund projects that support electric  
22 vehicle charging infrastructure for high mileage  
23 on-demand transportation services such as ride-  
24 hailing, taxis, and meal or grocery delivery.

25           And then the last on this slide, the REV

1 solicitation, Rural Electric Vehicle Charging,  
2 resulted in 17 agreements proposed for funding,  
3 totaling over \$20.6 million. This solicitation's  
4 focus is to fund projects that support deployment  
5 of public electric vehicle charging  
6 infrastructure that supports travel by rural EV  
7 drivers, especially those from low-income or  
8 disadvantaged communities, and also engage local  
9 rural communities to increase charger awareness  
10 and promote EV adoption.

11           So next, I'm going to hand off to  
12 Jamaica, who will talk about medium- and heavy-  
13 duty.

14           MS. GENTRY: Hi, everyone. I got stuck  
15 here in my settings.

16           I'm going to be presenting on EnergIIZE.  
17 Let me just share my screen here. It says  
18 someone else is sharing their screen right now.

19           MR. BRECHT: Actually, Jamaica, we have  
20 the slides up.

21           MS. GENTRY: Oh, great. Okay.

22           MR. BRECHT: Thanks.

23           MS. GENTRY: That works perfectly.

24           The next slide, please.

25           So EnergIIZE is one of the block grants

1 under the CTP, as Patrick described earlier, and  
2 it focuses on medium-duty and heavy-duty zero-  
3 emission vehicle infrastructure.

4           So there is up to \$276 million available  
5 with this project. And there are five  
6 opportunities for funding that we divided into  
7 funding lanes.

8           The first is the EV fast track, EV public  
9 charging, hydrogen, EV jump start which is our  
10 equity lane, and the HVIP alignment with CARB's  
11 Vehicle Incentive Program.

12           Next slide, please.

13           So I'll talk about the vehicle incentive  
14 matchup first. We've set aside funds to align  
15 with the Governor's directive to -- I'm sorry  
16 here, there we go -- the Governor's directive in  
17 the 2021-2022 Budget to earmark specific funding  
18 to replace 1,125 drayage trucks, 1,000 school  
19 buses, and 1,000 transit buses with zero-emission  
20 alternative vehicles, and the accompanying  
21 vehicle refueling infrastructure over, three  
22 years.

23           And so we're doing this by matching up  
24 with the HVIP Program that CARB has established.  
25 And so you can see in the graphic, we are

1 allotting \$17.7 million for school buses in 2020,  
2 \$37.9 million for drayage vehicles in 2022, and  
3 then we will be really seeing the number for  
4 funding of transit vehicles in 2023.

5           And so the school bus set-aside and the  
6 drayage set-asides will be released this year.  
7 The school bus set aside is tentatively scheduled  
8 to launch on October 24th. And the drainage set-  
9 aside lane will launch shortly after that.

10           Next slide.

11           So the EV fast track is a first-come,  
12 first-served lane, funding opportunity, and it's  
13 actually the only one that's first-come, first-  
14 serve. The rest are all competitive. So this  
15 one offered \$16.6 million and a project cap of  
16 \$500,000 per project which covered up to 50  
17 percent of equipment costs.

18           That lane launched on March 23rd of this  
19 year, and it also closed on March 23rd. We had a  
20 lot of interest, a lot of demand for that  
21 product, and it was fully subscribed within  
22 seconds of opening. Actually, 61 applications  
23 were submitted that day, with a total request of  
24 over \$24 million, which is great because we  
25 actually were able to fund, you know, \$16 million

1 of that. And I think that's a really encouraging  
2 statistic for going forward in deploying  
3 infrastructure throughout the state. And that  
4 lane is going to reopen in quarter one of 2023.

5           Next slide.

6           We also launched the hydrogen line this  
7 year on -- well, we opened it on June 30th and it  
8 closed on July 14th. It was also fully  
9 subscribed at the time of closing. That was a  
10 competitive application process, and we offered  
11 \$17 million with a maximum project cap of \$3  
12 million per project. And if those projects were  
13 of benefit to a disadvantaged community, or a  
14 low-income community, they were eligible to  
15 receive up to \$4 million per project. Again,  
16 that covered up to 50 percent of equipment costs.

17           With the hydrogen lane, we received 23  
18 applications, with a total request of \$83  
19 million, so there was quite a big gap there in  
20 funding. We are going to reevaluate our budget  
21 allocations for Cycle 2 of EnergIIIZE to better  
22 accommodate the demand that we saw there.

23           Of the 23 applications that were  
24 received, 20 -- oh, I'm sorry, 17 of them met the  
25 equity criteria as established in the jump start

1 lane and were eligible for that increased  
2 incentive of up to \$4 million. But the average  
3 request per project was \$3.6 million dollars, so  
4 that helps us going forward in our project  
5 design.

6 Next slide.

7 So we talked a little bit about the EV  
8 jump start already. That's our equity lane.  
9 That's focused on reducing or eliminating  
10 barriers to participating in the transition to a  
11 zero-emission transportation system. Some of the  
12 features of this lane that set it apart from the  
13 other lanes is that it has the increased  
14 incentive of up to \$750,000 per project. It has  
15 a longer application window.

16 So this one launched on September 1st and  
17 it will be closing on October 7th, so tomorrow.  
18 We're looking forward to getting the data on the  
19 applicants to this lane and how people responded  
20 to the additional support that was offered.

21 So as I said, we offered additional  
22 technical support here. That's why we kept the  
23 application window open longer as to allow people  
24 to ask questions and get feedback in real time as  
25 they were preparing their applications and



1 refining their project designs.

2           With this lane, the incentives can cover  
3 up to 75 percent of the hardware, software,  
4 network, and soft costs. This is the only lane  
5 where soft costs would be covered.

6           Okay, I'm going to move on to the next  
7 slide.

8           The fourth funding lane is the public  
9 charging lane. And this is for publicly-  
10 available and shared charging solutions. The EV  
11 public charging lane provides incentives up to  
12 \$500,000 per project, and we are offering \$8.1  
13 million in this funding lane, which will launch  
14 on October 14th.

15           Another feature of this lane is we are  
16 piloting -- charging, as a service, opportunity  
17 for funding for, as I said, fleets that want to  
18 share the charging infrastructure. Again the  
19 incentives will cover up to 50 percent of  
20 equipment costs with this lane.

21           Next slide, please. Oh, was that the  
22 last one? Okay.

23           So yeah, just to recap, we had launched  
24 the EV fast track hydrogen lanes and we will be  
25 launching -- I'm sorry, we also launched EV jump

1 start, which will be closing tomorrow, and then  
2 we will be launching the EV public charging lane  
3 on October 14th, as well as the school bus set-  
4 aside on October 24th, and the drayage set-aside,  
5 also, in November.

6           So we're almost done launching everything  
7 that we planned for in 2022. And we're actually  
8 preparing for Cycle 2, which will be our 2023  
9 funding.

10           2023 is going to kick off with the  
11 reopening of that EV fast track lane. And EV  
12 fast track is designed for fleets that have  
13 received vehicle incentives through another  
14 program. It doesn't have to be HVIP but just  
15 zero-emission vehicles that have received  
16 incentives. We know that those fleets have a  
17 need for refueling infrastructure, and so we are  
18 catering to them with that lane.

19           We are preparing the budget for 2023.  
20 And we are holding a critical project review in  
21 November.

22           And following that, we will be focusing  
23 on data collection and reporting. So we're  
24 looking forward to being able to publish some of  
25 this data including a map of where the

1 infrastructure has been deployed so far.

2 Thank you.

3 MR. BRECHT: We will turn it over to  
4 Jonathan.

5 MR. BOBADILLA: Thank you, Patrick.

6 Hello. My name is Jonathan Bobadilla,  
7 staff in the CEC's Fuels and Transportation  
8 Division. Today I will be providing information  
9 on our recent California zero-emission vehicle-  
10 related manufacturing efforts.

11 Next slide.

12 Thanks to the ambitious goals of the  
13 State of California to electrify and decarbonize  
14 transportation, the CEC was entrusted by the  
15 legislature with nearly \$250 million to support  
16 in-state manufacturing projects through our Clean  
17 Transportation Program. The goals of our  
18 manufacturing solicitations are to: attract new  
19 and expand existing zero-emission vehicle-related  
20 manufacturing in California; increase the number  
21 and quality of manufacturing jobs in California,  
22 particularly in the ZEV market; bring positive  
23 economic impacts in the state by attracting  
24 private investment in manufacturing capacity; and  
25 contribute to California's goals of zero-emission

1 transportation.

2           The first solicitation to be developed  
3 was GFO-21-605, titled Zero-Emission  
4 Transportation, Manufacturing, or ZETM. That was  
5 announced last year. This was a competitive  
6 grant funding opportunity to fund projects that  
7 manufacture ZEVs, ZEV components, and ZEV  
8 infrastructure in California. A notice of  
9 proposed work was released on August 24th and is  
10 available on the CEC's solicitation webpage.

11           Next slide.

12           GFO-21-605 ZETM was oversubscribed and  
13 very competitive. A breakdown of funding by  
14 manufacturer product types are shown in the  
15 table; 26 applications were received for funding  
16 consideration, 12 applications received passing  
17 scores and were recommended for funding, for a  
18 grand total of almost \$185 million.

19           A funding breakdown by manufactured  
20 product shows \$112 million towards projects that  
21 manufacture complete zero-emission vehicles, \$49  
22 million towards the battery manufacturing  
23 projects, \$15 million towards EV-charging  
24 infrastructure manufacturing projects, and \$9  
25 million towards ZEV infrastructure component

1 manufacturing projects.

2 Next slide.

3 Shown here is a map of California with  
4 the awardee's name and the project locations of  
5 the proposed projects. The 12 projects  
6 recommended for funding are spread over 18  
7 project sites, 13 cities, and 8 counties  
8 throughout California. Please note that the  
9 awardees and their site locations can be subject  
10 to change and must be formally approved at a CEC  
11 business meeting.

12 Next slide.

13 The projects recommended for funding will  
14 promote a diversity of manufacturing projects  
15 ranging from electric transit buses, electric  
16 vehicle supply equipment, hydrogen refueling  
17 station subcomponents, to EVSE battery  
18 manufacturing, to name a few examples. We are  
19 very excited to work with our new project  
20 partners as they develop new ZEV products while  
21 creating high-quality manufacturing jobs in  
22 California.

23 Next slide.

24 On top of our solicitation development  
25 efforts, we have also developed web tools to

1 highlight California ZEV-related manufacturers.  
2 This interactive map is hosted on the California  
3 Energy Commission's manufacturing webpage and  
4 shows data on in-state manufacturers.

5           For the purposes of this tool, we define  
6 a California ZEV-related manufacturer as a  
7 private company with at least one manufacturing  
8 facility physically located in California that  
9 manufactures, produces, and/or assembles complete  
10 zero-emission vehicles, ZEV components and  
11 batteries, and/or ZEV infrastructure hardware for  
12 commercial sale.

13           The tool is sectioned into two parts. On  
14 the right is an interactive GIS map of  
15 California, with dots representing manufacturers.  
16 And on the left are widgets that interact with  
17 the map and allow you to filter out by  
18 manufacturer types. To date, we have identified  
19 43 ZEV and ZEV-related manufacturers in  
20 California, and that number is expected to grow  
21 on our next update towards the end of fall.

22           We hope that this can be a useful tool to  
23 highlight what a fast-growing industry ZEV  
24 manufacturing is in California, while bringing  
25 attention to the companies creating high-quality

1 manufacturing jobs for Californians.

2 A link to our manufacturing webpage will  
3 be put in the chat shortly.

4 Thank you everyone for your time and this  
5 concludes my presentation.

6 Patrick, I'll hand it back to you.

7 MR. BRECHT: Thanks, Jonathan.

8 Wow, we are right on time here, so I'm  
9 very pleased about that.

10 Okay, now I'd like to provide our active  
11 and upcoming program funding, and to show how  
12 busy we've been.

13 Yes. Right. Thank you.

14 The overreaching goals of the Convenient,  
15 High-Visibility, Low-Cost, Level 2 Charging  
16 solicitation are to enhance perception of Level 2  
17 charging access through high-density, high-  
18 visibility installations and test business models  
19 for Level 2 charging.

20 Right now we're planning on requiring  
21 projects to install a minimum of 500 Level 2  
22 chargers within a one-mile radius. We're hoping  
23 to release this solicitation in December of this  
24 year, putting project start dates around late  
25 summer of 2023. We have \$24 million for this

1 solicitation, so we're estimating funding two or  
2 three projects.

3           We have the Bidirectional School Bus.  
4 CEC will release a funding opportunity in early  
5 2023 to fund bidirectional infrastructure for  
6 electric school buses with a focus on either  
7 vehicle-to-building and/or vehicle-to-grid  
8 capabilities. This funding will promote projects  
9 that incorporate bidirectional infrastructure for  
10 electric school buses in multiple locations and  
11 multiple districts across the state of  
12 California, and to encourage integration with the  
13 grid for these resources. The funding amount is  
14 still to be determined.

15           Next we have Vehicle Grid Integration-  
16 focused Solicitation. This solicitation is  
17 called Responsive, Easy-Charging Products with  
18 Dynamic Signals. This solicitation would fund  
19 the development and deployment of charging  
20 products that can help customers easily manage  
21 their charging and respond to dynamic grid  
22 signals. Products may include charging backoff  
23 software -- excuse me, back office software,  
24 telematics aggregators, charging hardware, in-  
25 vehicle software, and others. As part of the



1 project, applicants will deploy their products to  
2 customers throughout California and collect  
3 performance data.

4 CEC hopes to release this list this  
5 solicitation later this year, receiving  
6 applications by early 2023, and announce awards  
7 by mid-2023. Funding is also to be determined.

8 Next we have signage. The CEC has  
9 authorized up to \$1 million for the Signage  
10 Initiative, a project designed to increase the  
11 visibility of existing EV chargers through the  
12 installation of signs along state freeways and  
13 highways in major urban expressways and  
14 boulevards. The initiative will also promote the  
15 use of green paint to highlight EV charger  
16 parking spaces. The CEC hosted an informational  
17 workshop on September 6th and is working to  
18 release a grant funding opportunity by the end of  
19 Q4 2022.

20 Next we have our Battery Manufacturing  
21 Block Grant. The purpose of this solicitation is  
22 to seek a block grant implementer to design and  
23 implement up to \$100 million in grant funds for  
24 projects that will promote in-state battery  
25 manufacturing for zero-emission vehicles and

1 related infrastructure. The solicitation, which  
2 is GFO-21-605, was released August 9th. And the  
3 deadline an application is due -- and  
4 applications are due November 18th of 2022.

5           This GFO, or grant funding opportunity,  
6 has \$25 million initially available. Staff  
7 conducted a pre-application workshop on September  
8 28th, with applicants due, as I mentioned,  
9 November 18th.

10           Next we have our low-carbon fuel  
11 production and supply. The CEC held a workshop  
12 in July to gather feedback on potential funding  
13 concepts related to zero- and near-zero carbon  
14 fuel production and supply. The 2021 to 2023  
15 Investment Plan Update allocated \$10 million for  
16 zero-emissions -- excuse me, zero and near-zero  
17 carbon fuel production and supply projects; of  
18 this amount, \$7 million remains available.

19           The Draft 2022 to 2023 Investment Plan  
20 update, which we'll discuss later, of course,  
21 proposes an additional \$10 million in Fiscal Year  
22 2022 to 2023 and \$5 million in '23 to '23 for  
23 this activity, though these amounts are subject  
24 to change based on the Investment Plan process,  
25 as well as budget act preparations.

1           Next slide.

2           And here's just a slide for more  
3 information on our solicitations.

4           And now let me shift, again, to federal  
5 government activities, and we'll have Ben De Alba  
6 talk to that subject.

7           Thanks.

8           MR. DE ALBA: Thanks, Patrick.

9           Good morning, everybody. My name is Ben  
10 De Alba, and I am on the NEVI Team in the Fuels  
11 and Transportation Division.

12           As Patrick mentioned, today I'm going to  
13 provide an overview of California's  
14 Implementation Plan for the NEVI program. But  
15 before I do, I want to start by highlighting some  
16 key infrastructure provisions in the Inflation  
17 Reduction Act and the Infrastructure Investment  
18 and Jobs Act.

19           Next slide, please.

20           In the Inflation Reduction Act -- or I  
21 should say, rather, the Inflation Reduction Act  
22 extended federal tax credits on charging  
23 infrastructure through 2032 for both individual  
24 residential uses and commercial uses. The  
25 equipment needs to be placed in low-income and/or

1 non-urban areas as prescribed by the bill.

2           Furthermore, there is also \$1 billion to  
3 states, municipalities, Indian tribes, and  
4 schools. For heavy-duty ZEV, infrastructure is  
5 included in that. And there's \$2.25 billion for  
6 zero-emission technology at ports. In addition,  
7 the IRA also extended EV tax rebates and provided  
8 \$3 billion to electrify the United States Postal  
9 Service.

10           On the right of this chart is the  
11 Infrastructure Investment and Jobs Act, which I'm  
12 going to spend more time discussing. There was  
13 \$5 billion for the National Electric Vehicle  
14 Infrastructure, or NEVI, from the program, and an  
15 additional \$2.5 billion for two discretionary  
16 grant programs, the Community Charging Grant  
17 Program and community -- or excuse me, Corridor  
18 Charging Grant Program and the Community Charging  
19 Grant Program, both of which we are awaiting more  
20 detail on.

21           Next slide.

22           So for the Formula Program, specifically,  
23 and for the purpose of this presentation, I want  
24 to inform you all on California's implementation  
25 of the NEVI Formula Program. As I mentioned, it

1 was established in the IIJA. And the overall  
2 goal of the national program is to establish a  
3 statewide, interconnected network of publicly-  
4 available high-powered electric vehicle chargers  
5 along alternative fuel corridors. California  
6 will receive \$384 million over five years to  
7 build out the network in our state. And we're  
8 expecting more details to come by the end of the  
9 year.

10 Next slide.

11 First and foremost, our implementation of  
12 the NEVI Formula Program is a partnership with  
13 Caltrans.

14 Next slide.

15 The first iteration of that partnership  
16 really was the completion of California's NEVI  
17 Deployment Plan, depicted here. We submitted the  
18 plan on August 1st to the U.S. Joint Office of  
19 Energy and Transportation. And we received  
20 approval on September 14th without comment from  
21 the Joint Office, which means California has the  
22 green light to use its NEVI Formula funds.

23 Next slide, please.

24 This is a snapshot of the timeline for  
25 the implementation of our NEVI Program. As I

1 mentioned, we put together the Deployment Plan  
2 earlier this year. We submitted that plan on  
3 August 1st. We got federal approval on the 14th  
4 of September. And now we are in the solicitation  
5 development phase for the NEVI program between  
6 now and the end of the calendar year. We  
7 anticipate releasing a first round of the  
8 solicitation in early of 2023, and subsequent  
9 rounds of the NEVI Formula funds will be released  
10 in subsequent quarters in subsequent years.

11           Next slide, please.

12           The purpose of our, California's, NEVI  
13 program is to strategically deploy high-powered  
14 chargers along designated corridors in a  
15 competitive manner that leverages private  
16 investment. We're going to release four to five  
17 rounds of solicitations approximately every six  
18 months, starting in early 2023. Each round will  
19 be a different collection of corridor groups,  
20 which I'll explain in the next slide. And these  
21 solicitations will initially aim to deploy  
22 charging for light-duty vehicles only.

23           The goal of this approach is to provide  
24 predictability for both potential applicants and  
25 the state. Furthermore, private entities are

1 eligible to apply, and local governments and  
2 municipalities may be included in the project  
3 team but cannot be the prime applicant.

4           Next slide.

5           Here's an image of our proposed  
6 corridors. There are roughly 70 alternative fuel  
7 corridor segments, which we have comprised into  
8 20 corridor groups. The colored corridors have  
9 been identified by CEC and Caltrans as meeting  
10 the required minimum NEVI criteria. The corridor  
11 group number and color is nothing more than an  
12 identifier. And the black dots are existing  
13 stations that currently meet the NEVI minimum  
14 criteria, although station criteria may change at  
15 the time of the solicitation, so this may be  
16 altered going forward.

17           We're targeting 50 percent of NEVI  
18 funding for projects located within California  
19 disadvantaged communities and within one mile of  
20 those communities. We're also targeting 40  
21 percent of funding in and within one mile of  
22 Justice40 designated disadvantaged communities.  
23 These are floors and we encourage more funding to  
24 provide benefits to these communities where  
25 feasible.

1           Furthermore, we grouped interstates  
2 together, when possible, and we tried to balance  
3 the number of new charging stations with like  
4 segments.

5           And finally, we looked at the analysis  
6 from our Road Trip analysis which estimates the  
7 number of chargers needed for each corridor  
8 segment in 2030. We are proposing to build out  
9 corridors to at least 50 percent of the Road  
10 Trip's 2030 demand or to at least the minimum  
11 NEVI requirements, whichever is greater.

12           For more information, please visit our  
13 NEVI docket, or feel free to reach out to me or  
14 visit our NEVI website.

15           Now I'll pass it to my colleague Michael  
16 Nicholas.

17           MR. NICHOLAS: Alright. Thanks, Ben.

18           Good morning. My name is Michael  
19 Nicholas.

20           And next slide. Oh, yeah, maybe we can,  
21 I guess, leave that up, or that'll be information  
22 that people can catch up on.

23           So, yeah, my name is Michael Nicholas. I  
24 supervise the Infrastructure Modeling and  
25 Assessment Unit. And before we go to the next



1 section on our reports in our modeling efforts,  
2 I'll provide an overview of relevant CARB  
3 regulations. And I looked at this slide, and I  
4 saw that there was more acronyms and  
5 abbreviations than words. And so hopefully, I  
6 can demystify that coming up in the next few  
7 slides.

8           But we see CARB regulations as setting a  
9 floor for our analysis for the number of vehicles  
10 that we can expect.

11           Next slide.

12           But we actually see sometimes that the  
13 market goes faster than these regulations. And  
14 so we try to use these as a floor but also try to  
15 make sure that we have enough infrastructure to  
16 support different scenarios where, you know, we  
17 actually can exceed some of these numbers. But  
18 these are very useful, and I'll go through it  
19 right now.

20           So the first is Advanced Clean Cars II,  
21 and it applies to light-duty cars, and it states  
22 that by 2035, 100 percent of new vehicle sales  
23 are zero-emission vehicles, and that includes  
24 PHEVs up to 20 percent.

25           What we care about is the on-road fleet

1 that we need to support with the charging, so by  
2 2030, that's 5.7 million ZEVs, and by 2035, it's  
3 12.2 million ZEVs.

4           The next relevant regulation is advanced  
5 clean trucks, and that's Class 2b to 8 trucks,  
6 and I'll go a little bit more in that, what that  
7 means. So it's more nuanced than Advanced Clean  
8 Cars in that there are different requirements for  
9 different classes of trucks. And the  
10 requirements started in 2024, and by 2035, 55  
11 percent of Class 2b and 3 -- and this is kind of  
12 an extension of the light-duty sector, but it's  
13 really big pickups and vans but just heavier like  
14 F-250s and those sorts of trucks -- 55 percent  
15 have to be ZEVs, 75 percent of Class 4-8 straight  
16 trucks, so they don't have an articulation --  
17 they're not kind of the tractor trailers -- those  
18 have to be ZEVs, and 40 percent of tractor  
19 trailers Class 7 and 8 are the big rigs that you  
20 might refer to them as have to be ZEVs by 2035.

21           So for us, the estimated on-road fleet is  
22 172,000 ZEVs by 2030, and by 2035, 361,000 ZEVs.

23           Next slide.

24           So the next regulation that is relevant  
25 is the Advanced Clean Fleets regulation, and it's

1 not completed, but it uses Executive Order  
2 N-79-20 to guide the regulation, so there's a  
3 couple relevant numbers in there. So 100 percent  
4 zero-emission drayage trucks by 2035, 100 percent  
5 zero-emission offroad vehicles by 2035, where  
6 feasible, and there are some hard sectors in the  
7 fleet world, and 100 percent medium- and heavy-  
8 duty vehicles by 2045, again where feasible.

9           So this sets varied regulations based on  
10 fleet size, revenue ownership, and model  
11 application.

12           Next slide.

13           And I see Craig has a comment on ACF, and  
14 he's probably the one to be the expert on that,  
15 so please read his comments.

16           So next, I'll talk about the AB 2127  
17 Report and the timeline for our next report, and  
18 I'll review our previous report as well.

19           Next slide.

20           So the first AB 2127 Assessment, first,  
21 this assessment, maybe if you're not quite  
22 familiar with it, it accomplishes several goals.  
23 It looks at the number of charges needed. In  
24 this case, our scenarios were 5 to 8 million ZEVs  
25 on California roads by 2030.

1           The second thing it does is this tells us  
2 where the chargers are needed, and this provides  
3 a geography on a county level. We're looking to  
4 improve that in the next report to find our  
5 geographic resolution. And it also -- I didn't  
6 put it on here, but it tells us what type of  
7 infrastructure we'll need, so fast-charging,  
8 Level II home charging, workplace charging, and  
9 I'll actually provide some more detail in the  
10 next slides.

11           But we use it as an early warning system  
12 or a way to identify gaps in our infrastructure  
13 needs. And it helps in our investment planning.  
14 So how much money do we need? Who actually is  
15 the audience for the funding? And, yeah, and  
16 then what are the gaps in those infrastructure  
17 deployments?

18           An, importantly, it's an iterative  
19 process, and we do this every two years,  
20 approximately. And, you know, this market is --  
21 it's a future market, there's no crystal ball,  
22 and things change, technologies change, costs  
23 change, and so we update those as those  
24 conditions change. And so it's good to have this  
25 iteration, then we're not -- so to not have so

1 much hubris so we think we got everything right,  
2 so we have a chance to go through it again.

3           So this is what we're going to be  
4 talking, about the second one. So we did the  
5 first one, now we're going to do the second one.

6           Next slide.

7           So this is a little bit of the kind of  
8 detail you can expect in the report. So this is  
9 the light-duty EV charger needs, and so just for  
10 700,000 light-duty vehicles, we need -- or sorry,  
11 to support 5 million ZEVs, we need 700,000  
12 chargers. And you can see on the graph on the  
13 right exactly what type of charges are needed and  
14 the numbers of those chargers.

15           Our second scenario is 1.2 million  
16 chargers, and that's the marginal number of  
17 chargers needed above. The number to support 5  
18 million is shown in the orange bars. And then  
19 this is public charging and shared private  
20 charging. So it doesn't include the chargers in  
21 people's garages, even though we do take that  
22 into consideration.

23           Next slide.

24           So this is -- also in the report is  
25 medium- and heavy-duty chargers. And in this

1 scenario, you can see that to support 180,000  
2 battery-electric trucks we need 157,000 chargers.  
3 And this one is a little different in that we  
4 look at the overnight chargers needed and, also,  
5 the daytime chargers needed, so they're of  
6 different powers and different use cases. And so  
7 this will be updated. There are new charging  
8 standards now and we'll be able to incorporate  
9 those and new assumptions in the second report.

10           Next slide, please.

11           So for the update, the main update is  
12 extending the assessment horizon to 2035. The  
13 previous one was focused on 2030. And, again, it  
14 gives us a second chance to adjust estimates  
15 based on changing technology, whether that be  
16 changing charging technology, changing consumer  
17 preferences, changing prices which are reflected  
18 in those consumer preferences, and refining the  
19 assumptions that we find important.

20           So what is contained in the report? A  
21 short outline is here. There is certainly more  
22 to this but we looked at the existing charging  
23 infrastructure level set where we are. There are  
24 the current ZEV trends. As I said, things  
25 change, conditions change, and we'll detail that.

1 And, yeah, I don't want to say the main part of  
2 the report but, you know, for the chargers we  
3 have the light-duty and heavy-duty charging.

4 And we also have, as a separate module,  
5 the chargers needed for transportation network  
6 companies like Uber and Lyft. And we see that as  
7 a big opportunity for getting, you know, more  
8 zero-emission miles and really trying to see how  
9 those needs are distinct from other sectors.

10 So other topics that we cover in the  
11 report -- it's not just charging, number of  
12 chargers -- we look at the grid needs analysis  
13 from the additional charger load that that we  
14 expect, so it's kind of a holistic look, not only  
15 the numbers of chargers but what impact does it  
16 have on the grid? And we have a section on  
17 vehicle-grid integration, which I think Jeffrey  
18 is going to cover next, and that's how can we be  
19 a little bit smarter on how we charge? And how  
20 can the vehicle be responsive to grid conditions  
21 in real time?

22 And for this report, we're adding a Labor  
23 and Workforce section, and this was added based  
24 on new legislation, SB 589. And this looks at,  
25 you know, what sort of workforce do we need, and

1 what sort of economic activity is being generated  
2 by electric vehicle charging installation and  
3 companies involved in this space?

4 Next slide, please.

5 So second report, this is, again, I said  
6 on the previous slide that we've extended the  
7 time horizon, and we look at multiple scenarios.  
8 The Advanced Clean Cars scenario is on the bottom  
9 and that's 12 million cars by 2035. And we look  
10 at Mobile Source Strategy, as well -- or we're  
11 considering looking at Mobile Source Strategy, as  
12 well, for a little bit of a higher case to make  
13 sure that, you know, we are responsive to better-  
14 than-expected performance in the market.

15 Next slide, please.

16 And finally, here's a brief timeline. So  
17 we're going to be finishing up in a draft staff  
18 report the end of this year. And then the public  
19 will get to see that staff report in February of  
20 next year. And we'll have a workshop on the  
21 staff report; that's another chance for the  
22 public to comment on it. And then by July, we'll  
23 publish the revised staff report. And then,  
24 finally, publishing the commission report.

25 It's a very long process to write a



1 report, which is good because we get a lot of  
2 input. And by the end of the process, you can't  
3 say people didn't have a chance to look at it, so  
4 it does reflect the best we can the public input  
5 and input from stakeholders.

6 So that's it for my presentation. Thank  
7 you very much.

8 And I'll pass it on to Jeffrey.

9 MR. LU: Thanks Mike.

10 Good morning everyone. Thanks for  
11 joining us. My name is Jeffrey and I work in the  
12 CEC's Fuels and Transportation Division. For the  
13 next couple of minutes, I'd like to provide you  
14 an overview of how EV charging will impact the  
15 grid and what the CEC is doing to prepare for  
16 that load growth.

17 Next slide.

18 As you're probably all seeing on our  
19 roads every day, EV adoption in California is  
20 rising. More EVs means more EV charging, which  
21 means more electricity consumption. And EV  
22 charging is on track to become a significant  
23 share of the state's total electricity  
24 consumption. For a perspective, our analysis  
25 estimates that charging the 800,000 or so plug-in

1 vehicles in the state today accounts for just  
2 under two percent of the state's total  
3 electricity consumption. By 2031, when we'll  
4 have millions of EVs on the road, that will grow  
5 to around ten percent, meaning a 10th of the  
6 state's electricity will be going to charging our  
7 vehicles in just seven to eight years.

8           This statistic alone, however, doesn't  
9 really capture the entire picture. EV charging  
10 is generally flexible because they're often  
11 parked for long periods of time, so you can sort  
12 of shift when you want to try charge during that  
13 plug in time. Because of this flexibility, we  
14 expect that most of this EV charging load growth  
15 can be accommodated outside of the grid's peak  
16 hours or when it's already pushing up against its  
17 capacity. Today, less than one percent of the  
18 peak electricity load in California comes from EV  
19 charging, so this usually happens around 6:00  
20 p.m.

21           In 2030, even with millions more EVs on  
22 the road, we expect that number to still remain  
23 under five percent. As I'll talk about in a bit,  
24 we're doing a lot of work to push this five  
25 percent number down even further and to make sure

1 that EVs are good grid citizens.

2 Next slide.

3 What the statistics on the prior slide  
4 hint at is that how we integrate new charging  
5 load onto the grid will impact the cost,  
6 planning, and operation of the grid. Basically,  
7 when, where and how we add new charging load has  
8 a big impact on how much more grid infrastructure  
9 we'll need to support all of those electric  
10 vehicles.

11 To illustrate this point, I pulled up the  
12 systemwide electricity load curve from June 1 of  
13 this year. The purple line on the screen shows  
14 the net electricity demand. So the Y axis  
15 represents power and the X axis spans across one  
16 24-hour period. The specific numbers aren't that  
17 important here, they're not even shown; what  
18 we're looking at is the general shape.

19 If you look at the center of the plot,  
20 you see that the purple net demand line has this  
21 huge valley, which gives the curves sort of duck  
22 shape. This is what we sometimes call the duck  
23 curve. And it's due to the fact that during the  
24 day, California's solar generation kicks in and  
25 pumps tons of electricity onto the grid.

1           We can think of this valley as a sort of  
2 period of grid abundance; we're getting lots of  
3 electricity from solar, electricity prices are  
4 generally cheaper at this time of day, and  
5 oftentimes we're generating so much electricity  
6 that we end up shutting off some solar generation  
7 because nobody is using that energy at that point  
8 in time. In other words, the grid has a lot of  
9 capacity available at certain times of day. If  
10 we can take steps to encourage and award charging  
11 during these periods of great abundance, we can  
12 maximize our use of the infrastructure and  
13 systems that we already have.

14           This general idea of integrating charging  
15 load while considering both what the driver needs  
16 but, also, what the grid needs is what we call  
17 vehicle grid integration, or VGI. VGI can help  
18 us balance out the system and save money for  
19 drivers and ratepayers along the way. Of course,  
20 sometimes the driver will need to charge  
21 immediately and won't have the flexibility to  
22 shift to their charging time. But as I mentioned  
23 earlier, charging does often have a lot of  
24 flexibility. So VGI can help us make the most  
25 out of the infrastructure that's already

1 available.

2           And finally, while VGI will be a big part  
3 of how we address EV charging moving forward, we  
4 still need some grid upgrades to accommodate new  
5 EV charging load. The next slide will discuss  
6 some of the efforts at CEC to make sure that we  
7 do this thoughtfully and judiciously.

8           Next slide, please.

9           As Mike just noted, Assembly Bill 2127  
10 tasks the CEC with preparing reports on the  
11 charging infrastructure that we need to meet our  
12 EV and decarbonization goals. The models  
13 supporting that work, such as EVI-Pro and Heavy  
14 Load, they help us understand the number of  
15 chargers that will need, as well as the total  
16 electricity load from those charges under various  
17 vehicle adoption scenarios.

18           Beyond the modeling work, we're  
19 developing the EDGE Tool to combine our modeling  
20 results with utility data. And this can help us  
21 identify areas of the grid that will likely need  
22 upgrades to accommodate future charging load.

23           I also want to note that our work in this  
24 area is not purely quantitative. There's a lot  
25 of qualitative analysis too. For example, we

1 identify utility processes that can be  
2 streamlined to accelerate charter installation,  
3 we explore ways to develop the workforce that we  
4 need to install those charters, and so on.  
5 That's some of the stuff that Mike talked about  
6 earlier.

7           Complementing a lot of that AB 2127 work,  
8 the CEC conducts technical analyses to determine  
9 the policies and technologies needed to realize  
10 vehicle grid integration at scale. Where  
11 appropriate, we'll deploy technology and funding  
12 through our solicitations to advance the products  
13 and services that help customers manage their  
14 charging intelligently and respond to grid  
15 signals.

16           Finally, I want to emphasize that our  
17 division is just one corner in a very busy EV and  
18 energy space. We work closely with our  
19 counterparts at the Air Resources Board and the  
20 Public Utilities Commission. And we really do  
21 try to share our findings with our sister  
22 agencies and to complement their actions. I  
23 think you see that this is pretty clearly  
24 reflected in what we've already produced.

25           For example, if you look at the modeling

1 in AB 2127, we built those around the planned --  
2 the projected EV populations as a result of  
3 CARB's regulations. And if you read through some  
4 of the recent CPUC decisions, you'll find that a  
5 lot of the guidance there is aligned with  
6 recommendations provided by the CEC.

7 That's all I have for now. Thanks for  
8 your time.

9 You can move to the next slide, Patrick.

10 If you have questions after today's  
11 workshop, feel free to reach out to the email  
12 posted here. Otherwise, we'll take questions at  
13 the end.

14 Next I'd like to introduce my colleague  
15 Kristi, who will discuss some of the work that we  
16 do in hydrogen space.

17 MS. VILLAREAL: Just trying to bring up  
18 my video. One minute, please. Okay.

19 Thank you, Jeffrey.

20 Good morning everyone. My name is Kristi  
21 and I'm with the Fuels and transportation  
22 Division. Today I'm presenting a brief update on  
23 Senate Bill 643, which was chaptered in 2021, and  
24 requires the CEC to prepare an assessment of  
25 hydrogen supply and infrastructure needs for

1 medium-duty and heavy-duty fuel cell electric  
2 vehicles and offer applications that will be  
3 required to meet our statewide goals.

4           Next slide, please.

5           We're also referring to this report as h2  
6 for MD/HD. This slide provides some examples of  
7 MD HD on-road and offered hydrogen fuel cell  
8 ZEVs. To the left is a hydrogen fuel cell  
9 tractor, and to the right is a heavy duty fuel  
10 cell truck, and a fuel cell electric bus right  
11 below that.

12           Just to briefly touch on the technology  
13 itself, hydrogen fuel cells are a complimentary  
14 ZEV technology that may also help decarbonize  
15 other transport applications that are challenging  
16 to electrify directly due to high energy  
17 requirements and continuous or multiple shift  
18 operations that require fast refueling times.

19           Next slide.

20           This report will be developed in  
21 consultation with our sister agencies, Air  
22 Resources Board and the PUC. The assessment will  
23 include but is not limited to equipment  
24 considerations, regional analyses including  
25 impacts to disadvantaged communities, emission



1 reductions, synergies between the sectors, energy  
2 storage, and grid impacts.

3 This inaugural report is due to the  
4 legislature by December 31st, 2023. And the  
5 assessment is required to be updated every three  
6 years until January 2030.

7 Next slide.

8 Next steps will include finalizing the  
9 schedule and outline for the report. Also, the  
10 CEC will begin collaborating more closely with  
11 CARB and the PUC to develop the report with input  
12 from the Department of Food and Agriculture, GO-  
13 Biz, and other state agencies that may be  
14 interested. And early next year the CEC will  
15 hold a public workshop and will provide other  
16 comments opportunities. We currently have Docket  
17 Number 22-HD-02 on our dockets webpage where  
18 interested parties can provide comments regarding  
19 their reports topic areas.

20 Thank you so much for your time today.

21 And now I'll hand it off to Liz. who will discuss  
22 the ZEV dashboard.

23 MS. PHAM: Hi. My name is Liz Pham and  
24 I'll be introducing the zero-emission vehicles  
25 and infrastructure dashboard, also known as ZEVs

1 stats.

2 Next slide, please.

3 So for anyone who is new the ZEVs stats  
4 dashboard collection, we offer seven interactive  
5 dashboards on zero-emission vehicles and  
6 infrastructure.

7 This is our landing page. At the bottom  
8 left, we have one and two which is our light-duty  
9 vehicle population and new ZEV sales. At the top  
10 right, number three, we have been medium- and  
11 heavy-duty vehicle population. Number four is  
12 our electric vehicle charger infrastructure.  
13 Five is the hydrogen refueling station. And six  
14 and seven is our CEC-funded electric school bus  
15 and school bus chargers. And you can visit the  
16 site by going to [www.energy.ca.gov/zevstats](http://www.energy.ca.gov/zevstats).

17 Next slide, please.

18 So we are proud of our collection. We're  
19 hoping this can be a one-stop shop in tracking  
20 our progress in transitioning to zero-emission  
21 vehicles.

22 For instance, on our new ZEV sales  
23 dashboard, there's a chart -- there's a graph  
24 that shows our progress over the years. As you  
25 can see on the graph to the left, our cumulative

1 ZEV sales is steadily growing, and we reached 1  
2 million ZEVs sold by 2021. In terms of the total  
3 vehicle sales, if you look to our graph on the  
4 right, the blue line shows the ZEV sales share.  
5 So in 2011, ZEVs only made up 0.5 percent of the  
6 total light duty sales, but it has increased to  
7 16.5 percent by the end of Q2 of 2022. So it's  
8 all very exciting to track our progress.

9           Next slide, please.

10           So let me introduce you to our newest  
11 member to the collection, the medium- and heavy-  
12 duty dashboard. We're proud of all of our  
13 dashboards, but this one in particular was a  
14 tough one. Medication and heavy-duty vehicles in  
15 the DMV database is very hard to identify, so  
16 much so that we had to reach out to the National  
17 Highway Traffic Safety Administration to see if  
18 they can help us. And we also worked with  
19 Alameda County and small companies, like Volta  
20 Trucks, to help identify missing vehicles.

21           This is still a work in progress. And  
22 we're dedicated to improving this and updating  
23 once a year. So if you know something that isn't  
24 displayed, please reach out, anything is helpful.

25           So looking at this slide, this is a

1 typical layout of the dashboard.

2           At number one at the top left, you can  
3 access the other dashboards using these  
4 highlighted links.

5           And link number two, at the top right,  
6 allows you to download the data for any of our  
7 dashboards.

8           At number three, this is where you can  
9 find the total number of zero-emission, medium-  
10 and heavy-duty vehicles registered at the end of  
11 Q2 of 2022.

12           And then below that, at number four, this  
13 breaks down the total by vehicle title, so we  
14 have buses, trucks, and delivery vans.

15           Number five is a map representation of  
16 where the vehicles are located on a county level.  
17 The darker the color in the map, the higher the  
18 vehicle population in that county.

19           Number six is the chart that breaks down  
20 the data by manufacturers.

21           And below that number seven breaks down  
22 the data by body styles. So this goes into more  
23 details into what types of bus trucks and deliver  
24 bands.

25           And number eight, to the right, is to

1 filters. You can filter the data by county, fuel  
2 type, vehicle weight class, and vehicle type.

3 And then lastly, again, at the very  
4 bottom is our URL to the landing page where you  
5 can find our dashboard, this one and the others,  
6 as well.

7 So that's pretty much it. I encourage  
8 everyone to explore dashboards. Thank you.

9 Patrick, I hand it back to you.

10 MR. BRECHT: Commissioner Monahan, do you  
11 have something you wanted to --

12 COMMISSIONER MONAHAN: I do, yeah. So I  
13 wanted to just ask a question of our team about  
14 charger reliability. That's an issue that's come  
15 up more and more. And could someone speak more  
16 about what the CEC is doing to address charger  
17 reliability?

18 MR. WENZEL: Sure. Hi Patti. This is  
19 Mark Wenzel. I manage the Light-duty Electric  
20 Vehicle Infrastructure and Analysis Branch here  
21 at the CEC, and I'm happy to start to field that  
22 question.

23 So in one of our earlier slides on the  
24 legislative update, there was a mention of AB  
25 2061, which was enacted in this most recent

1 session. It requires the CEC, working with the  
2 Public Utilities Commission, to set standards for  
3 charging infrastructure that's funded either  
4 through us, through state funds, or through  
5 ratepayer funds.

6 We've been doing that at the CEC for the  
7 past year. There were reliability requirements  
8 in the three solicitations that Phil mentioned  
9 for multifamily housing for rural charging and  
10 on-demand transportation services. So we'll be  
11 working to continue to implement those standards,  
12 and then to update them as the market evolves and  
13 working with the CPUC on applying those to  
14 ratepayer funded projects.

15 The NEVI Program that Ben described, the  
16 federal government has proposed reliability  
17 standards for chargers receiving that funding, so  
18 we'll implement those, as well, and try to  
19 coordinate our state standards with the federal  
20 standards.

21 The second thing that 2061 requires is  
22 for the CEC to report on the overall reliability  
23 of chargers in the charging network in  
24 California. We're looking at a variety of ways  
25 to do that, including field testing and customer

1 surveys.

2 So our next step is to hold a public  
3 workshop on these topics. Of course, we welcome  
4 participation from everyone here and others. So  
5 let's spread the word as soon as we've posted  
6 that announcement. So we're planning to announce  
7 that this month.

8 Thanks.

9 COMMISSIONER MONAHAN: Great. Thanks  
10 Mark. Thanks for fielding a question out of the  
11 blue.

12 Patrick, pass it back to you.

13 MR. BRECHT: Okay, well, just this is an  
14 opportunity for the Advisory Committee members to  
15 ask questions for the materials that we've  
16 covered so far. Of course, we'll cover the  
17 Investment Plan a little bit later, so we can  
18 have questions on the Investment Plan itself from  
19 that later point. But if you have any questions  
20 on material so far, time to ask.

21 So, Samantha, did you have the question?

22 COMMITTEE MEMBER HOUSTON: I do. Thank  
23 you. And just let me know if you need to defer  
24 this one until later.

25 But I was thinking about the overview of

1 the Clean Transportation Program funding and that  
2 we'll be looking at the Fiscal Year '20 to '23,  
3 and then first half of the following fiscal year  
4 for the Clean Transportation Program funds.  
5 I just want to make sure I understand sort of  
6 what is still sort of changeable, thinking that  
7 we're within that first half of Fiscal Year '22-  
8 23 right now. I just want to make sure my  
9 understanding of what's governing that right now  
10 is correct. And I assume the prior plan is  
11 governing the and sort of the first half of '22-  
12 23 dollars. And, really, we're most concerned  
13 with the second half of '22-23, and first half of  
14 the following fiscal year, which is to say,  
15 basically, Calendar Year 2023 when we get to sort  
16 of the feedback on the plan is that there was a  
17 lot of work.

18           Is that clear? That was a lot of words,  
19 so --

20           MR. BRECHT: I think so. When we take  
21 the Investment Plan to the business meeting in  
22 December, the Commissioners will be voting on  
23 just Fiscal Year '22 to 2023. Of course, it's a  
24 multiyear plan which, you know, shows the next  
25 half a fiscal year, but that will be decided next



1 year at the next year's business meeting.

2 Does that makes sense? So --

3 COMMITTEE MEMBER HOUSTON: It does. So I  
4 guess they're voting on some things that are like  
5 time that is already passed; is that right, kind  
6 of retroactively? I just want to make sure I  
7 understand how the vote lines up with the fiscal  
8 year.

9 MR. SMITH: Yeah. So this is Charles  
10 Smith, the Branch Manager in the Fuels and  
11 Transportation Division. Maybe I can jump in.

12 So just to clarify, all of the funding to  
13 date that you have seen, none of that is  
14 utilizing Fiscal Year '22-23 funds yet, and  
15 that's what's going to be taken to a business  
16 meeting for formal consideration with this  
17 Investment Plan. So hopefully that clarifies.

18 COMMITTEE MEMBER HOUSTON: That does  
19 help, Charles.

20 MR. SMITH: Okay.

21 COMMITTEE MEMBER HOUSTON: Thank you very  
22 much.

23 MR. SMITH: Sure. And as Patrick noted,  
24 we will have some slides in the -- towards the  
25 end of the day that capture a little bit more

1 clearly which pots of funding are -- can be moved  
2 around, because a lot of the General Funds are  
3 pretty prescribed and set, and so we have more  
4 flexibility with our core program funds. So  
5 thanks.

6 MR. BRECHT: Joel, did you have a  
7 question?

8 COMMITTEE MEMBER LEVIN: Yeah, I did. So  
9 I was actually really happy to hear the  
10 Commissioner and Mark talking about reliability  
11 because, from our point of view as a consumer  
12 group, it's a huge issue, it's a really big  
13 challenging issue.

14 We do a survey every year of EV drivers  
15 and their perceptions about different issues.  
16 And for drivers who use the public charging  
17 network, across all of the networks, so this is  
18 all of them, except for the Tesla network, 25  
19 percent of them said that broken chargers was a  
20 major problem, it's a challenge to them using the  
21 network, and that was in California and across  
22 the country, it's kind of the same everywhere.

23 And there's, just anecdotally, you know,  
24 there's a perception in the world that chargers  
25 are broken and that it's hard to use the public

1 charging network. And it's, really, it's holding  
2 back sales of EVs. People are hesitant to buy  
3 EVs because they're worried that when you go to  
4 use a charger, it's going to be broken, and  
5 there's a lot of truth to that.

6           So I would just encourage you to really  
7 focus on reliability and uptime as key metrics  
8 for all the solicitations that you do, and to  
9 push for really pretty high uptime, you know, 99  
10 percent or more, keeping in mind that when  
11 someone comes to a charger and they're expecting  
12 it to work and it's broken, they may be, you  
13 know, getting a tow home, and their next car may  
14 not be an EV.

15           So think about the comparison with gas  
16 stations. You know, how often does it happen  
17 that you go to a gas station and you can't fuel  
18 your car? That like never happens.

19           So just to emphasize that to be a  
20 priority and maybe even suggest that, with your  
21 new several stats, maybe you gather data on that  
22 and try to, you know, track that data as, you  
23 know, people's ability to successfully use the  
24 network and the, you know, level of uptime and  
25 broken chargers is something that you track

1 because it's really a big deal for drivers. `

2 So thanks.

3 MR. BRECHT: Thank you, Joel.

4 I should clarify, when I call on you, if  
5 you can just state your full name for the court  
6 reporter, I appreciate it.

7 Eileen, did you have a question?

8 COMMITTEE MEMBER TUTT: Yes. Eileen Tutt  
9 with the Electric transportation Community  
10 Development Corporation. I have two questions,  
11 just clarification.

12 The first is on Slide seven. And sorry  
13 to do this to you but it says at the bottom and  
14 in parentheses, And I just noticed this because I  
15 was one of those persons who worked really hard  
16 to get funding this year and record net amount of  
17 funding, It says, "pending future state budgetary  
18 approval," which I think is actually just -- I  
19 have a feeling that's mistyped. I assume the  
20 budget has already been approved. So I just want  
21 to clarify that and just make sure that there is  
22 not funding that we're still waiting to be  
23 approved. And then -- and is that true?

24 And I have one other question.

25 COMMISSIONER MONAHAN: I can answer that

1 really quick. I mean, Eileen, we're talking  
2 about this fiscal year is approved. The budget,  
3 the broad budget, is approved. This fiscal year  
4 funding is approved. But every fiscal year will  
5 be another discussion with the legislature.

6 COMMITTEE MEMBER TUTT: Okay. Okay. So  
7 this slide is as of spring 2022? Okay. I think  
8 that's, I think -- anyway, I would not include  
9 that, I would just take that out just for  
10 clarity, just as an FYI.

11 And then then the only other  
12 clarification question that I have is it looked  
13 like all of the ZEV Program funds were  
14 oversubscribed, which is not surprising to me,  
15 and part of the reason why we pushed so hard for  
16 such a large allocation because it's clear that  
17 the need is way outstripping demand, but that the  
18 low-carbon fuel funds, it sounds like there's  
19 still money left, that those are not  
20 oversubscribed; is that a fair characterization?

21 So it sounded like there was still \$7  
22 million left in that pot of money for a low-  
23 carbon fuel production, which to me would  
24 indicate perhaps we don't need to allocate money  
25 next year. And I'm not I'm not even trying to

1 fight or anything. I'm just saying, I'm just  
2 wondering, we have one pot of money that is not  
3 oversubscribed, whereas workforce, everything  
4 else, is oversubscribed. And so I'm just asking  
5 that, is that what I understood from the staff's  
6 presentation?

7 MR. BRECHT: I should go back and double  
8 check. But my recollection was that the last  
9 time we ran our low-carbon fuel production  
10 solicitation, we were oversubscribed with  
11 applicants that received a passing score or  
12 greater. So I think we're oversubscribed in  
13 pretty much all that we do, which is kind of a  
14 good problem to have. But, yeah, I can double  
15 check.

16 COMMITTEE MEMBER TUTT: Okay. Yeah, if  
17 yo8u could? Because I heard in the staff  
18 presentation, and when they were going through  
19 the low-carbon transportation, it sounded like  
20 she said, or he said, I can't remember who said  
21 it, but that there's still \$7 million left.

22 MR. SMITH: Yes. Right. We have not put  
23 that funding into -- we have reserved that  
24 funding for an upcoming solicitation.

25 COMMITTEE MEMBER TUTT: Got it. Thank

1 you.

2 MR. SMITH: Correct.

3 COMMITTEE MEMBER TUTT: Yeah, that  
4 answers my question. Thank you so much.

5 MR. SMITH: Okay. Thanks, Eileen.  
6 Craig, do you have a question?

7 COMMITTEE MEMBER SEGALL: That works even  
8 better if I come off mute. Just a quick point of  
9 clarification that we talked about a bit.

10 But to public reference, I just wanted to  
11 flag the ACF. The fleet regulation also has a  
12 sales end date for zero-emission trucks of -- oh,  
13 sorry, of internal combustion trucks and 100  
14 percent zero-emission truck sales by 2040 is the  
15 current proposal, although I know members of the  
16 public could argue that shouldn't be pulled  
17 forward. So it's great to see all this, this  
18 readiness work that might affect that.

19 And I also just had a follow-up question  
20 for my former book club colleague, Mark Wenzel,  
21 if he's game, which is to hear a little bit more  
22 about how the CEC thinks about reliability for  
23 non publicly-funded chargers, since this  
24 obviously is also an important area.

25 MR. WENZEL: Yeah. Thanks, Craig.

1           So the, you know, the authority that we  
2 have right now is for publicly-funded chargers,  
3 or the direction we have right now is for  
4 publicly-funded and ratepayer-funded chargers in  
5 terms of creating standards, performance  
6 standards, that we can apply.

7           The direction is also to report on the  
8 overall status of the network, including non  
9 publicly-funded charges. And so the second piece  
10 of that, we'll be looking at field testing things  
11 like customer surveys and gathering more  
12 information on that.

13           COMMITTEE MEMBER SEGALL: Thanks Mark.

14           MR. BRECHT: Eileen, did you have another  
15 question?

16           COMMITTEE MEMBER TUTT: Yeah, I'm sorry.  
17 I just noticed again on slide seven that it says  
18 you leveraged over \$730 million in private and  
19 other public funds. I think that's very, very  
20 low. I'm just really surprised by how low that  
21 number is. I was just -- so I just wanted to  
22 just flag that for you, and happy to have an  
23 offline conversation, but that -- I mean, I  
24 know -- I don't know if there's somebody from GO-  
25 Biz on the line, but I see that as -- I know, or



1 even ChargePoint or others that have -- the  
2 private sector funding so overwhelms the amount  
3 of public sector dollars that are going into this  
4 space that I was just surprised at how low that  
5 number of looked.

6 MR. SMITH: Yeah. We know that that is a  
7 conservative estimate, and that's just based on  
8 what's written into our grant funding  
9 requirements. You know, in common solicitation,  
10 say, maybe we'll require that every dollar that  
11 our program puts in has to be matched by a dollar  
12 from the recipient in matched funding. And so  
13 that's a floor but it's the minimum.

14 COMMITTEE MEMBER TUTT: Okay.

15 MR. SMITH: Yeah. Over --

16 COMMITTEE MEMBER TUTT: Okay.

17 MR. SMITH: -- (indiscernible) --

18 COMMITTEE MEMBER TUTT: So just for

19 these --

20 MR. SMITH: -- well over.

21 COMMITTEE MEMBER TUTT: -- projects? I  
22 see what you're saying.

23 MR. SMITH: Correct.

24 COMMITTEE MEMBER TUTT: Okay.

25 MR. SMITH: Yeah.

1 COMMITTEE MEMBER TUTT: Okay. Thank you.

2 MR. SMITH: Yeah. Thank you.

3 MR. BRECHT: Craig, do you have another  
4 question? Okay.

5 Are there any more questions from the  
6 Advisory Committee?

7 Joe Levin?

8 COMMITTEE MEMBER LEVIN: Hi. Yes. Yes.  
9 I'm Joel Levin with Plug In America.

10 So I have one other question about your  
11 solicitations for Level 2 charging as to whether  
12 -- for light-duty vehicles to whether you draw a  
13 distinction between sort of short dwell time  
14 locations and longer dwell time locations?

15 So for example, kind of multiunit  
16 dwellings where people can charge at home and  
17 workplaces where you can charge at work, which  
18 are really, we think, the most valuable because  
19 those allow somebody who normally wouldn't be  
20 able to buy an EV to buy an EV because that's  
21 sort of a place where they can actually charge  
22 versus like retail when you go into a store and  
23 you charge for 20 minutes, which is, we think a  
24 lot less valuable.

25 So like focus on multiunit dwellings.

1 It sounds like you have some programs that  
2 specifically focus on those, particularly low-  
3 income, which is great, and then workplace. So  
4 if you're looking at a retail place, we would  
5 argue like the employee aspect of it is much more  
6 valuable than the public aspect because it allows  
7 someone to actually buy an EV versus like if  
8 you're just getting a -- you know, topping off  
9 when you're shopping, it's sort of a nice-to-have  
10 but it doesn't really change the world at all.

11 So I don't know if you draw a distinction  
12 between those kind of shorter dwell time and  
13 longer dwell time applications?

14 MR. WENZEL: Yeah. Thanks Joel It's,  
15 you know, it's a good point and it's something  
16 we're certainly looking at.

17 I'd also refer back to the Draft ZEV  
18 Infrastructure Plan, which we published in April,  
19 and we're planning to get the final version out  
20 this year. So in it we say that our policy would  
21 be to maximize at-home charging, just recognizing  
22 that it's often the lowest cost and most  
23 convenient, and sometimes the grid friendliest  
24 option there.

25 When it comes to the rest of Level 2

1 charging, we're really thinking very carefully.  
2 And there's more in the ZIP about that, thinking  
3 very carefully about what the business cases are  
4 there.

5 I'll point to the CHL 2 (phonetic)  
6 solicitation, convenient, high visibility, low-  
7 cost Level 2 charging that is under development  
8 now. And it's really sort of aimed at trying to  
9 understand those business cases better.

10 In particular, so if people know that  
11 Level 2 charging is available, how does that  
12 affect their behavior and ability to charge?

13 And one of the things that, you know,  
14 we've talked about, some innovations that we  
15 might test there, too, so one would be smart  
16 charging, but another is in, say, a downtown  
17 corridor, could we have charging that is used  
18 primarily by visitors, whether that's retail or,  
19 you know, tourists or employees during the day,  
20 and then by multifamily housing dwellers at  
21 night? So make -- you know, increase the  
22 utilization, decrease the overall cost, and  
23 increase the availability to a variety of folks.

24 So I think the things that you are  
25 targeting are issues we're very interested in.

1 Happy to get your feedback and input on all  
2 those.

3 COMMITTEE MEMBER LEVIN: Thank you.  
4 Yeah, the CHL sounds like a like a really  
5 interesting program.

6 MR. SMITH: Yeah. I might just add, you  
7 know, from the modeling perspective, this is  
8 not -- your specific question was about the  
9 solicitations, but from a modeling perspective,  
10 we try to match the dwell times that people  
11 already have in their schedule to the power of  
12 charging that is -- yeah, that we see as needed.  
13 So people don't have -- you know, if it's only a  
14 20-minute stop, we put, you know, what kind of  
15 charger can be -- can accomplish that in 20  
16 minutes. And so it's kind of implicit in the  
17 modeling and the numbers that we come up with for  
18 the chargers.

19 And then in our most recent workshop  
20 about the second assessment, we're looking at --  
21 we detailed kind of -- you can go back to the  
22 slides, as well -- but we detailed maybe a split  
23 between retail chargers, so back of the lot  
24 versus front of a lot. So charges that are for  
25 the employees of retail is a much different kind

1 of charge or longer dwell time than you might see  
2 in front of the store, and so picking apart that  
3 a little bit more in the modeling.

4           And then we also see other trends that,  
5 you know, may or may not be relevant but the  
6 downboard (phonetic) chargers in cars are getting  
7 bigger and bigger. And so does that mean we need  
8 Level 2, you know, some Level 2 that's faster  
9 charging to kind of match that dwell time?

10           So, yeah, from the modeling perspective  
11 it's kind of implicit and integrated into all the  
12 different estimates that we do.

13           COMMITTEE MEMBER LEVIN: Thanks.

14           MR. BRECHT: Great. I know we're running  
15 a little late on time here.

16           So, Tracy, do you have a question? This  
17 will be our last question, I think, for this  
18 section. We'll have to move on.

19           COMMITTEE MEMBER STANHOFF: Thank you.

20 Yeah. Patrick, it's Tracy. Thank you.

21           I had a quick question on did you say GO-  
22 Biz will be doing business training for these  
23 installation or are working with the charging  
24 stations or am I not seeing this correctly?

25           Oh, you couldn't hear me or --

1           MR. BRECHT:  Apologies, Tracy, it's  
2 cutting -- your line is cutting in and out a  
3 little bit.  Could you repeat the question maybe?

4           COMMITTEE MEMBER STANHOFF:  Oh, I'm  
5 sorry.  Hang on.  The question was on the  
6 business and workforce training for the  
7 installation -- the charging stations, is GO-Biz  
8 going to be in charge of selecting these?

9           MR. SMITH:  I don't believe so.  We do  
10 coordinate with GO-Biz on many of our efforts,  
11 including planning for workforce training  
12 activities, but I'm not recalling maybe what the  
13 impetus for comment was.  But I think, in  
14 general, we would be perhaps consulting with GO-  
15 Biz as we develop our funding concepts and  
16 funding opportunities, but I don't believe that  
17 GO-Biz would be the ones implementing them.

18           MR. BRECHT:  Okay, I see Commissioner  
19 Monahan has stepped away for a moment.  We'll  
20 have to decide if this would be a good  
21 opportunity to have a break or if we should power  
22 through, move on to the Investment Plan?  Maybe  
23 give Commissioner Monahan a moment or --

24           MS. HAAS:  We do have one question in the  
25 question and answers.

1           "For the universe of non transit/bus BEVs  
2 displayed on that medium/heavy-duty dashboard,  
3 are those medium/heavy-duty vehicles registered  
4 and domiciled in California and on California  
5 roads today?

6           MR. SMITH: I think Liz might be able to  
7 answer that question. I think for the most part,  
8 we're probably going to reserve the Q&A segment  
9 for the public comment period at the end of the  
10 meeting.

11           But, Liz, do you have immediate thoughts  
12 on that question?

13           MS. PHAM: Yeah. So those vehicles are  
14 registered and they are on the road?

15           MR. SMITH: Got you. Thank you.

16           MR. BRECHT: Charles, do you have a  
17 recommendation? Should we have our break at this  
18 point or --

19           MR. SMITH: Let me look ahead to the  
20 agenda real quick here. Just a second.

21           MR. CAZEL: I can fill a few seconds.

22           Regarding the Level 2 chargers, don't  
23 forget, the Communities In Charge Program is  
24 going to have a workshop on October 18th, so  
25 that's going to be Level 2 only, talking about a



1 lot of those same things, workplace and home  
2 charging at multiunit family.

3 MR. SMITH: Okay. Thank you, Phil.

4 So looking at our agenda, I see the next  
5 item is your presentation, Patrick. So maybe we  
6 can just dive into that and Patty will rejoin  
7 while we are going through those slides.

8 MR. BRECHT: That sounds good, Charles.  
9 Thank you. We can.

10 Next slide, please. Next slide.

11 I'm, once again, Patrick Brecht, the  
12 Investment Plan Project Manager. And at this  
13 point, I'll go over some key changes that are in  
14 the revised staff draft report version versus  
15 that of the staff draft back in April. Of  
16 course, this is why we didn't -- we couldn't  
17 publish until end of September. We had to -- we  
18 were waiting, actually, for -- to incorporate the  
19 \$2.4 billion from the 2022 State Budget General  
20 Fund ZEV package to be administered by the CEC  
21 over four fiscal years.

22 We incorporated, actually, the National  
23 electric vehicle Infrastructure Program was  
24 spoken about earlier, but only in text. However,  
25 we did not include that in our funding table. We

1 incorporated CARB's 2022 Scoping Plan Advanced  
2 Clean Cars II rule.

3           We had update, as mentioned earlier, by  
4 the AB 2127 Report in leveraging findings to  
5 inform our investments. There are updates to the  
6 California Electric Vehicle Deployment  
7 Assessment, or the SB 1000 Report, and we  
8 leveraged findings to inform our investments and  
9 incorporated feedback from the Advisory Committee  
10 meeting docket submissions.

11           Next slide.

12           This graphic provides a visual of total  
13 funding, both for the Clean Transportation  
14 Program and General Funds, which equals \$2.9  
15 billion for Fiscal Year 2022 and 2023 through  
16 '25-26.

17           And, yeah, but now let's move on to our  
18 table, so let's go to the next slide, please.

19           This slide provides greater detail and  
20 breaks down each funding category. Now I'll go  
21 through the funding and provide rationale for the  
22 Clean Transportation Program funding allocations.  
23 The Investment Plan updates include program  
24 funding and the General Fund ZEV package  
25 investments from the enacted budgets of 2021 and

1 2022. This table -- and I'm so sorry, the font  
2 is so small, and it's a lot of info to fit onto  
3 one slide -- the program's proposed funding  
4 allocations for Fiscal Year '22 to '23, the  
5 proposed funding allocations for the remainder of  
6 the Clean Transportation Program through the end  
7 of Calendar Year 2023, as well as the recent  
8 General Fund allocations under the Budget Acts,  
9 as mentioned, 2021 and 2022.

10           It's important to note that CEC can only  
11 make adjustments to the Clean Transportation  
12 Program funding. The Budget Acts of 2021 and  
13 2022 are prescriptive, as Charles mentioned  
14 earlier, and cannot be modified. The Clean  
15 Transportation Program allocations for the 2022  
16 to 2023 Investment Plan Update are unchanged from  
17 last year's 2021 to 2023 Investment Plan update.

18           And I should also mention amounts have  
19 been adjusted to account for administrative costs  
20 that are not to exceed five percent.

21           Next slide.

22           The table shows combined allocations of  
23 just over \$900 million to support light-duty  
24 passenger vehicle charging. This is the first  
25 three.

1           actually, if you can go back one slide?

2 I'm sorry. Thank you.

3           So as \$900 million to support light-duty  
4 passenger vehicle charging, that's the first  
5 three rows, and nearly \$1.8 billion to support  
6 medium- and heavy-duty zip infrastructure, which  
7 is the next six rows. Investments in medium- and  
8 heavy-duty infrastructure affect the need to  
9 swiftly transition the most polluting vehicles  
10 toward zero-emission vehicle technologies in the  
11 most sensitive regions of the state.

12           Next slide.

13           Of the over \$900 million allocated for  
14 light-duty charging infrastructure, the Clean  
15 Transportation Program original funds will  
16 provide \$30.1 million in the current fiscal year  
17 and \$13.8 million in the remaining half fiscal  
18 year, which along with the last year's cumulative  
19 investments of \$270.1 million, it should be  
20 sufficient to meet the state's goal of having  
21 250,000 chargers by 2025.

22           The General Fund provides over \$558  
23 million over the next four fiscal years to build  
24 out a broad network of grid integrated, high-  
25 powered fast chargers to support travel across

1 the state and to supplement federal NEVI funding  
2 for corridor fast charging. The General Fund  
3 also provides \$299 million for equitable at-home  
4 charging for multifamily residents and priority  
5 community single-family homes.

6 Next slide.

7 The Investment Plan allocates \$1.7  
8 billion for medium- and heavy-duty ZEV  
9 infrastructure. The Budget Acts of '21, of 2021  
10 and 2022, require the CEC to fund ZEV  
11 infrastructure for specific categories, that's  
12 four and \$6 million for drayage trucks, over \$198  
13 million for transit buses, over \$404 million for  
14 school bus ZEV infrastructure, over \$465 million  
15 for truck, bus and offroad equipment, \$150  
16 million for ports.

17 The CEC is allocating an additional \$44  
18 million of Clean Transportation Program funding  
19 for medium- and heavy-duty ZEV infrastructure.  
20 These funds will support the deployment of  
21 thousands of ZEV drayage trucks, school buses,  
22 transit buses, and other medium- and heavy-duty  
23 vehicles within the state.

24 Allocations for The Clean Transportation  
25 Program Fund and General Fund will also support a

1 broader portfolio of activities.

2 Next slide.

3 The \$97 million for emerging  
4 opportunities allocation, highlighted here, for  
5 instance, includes funding from the General Fund  
6 for sectors that are only beginning to transition  
7 to zero-emission technologies, including zero-  
8 emission aviation, locomotive, and marine  
9 vehicles. The allocation will also support  
10 vehicle grid integration efforts, such as  
11 mitigating electric vehicle charging during peak  
12 capacity or high carbon intensity hours, as well  
13 as bidirectional charging to actively support the  
14 grid.

15 Next slide.

16 Now, Assembly Bill 8 directs the CEC to  
17 allocate \$20 million annually, not to exceed 20  
18 percent of the funds appropriated by the  
19 legislature, from the Clean Transportation  
20 Program to deploy hydrogen fueling stations until  
21 there are at least 100 publicly available  
22 stations in operation.

23 The Investment Plan allocates \$90 million  
24 for hydrogen infrastructure, but this is a  
25 minimum, not a maximum, since funding for medium-

1 and heavy-duty ZEV infrastructure will also be  
2 used for hydrogen infrastructure. Funding for  
3 the Clean Transportation Program Fund, which is  
4 \$30 million will be sufficient to meet and exceed  
5 the 100 station goal set by AB 8, while  
6 additional General Fund investments from last  
7 year will help the state reached the 200 station  
8 goal.

9           The Budget Act of 2022 requires the CEC  
10 to fund hydrogen stations to meet hydrogen  
11 infrastructure at \$20 million per year for three  
12 years starting Fiscal Year 2023 to 2024. This  
13 new funding from the Budget Act of 2022 will  
14 allow the state to further expand access to  
15 hydrogen infrastructure, including medium- and  
16 heavy-duty vehicles.

17           Next slide.

18           Now to support the development of clean  
19 low carbon fuels, the Investment Plan allocates a  
20 total of \$15 million of program funding over the  
21 next two years, an additional \$10 million for  
22 program funding will support ZEV workforce  
23 development, and, finally, the General Fund  
24 includes \$118 million for ZEV-related  
25 manufacturing to help keep California at the

1    forefront of manufacturing.

2                   That's a lot of information but that  
3 includes that concludes my presentation.

4                   I will now turn it over to Commissioner  
5 Monahan, who will lead the Advisory Committee  
6 discussion.

7                   COMMISSIONER MONAHAN: Great. Thanks  
8 Patrick. Excuse me. So a lot of information to  
9 digest, as I said.

10                   And we had a few discussion questions,  
11 but I'm guessing the Advisory Committee is just  
12 ready to go, at least some members are. So  
13 here's the questions that we pose just to help  
14 stimulate the conversation.

15                   So given the fact that we don't have much  
16 flexibility in terms of we can't move the General  
17 Fund money, we can only move the Clean  
18 Transportation Program money, should we be  
19 shifting any of the Clean Transportation Program  
20 dollars to other categories, like low-carbon fuel  
21 production, ZEV manufacturing, workforce  
22 training, or between the medium-duty and light-  
23 duty ZEV infrastructure?

24                   Also, do the timing and allocations  
25 between the light- and the medium- and heavy-duty



1 infrastructure investments strike the right  
2 balance for ZEV acceleration? If not, where  
3 should we adjust?

4           And finally, what should the Investment  
5 Plan include within each funding allocation to  
6 improve equity and create a greater stream of  
7 benefits from that allocation?

8           So we have allocated three minutes per  
9 Advisory Committee member. We're going to be  
10 timing that. I'm sorry to be so disciplined  
11 about this but, as I said at the outset, we want  
12 to make sure that we're sort of bouncing the  
13 amount of time that somebody could sit in a Zoom  
14 meeting with the need to get feedback. And,  
15 also, we want to make sure that every single  
16 Advisory Committee member has a chance to speak.

17           At the end of that, we'll open it up for  
18 public comment, as well. We may have to change  
19 the timing for public comment, just because we  
20 don't know how many members or stakeholders are  
21 going to be wanting to speak, and we want to make  
22 sure that, again, this doesn't go all day.

23           So with that, what I would ask for the  
24 Advisory Committee members, if you could raise  
25 your hand when you're ready to speak? And I

1 would give kudos to the first couple of people  
2 because they're the bravest, and also because I  
3 think, you know, sometimes you could just do a  
4 me-to for comments to make it faster and to give  
5 you more time for speaking.

6 But we do have one brief panelist who has  
7 said yes. Let me get it -- ah, Mr. Segall?

8 COMMITTEE MEMBER SEGALL: I will be  
9 brief.

10 My first thing to say is thanks to you,  
11 Patti, and to the staff. This is a major effort,  
12 it's been a team effort, and I think dovetails  
13 well with CARB's funding plan, so thanks. And,  
14 of course, I'm supportive.

15 A few thoughts on the areas of focus. I  
16 do think as we continue to electrify heavy-duty  
17 fleets, I contend a strong emphasis there will be  
18 important, especially considering the  
19 considerable interest in accelerating sales  
20 mandates in that area.

21 I think that the analysis in the plan on  
22 equity is really positive. And continued focuses  
23 in equity metrics and designs will be quite  
24 critical. I really like where we're going on  
25 that.

1           One area I would suggest for future  
2 consideration, and I know this is an area, I  
3 think, with some staff interest, is thinking  
4 about rural-focused solicitations and  
5 solicitations focused on tribal nations, both  
6 areas where I think there's continued interest,  
7 and especially as CARB will be moving into zero-  
8 emission offered equipment, such as forklifts,  
9 over the next few years. Really speeding charger  
10 infrastructure installation times will be  
11 important to those areas.

12           Finally, I think the plan does really  
13 interesting work thinking about both public and  
14 private investment. I'm interested in Staff's  
15 ideas on ways to continue to push forward and  
16 leverage private investment in these spaces, as  
17 well as the major public seed money.

18           And just kidding. Finally, finally, I'm  
19 quite interested in ways to continue to grow the  
20 stock of trained installers, given the  
21 appropriate labor restrictions in those areas to  
22 help train people and certify them rapidly and  
23 efficiently to be installers. So just note  
24 there's just issues to consider but, generally,  
25 really supportive and appreciate everyone's work.

1                   COMMISSIONER MONAHAN:   Great.   Thanks  
2 Craig.

3                   And I see, let's see, Morgan.   Is Morgan  
4 the next speaker?   Looks like it.

5                   Morgan?

6                   COMMITTEE MEMBER CASWELL:   I actually  
7 think Joel was before me.

8                   COMMISSIONER MONAHAN:   Oh, okay.   So for  
9 some reason my -- oh, there it goes.   It wasn't  
10 updating.

11                  Joel, sorry about that.

12                  COMMITTEE MEMBER LEVIN:   Okay.   No  
13 worries.   I've already taken a bunch of time  
14 anyway.

15                  But, yeah, in general, I think the plan  
16 is really strong.   A couple of specific comments.

17                  In terms of promoting equity, one other  
18 area that we hear a lot from drivers is about  
19 payment, that payment is really challenging,  
20 particularly when you have to like download  
21 someone's app and upload your credit card, and  
22 you're standing there in the in the rain, trying  
23 to figure all this out.

24                  So I would encourage that you have credit  
25 card readers with chips on everything that you

1 guys do. I don't know if that's a standard thing  
2 now. But it turns out that particularly lower  
3 income people don't always have tap cards that  
4 that are touchless, that chip readers are still  
5 very, very common for a lot of people. So I  
6 would encourage that. I don't know if that's the  
7 standard on your solicitations.

8           In terms of workforce development, one  
9 thing I didn't hear, maybe it was kind of built  
10 in, is dealerships. Dealerships are having a  
11 really hard time finding staff that can work on  
12 electric vehicles. So I would say supporting  
13 both mechanics, people who have technical skills  
14 to work on the vehicles, and also sales staff  
15 who -- because it's a whole different area of  
16 expertise to be able to sell an EV. That's a  
17 little bit different from a regular gas car. So  
18 I would encourage you to think about workforce  
19 development for dealerships.

20           Let's see what else. In terms of  
21 maintenance of the stations, I think I already  
22 kind of talked about that, that maintenance is  
23 really key. If we're building out a suite of  
24 stations that have you know, low uptime, that's  
25 going to create a lot of frustration around -- to

1 drivers.

2           And then I also mentioned around I think  
3 that having a focus on multiunit dwellings, and  
4 particularly lower income multiunit dwellings  
5 and, and thinking about when you're -- as Mark  
6 said, you know, charging at home is the cheapest,  
7 most convenient place to charge. And you also  
8 don't need super high power. We've found that  
9 among EV drivers, about a quarter of drivers that  
10 charge at home just use Level 1. So for a lot of  
11 people, that's fine.

12           So I could imagine a situation where, if  
13 you're doing installations in in a multiunit  
14 dwelling, to have, you know, a large amount of  
15 Level 1 or very low Level 2 with a little bit of  
16 faster charging for people who need it to make  
17 the first one very cheap or inexpensive, and  
18 then, you know, a little bit faster for people  
19 who need it and charge for that. And I think  
20 utilities are like that, as well, because it puts  
21 less pressure on the grid.

22           And then the last thing, in terms of  
23 hydrogen, I don't know how much control you have  
24 over this, but I would focus more of your efforts  
25 on the heavy duty rather than light duty, given

1 that there's just not a lot of light-duty  
2 hydrogen out in the world. So with your light  
3 duty, I would kind of focus more on EVs than  
4 hydrogen.

5 So thank you.

6 COMMISSIONER MONAHAN: Great. Thanks a  
7 lot, Joel.

8 Just a heads-up that payment is under the  
9 regulatory authority of the Air Resources Board.  
10 And there is a requirement for chip readers that  
11 already phased in for DC fast chargers. I think  
12 it's at the end of 2022 or 2023 for Level 2, so  
13 that is a requirement for new chargers.

14 All right. Also, Joel, we'll just  
15 encourage you to keep engaging from a consumer  
16 perspective on the charging side. We really want  
17 to make sure we're attentive to these consumer  
18 issues. And charging is changing, consumer  
19 preferences are changing, so appreciate that  
20 input.

21 Morgan, you're next. Morgan, and then  
22 Bill McGavern.

23 COMMITTEE MEMBER CASWELL: Great. Thank  
24 you.

25 Well, first, I'd like to, you know,

1 continue to commend CEC Staff for their work on  
2 this and for allocating dollars for heavy-duty  
3 vehicle applications and, more specifically, port  
4 sources of emissions.

5 I don't have comments on the funding that  
6 is flexible for movement between the buckets or  
7 movement between the fiscal years. I did prepare  
8 some other comments for today that I wanted to  
9 share.

10 I'll highlight that, you know, the Clean  
11 Transportation Program has been integral to  
12 technology advancement here at the San Pedro Bay  
13 Ports, particularly when it comes to cargo  
14 handling equipment, drayage trucks, and harbor  
15 craft. I think there is still a demand for  
16 technology advancement funding at the ports,  
17 particularly for innovative charging and fueling  
18 for zero-emission cargo handling equipment, as  
19 well as build and demonstration of zero-emission  
20 harbor craft with the associated infrastructure.

21 I am glad to see zero-emission  
22 locomotives are called out explicitly in the  
23 emerging opportunities allocation. I'd also like  
24 to see opportunities for demonstration of clean  
25 fuels for ocean going vessels.



1           I'm going to focus the remainder of my  
2 comments on the importance of public truck  
3 charging, which I know you also recognize. You  
4 know, for the Port of Long Beach, you know, we  
5 feel like the NEVI Formula Program was a missed  
6 opportunity for investments in public drayage  
7 truck charging.

8           I think one of the challenges is there  
9 are many funding programs in which zero-emission  
10 truck charging infrastructure is eligible, giving  
11 the appearance that funding gaps don't exist.  
12 But the reality is many of these funding programs  
13 are either oversubscribed for other applications,  
14 that are tailored for other applications, or  
15 aren't conducive to public truck charging.

16           Just as an example, you know, we don't  
17 believe government is going to install all the  
18 public truck chargers needed. The private sector  
19 will need to fill that gap but many of the  
20 funding programs that exist are only open to  
21 government or don't emphasize public truck  
22 charging.

23           I guess what I'm what getting to is I'd  
24 like to encourage the CEC to go further than  
25 defining a bucket for drayage truck ZEV

1 infrastructure, but to explicitly include  
2 discussion of how public truck charging is going  
3 to be prioritized and the description for that  
4 allocation in the plan. By doing so, you know,  
5 we would really see the first plan that calls  
6 public truck charging infrastructure out  
7 directly. And we certainly are hopeful to engage  
8 in the future on the NEVI Formula Program and  
9 hoping that it will accommodate public charging  
10 infrastructure.

11 And that's it. Thank you.

12 COMMISSIONER MONAHAN: Thanks Morgan.

13 We have Bill McGavern next and Lucas on  
14 deck.

15 COMMITTEE MEMBER MAGAVERN: Thanks. Bill  
16 McGavern with Coalition for Clean Air.

17 And, in general, I think this is really  
18 well thought-out plan. And I appreciate the way  
19 that it grows out of the research and planning  
20 that you've done, and also, especially, that  
21 you're supporting the important rules adopted by  
22 the Air Resources Board, and soon to be adopted  
23 by the Air Resources Board Advanced Clean Cars,  
24 Advanced Clean Trucks, and advanced Clean Fleets.

25 I want to focus particularly on what to

1 do for the communities that have suffered the  
2 most from air pollution, as well as from historic  
3 disinvestment. And, therefore, I encourage you  
4 to really focus on charging in multifamily  
5 dwellings.

6 I really agree with Joe Levin's comments,  
7 that often Level 1 charging will be sufficient.  
8 And also our rural communities, making sure that  
9 they're not left out.

10 And when we talk about equity, it's also  
11 important to note that the toxic diesel exhaust  
12 from medium- and heavy-duty vehicles really  
13 concentrates in low-income communities of color.  
14 So we can do a lot for environmental justice by  
15 focusing on replacing those dirty diesel engines  
16 with zero-emission engines when we're talking  
17 about trucks and buses and off-road engines, like  
18 Port equipment and construction equipment. So  
19 we'd really like to see an emphasis on investment  
20 there.

21 One note, I know you can't do anything  
22 about this because it's in the budget, but I was  
23 struck by the imbalance between the amount of  
24 money allocated for infrastructure for school  
25 buses versus those for transit buses. It really

1 seemed like the transit buses got the short end  
2 of the stick there. And if anybody knows the  
3 rationale for that, I'd be interested. Like I  
4 said, you can't do anything about it, at least  
5 this year, but it really does not seem to be  
6 balanced.

7           One point that I'm not sure has come up  
8 so far is the importance of when we're talking  
9 about ZEV charging. A single connector type for  
10 charging would be, I think, very helpful for  
11 consumers and, you know, for the overall  
12 transition.

13           And then finally, I just wanted to  
14 support the identification of emerging  
15 opportunities in the plan. Zero-emission,  
16 aviation, locomotives and marine engines, those  
17 are areas where we do see a growing share of air  
18 pollution coming from that sector. And because  
19 the federal government really has not stepped up  
20 in the way that the state has, and the Feds  
21 actually have responsibility for a lot of those ,  
22 we're lagging behind there.

23           And I also think the vehicle grid  
24 integration and bidirectional charging are going  
25 to be increasingly important as we meet our grid

1 needs while we make this transition.

2 So thanks very much.

3 COMMISSIONER MONAHAN: Great. Thanks  
4 Bill.

5 We have Lucas, and then Michael Pimentel  
6 on deck.

7 COMMITTEE MEMBER ZUCKER: Hi everyone.  
8 Lucas Zucker with CAUSE.

9 I want to focus my comments on equity. I  
10 think, unfortunately, we're missing a lot of our  
11 representatives from the environmental justice  
12 community on our Advisory Committee today. And,  
13 you know, I do think there's a sense among  
14 environmental justice advocates that a lot of the  
15 kind of voices and comments that have been made  
16 from the EJ community haven't really been  
17 reflected in the plan over the last few years.  
18 And so, you know, I may sound like a broken  
19 record here, but just want to reiterate some of  
20 the things that we've been saying.

21 I think, first, on the light duty/heavy  
22 duty balance, really wanting to see, you know,  
23 more of the shift towards heavy duty. You know,  
24 originally when I came on the Advisory Committee,  
25 the heavy duty was really prioritized in the

1 plan. And I think that was kind of scaled back  
2 as the legislature invested a lot in heavy duty.  
3 And I think that's because our legislature is  
4 really concerned with environmental justice, and  
5 that diesel exhaust is killing people in  
6 disadvantaged communities, the airports and  
7 warehouses and truck routes.

8           And so I think we should be thinking of  
9 our role often is to follow the guidance of the  
10 legislature, who is democratically elected by our  
11 communities, you know, rather than thinking of  
12 ourselves as like a countercurrent to the  
13 legislature. And so I'd like to see more  
14 investment in heavy duty.

15           And I think in terms of the, you know,  
16 within categories, I'd really like to see, you  
17 know, more kind of concern around potential  
18 displacement around kind of fast chargers in  
19 disadvantaged communities. We've mentioned  
20 suggestions around prioritizing kind of public  
21 and nonprofit housing, or communities that have  
22 stronger tenant protections. You know, as well  
23 as, I think, you know, labor standards and  
24 targeted hire helps ensure that some of those  
25 benefits are really reaching disadvantaged

1 residents of disadvantaged communities and not  
2 just kind of putting something in a disadvantaged  
3 neighborhood and hoping that it benefits the  
4 people living there.

5           Also on hydrogen and fuels, I think  
6 that's been another major concern from the EJ  
7 community, you know, trying to maybe think of  
8 some guardrails or parameters. I know there's  
9 disagreements on the role of hydrogen and low-  
10 carbon fuels but, you know, things like, to me,  
11 hydrogen should just not be used for things like  
12 short haul, you know, talking like drayage, like  
13 you know, this should really be kind of limited  
14 to more like long haul.

15           And looking at the at the source of  
16 hydrogen as a, you know, a big criteria here, is  
17 green hydrogen really coming from electrolysis  
18 or, you know, is it more like gray hydrogen,  
19 right, that that actually has its own, you know,  
20 emissions impacts; right?

21           And so, yeah, I just want to close with I  
22 think it is really important to, you know, think  
23 about environmental justice here. I know it  
24 didn't make it into the presentation, but it's in  
25 our staff report, when you look at the DCAGs

1 (phonetic) recommendations, you know, on this  
2 action plan, you know, there's a real disparity  
3 between the recommendations there and, I think,  
4 the actions that we've taken in this plan. And  
5 it's pretty jarring when you look at it.

6           And so, you know, really want to kind of  
7 bring that focus back to equity, even though I  
8 know that there's not a lot of other people on  
9 the call today who will be raising those  
10 concerns.

11           COMMISSIONER MONAHAN: Great. Thanks  
12 Lucas.

13           And just to just a heads-up that we  
14 are -- we have a separate track of engagement  
15 with the Disadvantaged Communities Advisory  
16 Group. And we've asked them to provide feedback  
17 into the plan. So even though there was no  
18 representation today, we do really encourage  
19 equity consideration so that we're -- you know,  
20 we need good information in order to make good  
21 decisions. So just appreciate that feedback.

22           Alright, we have -- oh, sorry. Oh.

23           And can the team helped by taking the  
24 hands down when they've spoken so I can tell  
25 who's new?



1           So it looks like we have Jerome next --  
2 oh, no, I'm sorry. We have Michael next, and  
3 then Jerome on deck.

4           COMMITTEE MEMBER PIMENTEL:    Alright.  
5 Well, thank you, Commissioner Monahan and CEC  
6 Staff for the ability to continue to participate  
7 in this Advisory Committee.

8           I'm Michael Pimentel, Executive Director  
9 of the California Transit Association. As you  
10 know, we represent 228 member organizations  
11 across the state of California. And that does  
12 include 85 transit and rail agency members.

13           And I just want to start off by thanking  
14 Staff for the great work and compiling the plan  
15 and capturing so well the various successes that  
16 we've had as a state in investing in zero-  
17 emission infrastructure.

18           I want to start off by supporting the  
19 baseline investments proposed for zero-emission  
20 transit buses. And want to acknowledge and  
21 appreciate the legislature in the CEC for their  
22 continued commitment to multiyear funding.

23           As you've heard me say previously, having  
24 funding certainty in programs like this one  
25 really is essential for public transit agencies

1 in developing and ultimately following through on  
2 their long-range transition plans. Here we're  
3 talking about the agencies that may have a  
4 several hundreds, if not several thousands, of  
5 vehicles in their fleet. And having some  
6 knowability in the funding that's available is  
7 just critical for them in making decisions for  
8 their procurements.

9           With all that said, I do want to pick up  
10 on and re-double on Bill McGavern's comment on  
11 the noticeable imbalance in level of funding  
12 provided to zero-emission trains and buses  
13 relative to school buses. And while we  
14 understand that much of this unbalance is  
15 statutorily directed, and there are some confines  
16 around how the CEC can make decisions on those  
17 investments, I do want to acknowledge that the  
18 CEC does have some discretion to direct monies  
19 that are identified for clean truck, bus, and  
20 off-road equipment toward infrastructure for  
21 zero-emission transit buses. And, as an  
22 association, we would encourage you to do so.

23           I also want to make an observation for  
24 Investment Plan moving forward. And I really do  
25 think it would be helpful for us as an Advisory

1 Committee to be able to see at least some sketch  
2 detail on concepts for the investments that would  
3 be made under that clean truck, bus and off-road  
4 equipment line item. Currently, it's a bit  
5 opaque. And so for conversations around whether  
6 we've identified the right mix or balance of  
7 investments, it's hard to be able to offer from  
8 feedback without knowing what CEC's  
9 contemplations might be for suballocating those  
10 dollars in that line item.

11           And then finally, I just want to  
12 highlight that one of the things that the CEC may  
13 consider making investments in is an  
14 infrastructure to establish resiliency and  
15 redundancy for zero-emission infrastructure.  
16 During these high heat wave cycles that we found  
17 ourselves in, we, as an industry, were being  
18 called on to reduce demand. That is  
19 satisfactory. It's something we can do while we  
20 still have very small zero-emission fleets. It's  
21 going to be much harder once we have fully built-  
22 out fleets that are using primarily battery-  
23 electric technology, where those grid  
24 considerations are going to be most acute.

25           And then finally, I just want to

1 acknowledge, because as an association, we  
2 represent more than just best interests, we are  
3 hugely supportive of the investments for emerging  
4 opportunities, recognizing that our rail and our  
5 ferry agency members are being charged with  
6 transitioning to zero-emission technologies  
7 pursuant to the proposed (indiscernible)  
8 locomotive regulation, as well as the commercial  
9 harbor craft regulation that has been adopted by  
10 CARB.

11           So thank you for your time.

12           COMMISSIONER MONAHAN: Thanks Michael.  
13 Great comments for us.

14           Next we have Jerome, and then Ruben is on  
15 deck.

16           COMMITTEE MEMBER QIRIAZI: Thank you,  
17 Commissioner Monahan.

18           Jerome with the Humboldt Transit  
19 Authority. I have just a few comments from the  
20 perspective of a rural transit agency.

21           First, really appreciate the comments by  
22 Michael, and second, all of those, as well. Some  
23 additional comments.

24           A key gap in terms of vehicle  
25 availability that is critical for all transit

1 agencies, but particularly rural, is the  
2 availability of a hydrogen cutaway bus.  
3 Currently, there are no commercially-available  
4 cutaways. And so the CEC is able to help  
5 incentivize the vehicle manufacturing sector to  
6 start development on those vehicles, that would  
7 be a huge benefit.

8           Another comment. I was excited to see  
9 the suggestion of the medium- and heavy-duty loan  
10 program. Just to add to that, if there was the  
11 ability to have a short-term loan program that  
12 helped offset the cash flow requirements for  
13 reimbursement programs, that would be a huge  
14 benefit to, particularly, smaller agencies. For  
15 example, we have a grant through Tursup  
16 (phonetic) where we will be managing invoices  
17 that exceed 10 to 20 times our operational budget  
18 for a year. And it's been very challenging to  
19 figure out how to manage that.

20           Another point that I wanted to highlight  
21 is rural agencies really are looking to hydrogen  
22 for a lot of the more challenging rural trips  
23 that we have to achieve. Battery electric today  
24 is a great technology but it just doesn't work  
25 for a lot of the duty cycles that we have in

1 rural areas. And so we're looking to hydrogen.

2 A huge barrier there is the cost of  
3 hydrogen. It's a huge concern. And one  
4 potential way to help with that is to continue  
5 with operation and maintenance costs as an  
6 eligible cost under infrastructure grants  
7 provided by the CEC, so I'd urge you to consider  
8 continuing that.

9 And, also, I just wanted to say I was  
10 excited to see the idea of coupling fleet  
11 hydrogen fueling with public access. I think  
12 that will be a huge benefit for rural areas where  
13 transit agencies can really be a key player in  
14 kickstarting a supply chain outside of the urban  
15 areas.

16 Overall, the plan, excited about the plan  
17 and agree, as well, with the benefit of showing  
18 future funding plans going forward and in the  
19 years ahead.

20 Thank you.

21 COMMISSIONER MONAHAN: Great. Thanks  
22 Jerome.

23 So we have Ruben next, and Heather on  
24 deck.

25 COMMITTEE MEMBER ARONIN: Thanks,

1 Commissioner Monahan. And congratulations to all  
2 of the staff on this great work. It's exciting  
3 to see what is in the pipeline and what's to  
4 come.

5 A couple of just overall notes on the  
6 presentation. Really happy to see the mobile  
7 source strategy and not just (indiscernible)  
8 sales requirements included in your scenario  
9 planning. With credit pooling and technology  
10 advances, I think we're very likely to see  
11 overcompliance in California.

12 I also loved seeing the dashboards and  
13 can't wait to take a deeper dive into those.

14 To Jerome's note on the loan program,  
15 that idea, not just for transit but across the  
16 board, particularly in the medium- and heavy-duty  
17 sectors, I look forward to the CEC really leaning  
18 in to stretch its dollars as far as they can go  
19 and then be able to recycle them into new loan  
20 programs, hopefully.

21 On the funding plan scenarios, given the  
22 extraordinary state and federal funding on light-  
23 duty infrastructure, I wonder if there isn't a  
24 gap on the infrastructure for medium and heavy  
25 duty outside of the drayage category, and would

1 urge you to consider increasing some of those  
2 dollars in this early market.

3           Access to Public charging is going to be  
4 critical to building confidence. And given  
5 (indiscernible) or tech advancement in the Class  
6 3 through 6, as well as 7 and 8 trucks, this  
7 market gap is really critical. And the truck  
8 sector is really poised to accelerate as a  
9 percentage of sales faster than some of the light  
10 duty categories, but not without the  
11 infrastructure deployment.

12           In the past, I know we had talked about  
13 workforce training versus manufacturing  
14 investments, given the great funding from the  
15 budget for manufacturing. It would be great if  
16 there was additional funding to plus-up workforce  
17 training categories. I think that's so critical  
18 for market success, for further public buy-in,  
19 for benefiting frontline communities from a job  
20 and workforce development space.

21           Back to the dashboard piece, I look  
22 forward to diving more into it. I'm curious  
23 about the granularity of the data and whether we  
24 can be tracking by zip code the infrastructure  
25 deployment and ZEV sales deployment. That's



1 something that I know CARB is going to be looking  
2 at. And so anyway, if that could be integrated,  
3 it would be terrific.

4           And I'll also draw your attention to the  
5 equity stakeholder initiative. That card will be  
6 standing up in January of '23 including, I think,  
7 with a plan in the summer of '25, to accelerate  
8 implementation of frontline, of getting more ZEVs  
9 in frontline communities. And the block grant  
10 awards would be a great roadmap for where there  
11 could be some synergy, because we need  
12 infrastructure deployment and vehicles there, as  
13 well.

14           Last little note on signage, I'm excited  
15 about that, the \$1 million piece of the funding  
16 plan. And I'm wondering how freeway signs, like  
17 the ones that promoted Clean Air Day just  
18 yesterday, could be used, at least in the  
19 interim, to help build confidence in the  
20 infrastructure that's getting deployed?

21           Thanks so much.

22           COMMISSIONER MONAHAN: Great. Thanks  
23 Ruben.

24           Alright, we have Heather next, and Leslie  
25 on deck.

1 COMMITTEE MEMBER HICKERSEN: Hi everyone.  
2 Heather Henderson from GO-Biz.

3 First, I just wanted to echo everyone's  
4 thanks to you, Commissioner Monahan, and to CEC  
5 Staff who worked on this really impressive plan.  
6 And I, you know, I just really appreciate the  
7 openness to reevaluating some of the allocations  
8 based on what we're learning and experiencing,  
9 especially in previous grant funding  
10 opportunities.

11 And I just wanted to be supportive of  
12 providing that flexibility for opportunities that  
13 might arise that, you know, could provide a  
14 public service but might not fit within a  
15 specific category, and so that we can adapt to  
16 the evolving market.

17 I also just wanted to note a couple of  
18 items that GO-Biz is working on that align really  
19 well with the funding plan. GO-Biz is launching  
20 a public-private partnership called ARCHES, the  
21 Alliance for Renewable Clean Hydrogen Energy  
22 Systems, it's a mouthful, that is working to go  
23 towards winning some of the Department of  
24 Energy's funding for the clean hydrogen hubs and,  
25 ultimately, creating a sustainable and expanding

1 renewable hydrogen market in California, which  
2 aligns well with the funding that you've proposed  
3 here.

4           And also, in the last legislative  
5 session, SB 1251 establishes a ZEV equity  
6 advocate within our office who will be a key  
7 point of contact for stakeholders, and who can  
8 help to coordinate some of the cross agencies to  
9 develop an equity plan. We'll be part of the ZEV  
10 market development strategy that GO-Biz has in  
11 our office that works across agencies and really  
12 is looking to, you know, have a sustainable  
13 market.

14           So I just wanted to thank you again and,  
15 you know, I really appreciate the presentation.  
16 Thanks so much.

17           COMMISSIONER MONAHAN: Thanks Heather.  
18 Thanks, GO-Biz, for being such a great partner  
19 with all of the work.

20           So we have Leslie, and then Robert on  
21 deck.

22           COMMITTEE MEMBER AGUAYO: Hi. Good  
23 morning. This is Leslie Aguayo. I'm a Climate  
24 Equity Program Manager with the Greenlining  
25 Institute. Thank you all so much for the

1 opportunity to speak and for the hard work and  
2 thoughtfulness that went into this plan. I'd  
3 like to highlight a couple of points.

4           So first off, would love to reiterate a  
5 couple of conversations that we've had in the  
6 past around defining and operationalizing equity.  
7 So I'm not sure if that's going to be included in  
8 the latter part of the meeting today but would  
9 love to, yeah, see where the CEC is at on the  
10 definition of equity, on the definition of  
11 benefits, and definition around metrics to  
12 encompass equity.

13           In particular, I'd also like to highlight  
14 Governor Newsome's new Executive Order N-16--22,  
15 which will now embed equity analyses and  
16 considerations in state agency emissions policies  
17 and practices, so pointing attention to that as  
18 well.

19           The second thing I'd like to highlight  
20 is, you know, this notion of benefits to people  
21 and not just place. So drawing from the  
22 wonderful resources that I have also learned from  
23 her own SB 1000, and Tiffany Wong (phonetic) and  
24 Larry Pietta's (phonetic) work around ensuring  
25 accessibility and not just deployment, so

1 ensuring that we prioritize direct funding to  
2 frontline communities that are affected by  
3 poverty and pollution first and foremost, but  
4 that those investments actually create meaningful  
5 benefits for folks and it's not just meeting a  
6 checkbox, and deploying charging infrastructure,  
7 in this example, to a census tract that is  
8 allocated as a disadvantaged community.

9           To that, I'd also like to encourage the  
10 CEC to similarly see this definition -- I'm  
11 sorry, this minimum investment standard for  
12 disadvantaged communities as an iterative and  
13 increasing process says as well. So in the same  
14 way that we have iterated processes for other  
15 standards and reliability metrics, thinking about  
16 how to further increase that standard for  
17 disadvantaged communities as well. So while  
18 right now CEC is meeting the 50 percent  
19 disadvantaged community investment, perhaps  
20 continuing to push that mark further and further  
21 as years go on.

22           I'd also like to point out to this  
23 understanding that we have to see these  
24 investments as removing barriers to the green  
25 economy; right? So as emerging green economy

1 presents itself as an opportunity to create new  
2 forms of wealth building, it will allow  
3 communities of color that have been locked out of  
4 intergenerational wealth and capital to actually  
5 be able to invest in transportation systems that  
6 can create access to the green economy and  
7 further generate generating wealth.

8           So again, thinking about AB 2127, maybe  
9 in their second assessment, updating not only the  
10 grid needs analysis and VGI, but also within that  
11 labor analysis considering how labor can  
12 encompass more wealth building opportunities.

13           And lastly, wanting to again highlight  
14 one of the points that was mentioned earlier by  
15 Michael Pimentel around heatwaves, so really  
16 making sure that we integrate resilience into our  
17 planning and thinking; right? What is our land  
18 use going to look like? What is sea level rise  
19 going to take affect? What about wildfires and  
20 demographic changes as we project how California  
21 will be changing once these plans and projects  
22 are shovel-ready?

23           So thank you for your time.

24           COMMISSIONER MONAHAN: Thanks Leslie.

25 Really appreciate those comments. And, actually,

1 I'll be following up with an email to you on some  
2 of the issues that you raised.

3           Alright, we have Robert next, and Will on  
4 deck.

5           COMMITTEE MEMBER MEYER: Alright. Thank  
6 you. Robert Meyer, Director of Economic  
7 Development with the Employment Training Panel.  
8 I'd like to thank all of the CEC staff, of  
9 course, on the report, particularly Charles,  
10 Larry, Tami, and Jonathan and Chris  
11 (indiscernible) regarding -- for support of  
12 workforce and economic development engagement.

13           I'd like to also congratulate the state  
14 on its new partnership with British Columbia,  
15 Washington, Oregon. The states are  
16 (indiscernible) promising message overall in  
17 terms of climate sustainability and economic  
18 development and investment, so happy to see that.

19           My only comments regarding the plan would  
20 really be to see if there be ways to add  
21 additional investment in workforce development,  
22 and particularly for manufacturing. We have --  
23 this most recent year funded \$13 million in  
24 community college funds from the General Fund,  
25 which enabled us to reach public transit training

1 demand through the California Community Colleges.  
2 There is much more there and we hope to continue  
3 that funding because of the uniqueness of the  
4 General Fund dollars, we're able to reach public  
5 and nonprofit entities where, with our core  
6 program funds, we're not able to do that.

7           We can, however, provide additional  
8 investment for manufacturing, and that includes  
9 not only the research and science and  
10 technologies with the core program funds, but  
11 also the ranges of battery, battery technologies,  
12 rare earth mining and lithium. And we're already  
13 working in those spaces, so we look forward to  
14 reporting back to your teams regarding some of  
15 the work that's going on there, certainly  
16 charging infrastructure in vehicle component and  
17 component manufacturing.

18           So if you have employers facing your  
19 organizations in the manufacturing space, we  
20 would love to talk to you about how we can engage  
21 effectively.

22           Additionally, we do fund a tremendous  
23 amount of pre-apprenticeship, apprenticeship and  
24 journey worker training, particularly in the  
25 electric electrician, field, and sheet metal



1 workers which are involved in the infrastructure  
2 construction, as well as the other trade  
3 supporting transit and manufacturing. We fund  
4 about \$20 million to \$25 million in a given year.  
5 And there's a huge investment that we make and we  
6 see tremendous upside to continued investment in  
7 that space.

8           Lastly, regarding some of the  
9 manufacturing, we provide support through the  
10 Department of Defense supply chain which, through  
11 many circumstances globally, has created a real  
12 interest around energy, energy manufacturing, the  
13 systems, and ports and port security.

14           We are participating with a program  
15 called Cadence (phonetic) that deals with  
16 technology investments and defense priority  
17 modernization. And we'd be very, very interested  
18 in talking to the ports, as well as to systems  
19 and manufacturing within the infrastructure  
20 arena, because we have found some technologies to  
21 be able to do that.

22           Lastly, we are making investments in  
23 equity and we'd love to talk equity any chance we  
24 get.

25           Thank you and have a great morning.

1           COMMISSIONER MONAHAN: Thanks so much,  
2 Robert.

3           Okay, we have next, Will Barrett, and  
4 then Eileen Tutt.

5           COMMITTEE MEMBER BARRETT: Thank you very  
6 much, Commissioner Monahan. I appreciate it.

7           My name is Will Barrett. I'm with the  
8 American Lung Association. And, first, wanted to  
9 share, also, my appreciation for the work of the  
10 staff and the multiple projects detailed in the  
11 presentations for the discussion today. It  
12 really helps to table and I feel like staff did a  
13 thorough job there, so thank you.

14           I also just really quickly wanted to add  
15 my support to those who have already spoken to  
16 the need for as strong a focus as possible on the  
17 broadest possible transition to zero-emission  
18 technologies across the heavy-duty sector, really  
19 making sure that we're taking that comprehensive  
20 look at how we can eliminate the combustion  
21 pollution that's caused, whether by trucks or  
22 trains or harbor craft. We know that these  
23 impacts fall hardest in lower-income communities  
24 and communities of color throughout the state  
25 where these diesel technologies currently

1 concentrate, so really wanted to just kind of  
2 reemphasize those points that were made  
3 previously.

4           The Lung Association and many of our  
5 partners in the health community, we've been  
6 working closely together to really push for the  
7 strongest possible regulations at CARB on these  
8 sectors and really ushering in the transition  
9 from diesel and other combustion sources to zero-  
10 emission technologies as a critical public health  
11 intervention. So, again, very much appreciated  
12 seeing that in the Investment Plan again, and  
13 wanting to see that focus continue.

14           I also wanted to highlight that this week  
15 the Lung Association issued a new report called  
16 Delivering Clean Air, really focusing on the  
17 health benefits of making the shift to zero-  
18 emission trucking in major truck corridors around  
19 the country. And in California, we found \$100  
20 billion-plus in public health benefits are  
21 possible if we make the transitions to zero-  
22 emission technologies quickly and broadly. So,  
23 again, wanted to highlight and add a bit of more  
24 information to the research pile there.

25           The other thing I just wanted to kind of

1 highlight is the wanting to see that, you know,  
2 these investments continue to accelerate, you  
3 know, as quickly as possible, working in tandem  
4 with very strong policies that are being set by  
5 CARB so that the policies and investments are  
6 working together. We can't rely on investments  
7 alone. We know we need the strong policies.  
8 Both these investments are critical to really  
9 accelerating the health benefits that are  
10 possible and sitting on the table. And, again,  
11 just how important that is for the communities  
12 who are bearing the greatest brunt of pollution  
13 burdens today.

14           So I'll end there to say thank you again.  
15 And I really want to make sure that the emphasis  
16 stays as heavily as possible on cleaning up the  
17 diesel sector, the industrial sector, to bring  
18 the greatest and earliest health benefits  
19 possible.

20           So thank you very much.

21           COMMISSIONER MONAHAN: Great. Thanks  
22 Will.

23           Alright, we have Eileen, and then  
24 Katherine Garcia on deck.

25           COMMITTEE MEMBER TUTT: So thank you,

1 Commissioner Monahan and staff. I really, I just  
2 think this report is excellent. I'm just going  
3 to say it again, every year that I sit on this  
4 Committee, I feel like the staff does a better  
5 job. And this year was particularly challenging  
6 because of all the money. Thank you.

7           So I do I do want to point out that I  
8 think, on your first question, I think it's  
9 really important to continue to invest in light-  
10 duty charging infrastructure opportunities. And  
11 I know that I've heard a few comments about,  
12 well, since we have federal dollars or other  
13 things, do we need this investment? And I will  
14 just say that we are so far away from meeting our  
15 goals on the light duty side. And I'm not -- you  
16 know, we need medium- and heavy-duty investments,  
17 too, there's question.

18           I just, I don't want to see this  
19 competition setup, especially because, at least  
20 in the communities that I work in with the  
21 Electric Transportation Community Development  
22 Corporation, there are many low-income  
23 disadvantaged communities of color, rural  
24 communities, that have no access to charging  
25 infrastructure right now, don't even -- have

1 never even seen one in their communities. And  
2 that's what we're finding as we reach into these  
3 communities.

4           And so there is a lot of work to do here,  
5 obviously, on the light-duty side, while also  
6 focusing on getting these trucks electrified as  
7 quickly as possible. So I don't think we can  
8 pull back on those investments at all quite yet.

9           I also would maybe suggest that, I mean,  
10 I heard a few commenters, and I heard one from  
11 the Equity Groups Advisory Committee, I would  
12 love to hear a report out from the equity people,  
13 the equity groups that are -- I don't know if  
14 there's a panel or an opportunity to bring a  
15 couple of equity group members to present during  
16 the staff presentation, like as part of here's  
17 our response.

18           I would really appreciate that because  
19 what I've seen as a Committee member is a huge  
20 transition and commitment to equity in this  
21 report. And I was a little surprised to hear  
22 that there are things that are not being  
23 addressed by the Energy Commission staff, because  
24 I just, I feel like it's been definitely  
25 prioritized throughout this about this. And I

1 just, I would like to hear directly from those  
2 members, if that's possible, to include in a  
3 future hearing.

4           And then also just want to thank you for  
5 the focus on grid readiness. I really am tired  
6 of hearing about how the grid can't handle  
7 electric vehicles, to be quite honest. The grid  
8 has handled much greater demands. And the pace  
9 of this transition is sufficient, as long as  
10 we're planning well. I'm glad to see that the  
11 Energy Commission continues to be leading there,  
12 so thank you for that. I think you guys are  
13 doing an excellent job. And I really appreciate  
14 my participation on this committee over the  
15 years.

16           COMMISSIONER MONAHAN: Thanks so much,  
17 Eileen.

18           We next have Katherine Garcia, and then  
19 Dylan is on deck.

20           COMMITTEE MEMBER GARCIA: Thank you.

21           So let me start by complementing the  
22 staff. Thank you so much for your commitment to  
23 this program. It's excellent to see this update  
24 today. And I'm excited to share it with my  
25 colleagues.

1           I want to start by mentioning that, you  
2 know, we're so grateful to CARB's work on the  
3 Advanced Clean Trucks and Advanced Clean Fleets  
4 work. And because of those standards, we are  
5 really poised to see an acceleration of electric  
6 trucks and buses.

7           So I am concerned that California is not  
8 open to using any of the NEVI funding for medium-  
9 and heavy-duty charging. I just wanted to raise  
10 the point that while most medium- and heavy-duty  
11 vehicles will go back to their base to charge, so  
12 utilizing depo charging, there are still some  
13 trucks and buses that will need enroute charging.  
14 So California should adequately plan for having  
15 public charging that is sufficient to meet their  
16 needs.

17           My colleague Eileen just spoke about the  
18 fact that we are not on track to reach our light  
19 duty goals. I completely agree. I respect that.  
20 And, obviously, I know that this is challenging  
21 having this push and pull between the medium- and  
22 heavy-duty and light-duty charging.

23           I just want to raise the point that there  
24 should be sufficient number of charging stations  
25 built for larger size vehicles. And just



1 recognition of the fact that not every truck and  
2 bus will be going to its base to charge at every  
3 single route, so just the recognition that  
4 enroute charging will be needed at some point by  
5 some of these vehicles.

6 I also wanted to raise some concerns  
7 about the investment on hydrogen. As my  
8 colleagues have already noted, this is concerning  
9 for some groups. So there are just very specific  
10 applications for hydrogen. We're not seeing  
11 hydrogen applications across the board, light  
12 duty, heavy duty. It seems like there's certain  
13 applications that it's more ideal for. And we've  
14 actually seen from manufacturers that there's  
15 been a concerted investment specifically in  
16 battery-electric vehicles as opposed to light  
17 duty, so -- or as opposed to hydrogen. I'm  
18 looking specifically at like carmakers are not  
19 investing as much on light-duty vehicles that are  
20 fueled by hydrogen.

21 So given that specific application, I  
22 think that we need very strict green hydrogen  
23 content standards. Of course, I do recognize  
24 that there are some applications. But we  
25 shouldn't have -- we shouldn't be going at the

1 pace where we are right now without a specific  
2 regulation on how that hydrogen is produced. So  
3 I think we need strict green hydrogen content  
4 standards that match those required for  
5 electricity with an interim required target by  
6 2030.

7           And then finally, I just want to lift up  
8 a letter that my colleague, that Jobs Team of  
9 America (phonetic) submitted recently. This  
10 specifically has to do with the high road job  
11 opportunities. And I think there really needs to  
12 be a bit -- an investment in diverse range of --  
13 excuse me -- opportunities that benefit a diverse  
14 range of disadvantaged workers, specifically with  
15 partnerships among community labor and workforce  
16 development organizations that specialize in  
17 recruitment and training with specific  
18 communities. So just wanted to lift up those  
19 recommendations that Jobs Teams of America had  
20 sent to the CEC recently.

21           Thank you so much for your time.

22           COMMISSIONER MONAHAN: Thanks Katherine.

23           Alright, so we have Dylan next, Sam on  
24 deck.

25           COMMITTEE MEMBER JAFF: Thanks,

1 Commissioner. Dylan Jaff with Consumer Reports.  
2 Thanks to the Commission for putting together  
3 this report -- or this Investment Plan. And  
4 thanks for the opportunity to comment.

5           First, just wanted to give a nod to the  
6 investments in disadvantaged communities and in  
7 rural communities. Our surveys have found that  
8 consumers in rural communities and multifamily  
9 housing units are among the highest to express  
10 concern with charging infrastructure. So these  
11 investments go a long way to ensure that these  
12 barriers are limited for these consumers.

13           I also wanted to give a few comments on  
14 some of the investments that have already been  
15 made. On the best fit innovative charging  
16 solution solicitation, we feel that these kinds  
17 of programs are great to leverage the best  
18 available science and technology. You know, as  
19 the report outlines, there is no one size fits  
20 all model, so these investments are great to make  
21 sure there's more consumer options for vehicle  
22 charging.

23           Also the Volt's solicitation, we believe  
24 that this is also a positive sign to remove  
25 barriers for all consumers.

1           Quick comment on the increasing consumer  
2 signage. We think this is a great opportunity to  
3 make -- you know, another opportunity to break  
4 down some of those barriers around charging  
5 availability and infrastructure. But also wanted  
6 to give a nod to some of the work that, you know,  
7 your colleagues at GO-Biz are doing with the  
8 Consumer Awareness Grants, and really hope that  
9 there's opportunities in the future to increase  
10 include some infrastructure awareness funding in  
11 some of those grants.

12           And then just lastly on the emerging  
13 opportunities, we really see this as a promising  
14 opportunity to really bring emissions reductions  
15 in some of these harder to reduce sectors. Our  
16 surveys have also found that consumers would be  
17 more willing to adopt some of these more low-  
18 carbon fuel technologies, specifically  
19 sustainable aviation fuels, if they were to align  
20 in costs with the traditional models.

21           So really looking forward to how these  
22 investments play out. And thank you again for  
23 the opportunity to comment.

24           COMMISSIONER MONAHAN: Thanks so much.  
25 And welcome again to the Committee.

1           Alright, so we also we have Morris on  
2 deck. I don't see any more hands raised, so if  
3 any Advisory Committee members have not yet  
4 spoken and want to, please raise your hand so we  
5 can make sure that you can talk.

6           Alright, Morris.

7           COMMITTEE MEMBER LUM: Thank you,  
8 Commissioner Monahan. I commend the California  
9 Energy Commission staff for all their work into  
10 the comprehensive plan for our state for the  
11 clean transportation indoor future.

12           I believe the rural areas of our state is  
13 very important for our attention as the rural  
14 areas will become less rural in our future as  
15 population migrates. And the truck charging is  
16 very important as goods are moved in and out of  
17 our ports in Long Beach area and Northern  
18 California Bay Area. It's a great incentive for  
19 transportation truck industry for future electric  
20 electrification.

21           And thank you for allowing me to  
22 participate on this Advisory Committee for the  
23 future of California.

24           COMMISSIONER MONAHAN: Thanks Morris.

25           Alright, and I skipped Sam Houston.

1 I'm sorry, Sam. You're up.

2 COMMITTEE MEMBER HOUSTON: No problem at  
3 all. As you said, we all get to go. Hello  
4 everyone. And thank you, Commissioner Monahan,  
5 CEC Staff, and fellow panelists.

6 I'd like to support a lot of what's been  
7 said already, and I wish I could touch on every  
8 element, but I will limit myself to a few things.

9 The first thing is to plus-up what  
10 Morris and Katherine and Morgan have all touched  
11 on in terms of the need for public charging for  
12 trucks.

13 It's been very encouraging to see that  
14 start to move forward with that energized lane  
15 for public charging for trucks. But getting that  
16 going is desperately needed, particularly to make  
17 progress on longer haul tractors that will  
18 absolutely need public charging. There aren't  
19 that many of them but they are among the largest  
20 sources of anthropogenic fine particulate matter  
21 and oxides of nitrogen emissions, so really  
22 critical from an environmental exposure and a  
23 justice perspective.

24 I also want to touch on the idea of  
25 either breaking down the separation between

1 buckets or sort of intentionally connecting  
2 projects across buckets. It's the two things in  
3 particular.

4           The first is the V2G. We've got it in  
5 the emerging tech bucket. I think it's been  
6 emerging, so to speak, for a really long time.  
7 And I'd really like to see that move forward in  
8 more of a, I guess you could say, mainstream way  
9 and really consider in every single project what  
10 kind of vehicle grid integration are we doing and  
11 can we put V2G in here, does it make sense?

12           Particularly from a resiliency  
13 perspective, I think it'll be really important  
14 and, in particular, making sure that low-income  
15 folks, disadvantaged communities, can also have  
16 access to be to V2G for resilience and other  
17 applications that will benefit the communities,  
18 and also potentially provide a revenue stream in  
19 addition to resilience.

20           The other topic for connecting buckets or  
21 breaking down sort of the silos is workforce  
22 development. And I've been thinking about a lot  
23 of the equity elements in the Strikeforce Equity  
24 Workgroup. And one of those is really using  
25 every project to tie all the equity components

1 together. And that would include many things,  
2 but certainly workforce development, possibly  
3 tying that to projects that are going into  
4 communities to make sure that there is a holistic  
5 kind of investment, not just in the capital costs  
6 but in all of the kinds of community investments  
7 that we need to see all connected together.

8 I noticed one thing in one of the block  
9 grant descriptions about readiness. And I just  
10 wanted to offer a word of caution about how  
11 project readiness could potentially disadvantaged  
12 certain kinds of applicants. Many of those are  
13 specifically for low-income or disadvantaged  
14 communities, which I think removes some of the  
15 concern, but thinking also how some communities  
16 may need support, may need funds or technical  
17 assistance to be ready, I think will be important  
18 across all funding opportunities.

19 And as I'm out of time, I will go ahead  
20 and stop there. Thank you very much.

21 COMMISSIONER MONAHAN: Thanks, Sam.  
22 Thanks for being so nice about me skipping you.

23 Alright, so I want to give one final  
24 chance for any Advisory Committee members who  
25 have not yet spoken to have their three minutes,



1 so I'm just going to wait a second, see if  
2 there's any final folks.

3           And while we are waiting, I also want to  
4 say, we have time to do a lightning round. So if  
5 you have already spoken but you were, you know,  
6 either reflecting on what you heard and you have  
7 more to say, or you just want to add something to  
8 your comments, we have a -- we'll do a one-minute  
9 lightning round. So anybody who wants to, raise  
10 your hand and you can have one minute to add to  
11 the comments that you have already made.

12           Alright, I see, Casey.

13           And, Casey, you have not spoken yet;  
14 right? So you get the full three minutes.

15           COMMITTEE MEMBER GALLAGHER: Oh, I'll be  
16 quick.

17           Well, thank you very much for this  
18 conversation and, as always, the hard work of the  
19 CEC staff in putting this report together.

20           I've been thinking long and hard about  
21 the questions you posed early on, especially on  
22 how we think about equity. And ultimately, in my  
23 written comments, I will be submitting to the  
24 dark and soon, thinking about -- to some of the  
25 points made by some of the earlier Advisory

1 Committee members of how do we really ensure and  
2 also in enhance equity throughout all these  
3 investments, either through training or how we  
4 improve the communities who are hardly hit  
5 With -- that have been hardly hit by maybe in the  
6 forms of economic forces, and also other  
7 circumstances.

8           So just want to say thank you. And I  
9 will be submitting my comments in response to the  
10 report the very soon. Thank you very much.

11           COMMISSIONER MONAHAN: Great. Thanks  
12 Casey.

13           Alright, in the lightning round, I see  
14 Joel has raised his hand.

15           COMMITTEE MEMBER LEVIN: Okay. Yeah, I  
16 kind of had thrown this out before but I wanted  
17 to sort of circle back to it, the notion that  
18 because reliability of the network for light-duty  
19 vehicles is such a challenge, with all the data  
20 that you guys gather, I think it would be really  
21 interesting if you could add sort of that to the  
22 different stats that you gather, maybe kind of  
23 more broadly on the charging network in  
24 California, maybe not just the stuff that you  
25 guys find as to how reliable it is.

1           And, you know, there's some nuances to  
2 it. It's not just was someone -- was it turned  
3 on at the time someone pulled up. Because it's  
4 really common, you hear that like someone pulls  
5 up to a charger, they start charging, and then it  
6 stops, and then they start charging and it goes  
7 ten seconds, then it stops, but there's just a  
8 bunch of ways to calculate it.

9           But I think because there's so much in  
10 the press and that people are hearing about the  
11 unreliability of the network, to have data  
12 gathered by you all on the sort of system in  
13 California, I think it'd be really valuable and  
14 I'll turn foreign policy.

15           COMMISSIONER MONAHAN: Thanks Joel. I  
16 agree with that idea. Data transparency is  
17 really part of our job. And the ZEV dashboard, I  
18 got -- for people who haven't been on it, check  
19 it out because it's awesome, and I think I'm on  
20 it probably the most for anybody. But the more  
21 we can add to that the better.

22           Alright, anybody else in the Advisory  
23 Committee, do you have any final thoughts?  
24 Because this is your last chance, and then we'll  
25 turn it over to public comments.

1           Alright, we have Sam.

2           COMMITTEE MEMBER HOUSTON: Thank you.

3 Sam Houston, again, with Union of Concerned  
4 Scientists.

5           I just wanted to touch on -- well, first,  
6 uplift Ruben's comment here in the chat about  
7 truck traffic. I think that really speaks to the  
8 fact that as these grant funding opportunities  
9 are going out, that there's thought given to sort  
10 of requirements around what kind of information  
11 and commitments we want to see from the  
12 applicants, or the applicants in partnership with  
13 the community, and so on. Addressing truck  
14 traffic or truck traffic thresholds could be one  
15 thing.

16           Earlier on, I think it was Lucas, who  
17 mentioned gentrification concerns, there are many  
18 different things you can do there, including sort  
19 of right of first refusal policies for the  
20 community, venture protections, community land  
21 trusts, different ways to share ownership and get  
22 that kind of consent from communities.

23           So just wanted to offer two more ideas  
24 about thinking and really meaningfully  
25 incorporating sort of this holistic approach in

1 how the programs are designed and how the grant  
2 opportunities go out, and what you'd like to see  
3 from the applicants.

4           COMMISSIONER MONAHAN: Great. Thanks  
5 Sam. Appreciate that.

6           Alright, I'm going to give it one more  
7 minute, before we move to public comments, from  
8 the Advisory Committee. So we'll just sit in  
9 awkward silence for a minute. Going once? Going  
10 twice? Alright.

11           I think I just appreciate the  
12 participation of all the Advisory Committee  
13 members, and the public, which we'll get to next.  
14 But it's a long time to sit in a meeting and just  
15 really appreciate everybody participating. And  
16 encourage you to continue to cogitate, continue  
17 to provide feedback in a written form or, if you  
18 want, to talk with us. We're happy to have more  
19 conversations but really appreciate everybody's  
20 time and energy on this. I would argue, the most  
21 important Investment Plan we've ever put out, so  
22 it's more money than we've ever had to navigate  
23 before.

24           So I'm going to turn it over. I think,  
25 Patrick, are you running the public comment? Oh,

1 I guess, Benjamin and Tami are running the public  
2 comment.

3 MR. BRECHT: Yeah. Well, maybe we can  
4 put up the slide for a moment that shows that the  
5 comments are due to the docket on October 25th?  
6 So we have a couple of weeks for you to submit  
7 those comments.

8 And I just want to add, also, that the  
9 transcript will be, of this meeting, will be  
10 available, probably in about a week. It takes a  
11 little bit of time for that. But the recording  
12 of this meeting should be up in a day or so and  
13 that will be on our CEC website.

14 In addition to that, the slides for the  
15 for this meeting are already available on the  
16 docket, so if you need to go back and revisit  
17 that.

18 So just wanted to mention those items.  
19 And I guess we can move on to public comment.

20 MR. TUGGY: Alright. Thank you, Patrick.

21 So the first person I have is Kitty  
22 Adams.

23 COMMISSIONER MONAHAN: Actually, Ben --

24 MR. TUGGY: Oh, go ahead.

25 COMMISSIONER MONAHAN: -- Benjamin, can

1 we just talk about timing? Because we were  
2 trying to figure out how many minutes per. We're  
3 definitely going to hear everybody who wants to  
4 provide feedback today. But we're trying to  
5 figure out how much time we can allot based on  
6 how many people want to speak. So if you could  
7 raise your hand so we can just get a general idea  
8 of how many people want to speak? That will help  
9 us with time allotment.

10 MR. TUGGY: I see six hands so far. No  
11 other hands raised so far.

12 COMMISSIONER MONAHAN: Alright, just give  
13 us a minimum in the background. Alright, I think  
14 then we could do three minutes per. I think  
15 we'll have time for three minutes per. And if a  
16 lot of other people start raising their hands, we  
17 may have to adjust the time just so that we can  
18 share everybody. So let's start with three  
19 minutes. And if we get too constrained, we may  
20 have to reduce it to two.

21 MR. TUGGY: Sounds good.

22 And, alright, Kitty, you should be good  
23 to speak. If you can state your name and  
24 affiliation, if anything?

25 MS. ADAMS: Hi. My name is Kitty Adams.

1 I'm the Executive Director of Adopt a Charger.  
2 I'm speaking today because I want to draw  
3 attention to the docket letter that I turned in  
4 last week that kind of explores this subject in a  
5 little bit more detail.

6           The reason I'm reaching out today is I  
7 would like to request a special carveout for  
8 funding to install electric vehicle charging  
9 stations at the California State Parks. Adopt a  
10 Charger was successful in facilitating the  
11 installation of over 60 EV charging stations at  
12 26 parks.

13           Our experience has shown that these are  
14 expensive installations in environmentally  
15 sensitive areas, remote locations where  
16 connectivity is sketchy, and there's no business  
17 case for monetizing the charging stations. The  
18 cost and complexity involved to commercialize the  
19 transactions actually makes the EV charging  
20 station less reliable.

21           I wanted to like just bring up one  
22 example. A lot of the staff had Yosemite in the  
23 background of their screen. I recently completed  
24 an installation at Yosemite National Park. And  
25 even though there's a cell phone tower right



1 there in the park, they have a bandwidth issue,  
2 when the visitors are there, that they can't  
3 download an app or upload a credit card. So even  
4 when there is connectivity, sometimes it's  
5 difficult to have a reliable transaction.

6           And currently there are some funding  
7 opportunities through AB 1083 where the investor-  
8 owned utilities are able to explore pilot  
9 programs at the California State Parks.

10           I am specifically asking for this  
11 carveout in response to a request from the  
12 California State Parks to find a solution for  
13 parks that are outside of AB 1083 territory. I  
14 currently have a list of 34 parks that they would  
15 like to my help and problem solving.

16           I appreciate Heather from GO-Biz bringing  
17 up the fact that we need flexibility in light-  
18 duty funding. Currently, the only option  
19 available is the CALeEVIP Program which offers  
20 \$6,000 per connector. For the California State  
21 Parks, we are typically looking at \$100,000 to  
22 \$120,000 just to bring the power to the curb. So  
23 \$6,000 is just enough to get everybody  
24 frustrated.

25           Another huge consideration at the

1 California State Parks is the ADA accommodation  
2 for EV charging is often cost prohibitive. When  
3 I received a CEC grant back in 2014 to install at  
4 the California State Parks, 7 of the 15 initially  
5 identified sites dropped off because the ADA  
6 accommodations were going to be upwards of  
7 \$30,000. Oftentimes, we have to repave parking  
8 lots.

9           So I'm just encouraging the CEC,  
10 Commissioner Monahan, and the Advisory Committee  
11 to think outside the box and find a way that we  
12 can help install EV charging stations for the  
13 39.5 million residents that visit the California  
14 State Parks.

15           Thank you so much.

16           MR. TUGGY: Thank you.

17           Up next we have Adam, and then Tom.

18           MR. BROWNING: Hey, thank you so much.

19 This is Adam Browning and I'm with Forum  
20 Mobility, a company working to electrify drayage.

21           Thank you for putting this on and for all  
22 your work helping to jump start the transition to  
23 serve trucks.

24           I just want to point out that the AB 2127  
25 analysis for medium and heavy duty outlined a

1 need for at least \$6.2 billion of CapEx for  
2 chargers alone. That would be installing 53  
3 chargers a day every day, including weekends,  
4 until the end of 2030, and we are not currently  
5 on that schedule. The advanced Clean Fleets  
6 could, of course, change this.

7           And I just, you know, want to point out  
8 that we're going to need some changes to the  
9 current -- or it would be helpful to have some  
10 changes to the current programs to help modify it  
11 to meet the scale of what's necessary.

12           So medium and heavy duty is different  
13 Light duty in that you need a lot of standalone  
14 land with access to power. You can't dual  
15 purpose grocery store parking lots. People  
16 aren't going to be charging at home. There's a  
17 lot of warehouse space without access to  
18 sufficient power.

19           So that really highlights, and  
20 specifically for drayage. You know, 80 percent  
21 of the drivers are independent owner-operators,  
22 and they need a place to charge their trucks  
23 overnight. And, again, that's not going to be at  
24 home.

25           And so this is going to drive a need for

1 much larger public depots, which are  
2 excruciatingly hard to build. Again, finding  
3 land in transit corridors that has access to  
4 power that is over two acres in size to allow for  
5 truck turnarounds, those are just like  
6 depressingly small Venn diagram overlaps right  
7 there.

8           So I would just suggest, as you consider  
9 the programs going forward, the EnergIIIZE Program  
10 could be adapted to, you know, meet the scale.  
11 And the things that you might want to consider is  
12 more money, multiple grant opportunities per year  
13 to match those project development cycles, and  
14 maybe consider, definitely consider looking at  
15 the funding caps the way that they are. So if  
16 you're building, you know, 100 truck charger  
17 depots, like having a cap of just \$500,000, you  
18 know, it's nice but, you know, we're talking  
19 about tens of millions and just CapEx alone, so  
20 it doesn't make that much of a dent in it.

21           But if, you know, instead of just doing  
22 project caps, you thought about in terms of like,  
23 you know, providing a portion on a per kilowatt  
24 hour basis, we can be much more efficient with  
25 that money if you, again, if you apportion it on

1 a -- or without the cap but perhaps put a cap on  
2 a per kilowatt hour basis, but on a capacity  
3 basis.

4           So we will be, of course, filing a letter  
5 with much more detail around this. But I just  
6 want to say, you know, this is an awesome initial  
7 step for these programs. It's a tremendous  
8 challenge that we have ahead of us. We look  
9 forward to your partnership going forward. But  
10 there's a lot of opportunity to continue to fine  
11 tune and expand the programs that you already  
12 have.

13           Many thanks.

14           MR. TUGGY: Thank you.

15           And I'll mention quickly, for anyone  
16 calling into this meeting via phone, you can  
17 press star nine to raise your hand.

18           Up next is Tom, and then Dan.

19           MR. MACK: This is Tom Mack from Zero  
20 Emission Locomotive Technologies, LLC.

21           What I wanted to talk about was the  
22 concept of multimodal charging. ZEL Tech is  
23 developing a line of battery-electric zero-  
24 emission locomotives, primarily targeting  
25 switching that actually -- in a 1,000 to 3,000

1 horsepower range. And what I wanted to bring to  
2 the attention of CEC was with the new DC fast  
3 charging systems that support up to about 350  
4 kilowatt charging and use a standard CCS 1 plug  
5 which can be used for heavy duty trucks,  
6 automobiles, a wide range of electric vehicles,  
7 we think there's an excellent opportunity for  
8 integrating rail into a multimodal type of  
9 charging strategy.

10           These locomotives, most of the time if  
11 they're working, say, in an industrial area or a  
12 yard, many times are working only during the day.  
13 So they could charge at night with a 350 kilowatt  
14 system literally in as little as four hours  
15 because we only expect 1 to 1.4 megawatt hours  
16 per day of actual energy years.

17           Well, that leaves this wide range,  
18 especially during the day, where you will have a  
19 great deal of trucks coming in and out of an  
20 industrial or railroad yard setting. You will  
21 even have private automobiles and vehicles doing  
22 business in the center. And the idea of having a  
23 multimodal DC fast charger to not only charge the  
24 locomotive, or locomotives even, there at night  
25 would be available then during the day for all of

1 this on-road traffic in and out, as well as, for  
2 example, any electric vehicles that might be  
3 based at that industrial or yard center.

4           So something to keep in mind because  
5 we're no longer with rail, we fell, at a  
6 situation where switcher locomotives will require  
7 a specialized charging infrastructure now with  
8 the new DC fast charge systems. And when we  
9 looked at, earlier, that that one chart that  
10 showed the duck graph basically, again, perfect  
11 that we've got that capacity during the day when  
12 the locomotive is out working, when the trucks  
13 and other vehicles coming in and out of that  
14 industrial park could take advantage of a  
15 multimodal DC fast charge system.

16           Thank you.

17           MR. TUGGY: Thank you.

18           Next is Dan, and then Heidi after that.

19           MR. CHIA: Hi. Dan Chia with Chia  
20 Strategies, representing Arrival Automotive.  
21 Arrival is a U.K. and American manufacturer of  
22 medium- and heavy-duty EV vehicles.

23           My comment is sort of off topic and I'll  
24 just keep it short. And I do see some chat from  
25 Eileen and Craig about the issue, but to Ruben's

1 comment about the needing to be sensitive or take  
2 greater care when considering medium and heavy  
3 duty charging in frontline or disadvantaged  
4 communities, I know a couple of CARB board  
5 members have expressed these concerns as well.

6           It does present a very interesting  
7 tension whereby what I believe CARB is proposing  
8 in its incentive program for HVIP eligibility for  
9 certain large fleets, and that proposal is to  
10 require those large fleets to actually domicile  
11 to heavy-duty vehicles within disadvantaged  
12 communities. And, obviously, wherever their  
13 domiciled they will likely be charging.

14           So there is an apparent tension here.  
15 And, again, it's food for thought. Don't expect  
16 any feedback or comment right now. But I believe  
17 folks should pay attention to the funding plan,  
18 as Craig encourages, and have this discussion  
19 openly with CARB staff and board members as to  
20 how to strike that appropriate balance.

21           Thanks very much.

22           MR. TUGGY: Alright. Thank you.

23           Heidi, you're good to speak.

24           And then Peter is next.

25           MS. SICKLER: Great. Thank you. Heidi



1 Sickler, Director of Policy for AMPLY Power. We  
2 recently rebranded to BP Pulse Fleet.

3           So I wanted to thank Commissioner Monahan  
4 and Staff for recognizing the need to incentivize  
5 solutions that help mitigate EV load during peak  
6 hours by proposing to allocate \$97.3 million for  
7 emerging opportunities, including VGI solutions.  
8 We think that this could be an impactful grant  
9 funding opportunity to help incentivize EV load  
10 shift to off peak hours, as Jeffrey showed in his  
11 great slides.

12           Currently, what we're finding is the  
13 biggest barrier to fleet electrification of all  
14 market segments is insufficient grid capacity or,  
15 said another way, a utilities ability to finance  
16 service upgrades, including a transformer,  
17 substations, and distribution system upgrades.  
18 AMPLY, or now BP Pulse Fleet's adaptive load  
19 management software helps manage and mitigate EV  
20 load during peak hours.

21           But one way specifically that we  
22 encourage the Commission to think about how to  
23 how to structure these UFOs (phonetic) is to --  
24 and to potentially help scale ALM (phonetic) in  
25 tandem with your load management standard tariff,

1 is by funding the OP-X (phonetic) component of  
2 fleet charging, which includes charge management  
3 software.

4 Thank you.

5 MR. TUGGY: Thank you.

6 Up next is Peter, and then Renee.

7 MR. JORDAN: Yeah, good afternoon. Thank  
8 you for the opportunity to speak. My name is  
9 Peter Jordan. I am running business development  
10 for a hydrogen production company. We basically  
11 take biomass and produce green hydrogen. So if  
12 that helps, Katherine Garcia from Sierra Club,  
13 we're 100 percent focused on green and not so  
14 interested in the other multiple colors.

15 So my suggestion to the CEC and  
16 Commissioner is to incorporate the PUC in all of  
17 this. I agree that I don't think we'll have a  
18 problem figuring out how to fulfill or fill the  
19 grid with enough power to, you know, support the  
20 charging that's required. But as I understand,  
21 now, PG&E has stepped up and asked for a third  
22 rate hike. And so the, you know, the consumer  
23 ends up paying for all the inflation issues and  
24 other issues that are associated with raising the  
25 rates of our utility bills.

1           So subsequently, as you start to take a  
2 look at, especially within this state, you start  
3 to take a look at, you know, low income rural and  
4 those type of communities, I think it becomes  
5 important for the CEC to be able to fulfill the  
6 delivery of charging costs associated with those  
7 particular communities and their ability to enjoy  
8 or be able to financially successfully deploy an  
9 electric vehicle.

10           So I would like to see some kind of  
11 incorporation of a communication with the PUC,  
12 because I don't see any particular plans from  
13 them coming to be, coming out to be presented to  
14 the community in respect to what their efforts  
15 are moving forward to move off of natural gas and  
16 move towards renewable and sustainable sources.

17           Thank you.

18           MR. TUGGY: Thank you.

19           And a reminder to anyone calling in by  
20 telephone, you can press star nine to raise your  
21 hand, and we'll open your line to speak.

22           Renee, go ahead.

23           MS. SAMSON: Yes. Can you hear me?

24           MR. TUGGY: Yes, we can. Thank you.

25           MS. SAMSON: Wonderful. Hi. My name is

1 Renee Sampson and I am the Director of Public  
2 Policy with FreeWire Technologies. FreeWire  
3 Technologies is a bit of a unique DC fast  
4 charging solution in that we incorporate battery  
5 energy storage into the unit itself. And we're  
6 headquartered here locally in Newark, California.

7 I just want to start off by saying that  
8 we really appreciate the time and effort that the  
9 CEC has invested into enabling a widespread, cost  
10 effective, and equitable deployment of EV  
11 charging infrastructure across the state. We  
12 have been pleased to participate in several  
13 rounds of funding and have been able to deploy  
14 infrastructure due to the CEC programs, and so we  
15 do appreciate that opportunity.

16 However, we would like to highlight one  
17 important market gap that we see in that we've  
18 been advocating for across the company. And we  
19 believe that the CEC can address this through  
20 funding programs for every charging technologies  
21 that avoid utility of infrastructure, provide  
22 grid services, and reduce operational costs for  
23 site hosts.

24 The current suite of incentive programs  
25 really incentivize traditional utility

1 infrastructure and EVSE hardware. However, we  
2 believe that there is an opportunity for the CEC  
3 to also recognize some alternative technologies,  
4 such as battery-integrated EV charging, that can  
5 reduce those infrastructure costs to support the  
6 station.

7           And, also, that this type of technology  
8 can provide flexibility for site hosts that may  
9 not have access to additional power upgrades or  
10 three phase power, and also grid operators during  
11 demand response, PSP, events and other valuable  
12 good service programs.

13           So we have we would ask the Commission to  
14 consider incentivizing technologies that meet  
15 those goals. And thank you for the opportunity  
16 to provide comments today.

17           MR. TUGGY: Thank you.

18           I'm looking over the list of attendees.  
19 I don't see any new hands raised. But under  
20 panelists, we do have a hand from Kevin.

21           So, Kevin, you can go ahead and speak.

22           MR. HAMILTON: Thank you. Kevin Hamilton  
23 with Central California Asthma Collaborative.  
24 And I had to step away for about 45 minutes  
25 there. Sorry.

1           So, again, I want to thank the Commission  
2 for holding these meetings and supporting this  
3 Committee in its work. I do think that the plan  
4 modifications that were discussed today are in  
5 line with what we need to see in the future as  
6 far as energy generation in California and the  
7 placement of charging infrastructure. Obviously,  
8 that's a long-term task.

9           I would love to see more coordination  
10 between the various partners. It was really  
11 great to hear that NEVI was approved. Block  
12 Grant 2 is about to start. And NEVI coordination  
13 there, especially on the Level 3 side, I think  
14 will be critical.

15           But I also think that we need to better  
16 coordinate, at least with folks like Electrify  
17 America and some of the big EVI installers out  
18 there, so that, you know, we can develop some  
19 conjoined plans for distribution where we have  
20 both public money and private money coming out  
21 from at least four different programs and three  
22 different agencies at this point, including  
23 utilities, so that has to be addressed.

24           But the second thing, and probably one of  
25 the most critical, it has especially been

1 illustrated for me in the last two years of  
2 working on the scoping plan on the energy piece,  
3 that, you know, it will come to the Air Board  
4 here in December, is we've got really a pretty  
5 decent plan for energy distribution and for  
6 distributed energy distribution. So having that  
7 -- or generation, excuse me. Boy, I said that  
8 backwards. Generation. So we've figured out  
9 ways to create clean energy from a whole lot of  
10 different sources.

11           What we haven't done for years is really  
12 look at the energy transportation network. It's  
13 highly overpriced and archaic. So we're  
14 basically vulnerable to the winds, if you will,  
15 of the CPUC and the utilities themselves who have  
16 moved away from generation mostly toward owning  
17 the transportation network. They saw what was  
18 the critical leverage point here, and especially  
19 if you want to call it price point.

20           And so what I see in communities that we  
21 serve is residents rapidly being priced out of  
22 energy. Most of the programs for them reduce  
23 rates by maybe 20 percent. But again, on \$1,000  
24 bill, that's \$800 for a family that's bringing in  
25 maybe \$38,000, \$39,000, or \$40,000 a year at

1 most. And with the housing crisis, I don't see  
2 how that works.

3 So very quickly, I just want to see the  
4 CEC step forward harder on planning how we deal  
5 with energy transportation in an equitable way in  
6 the future.

7 Thank you very much for your time.

8 MR. TUGGY: Thank you.

9 I'll give one final reminder that anyone  
10 calling in can press star nine to raise their  
11 hand. But otherwise, I do not see any raised  
12 hands right now, Commission.

13 COMMISSIONER MONAHAN: Alright. Thanks  
14 Benjamin.

15 I wanted to then -- I think, Patrick,  
16 you're on deck just to talk about next steps  
17 comments due, and then I'll close it out.

18 MR. BRECHT: Great. Thanks,  
19 Commissioner.

20 Maybe we can put the slide up, once  
21 again, with the deadline for comments. Yes.

22 Comments are due October 25th at five  
23 o'clock. We anticipate publishing the Lead  
24 Commissioner Report version of the Investment  
25 Plan end of November. And, again, we hope to



1 bring the plan to the December 14th Energy  
2 Commission business meeting. So that is our  
3 schedule.

4 And I will send it back to you,  
5 Commissioner Monahan.

6 COMMISSIONER MONAHAN: Yeah, I just  
7 wanted to say, again, thanks to everybody, thanks  
8 to the stakeholders who joined remotely, and to  
9 the Advisory Committee members. I mean, we will  
10 be accepting comments from anybody who wants to  
11 give them to us. As I said earlier, we're  
12 meeting separately with the Disadvantaged  
13 Communities Advisory Group who was set up to  
14 advise the Energy Commission and the Public  
15 Utilities Commission. And we're encouraging them  
16 to provide written remarks and to come, actually,  
17 to our business meeting to speak.

18 As folks who have been on the Advisory  
19 Committee will recall, we do always encourage  
20 people to come to our business meeting, whether  
21 you like to plan or not, and provide comments.  
22 And we give the Disadvantaged Communities  
23 Advisory Group and the Advisory Committee members  
24 have a chance to speak first, and then we open it  
25 up to all stakeholders, because we really do want

1 to hear from everybody.

2           And I wanted to thank Patrick for being  
3 the master of ceremonies and really helping pull  
4 together all parts of the Clean Transportation  
5 Program Investment Plan, Charles Smith, who has  
6 really also been in the trenches on all of this,  
7 all those presenters, it took all the presenters  
8 a lot of time and energy practicing to get this  
9 to happen within the time constraints we put.

10           And I especially want to thank Benjamin  
11 Tuggy, who has been behind the scenes. He  
12 stepped up. We were like, "Can you help on the  
13 Zoom?" He was like, "Sure," and he didn't know  
14 what he was doing but he did a great job. So  
15 thank you so much, Benjamin.

16           And I think that wraps it up. We're  
17 actually ending a little ahead of time, which is  
18 my sign of a good meeting. So thanks, everybody.  
19 And we're adjourned.

20           (Off the record at 12:24 p.m.)

21

22

23

24

25

CERTIFICATE OF REPORTER

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 31st day of October, 2022.



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MARTHA L. NELSON, CERT\*\*367

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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 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.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



MARTHA L. NELSON, CERT\*\*367

October 31, 2022