

DOCKETED

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CALIFORNIA ENERGY COMMISSION

In the matter of:

2022-2023 Investment Plan) Docket No. 22-ALT-01
Update for the Clean)
Transportation Program)
_____)

CLEAN TRANSPORTATION PROGRAM

ADVISORY COMMITTEE MEETING

REMOTE VIA ZOOM

TUESDAY, APRIL 12, 2022

9:00 A.M.

Reported by:

Martha Nelson

APPEARANCES

COMMISSIONER

Patricia Monahan, Lead Commissioner

ADVISORY COMMITTEE MEMBERS

Michael Pimentel, California Transit Association

Will Barrett, Clean Air Advocacy

Casey Gallagher, California Labor Federation

Zac Thompson, East Bay Community Energy

Lori Pepper, CalSTA

Gia Vacin, GO-Biz

Jose Lopez, Private Citizen

Robert Meyer, California Employment Training Panel

Sydney Vergis, California Air Resources Board

Ruben Aronin, Better World Group

Morgan Caswell, Port of Long Beach

Larry Engelbrecht, ASE Education Foundation

Micah Mitrosky, IBEW District 9

Samantha Houston, Union of Concerned Scientists

Neena Mohan, California Environmental Justice Alliance

Katherine Garcia, Sierra Club

Jerome Qiriazzi, Humboldt Transit Authority

Mary Solecki, AJW

Matt Gregori, SoCalGas

Bill Magavern, Coalition for Clean Air

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Kevin Hamilton, Central California Asthma Collaborative

Leslie Aguayo, Greenlining Institute

Bill Elrick, California Fuel Cell Partnership

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Mona Badie, Advisor to Commissioner Monahan

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Andreas Willfort, WEH Technologies

Rey Leon, City of Huron

Mikhael Skvarla, California Hydrogen Coalition

Jaimie Levin, Center for Transportation and the Environment

Chris King, Siemens

Glen Choe, Toyota Motors America

Mark Marbury

Wayne Leighty, Shell Hydrogen

Samantha Ortego, ChargerHelp!

David Park, Frontier Energy, California Fuel Cell Partnership

Roy Bant, Chart Industries

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P R O C E E D I N G S

9:00 A.M.

TUESDAY, APRIL 12, 2022

MR. BRECHT: Good morning. Welcome everyone. My name is Patrick Brecht and I'm the Project Manager for the 2022-2023 Investment Plan for the Clean Transportation Program. And I want to thank you all for being here, very much, both in person and virtually.

Before I begin, I have a couple housekeeping items to go over. I'll do a roll call for Advisory Committee members. I'll start off with those in the room, followed by those participating remotely.

If I can begin, perhaps, with Michael and your affiliation, please?

MR. PIMENTEL: Michael Pimentel, Executive Director of the California Transit Association.

MR. BARRETT: Will Barrett, National Senior Director for Clean Air Advocacy with the American Lung Association.

MR. GALLAGHER: Good morning. Casey Gallagher, California Labor Federation, AFL/CIL.

1 MR. THOMPSON: Good morning. Zac
2 Thompson with East Bay Community Energy.

3 MS. PEPPER: Lori Pepper with the State
4 Transportation Agency.

5 MS. VACIN: Gia Vacin with the Governor's
6 Office of Business and Economic Development.

7 MR. LOPEZ: Good morning. Jose Lopez,
8 private citizen.

9 MR. MEYER: Good morning. Robert Meyer,
10 Employment Training Panel.

11 MS. VERGIS: Good morning. Sydney
12 Vergis, California Air Resources Board.

13 MR. ARONIN: Ruben Aronin with the Better
14 World Group.

15 MS. CASWELL: Morgan Caswell, Port of
16 Long Beach.

17 MR. SMITH: Charles Smith, Staff with the
18 California Energy Commission. Also here is Tami
19 Haas, also staff from the California Energy
20 Commission.

21 MS. BADIE: Mona Badie with the Energy
22 Commission.

23 MR. BRECHT: And at this point, we can
24 move to Advisory Committee members that are
25 participating remotely.

1 MR. ENGELBRECHT: Larry Engelbrecht, ASE
2 Education Foundation. Good morning.

3 MS. MITROSKY: Hi, everyone. Good
4 morning. Micah Mitrosky, International
5 Representative with IBEW 9th District.

6 MS. HOUSTON: Good morning. Sam Houston
7 here from the Union of Concerned Scientists.

8 MS. MOHAN: Good morning, everyone. This
9 is Neena Mohan with the California Environmental
10 Justice Alliance, also known as SEJA.

11 MS. GARCIA: Good morning. This is
12 Katherine Garcia with Sierra Club.

13 MS. QIRIAZI: Hi. This is Jerome Qiriazzi
14 with Humboldt Transit Authority.

15 MR. BRECHT: Are there any more Advisory
16 Committee members?

17 MS. SOLECKI: Good morning. Mary Solecki
18 with AJW.

19 MR. GREGORI: Good morning. Matt Gregori
20 with SoCalGas.

21 MR. BRECHT: Bill, would you like to
22 introduce yourself? Welcome.

23 MR. MAGAVERN: Bill Magavern, Coalition
24 for Clean Air.

25 MR. BRECHT: Okay. I believe that is it.

1 We can move on.

2 I just need to go over a few housekeeping
3 items.

4 First, the meeting is being recorded. We
5 ask that you mute yourselves when you're not
6 speaking, star six for those who are on the
7 telephone. A transcript of this meeting will be
8 made available on the Energy Commission website.

9 This is our first Advisory Committee
10 meeting for the Investment Plan cycle. And we
11 anticipate a second Advisory Committee meeting in
12 July.

13 There will be an opportunity for public
14 comments at the end of the meeting. And written
15 comments submitted to the docket are strongly
16 encouraged. This slide provides the location of
17 the Docket, which is 22-ALT-01, as well as the
18 location to submit comments electronically. I
19 should add, the deadline to submit comments to
20 the docket is April 29th at 5:00 p.m.

21 We ask that Advisory Committee members
22 participating virtually indicate that they would
23 like to speak or comment by using the raise-hand
24 feature. We would also like you to identify
25 yourself before you speak and your affiliation.

1 Telephone participants, dial star nine to raise
2 your hand. For those in person, you can place
3 your name plate vertically or raise your hand.
4 Also, for those participating virtually, be sure
5 to keep your chat box open in case you receive
6 any messages.

7 Now we have a lot to cover today and, as
8 a result, we may have to limit Advisory Committee
9 member comments to three minutes per discussion
10 topic and two minutes for the public, but that
11 may be adjusted, according to times later in this
12 meeting.

13 And for the meeting, I will go over the
14 agenda. We'll have opening remarks from
15 Commissioner Monahan, followed by an update on
16 the Advisory Committee Roles and Responsibilities
17 document.

18 Then we'll provide a very brief overview
19 of the Clean Transportation Program.

20 We will then provide an overview of the
21 draft staff report version of the 2022-2023
22 Investment Plan Update.

23 This will be followed by staff
24 presentations on the Clean Transportation Program
25 funding activities and related topics.

1 We will then move on to presentations by
2 CEC staff and updates on ZEV and policy
3 activities.

4 We will then transition to Advisory
5 Committee discussion on the 2022-2023 Investment
6 Plan Update, followed by public comments, and
7 ending with closing remarks.

8 And there may be a break, depending on
9 time.

10 And with that, I will now turn it over to
11 Commissioner Monahan for opening remarks.

12 COMMISSIONER MONAHAN: Well, good with
13 energy efficiency.

14 So welcome everybody. I'll just say,
15 again, it's wonderful to see folks here in
16 person, and I welcome, also the people on Zoom.

17 And you know, I just want to acknowledge
18 what a strange world we are in. Michael and I
19 were talking about we're kind of in between.
20 We're in this hybrid world where we don't know,
21 are we still on Zoom? Are we in-person? We're
22 trying to recognize people through masks. In
23 fact, I thought Lori was Morgan. Sorry about
24 that. I'm like, oh, wow.

25 And you know, it's been a challenge, I

1 think, for the Advisory Committee. I know you
2 guys were maybe pestered a little bit from our
3 team, trying to make sure that we had a quorum.
4 And the rules that were developed for open
5 meetings, in order to ensure that there aren't
6 backroom deals, just aren't flexible enough for
7 what we need today.

8 So I just really appreciate the folks
9 that came here. I know Will Barrett is coming
10 with like a terrible back. He should be not
11 here.

12 So I do have cookies. And, Will, be sure
13 to take one before you leave.

14 But just really want to acknowledge that,
15 you know, we are trying our best to make sure we
16 have your engagement as we figure out how to
17 widely spend the monies that have been allocated
18 so far for clean transportation and engage with
19 folks who couldn't come here physically. So
20 apologize for the fact that you won't be able to
21 see folks speak who are sitting.

22 So I would just encourage everybody, when
23 you provide remarks, to say your name because I
24 think that will really help the people who aren't
25 in the room.

1 To me, actually, and I think a lot of the
2 surveys that we've taken in the IEPR, indicate
3 the people prefer Zoom. I prefer Zoom. I
4 actually think it's better for public engagement
5 because for people who, you know, otherwise it
6 would be very expensive to travel here, I think
7 it just, it actually levels the playing field
8 instead of making it more difficult.

9 So I hope the legislature takes some
10 action so that we can actually do this in the
11 future. But right now, this is the law, we have
12 to follow it.

13 I want to thank the CEC staff that has
14 been working really hard behind the scenes. I'm
15 going to say some names because it's really been
16 a challenge, I think, to make this meeting
17 happen.

18 So, first, Patrick Brecht and Charles
19 Smith. I would say there aren't enough cookies
20 in the world to thank you for the work that you
21 did to pull this together, and so just really
22 appreciate your stewardship of this process.

23 Tami Haas, Michael Comiter, Spencer
24 Kelley, Hannon Rasool, have all been key. On the
25 Legal Team, Sam Arens, Samantha Arens, who helped

1 us navigate all the Bagley-Keene requirement
2 issues which have been difficult.

3 So just to bring us back to why we're
4 here today, you might recall that last year we
5 passed a three-year plan with your input. And
6 the reason why we developed the three-year plan
7 is because we wanted to provide some certainty to
8 the world, the advocates, the industry, the
9 public, about where our investments were going.
10 And so we are -- and that three-year plan
11 included both the \$100 million that we usual get
12 from the Clean Transportation Program, as well as
13 \$1.165 Billion over multiple years that the
14 legislature allocated to this work.

15 We are not proposing any changes to the
16 three-year plan. And so that's the feedback we
17 want to hear from you, whether that's the right
18 cocktail of investments.

19 The governor is proposing a little bit
20 over \$2 billion of investment in this fiscal
21 cycle. He would like to frontload \$900 million
22 of that for light-duty vehicle charging in
23 response to the pain that consumers are feeling
24 right now at the pump. And I just want to be
25 clear, that money is not included in this

1 proposal. Until the legislature acts to finalize
2 a budget, we can't allocate those funds in the
3 Clean Transportation Program, so those won't be
4 included.

5 You may recall, as well, that this
6 program expires at the end of next year. So this
7 is, you know, at least for now, this Advisory
8 Committee endures until this program expires.
9 And then it's up to the legislature to decide
10 whether to continue the program.

11 We want to make sure that we hear all of
12 your thoughts and opinions. So I really
13 encourage you, as the presentation -- as the
14 staff provides data about how we are spending the
15 money, what we're proposing to do, just be
16 cogitating on that. And then I want to make sure
17 there's space for everybody to be able to provide
18 input.

19 So it's also important for you all to
20 understand the roles and responsibilities of
21 being an Advisory Committee member. And Mona is
22 going to walk through some of the -- just some of
23 that information.

24 And I want to be clear, again, this is
25 one -- this is something where we want to -- I

1 feel very strongly that I want this Advisory
2 Committee to really be leaning in on equity and
3 have community-based representation. And there
4 are some challenges in terms of our giving grants
5 to organizations who are part of the Advisory
6 Committee and wanting to -- and applying for
7 funding, but those are -- I think at this point,
8 we've developed a very clear guidance around this
9 that Mona will walk you through.

10 But I want to be crystal clear, you can
11 be on this Advisory Committee and your
12 organization can get funding. But Mona is going
13 to walk you through how that actually works in
14 practice.

15 MS. BADIE: Good morning, everybody.
16 Okay, so my name is Mona Badie. I'm an Advisor
17 in Patty's Office. And I'm glad to be joining
18 you today and meeting many of you in person for
19 the first time.

20 Last month the CEC revised and docketed
21 our Roles and Responsibilities document for the
22 Advisory Committee and a separate Q&A on the
23 Local Reform Act section 87104. And these were
24 also emailed to you from Patrick.

25 So 87104, just to briefly recap,

1 essentially prohibits state advisory body members
2 from being paid by others to use their position
3 to influence specific state decisions on
4 contracts, grants, and other entitlements.

5 For purposes of our Clean Transportation
6 Program Advisory Committee, this essentially
7 means that Advisory Committee members as
8 individuals can continue to communicate with us
9 about program funding priorities and allocations,
10 policies, legislation, and other matters but are
11 prohibited from appearing by name or signature on
12 applications and communications to the CEC to
13 influence specific decisions on contracts,
14 grants, and other entitlements.

15 As Patty said, member organizations and
16 entities are not subject to these restrictions,
17 and neither are colleagues from your
18 representative entities.

19 This rule is limited in scope and there
20 are exceptions. So we encourage members to reach
21 out with questions about section 87104 or any
22 other aspect of the Rules and Responsibilities
23 document and your service on the Advisory
24 Committee. We really appreciate your service and
25 we want to maintain a diverse advisory body. And

1 Patrick and I are your contacts for any
2 questions.

3 Thank you. And I'll turn it back over to
4 Patrick.

5 COMMISSIONER MONAHAN: Can I say one last
6 thing?

7 I just wanted to let you all know, I'm
8 going to give you guys a preview of the zero-
9 emission vehicle sales data for Q1 of this year.
10 It's not available, actually, online, so -- and
11 you guys are getting it, even before other
12 government agencies, so I hope that people aren't
13 mad about that.

14 So the amount of the market share of ZEVs
15 sold in Q1 was almost 16 percent. And that
16 compares to 12.5 percent last year so, you know,
17 so ZEV sales are going up. And I think that's
18 one of the issues, you know, that we are laser
19 focused on is as the market accelerates, how do
20 we make sure that this is something that
21 everybody in California can get access to and
22 feel comfortable that they'll be -- there will be
23 a place to refuel their zero-emission vehicle.

24 And so that, I mean, I'm so excited that
25 the market is accelerating. California, we're

1 like almost half of the zero-emission vehicle
2 sales in the country, we're ten percent of the
3 market, almost half of the ZEV sales. So this is
4 just something, I think, as we think about what
5 the right allocations are for investment, just to
6 keep in the back of your mind.

7 I think we'll be releasing data on
8 medium- and heavy-duty, hopefully, in the next
9 month or two. So that, also, will be information
10 as we move forward about how to make appropriate
11 investments to capitalize on that market
12 opportunity.

13 And now I will turn it over to Patrick.

14 MR. BRECHT: I guess, before we begin,
15 maybe, Eileen, you could introduce yourself and
16 your affiliation? Thank you.

17 MS. TUTT: Yes. my name is Eileen Tutt.
18 I'm with the California Electric Transportation
19 Coalition and really looking forward to the
20 meeting today. Thank you.

21 MR. BRECHT: I think you can advance.
22 I'll just provide a quick overview of the
23 program.

24 The Clean Transportation Program was
25 established by California Assembly Bill 118 in

1 2007. The program was funded through a small --
2 the program is funded through a small surcharge
3 on California vehicle registrations and provides
4 up to \$100 million per year. California Assembly
5 Bill 8 extended the program to January 1st, 2024.

6 The Clean Transportation Program provides
7 financial support for products that reduce
8 greenhouse gas emissions within the
9 transportation sector, which accounts for roughly
10 50 percent of state greenhouse gas emissions.
11 Furthermore, the program plays an important role
12 in improved air quality, investments in low-
13 income and disadvantaged communities, economic
14 development and recovery, job growth and
15 workforce development, petroleum reduction, and
16 adoption of zero-emission vehicles.

17 Next slide.

18 Now in the 14th year, the Clean
19 Transportation Program has provided over \$1
20 billion in alternative fuel and vehicle
21 technology projects in communities that can best
22 accrue health, environmental, and economic
23 benefits from these investments.

24 The Clean Transportation Program has been
25 an essential part of making California a leader

1 in near- and zero-emission vehicle -- or zero-
2 emission transportation. This slide shows the
3 key outcomes from our program through December
4 2021. The program has funded over 15,000
5 installed or planned chargers for plugin electric
6 vehicles, created innovative and efficient block
7 grants for both light-duty and medium- and heavy-
8 duty ZEV infrastructure.

9 We've also supported the largest network
10 of hydrogen fueling stations in the nation with
11 80 funded hydrogen fueling stations, plus
12 approval to fund an additional 74 stations based
13 on deployment in progress, funding availability,
14 and program funding allocations. Of these
15 stations, 13 will accommodate medium- and heavy-
16 duty vehicles, as well as passenger vehicles.

17 The program has created workforce
18 training for more than 22,000 trainees and 277
19 businesses, launched 71 projects to promote the
20 production of sustainable low-carbon alternative
21 fuels within California with a cumulative annual
22 production capacity of equivalent to more than
23 158 million gallons of diesel fuel.

24 Next slide, please.

25 Today we will discuss the staff draft

1 version of the 2022-2023 Investment Plan Update
2 of the Clean Transportation Program. The funding
3 allocations remain the same, as indicated in last
4 year's multiyear plan. This document, updated
5 annually, serves as the basis of the program's
6 funding opportunities to each fiscal year.

7 The allocations reflect considerations of
8 state and federal policies and regulations, as
9 well as the coordination with state agencies,
10 such as the California Air Resources Board and
11 the California Public Utilities Commission among
12 others. The Investment Plan lays out how the
13 coming fiscal year's funds will be allocated
14 across different fuels, vehicle sectors, and
15 supporting activities.

16 The document is vetted through a public
17 review process that involve multiple iterations
18 of the document and meetings with our Advisory
19 Committee, one which we're having today.

20 And, finally, the Investment Plan sets
21 allocations for various funding categories, not
22 for individual projects.

23 Next slide.

24 In preparing the Investment Plan, the CEC
25 seeks to increase the participation of

1 disadvantaged and under-represented communities
2 from a diverse range of geographical regions.

3 The CEC also seeks to effectively engage
4 communities disproportionately burdened by
5 pollution, and improve economic resiliency,
6 including rural and tribal communities. And this
7 effort includes consulting with the Disadvantaged
8 Communities Advisory Group for guidance and
9 recommendations on program effectiveness as it
10 relates to disadvantaged communities and other
11 vulnerable and under-represented groups,
12 consulting with the CEC's Public Advisor's Office
13 or the Tribal Program, the CEC's Tribal Program
14 and the CEC's Tribal Lead Commissioner for
15 assistance with outreach and promotion of
16 transportation-related funding opportunities to
17 tribes, and assessing whether electric vehicle
18 charging stations, station infrastructure, is
19 disproportionately distributed as examined in the
20 SB 1000 analysis.

21 Next slide.

22 His slide reflects the program's
23 community benefits, which includes seeking to
24 provide more than 50 percent of funds to projects
25 that benefit low-income and disadvantaged

1 communities, planning a public process to define,
2 measure, track and target more community
3 benefits, and explore community benefits that go
4 beyond project location and greenhouse gas
5 emission reductions such as health, mobility
6 options, economic and more.

7 Next slide.

8 Let me shift to provide context for
9 developing the Clean Transportation Program
10 Investment Plan.

11 The allocations and implementation of the
12 program reflect the effects of numerous policies
13 and goals by legislature, regulation, and
14 executive order. The net result of these
15 policies have been to steer the program towards
16 zero-emission fuels and technologies.

17 Such policies include reducing greenhouse
18 gas emissions to 40 percent below the 1990 levels
19 by 2030, reducing short-lived climate pollutant
20 emissions, such as methane, to 40 to 50 percent
21 below 2013 levels by 2030, achieving a carbon-
22 neutral economy by 2045, setting specific goals
23 to boost the supply of zero-emission vehicles, or
24 ZEVs, as well as charging and fueling stations,
25 including, by 2025, having at least 1.5 million

1 ZEVs on the road, installing 200 hydrogen fueling
2 stations, and 250,000 battery-electric vehicle
3 chargers including 10,000 direct-current fast
4 chargers or DC fast chargers by 2025, and by
5 2030, having 5 million ZEVs on the road.

6 Next slide.

7 Now by 2035, transitioning 100 percent of
8 new sales of passenger vehicles and trucks to
9 ZEVs, transitioning 100 percent of drayage
10 trucks, transitioning 100 percent of operating
11 offroad vehicles and equipment to zero-emission
12 wherever feasible. And by 2045, transitioning
13 100 percent of operating medium- and heavy-duty
14 trucks and buses to zero-emission vehicles by
15 2045 everywhere feasible.

16 Next slide.

17 Informing the Investment Plan. We have
18 the AB 2127, or the report, which is Electric
19 Vehicle Charging Infrastructure Assessment,
20 analyzing charging needs to support zero-emission
21 vehicles in 2030. And we'll have Kiel speak on
22 this a little bit later in the presentation.

23 We have the SB 1000 report, or the
24 Electric Vehicle Charging Infrastructure
25 Deployment Assessment, and we'll have Tiffany

1 speak on this effort later in the presentation.

2 There is consulting and coordination with
3 other state agencies, as well as consulting with
4 the Disadvantaged Communities Advisory Group,
5 the CEC's Public Advisor's Office, as mentioned
6 earlier, and the CEC's Tribal Program and the
7 Commissioner.

8 Next slide.

9 Now this slide shows the Investment Plan
10 process and proposed schedule. The CEC published
11 a staff draft on April 5th. The first Advisory
12 Committee meeting is taking place today. After a
13 Lead Commissioner review level -- review of the
14 comments from the Advisory Committee meeting, and
15 in DACAG consultations, plus docket submissions
16 from stakeholders and the public, we'll publish a
17 revised staff draft end of June, then a second
18 Advisory Committee meeting around mid-June --
19 excuse me, mid-July, and once again, a review of
20 feedback.

21 The Lead Commissioner Report is then
22 published and brought to the CEC business meeting
23 for approval, currently set for mid-September.
24 The approval provides the plan's funding
25 allocations for Fiscal Year 2022-2023 and signals

1 the plan's funding allocations for the subsequent
2 half-fiscal year.

3 And these dates are tentative and, of
4 course, rely on the legislative and budget
5 process. And we'll be monitoring that and making
6 adjustments to the schedule if need be.

7 Next slide.

8 Combined, both Clean Transportation
9 Program funding -- or I should say the key
10 priorities for the staff draft, eventually
11 provide both Clean Transportation Program funding
12 and General Fund ZEV package investments from
13 Budget Act of 2021.

14 Funding allocations are focused on ZEV
15 infrastructure, both battery-electric and
16 hydrogen fuel cells, and ZEV manufacturing. The
17 proposed allocations reflect the state goals of
18 ZEVs, as well as near- and long-term carbon
19 reduction, improved air quality, and equity with
20 the focus of providing benefits for disadvantaged
21 communities.

22 Coordination with state agencies for the
23 Zero-Emission Vehicle Infrastructure Plan, or
24 ZIP, and we'll have Thanh speak of this later in
25 the presentation.

1 And, of course, there's a focus on
2 equity, ensuring Clean Transportation Program
3 investments benefit communities of color,
4 disadvantaged communities, low-income
5 communities, rural communities, tribal
6 communities, and those living in multifamily
7 housing, and seeking to provide more than 50
8 percent program funds from the Investment Plan
9 towards projects that can benefit low-income and
10 disadvantaged communities.

11 Next slide.

12 This slide shows how we are proposing to
13 translate the aforementioned funding priorities
14 into real funding allocations over the next one-
15 and-a-half fiscal years. You can see the total
16 funding for medium- and heavy-duty ZEV
17 infrastructure in recognition of the need to
18 swiftly transition to more -- to the most -- or
19 swiftly transition to the most polluting vehicle
20 toward zero-emission technologies in the most
21 sensitive regions of the state. This includes
22 both battery-electric and hydrogen fuel cells.

23 Next slide.

24 Here is a combined Transportation Program
25 and General Fund allocations for the draft staff

1 report. The allocations for the 2022-2023
2 Investment Plan Update are, as Commissioner
3 Monahan mentioned, unchanged from last year's
4 2021-2023 Investment Plan Update. The purpose of
5 the multiyear plan is to provide certainty in the
6 market and to stakeholders with the opportunity
7 to adjust funding allocations on an annual basis
8 as needed.

9 The CEC is not recommending any
10 adjustments at this time but welcomes your
11 feedback by stakeholders on their
12 recommendations.

13 The plan update combines both the program
14 funding and the General Fund ZEV package from the
15 Budget Act of 2021, as mentioned. The table
16 showing the funding allocations for Fiscal Year
17 2022-2023, funding projections for the remainder
18 of the Clean Transportation Program, as well as
19 the \$1.165 billion over three years made
20 available through the General Fund ZEV package of
21 the Budget Act of 2021.

22 The allocations reflect the state goals
23 of ZEVs, as well as near- and long-term carbon
24 reduction, improved air quality and equity with a
25 focus on providing benefits, as mentioned before,

1 to low-income and disadvantaged communities. Now
2 the table shows an allocation of about \$50
3 million to support light-duty passenger vehicles.
4 This includes, of course, light-duty vehicle
5 charging and hydrogen refueling, and more than
6 \$160 million to support medium- and heavy-duty
7 vehicles in Fiscal Year 2022-2023.

8 As mentioned earlier, investments in
9 medium- and heavy-duty ZEV infrastructure
10 reflects the need to swiftly transition these
11 vehicles away from the most polluting vehicles
12 and towards ZEV infrastructure.

13 For light-duty charging infrastructure,
14 the CEC allocates \$30.1 million in the current
15 fiscal year and \$13.8 million in the remaining
16 half-fiscal year which, along with the prior
17 investments, should be sufficient to meet the
18 state's goal of having 250,000 chargers by 2025.

19 For light-duty hydrogen infrastructure,
20 the CEC allocates \$20 million for the current
21 fiscal year and an additional \$10 million for the
22 half-fiscal year of 2023-2024, which will be
23 sufficient to meet the 100 station goal set by AB
24 8.

25 An additional \$27 million from the

1 General Fund ZEV package investments from the
2 Budget Act of 2021 included in last year's
3 Investment Plan, as shown here, is anticipated to
4 help the station reach -- or the state reach the
5 200 station goal. The CEC projects that these
6 200 stations will have the capacity to support
7 and refuel about 290,000 fuel cell electric
8 vehicles. And station capacity is not expected
9 to be a barrier to near-term deployment.

10 Now for Fiscal Year 2022-2023, the CEC
11 allocates \$10 million of Clean Transportation
12 Program funding for zero- and near-zero carbon
13 fuel production and supply. Funding priorities
14 of this allocation may include increasing the in-
15 state production of low-carbon fuels from waste-
16 based feedstocks, such as woody biomass from
17 forests and agricultural sources, supporting
18 upstream blending infrastructure, and improving
19 state supply of renewable hydrogen from renewable
20 electricity or biomethane.

21 The Budget Act of 2021 provides \$125
22 million of General Fund money in Fiscal Year
23 2021-2022 for the CEC to investment in
24 manufacturing grants to increase in-state
25 manufacturing for zero-emission vehicles, zero-

1 emission vehicle components, and zero-emission
2 vehicle charging or refueling equipment. An
3 additional \$125 million for the same activity was
4 included in the Governor's Budget Plan for Fiscal
5 Year 2022-2023.

6 Based to the state's ZEV regulations,
7 increased deployment of ZEVs and the need to meet
8 critical ZEV training needs, especially in
9 priority communities, the CEC allocates \$5
10 million for workforce training and development
11 for Fiscal Year 2022-2023.

12 The CEC will continue to support new
13 public-private partnerships and leverage limited
14 resources to determine how program funding can be
15 best invested to maximize the benefits of this
16 funding.

17 Workforce training and development
18 investments will continue to support priority
19 communities, meet ZEV industry needs, create
20 workforce partnerships, and advance job quality
21 and quantity across the entire ZEV workforce
22 ecosystem.

23 Next slide.

24 Now here's the Governor's Budget, as it
25 is, for 2022-2023, and Commissioner Monahan

1 touched on this earlier. This is a proposed
2 budget which will be updated at the May revise
3 and will go through the legislative process. As
4 it stand today, we would receive an additional \$2
5 billion as part of the new four-year package.
6 This is on top of last year's three-year package.

7 The light-duty investments are focused on
8 equity and access. \$900 million will be towards
9 light-duty passenger vehicle infrastructure,
10 primarily for the broad network of grid-
11 integrated high-powered DC fast chargers and at-
12 home charging for multifamily residents, along
13 with low-income single-family homes.

14 The medium-duty and heavy-duty
15 infrastructure investments will total \$1 billion.
16 They will support our traditional investments to
17 support on-road medium- and heavy-duty, but will
18 also support offroad vehicles, agricultural
19 vehicles, and construction equipment.

20 On top of that, we would be receiving
21 \$100 million to support zero-emission aviation,
22 marine, and locomotive. Part of the \$100 million
23 will be used for a VGI pilot, likely in the
24 passenger vehicle space.

25 Once there is more certainty of the ZEV

1 package from the 2022-2023 state budget, it will
2 be at that time that the CEC will integrate
3 General Funds with the Clean Transportation
4 Program funds, which means the funding
5 allocations in the Investment Plan may be
6 adjusted. For this purpose, the meeting will be
7 focused on this draft staff version as is.

8 We'll now shift to CEC staff
9 presentations which will provide funding updates,
10 which include funding from last year's approved
11 multiyear Investment Plan.

12 And now, with that, I will turn it over
13 to Samridhi, who will provide Clean
14 Transportation Program funding updates for the
15 light-duty ZEV infrastructure funding category.

16 And it looks like --

17 COMMISSIONER MONAHAN: Before we --

18 MR. BRECHT: -- Patricia.

19 COMMISSIONER MONAHAN: -- before we
20 pivot, I just want to let folks know that Mona
21 just circulated via email the slides. So if
22 you're having a hard time seeing them or you want
23 to go back, just open your email and you'll find
24 them there.

25 MS. SONI: Good morning, everyone. my

1 name is Samridhi Soni and I am the Energy
2 Resources Specialist III in the Electric Vehicle
3 Infrastructure Deployment Unit.

4 Next slide, please.

5 So the goals of the light-duty electric
6 vehicle infrastructure as centered around
7 establishing equity in terms of building access
8 to electric vehicle charging infrastructure
9 throughout the state and making sure the
10 installations are rapid and provide an enhanced
11 EV driving experience.

12 Next slide, please.

13 Next, I will be sharing some of the
14 achievements from our first block grant, CALeVIP
15 1.0.

16 And next slide, please.

17 The California Electric Vehicle
18 Infrastructure Project, otherwise known as
19 CALeVIP 1.0, has now added over \$220 million in
20 incentives in 36 California counties, with \$200
21 million from CEC funding and more than \$40
22 million from partner funding. The entire project
23 will result in the installation of about 7,000
24 chargers, both Level 2s and DC fast Chargers,
25 throughout the state of California. Keeping the

1 focus on equity, more than half of the chargers
2 are in the disadvantaged and low-income
3 communities.

4 CALeVIP has seen a very high
5 participation rate and has evolved significantly
6 with some successes and some lessons learned,
7 which we will carry forward to our other
8 projects. The following slide is about Block
9 Grants 2.0 in which we have incorporated some of
10 the lessons learned in CALeVIP 1.0.

11 Next slide, please.

12 The second block grants have an approved
13 funding of \$250 million each for both the block
14 grants. Taking into account stakeholder
15 feedback, the CEC released a solicitation and
16 selected two block grant implementors, CEC -- I'm
17 sorry, CSE and CALSTART. The agreements for both
18 of these were executed in January of 2022.

19 We are anticipating public workshops in
20 spring of this year to help refine the design of
21 both the block grants. There will be funding
22 available for both Level 2 and DC fast chargers
23 with some technical assistance.

24 While the goal of both block grants will
25 be rapid deployment of chargers, the focus will

1 be on equity. And we will be following our
2 Investment Plan commitment with half of the
3 funding going to disadvantaged and low-income
4 communities.

5 Thank you.

6 MS. MAGANA: Okay. Good morning,
7 everyone. I'm Pilar Magana with the Electric
8 Vehicle Infrastructure Innovation Unit in the
9 Fuels and Transportation Division. And I will be
10 giving a brief overview of our three recent
11 solicitations that were designed to create
12 solutions to specific high-priority challenges.

13 So unlike block grants that have
14 standardized and simplified applications, these
15 are competitive solicitations where we set
16 specific criteria that applicants must meet in
17 order to be eligible. Applicants are asked to
18 submit their best ideas via an application
19 process to address these challenges. In the case
20 of these three solicitations, we targeted the
21 expansion of accessibility to EV infrastructure
22 throughout the state.

23 The first solicitation, which was
24 mentioned earlier, is our CARTS agreement, which
25 is Charging Access for Renewable On-Demand

1 Transportation Services. This funding
2 opportunity was for approximately \$16.6 million
3 and ten projects were selected for recommendation
4 for funding. We are currently in the agreement
5 development phase for this solicitation and we'll
6 be seeking approval of these projects at the May
7 and June business meetings.

8 The next two solicitations are in the
9 scoring phase of the solicitation process. The
10 first solicitation, which is REACH, which is
11 Reliable, Equitable, and Accessible Charging for
12 Multifamily Housing, and this solicitation is for
13 \$8.5 million.

14 And the other solicitation is REV, or
15 Rural Electric Vehicle Charging. And this
16 solicitation is for approximately \$4.8 million.

17 For these two solicitations, we expect to
18 seek approval for selected projects under the
19 last two solicitations in late summer of this
20 year.

21 And I'm happy to answer any questions or
22 provide any additional information the Advisory
23 Committee may have on these solicitations. Thank
24 you.

25 And I will hand it over to Sharon.

1 MS. PUREWAL: Good morning, everyone.

2 Today I will be light-duty electric vehicle
3 infrastructure funding plans.

4 Next slide, please.

5 All right, as Patrick mentioned earlier,
6 in last year's Investment Plan, approximately
7 \$270 million in General Funds and Clean
8 Transportation Program funding were allocated to
9 light-duty electric vehicle charging. Last
10 December, we held a public workshop to gather and
11 solicitate stakeholder feedback. The following
12 concepts were presented for feedback.

13 So the first concept is block grants, and
14 Samridhi touched on some of those block grant
15 concepts that we have, and CALeVIP that we
16 already had been piloting. So we proposed
17 general (indiscernible) designs and funding
18 amounts for future block grants there.

19 We also wanted to solicit feedback on
20 vehicle grid integration pilots, so this involved
21 microgrids and charging, and also accelerating
22 vehicle grid integration, of course.

23 So the next concept that we floated to
24 get feedback on is local government fleets. This
25 concept aimed to fund infrastructure to

1 accelerate adoption of EVs by local government
2 agencies, cities and counties.

3 Next concept, corridor charging. This
4 looked to build out corridor charging along
5 corridors in California that had little or no
6 direct-current fast charge. This also would
7 increase the density of the DC/FC sites by adding
8 chargers at installed stubouts (phonetic) that
9 were previously stalled by either other
10 solicitations we had previously or other
11 entities.

12 Next, we had BESTFIT 2. This item was
13 presented to duplicate the 2020 BESTFIT
14 solicitation to solicit additional innovation
15 regional concepts for EV charging.

16 Next, we have high-density Level 2
17 charging. This concept presented to install a
18 large number of Level 2 chargers in areas with
19 high traffic density, such as downtown corridors.
20 And this can include curbside charging, as well,
21 parking garages.

22 Low-income residential charger support,
23 this was presented to support charging access to
24 low-income populations to support equity and
25 target a comprehensive education program in

1 multiple languages.

2 And last -- or, sorry, second to last, we
3 have increasing physical signage for EV charging
4 stations. This is pretty self-explanatory. We
5 want to make sure that our investments are known
6 and that people can find chargers.

7 We, also, we're looking at community-led
8 EV infrastructure projects, so that's pretty
9 self-explanatory, too. This could support any of
10 the concepts above, actually, generally.

11 Next slide, please.

12 So as a result of that public workshop,
13 these are the steps we are going to proceed with.

14 As Samridhi mentioned earlier, we are
15 going to be funding second block grants. And as
16 you can see, we're up to \$150 million for that.
17 And our development schedule for that is quarter
18 one through quarter four.

19 We will move forward with high-density
20 Level 2 charging for density centers, so this is
21 \$24 million, and will be developed this year as
22 well.

23 And, also, signage. We are approximating
24 \$1 million for this. And this is going to be
25 developed now, the initial phases.

1 Also, we will be putting additional
2 funding into on-demand transportation services.
3 Now this wasn't explicitly mentioned in the last
4 slide but this, we did receive a lot of feedback
5 on this, actually. So we will be funding \$10.6
6 million for this. And this will be things like
7 Uber, Lyft, on-demand transportation in general.

8 So with that, I would like to thank you
9 for your time. And if you have any questions at
10 any time, please let me know.

11 Thank you.

12 MR. LU: Hey. Good morning, everyone. My
13 name is Jeffrey Lu. I work in the Vehicle Grid
14 Integration Unit here in the Fuels and
15 Transportation Division.

16 You just heard a lot about the CEC's work
17 in getting chargers funded and installed
18 throughout the state. And I want to spend a
19 couple minutes talking about our efforts that
20 support charge interoperability and the
21 development of new charging capabilities.

22 Next slide.

23 The focus of my remarks today is on
24 charging communication. Every time someone plugs
25 into charge there's a communication handshake

1 that takes place between the charger and the
2 vehicle. Even though there are standards for
3 this communication, every company interprets the
4 standard a little differently. And sometimes
5 these differences are problematic enough that a
6 charger and vehicle pair are not interoperable,
7 meaning that get you a failed charging session.

8 We hear stories about this all the time.
9 Someone pulls up to a charge and, although
10 everything looks okay, they just can't get the
11 charging session to start. This status quo is
12 unacceptable. And improving this communication
13 and interoperability among different brands is
14 key to the reliability of our charging network.

15 Beyond that basic handshake, the
16 communication between the vehicle and the charger
17 is also the foundation for a lot of advanced
18 features that we want to be widely available to
19 Californians. These include managed charging so
20 that we automatically charge up when electricity
21 is cheapest or when emissions on the grid are
22 lowest, and even bidirectional charging so that
23 we can power our homes and buildings when there's
24 an outage, or even just when just electricity is
25 more expensive.

1 There's are two projects funded by the
2 Clean Transportation Program I want to call out
3 today that support this charging communication
4 work.

5 The first is our Vehicle Grid Innovation
6 Lab, or what we call ViGIL. The CEC awarded a
7 nearly \$2-million grant to DEKRA certain to
8 establish a charge testing lab in the East Bay.
9 This lab will offer testing services to make sure
10 that chargers have that basic charging handshake
11 implemented correctly.

12 ViGIL can also test that chargers
13 implement features, such as bidirectional
14 charging or plugin charge in an interoperable
15 manner.

16 DEKRA expects to open this lab for
17 business later this year. And we think this will
18 be a very valuable resource for charging
19 providers here in California and for beyond, as
20 well.

21 The second effort is the Vehicle
22 Interoperability Testing Symposium, or what we
23 call VOLTS. We awarded a \$910,000 contract to
24 INOS (phonetic) to plan and host a collaborative
25 testing event in California. And at this testing

1 event, automakers and charging providers will
2 gather to test that their products interoperate
3 with one another. These testing events are very
4 useful for catching corner cases that might not
5 pop up in testing at ViGIL. And they're also
6 just a great opportunity for industry to get
7 together and learn from one another.

8 Overall, we think that these efforts will
9 lead to a better charging experience than what
10 you get at the fuel pump today and will also
11 enable EVs to become grid and resiliency assets.

12 Thanks for your time. And feel free to
13 reach out if you'd like to chat about any of
14 these efforts in greater detail.

15 MS. ODUFUWA: Yes. Good morning,
16 everyone. My name is Esther Odufuwa, Energy
17 Comment Specialist I in the Freight and Transit
18 Unit within the Fuels and Transportation
19 Division. So today, I'll be presenting on
20 medium-duty and heavy-duty ZEV infrastructure
21 funding, including the concepts that were
22 presented at the February 28, 2022 workshop.

23 Next slide.

24 Medium-duty and heavy-duty vehicles
25 represent a significant opportunity to reduce

1 greenhouse gases and criteria emissions while
2 (indiscernible) on the smaller of vehicles. And
3 to meet the state's GHG and air quality goals,
4 this sector will need to transition to zero-
5 emission technologies. But the resources
6 required for this to be an equitable transition
7 are more than the available funding.

8 Transition of medium- and heavy-duty ZEVs
9 will help reduce air pollution in communities
10 that have historically faced higher levels of
11 harmful diesel pollution, with a focus on the
12 disadvantaged communities. So as the state's
13 lead agency for ZEV infrastructure deployment,
14 the CEC is focusing on the infrastructure needs
15 of medium- and heavy-duty ZEVs.

16 In addition, CEC is seeking ways to
17 include grid integration, integrated storage
18 solutions, and charge management as complimentary
19 technologies.

20 Another goal is to help the markets for
21 medium-duty and heavy-duty ZEVs and the
22 infrastructure grow to scale. And, of course,
23 more importantly, act as a foundation for an
24 equitable and sustainable economic recovery by
25 drawing private investments to California and

1 creating jobs in manufacturing, construction and,
2 of course, engineering.

3 Next slide.

4 For the Fiscal Year 2021-2022, the CEC
5 allocated more than \$30 million in Clean
6 Transportation Program funding and nearly \$208
7 million in General Funds that were dedicated to
8 medium- and heavy-duty ZEVs and the
9 infrastructure.

10 This slide displays a funding breakdown
11 of the last few fiscal year's projects. These
12 grant-funded opportunities were developed with
13 stakeholder feedback from a medium-duty/heavy-
14 duty allocation workshop that we held in October
15 of 2019. Most of the agreements that resulted
16 from this solicitation have already been
17 presented at several CEC business meetings, while
18 others are still being developed.

19 Next slide.

20 For future Clean Transportation Program
21 funding and General Funds that are dedicated to
22 medium- and heavy-duty ZEVs and infrastructure,
23 staff held a workshop on February 28th this year
24 and we presented on topics which focused on
25 (indiscernible) concepts that are in addition to

1 and that may not be provided by the block grant
2 for medium-duty/heavy-duty, which is referred to
3 as EnergIIZE Commercial Vehicle Project. This
4 project will be presented by Manuel later.

5 Over 300 participants attended the
6 workshop. And staff are currently reviewing the
7 written comments that we have received.

8 Next slide.

9 I want to call out one concept of
10 particular interest which is the medium- and
11 heavy-duty blueprint planning document. This
12 concept will be similar to the previously-
13 released grant funding opportunity that was tied
14 to the blueprints for medium- and heavy-duty
15 zero-emission vehicle infrastructure.

16 The previously-released competitive grant
17 solicitation for medium-duty and heavy-duty
18 blueprints provided funds for planning blueprints
19 that will identify actions and milestones that
20 are needed for implementation of medium- and
21 heavy-duty ZEVs and the related electric charging
22 and/or hydrogen refueling infrastructure.

23 Forty applicants were proposed for award
24 across multiple California counties and vehicle
25 sectors, totaling nearly \$8 million. Funding was

1 available to fund all passing projects.

2 Again, this medium- and heavy-duty
3 blueprint projects are targeting completion
4 beginning in Q4 of 2022, all through 2024. And
5 these projects are meant to be replicable across
6 fleets and will seek to accelerate the deployment
7 of medium- and heavy-duty ZEVs and the ZEV
8 infrastructure. Planning, of course, will
9 continue to pertain to all the fleets as the
10 design, permit, (indiscernible), and futureproof
11 the ZEV infrastructure projects.

12 Next slide.

13 So I mentioned that we have a workshop in
14 February. And the deadline to submit written
15 comments for that workshop was Friday, March
16 18th. But our team will continue to accept
17 comments that are submitted through that docket.
18 Right now our team is currently reviewing all the
19 comments that we have received. We're also
20 meeting with stakeholders for further discussion.
21 And we will subsequently be issuing a series of
22 competitive solicitation, known as grant funding
23 opportunities, or GFOs.

24 We also plan to hold several pre-
25 solicitation and solicitation workshops as these

1 solicitations are developed and released. And we
2 will continue our coordination efforts with CARB
3 and other agencies.

4 This concludes my presentation. Thank
5 you for your time.

6 I will now invite my colleague, Manuel,
7 to present on EnergIIZE. Thank you.

8 MR. AGUILA: Thank you, Esther.

9 Greetings everyone. My name is Manuel
10 Aguila, Specialist in the Fuels and
11 Transportation Division. Today, I'll be
12 providing an overview of the Energy
13 Infrastructure Incentives for Zero-Emission
14 Commercial Vehicles Block Grant, also known as
15 EnergIIZE.

16 Next slide, please.

17 Approved at the March 2021 business
18 meeting, the Block Grant Program provides
19 financial incentives to increase adoption of
20 commercial medium-duty and heavy-duty zero-
21 emission vehicles to promote healthier
22 communities. The program funding helps
23 commercial fleets keep pace with industry demands
24 as they transition away from fossil fuels towards
25 zero-emission vehicles and helps to advance zero-

1 emission infrastructure technology.

2 Currently, the program is approved for
3 \$50 million with a funding authority of up to
4 \$276 million. And funds are administered in
5 partnership with CALSTART, Tetra Tech, and Grid
6 Alternatives.

7 Next slide, please.

8 Now, the EnergIIZE Program is comprised
9 of four funding lanes. The first funding lane is
10 an electric vehicle fast-track lane.

11 Applications in this funding lane are reviewed on
12 a first come-first served basis. And this lane
13 was allocated \$16 million and it was designed
14 specifically for applicants who have prior
15 experience applying for medium- or heavy-duty EV
16 funding and own or have a EV on order.

17 A few of the highlights of the fast-track
18 applications process, which began accepting
19 applications on March 23rd, was we received a
20 total of 72 applications with funding lane being
21 fully subscribed within two minutes of opening.
22 Application requests totaled in excess of \$24
23 million. And the average incentive request was
24 for around \$400,000, with 85 percent of
25 applicants meeting our equity criteria and/or our

1 locating infrastructure in a disadvantaged or
2 low-income community.

3 The next three funding lanes have a
4 competitive application process where
5 applicants -- or applications will be scored on
6 criteria demonstrating project readiness, cost
7 effectiveness, and community benefit.

8 The second funding lane is the EV
9 jumpstart lane and is designed for eligible
10 applicants that meet one or more of eligible
11 criteria, including but not limited to tribal
12 entities, school districts in a designated
13 disadvantaged community, and low-income
14 communities.

15 The third funding lane is for EV public
16 charging station and is designed to fund public
17 DC fast chargers of 150 kilowatts or greater.

18 And the fourth funding lane is for
19 hydrogen vehicles and is intended for deployment
20 of hydrogen refueling equipment for medium- and
21 heavy-duty hydrogen fuel cell vehicles.

22 Lastly, CEC staff is working with
23 EnergIIZE, our EnergIIZE partners, to finalize
24 the last three funding lanes and hope to have
25 applications available soon. CEC staff look

1 forward to working with our partners and obtain
2 future applications and support commercial
3 transition to zero-emission vehicles.

4 And now I'll turn the presentation over
5 to Mark Johnson.

6 MR. JOHNSON: Thanks, Manny.

7 Hi. I'm Mark Johnson and I'm part of the
8 Hydrogen Strategy Infrastructure and Production
9 Unit where we manage the grant funding for
10 hydrogen refueling infrastructure. Current
11 funding allocations include \$20 million for
12 Fiscal Year 2022-2023, an \$10 million for Fiscal
13 Year 2023-2024.

14 Next slide, please.

15 Assembly Bill 8 directs the CEC to
16 allocate \$20 million annually to develop hydrogen
17 refueling stations until there are at least 100
18 publicly-available hydrogen refueling stations in
19 California.

20 In January 2018, Governor Brown signed
21 Executive Order B-48-18 to set an additional
22 target of 200 hydrogen refueling stations by
23 2025. So far the CEC's Clean Transportation
24 Program has a current investment of \$166 million
25 with a plan to investment \$279 for public

1 stations. This is expected to generate \$190
2 million in matched funding toward developing
3 hydrogen refueling stations. California's
4 current and planned investments rank second only
5 to Japan internationally.

6 California has also planned to have
7 additional investments in private infrastructure
8 for heavy-duty transit stations.

9 Next slide, please.

10 Currently, there are 58 open retail
11 light-duty hydrogen refueling stations in
12 California, with another 31 Clean Transportation-
13 funded stations under construction. We are also
14 seeing some private investment occurring in the
15 hydrogen station space with an additional six
16 stations planned.

17 Under the CEC's latest hydrogen station
18 solicitation, GFO-19-602, the CEC expects an
19 additional 82 stations to be built, 13 of which
20 will support medium- and heavy-duty vehicle
21 refueling. This brings the total number of open
22 and planned light-duty stations in California to
23 177. This planned station capacity can support
24 about 240,000 vehicles.

25 Industry projects that 61,100 FCEVs will

1 be in California roadways by 2027. The current
2 count of FCEVs is a little over 12,700 as of
3 March 2022.

4 Next slide, please.

5 Since 2010, individual station capacity
6 has grown over 500 percent. Stations from 2010
7 supported about 250 vehicles. And an average
8 newer station coming online can now support about
9 1,700 vehicles.

10 The chart on the right also shows that
11 the average station development time is about two
12 years in length.

13 Next slide, please.

14 In addition to light-duty hydrogen
15 refueling stations, there are currently seven
16 medium- and heavy-duty stations operating in
17 California, with an additional four stations
18 planned, as shown on the map. These stations
19 include transit and heavy-duty truck refueling.

20 Next slide, please.

21 The Clean Transportation Program has also
22 funded renewable hydrogen production facilities.
23 So far, five projects have been funded for a
24 total of four distinct locations, as shown on the
25 map. These projects cost \$17 million in Clean

1 Transportation funding and brought in a total of
2 \$66 million in matched funding. The total new
3 production capacity for these projects is nearly
4 24,000 kilograms per day using electrolysis and
5 gasification technologies.

6 Next slide, please.

7 The next steps for hydrogen refueling
8 infrastructure include continuing to develop
9 hydrogen refueling stations awarded under GFO-19-
10 602. Hydrogen has also received \$27 million in
11 one-time funding to be used in a new
12 solicitation.

13 There was a workshop held on February
14 28th, 2022. And the CEC staff are currently
15 looking over public docket comments for this
16 workshop.

17 Lastly, the CEC does expect to reach the
18 200 station goal with the combination of the new
19 solicitation and, also, recent private investment
20 announcements.

21 And Now I'd like to turn it over to Hieu.

22 Thank you.

23 MR. NGUYEN: Thanks, Mark.

24 Good morning, everyone. My name is Hieu
25 Nguyen, staff with the Fuels and Transportation

1 Division. Today, I will provide a summary and
2 update on zero- and near zero-carbon fuel
3 production and supply funding category,
4 specifically funding solicitation GFO-20-608, the
5 Ultralow Carbon Fuel Production Facility and
6 Blending Infrastructure Solicitation.

7 Next slide.

8 This funding solicitation supports the
9 following goals: commercial-scale fuel or
10 blending technologies and cost effectiveness of
11 the fuel production; increasing the in-state
12 production and supply of ultralow carbon
13 alternative fuels, which we define as a fuel with
14 a carbon intensity score of equal or less than 30
15 grams of carbon dioxide-equivalent per megajoule;
16 supporting commercial-scale fuel production
17 typically equates to a higher cost effectiveness
18 of the mitigation of greenhouse gas emissions;
19 lastly, creating jobs in low-income communities.

20 Next slide.

21 This competitive solicitation was
22 released in April 2021. The Clean Transportation
23 Program initially provided \$8 million in funding
24 to support ultralow carbon transportation fuel in
25 two funding categories, \$6 million for

1 commercial-scale fuel production facilities, and
2 \$2 million for fuel blending infrastructure.

3 This solicitation followed a two-phase
4 evaluation process which included a pre-abstract
5 phase and a full application phase. The two
6 areas of focus for this solicitation were to
7 provide support for projects that increase the
8 in-state fuel production and/or blending capacity
9 of ultralow carbon alternative fuels.

10 Proposed projects must use commercially-
11 tested fuel production/blending technologies and
12 expand their fuel capacity by 1 million diesel
13 gallon-equivalents or more per year. Fuel
14 blending projects were restricted to supporting
15 only the blending of renewable diesel and
16 biodiesel.

17 Next slide.

18 The next few slides provide a summary of
19 the benefits for the awarded projects for GFO-20-
20 608. This slide summarizes the benefits for the
21 three fuel production awards. The benefits are
22 as follows.

23 All three projects support the biomethane
24 fuel category in three distinct project types.
25 The California Grinding Project is located at a

1 waste processing center that utilizes green
2 waste, such as yard clippings, grass, and other
3 plant materials, dairy manure, and food waste.

4 The Merced Pipeline Project is a dairy
5 digester cluster project that uses dairy manure.

6 The SoCal Biomethane Project is at a
7 wastewater facility that processes food waste and
8 wastewater.

9 These fuel production projects support
10 the increase of in-state fuel production capacity
11 of near-zero or carbon-negative compressed
12 renewable natural gas by nearly 5 million diesel
13 gallon-equivalents per year.

14 When the fuel production projects are
15 complete and operating at full capacity, these
16 projects are expected to reduce approximately
17 186,000 metric tons of carbon dioxide-equivalent
18 on an annual basis. This reduction is equivalent
19 to removing over 40,000 light-duty internal
20 combustion engines -- engine vehicles off the
21 road per year.

22 Combined, the three projects provide over
23 78 jobs.

24 Next slide.

25 This next slide summarizes the benefits

1 of the two fuel blending the awards. The
2 benefits are as follows.

3 The fuel blending projects support the
4 increase of in-state fuel blending capacity of
5 alternative and ultralow carbon diesel by over
6 200 million diesel gallon-equivalents per year by
7 2027.

8 When the fuel blending projects are
9 complete and operating at full capacity, these
10 projects are expected to reduce over 2 million
11 metric tons of carbon dioxide-equivalents on
12 annual basis. This reduction is equivalent to
13 removing close to a half-million light-duty
14 internal combustion engine vehicles off the road
15 per year.

16 These fuel blending projects all provide
17 over 112 jobs. Though projects are also
18 partially funded by grant funding provided under
19 the United States Department of Agriculture's
20 Higher Blend Infrastructure Incentive Program.
21 Alter (phonetic) had received a \$1.5 million
22 grant. And New Leaf Biofuels had received a \$2.6
23 million grant.

24 This concludes my presentation. Thank
25 you.

1 And I will also introduce my fellow
2 colleague, Jonathan Bobadilla, who will discuss
3 our upcoming manufacturing solicitations.

4 MR. BOBADILLA: Thank you, Hieu.

5 Good morning, everyone. My name is
6 Jonathan Bobadilla, staff in the CEC's
7 Transportation Integration and Production Office
8 within the Fuels and Transportation Division. I
9 will be giving a brief overview of our upcoming
10 manufacturing solicitations under development.

11 Next slide.

12 The California Budget Act of 2021
13 appropriated funding to the CEC to support ZEV
14 and ZEV-related Manufacturing. Staff are
15 developing grant funding opportunities that will
16 increase in-state manufacturing of zero emission
17 vehicles, or ZEVs, ZEV components and batteries,
18 and ZEV infrastructure. The goals of these
19 solicitations are to attract new and expand
20 existing zero-emission vehicle related
21 manufacturing in California, increase number and
22 quality of manufacturing jobs in California,
23 particularly in the ZEV market, bring positive
24 economic impacts to the state by attracting
25 private investments in manufacturing capacity

1 And contribute to California's goals of zero-
2 emission transportation.

3 Next slide.

4 For context, California is the number one
5 ZEV market in the U.S., with over 1 million ZEVs
6 sold in California since end of 2021. Forty-
7 three ZEV and ZEV-related manufacturing companies
8 are in California. And a jobs study from Atlas
9 EV Hub shows California as number one in the U.S.
10 for ZEV Manufacturing Jobs.

11 Next slide.

12 In July of 2021, Senate Bill 129, the
13 Budget Act of 2021, was approved by the governor.
14 For Fiscal Year 2021-2022, this Senate Bill
15 authorizes the CEC, through its Clean
16 Transportation Program, to provide \$118.75
17 million in General Fund monies towards grants
18 that increase in-state manufacturing of zero-
19 emission vehicles, zero-emission vehicle
20 components, and zero-emission vehicle charging or
21 refueling equipment.

22 This fiscal year's funds have an
23 encumbrance and liquidation date of June 30th,
24 2024, and 2026, respectively. An additional \$125
25 million for fiscal 2022-2023 is pending

1 Legislative approval. We will announce more
2 details on those funds as they emerge.

3 Next slide.

4 For this current fiscal year, staff is
5 developing two manufacturing solicitations.
6 GFO-21-605 titled Zero Emission Transportation
7 Manufacturing, this is for \$60 million, and
8 officially released on March 30th. This is a
9 competitive grant funding opportunities for in-
10 state manufacturing projects. Projects are to
11 promote the manufacture of ZEVs, ZEV components,
12 and ZEV infrastructure right here in California.

13 Funding applications will be collected
14 and scored. And a notice of proposed award is
15 expected to release in July 2022. Agreements
16 will be potentially approved at an October or
17 November 2022 Business Meeting.

18 And the CEC may allocate additional
19 funding based on the number of applications
20 received and additional funding appropriated for
21 2022-23.

22 Next slide.

23 The second funding solicitation is a
24 block grant for \$25 million, with the goal of
25 selecting a not-for-profit block grant

1 implementer with expertise in battery
2 manufacturing. The eventual block grant
3 implementer, in consultation with the CEC, will
4 develop funding incentives for various zero-
5 emission vehicle battery manufacturing projects
6 throughout California.

7 A pre-solicitation workshop of the
8 solicitation concepts was held in January this
9 year. This solicitation is expected to release
10 in June 2022. And the implementer will be
11 announced through a notice of proposed award in
12 Fall 2022. The implementer will potentially be
13 approved by end of this year or early next.

14 Once an agreement with the implementer is
15 executed, the implementer will accept project
16 applications to recommend to the CEC for
17 subrecipient funding. Subrecipients selected to
18 receive funding are expected to be announced in
19 2023. Final Dates are still to-be-determined and
20 will be updated as the solicitation further
21 develops.

22 The CEC may allocate additional funding
23 based on GFO-21-605 applications received, and
24 additional funding appropriated for 2022-23.

25 Thank you for your time. This is the end

1 of my presentation.

2 And with that, I will now turn it over to
3 Larry Rillera.

4 MR. RILLERA: Good morning, everyone.
5 My name is Larry Rillera. I am staff in the
6 Fuels and Transportation Division. I will be
7 giving a brief overview of our workforce
8 portfolio and the most recent investment and
9 partnership.

10 Next slide, please.

11 The goals of our workforce portfolio are
12 to prepare new and incumbent workers for clean
13 transportation careers that lead to good quality
14 jobs, to partner and support high road training
15 partnerships, to support clean transportation
16 workforce market needs, to support the
17 development and deployment of ZEV and ZEV
18 infrastructure assets and technologies, and to
19 support clean transportation certified business
20 supply chain companies.

21 Next slide.

22 There have been over 20,000 trainees and
23 trainers for the program's \$36 million
24 investment.

25 Early in the development of the portfolio

1 the CEC cultivated partnerships and built
2 workforce capacity and knowledge with sister
3 state agencies, some of which are noted here and
4 include the Employment Training Panel, the
5 Community colleges, Workforce Development Board,
6 more recently our California Conservation Corps,
7 and our California Air Resources Board.

8 Illustrative and current training
9 projects include our Electric School Bus Training
10 Project, our ZEV college and high school
11 programs, Transportation Electrification Training
12 Project with the Corps, and a couple of other
13 partnerships as well.

14 This brings me to our most current
15 project launch, the IDEAL ZEV Workforce Pilot
16 Project.

17 Next slide, please.

18 This competitive solicitation was
19 released in October 2021.

20 The Clean Transportation Program provided
21 \$5.5 million, with the California Air Resources
22 Board providing \$1 million.

23 The purpose of the solicitation is on
24 community-based workforce training and
25 development projects that lead to ZEV industry

1 jobs, and that can be replicated in other regions
2 of the state.

3 Next slide, please.

4 A little more about the partnership and
5 fully describing our effort with the California
6 Air Resources Board in this pilot.

7 A collaboration between our agencies has
8 brought forward many intersecting areas, such as
9 focus on priority communities and populations,
10 community engagement, and clear line of sights
11 connecting training with ZEV deployments. Our
12 partnership is also building respective agency
13 capacity in this space.

14 This foundation in workforce
15 understanding and action is essential, given the
16 governor's priorities and investments noted in
17 the early presentations, and as identified in the
18 draft Investment Plan.

19 In terms of results, a Notice of Proposed
20 Award, or NOPA, was released on February 18th,
21 2022. Twenty project applications were received,
22 and the solicitation was oversubscribed.
23 Fourteen projects are proposed for awards.

24 A key theme for the proposed awards is
25 diversity, diversity of applicants from small

1 non-profits to esteemed California colleges,
2 diversity of training needs from EV and EV
3 charging familiarization in Spanish to hydrogen
4 refueling station engineering, diversity of
5 equity, and geographic diversity from tribes in
6 Humboldt County to a farm community in the
7 central San Joaquin Valley, and a diversity of
8 ZEV and ZEV infrastructure from light-duty on-
9 road vehicles to EV chargers to ZEV
10 manufacturing. And finally, diversity of project
11 partners, including the Northern California
12 Teamsters to the Electric Vehicle Infrastructure
13 Training Program.

14 I should also note that there are many
15 employers involved in all of these projects.

16 Next slide. Thank you.

17 Identified here is the dispersion of
18 proposed project and recipient locations
19 statewide. I would not that this does not
20 capture the full impact of projects. This has a
21 much larger footprint that expands across the
22 state.

23 I would also note the very high
24 likelihood of project replication in other
25 communities in the state as well.

1 Next slide.

2 Designed into the solicitation and into
3 the proposed projects is to capture estimated
4 baseline metrics in order to chart performance,
5 results, and outcomes.

6 The start of data collection and
7 performance metrics started with the project
8 proposal. Then, staff issued a project survey to
9 the proposed awardees after the NOPA was issued
10 in February. This will finally culminate with
11 the collection of data and results throughout the
12 duration of the project.

13 A couple of key metrics I would note here
14 is an average CalEnviroScreen score across all of
15 the projects that are in 89th percentile. This
16 is the total investment. And 4,000 trainees,
17 almost 32,000 hours of classroom and hourly
18 instruction, the creation, retention and
19 projected estimate of jobs of 4,400 full-time
20 jobs, and a total of 200 outreach events for
21 34,000 participants.

22 So this concludes my brief remarks and
23 I'm looking forward to the rest of the
24 presentation and discussion. Thank you.

25

1

2 MR. BRECHT: Now I'll turn it over to
3 updates on ZEV planning and analysis. I have
4 three presentations.

5 MS. LOPEZ: Good morning.

6 Next slide, please.

7 Good morning. My name is Thanh Lopez,
8 staff in the Fuels and Transportation Division.
9 Today I'll be providing a quick overview of the
10 draft Zero-Emission Vehicle Infrastructure Plan,
11 or ZIP. This was a joint interagency effort and
12 we wanted to acknowledge the important work that
13 our colleagues are working on. We are working
14 with our counterparts at the Air Resources Board,
15 Public Utilities Commission, Governor's Office of
16 Business and Economic Development, or GO-Biz, and
17 Caltrans, to name a few.

18 Next slide, please.

19 So GO-Biz worked with several agencies to
20 develop the California Zero-Emission Vehicle
21 Market Development Strategy that lays out the
22 overall strategy to meet California's ZEV goals.
23 Within that strategy there are four market
24 pillars: vehicles, infrastructure, end users, and
25 workforce. The ZIP is intended to address the

1 infrastructure pillar of that strategy and
2 provide a fuller description of the state's
3 strategy.

4 I'll note that the other pillars do
5 matter to infrastructure rollout but will not be
6 covered in the ZIP.

7 The ZIP describes what California has
8 done and will do in the near and longer term to
9 support electric vehicle charging and hydrogen
10 fueling to ensure that we have the ZEV
11 infrastructure to meet the needs of the growing
12 ZEV market.

13 The ZIP, along with our current modeling
14 and analysis efforts, is intended to support
15 public discussions of future funding needs but
16 also demonstrate that we are on a path to success
17 in meeting California's ZEV goals.

18 Next slide, please.

19 Private investments have been critical to
20 developing the existing ZEV infrastructure
21 network and is anticipated to play a large role
22 in the future. Of the nearly 80,000 operational
23 public -- I'm sorry, operational plug-in electric
24 vehicle chargers in California, less than half
25 received funding from the state, electric

1 utilities, and settlement agreements.

2 The Clean Transportation Program,
3 Caltrans, and DGS combined have funded
4 approximately ten percent of the operational
5 public and shared private chargers in the state.
6 The electric utilities funded 29 percent and
7 settlements funded nearly 5 percent of
8 operational chargers in California. The graph
9 shows cumulative private investments are
10 increasing for light-duty plug-in electric
11 vehicle charging between 2011 and 2022.

12 While continued growth in private
13 funding, as well as growth in public funding,
14 will keep us on the path to success, there is an
15 ongoing role for public funding in accelerating
16 adoption and addressing equity.

17 Next slide, please.

18 So public investments also have played an
19 essential roles in deploying the existing ZEV
20 infrastructure in California. State agencies
21 have funded about \$600 million in ZEV
22 infrastructure to date. California's 2021-2022
23 Budget included a three-year \$3.9 billion budget
24 for ZEV-related investments.

25 The Governor's Proposed 2022-2023 Budget,

1 which is not yet set in stone, includes \$6.1
2 billion to support ZEV and fueling
3 infrastructure. Combined with the \$3.9 billion
4 from the previous budget, this represents,
5 potentially, \$10 billion for ZEV-related
6 investments to help support California's
7 transition to ZEVs over the next five years.

8 The CPUC has also authorized \$1.85
9 billion in spending by the electric utilities
10 that regulates for ZEV infrastructure. I'll
11 emphasize again, both the public and private
12 funding will provide a pathway to success in ZEV
13 infrastructure deployment.

14 Next slide, please.

15 The draft ZIP divides ZEV infrastructure
16 into five categories shown here. The ZIP
17 provides the current status and near and longer
18 terms state actions for each category. In light-
19 duty hydrogen, the state plans to close the 200 -
20 - close the gap to the 200 station goal. Further
21 public funding to expand the network beyond the
22 200 stations will depend on whether vehicle
23 deployment accelerates.

24 The state will also continue to address
25 barriers to fuel cell electric vehicle adoption.

1 For DC fast charging for light-duty
2 electric vehicles, the state plans to continue to
3 deploy additional funding if appropriated, phase-
4 out support, and fund projects that take
5 advantage of advanced technologies and minimize
6 costs to consumer. DC fast charging deployment
7 costs are still high and power levels can pose
8 challenges for the grid if not integrated
9 appropriately.

10 For charging and hydrogen fueling or
11 medium- and heavy-duty ZEVs, the state will
12 continue to rapidly and effectively deploy
13 allocated funding, such as the CEC's recently
14 launched EnergIIZE Project infrastructure
15 incentives, and the CPUC'S authorized funding for
16 medium- and heavy-duty chargers.

17 The state will also continue grid
18 planning, collecting project data, and focus on
19 fleets in areas that face barriers to medium- and
20 heavy-duty ZEV infrastructure deployment.

21 For Level 1 and Level 2 charging for
22 light-duty electric vehicles, the state plans to
23 deploy infrastructure to provide greater access
24 by priority populations. This includes low-
25 income and disadvantaged communities.

1 The state also plans to encourage primary
2 buildout of charging away from home. But we'll
3 also need to consider the equity implications of
4 away-from-home charging deployments.

5 For emerging technologies, the plan looks
6 at battery swap, wireless, and mobile charging
7 technologies. The state will continue to monitor
8 the demonstration of these technologies and
9 automaker announcements for plans to incorporate
10 them in a significant number of vehicles.

11 Next slide, please.

12 In addition to deploying ZEV
13 infrastructure across the five categories, the
14 ZIP also looks at other challenges that could
15 impact multiple categories. This includes items
16 like permit streamlining and improving
17 interconnection times for ZEV infrastructure
18 deposition.

19 Next slide, please.

20 So we held a workshop in January to
21 officially kick off the process with the public
22 and to start gathering stakeholder input on a
23 draft outline and concepts. We continued to work
24 with the agencies through January and February in
25 the development of the draft.

1 The ZIP was published on April 1st. and
2 we anticipate holding one or two workshops
3 between now and May to continue the stakeholder
4 engagement.

5 After we've collected and incorporated
6 the feedback, we anticipate publishing the final
7 ZIP this summer.

8 Next slide, please.

9 As mentioned in the previous slide, the
10 draft ZIP was published on April 1st. we will be
11 holding a staff workshop to discuss the draft ZIP
12 and provide a more detailed overview compared to
13 today. We've very interested in any stakeholder
14 feedback on the draft ZIP. A link to the draft
15 ZIP and workshop notice can be found on the
16 events webpage. And the workshop will be on
17 April 14th.

18 The concludes my presentation. Thank you
19 very much.

20 And I'll pass it on to the next
21 presenter, Kiel Pratt.

22 MR. PRATT: Good morning, everyone. I am
23 Kiel Pratt. I supervise the Fuels and
24 Transportation Division's Vehicle Grid
25 Integration Unit. And today, I will be talking

1 about our work under the Assembly Bill 2127
2 Charging Infrastructure Analysis.

3 Next slide, please.

4 What this is is not so much a econometric
5 forecast, like you might find in our Integrated
6 Energy Policy Report, or IEPR, but a projection,
7 assuming that California's ambitious vehicle
8 deployment targets are achieved, what kind of
9 charging infrastructure will we need? And what
10 are some related topics that we'll need to look
11 at to bring about these benefits of cleaner
12 transportation, grid-friendly infrastructure
13 through flexible vehicle charging loads, and
14 convenience for the driver which is, obviously,
15 critical for achieving these goals and ensuring a
16 convenient experience?

17 Next slide, please.

18 You probably noticed it already, so I
19 apologize. The correct reference for the bill's
20 passage is 2018 but it became active in 2019.
21 But this bill charged the Energy Commission with
22 assessing, every two years, the charging
23 infrastructure needs for vehicles and several
24 related aspects.

25 And to give a sense of the chronology, we

1 began this work, and then the pandemic happened
2 which influenced some potential future
3 possibilities for transportation overall.

4 And then, in late 2020, Governor Newsom
5 issued Executive Order N-79-20 which both set out
6 more ambitious targets than the legislation
7 spelled out and directed the Energy Commission to
8 incorporate these targets in its report.

9 Next slide, please.

10 So our first report, which was released
11 in summer of 2021, addressed two targets, one,
12 the 5 million ZEV goal by 2030 which was
13 explicitly part of the legislation.

14 And, secondly, an 8 million ZEV goal by
15 2030 derived from the governor's executive order,
16 but that's actually working backwards from the
17 2035 100 percent new ZEV sales target. The
18 California Air Resources Board had a set of
19 assumptions and determined that about 8 million
20 ZEVs would be on California roads by 2030 if that
21 scenario is achieved. So we took that as an
22 input.

23 And we heard encouragement from
24 stakeholders to focus on the second, more
25 ambitious target.

1 Next slide, please.

2 You can see, based on existing and
3 anticipated chargers deployed by our program,
4 utilities' programs and others, you can see a
5 projection of roughly 269,000 light-duty chargers
6 for 2025. So we believe we are on track to
7 exceed the goal of 250,000 public or shared
8 chargers for 2025 under Governor Brown's
9 Executive Order from 2018.

10 However, as shown, we currently foresee a
11 deficit of light-duty chargers for 2030 based on
12 the 8 million ZEV scenario used in the AB 2127
13 report. This includes a gap of roughly 869,000
14 public or shared Level 2 chargers, as well as
15 26,000 public DC fast chargers.

16 Next slide, please.

17 To continue with the overview of the
18 first 2127 Report, which came out last year,
19 let's start with the medium- and heavy-duty
20 sector. So the previous slide talked about
21 light-duty chargers. The analysis for medium-
22 and heavy-duty is different. It's not informed
23 by, say, household travel surveys, as the light-
24 duty sector is. It's a different kind of
25 analysis. There are many different commercial

1 vehicle duty cycles that need to be understood,
2 whether these vehicles can charge overnight or
3 might need a charge during the day. So that
4 analysis is continuing.

5 Then, taking the items here
6 counterclockwise, we are trying to send our
7 equity in our reports, and particularly the
8 medium- and heavy-duty piece is important because
9 of the toxic diesel air contaminants that those
10 who live in locations, such as near freight
11 corridors, are exposed to.

12 We also talk about vehicle grid
13 integration and how the flexible loads can
14 support the grid, and support a convenient driver
15 experience, and exciting announcements about the
16 availability of bidirectional charging vehicles,
17 such as the Ford F150 you see in the image.

18 We also talked about making maximum and
19 efficient use of a network by having
20 interoperable connectors and communication
21 standards. And the fact that the best solution,
22 the best charging solution, really depends on the
23 location it's in, so the form factor, charging
24 power, and other parameters can be different,
25 depending on what's needed.

1 And it also discussed different financing
2 mechanisms and the future business cases.

3 Next slide, please.

4 Now, as I wrap up this portion of the
5 presentation, looking forward to this next
6 report. We will continue to update models and
7 assumptions. We're looking at a finer geographic
8 scale of analysis.

9 We're also looking to highlight the
10 potential of EVs as a reliability resource for
11 the grid, both, perhaps, for V2G services, but
12 even flexible demand from managed charging, so
13 vehicle grid integration.

14 And then, also, a discussion of the
15 reliability of the existing charging network, the
16 chargers themselves, as well as updates about
17 workforce and infrastructure costs, as well as
18 adding additional charging options, could be
19 assessed in this next report.

20 Here's the schedule. In fall of this
21 year, we anticipate publishing a staff report and
22 then hosting a workshop, much like we did for the
23 last cycle, collecting stakeholder feedback,
24 written comments, and incorporating those into
25 the later version of the report, the revised

1 staff report, which we'll then present at a
2 business meeting anticipated for early next year.
3 And then, finally, post the Commission report.

4 So this concludes my presentation. Thank
5 you for your attention.

6 MS. HOANG: Good morning, everyone. My
7 name is Tiffany Hoang, staff in the Fuels and
8 Transportation Division. I'll be providing a
9 brief update on SB 1000, which is an analysis
10 looking at EV charging infrastructure,
11 distribution, and access. This ongoing
12 assessment helps inform Clean Transportation
13 Program investments and project design to improve
14 equitable deployment of new EV charging
15 infrastructure.

16 We presented initial drive time results
17 (indiscernible) community meeting last fall and
18 are happy to be back to provide this update,
19 which includes community overlaps.

20 Next slide, please.

21 Drive time is one way to measure access
22 to public DC fast chargers and infrastructure
23 coverage among communities. Looking at drive
24 time allows us to identify charging network gaps
25 that discourage travel within California

1 communities and to and from those communities.

2 This is a tool we use to show us the
3 shortest routes and times driven between census
4 tract population centers and the nearest public
5 fast chargers during peak traffic. This map
6 shows two different census tract population
7 centers in Los Angeles County and the shortest
8 route and time driven to get to the nearest
9 public DC fast charging station. Communities
10 with drive times of ten minutes or more have
11 poorer public fast charging covering.

12 Next slide, please.

13 This is a map of disadvantaged
14 communities in the Los Angeles area.
15 Disadvantaged communities are census tracts that
16 score within the top 25th percentile of
17 CalEnviroScreen 3.0 in census tracts with low
18 population and high pollution burden.

19 Disadvantaged communities that are less
20 than ten minutes from a public DC fast charger
21 are in blue and gray on this map. Those further
22 away are in orange. You can see that there are
23 some areas where disadvantaged communities have
24 DC fast chargers nearby but others with long
25 drives from fast charging.

1 From this, we can take away that we need
2 to continue to focus our efforts to a finer level
3 of detail. Having a targeted amount of
4 investments within disadvantaged and low-income
5 communities is necessary but, on its own, could
6 still mean that we're not reaching all
7 communities.

8 Next slide, please.

9 While about 88 percent of urban
10 communities are within ten minutes of a public DC
11 fast charger, only 40 percent of rural
12 communities are that close.

13 Next slide, please.

14 About 11 percent of all low-income
15 communities are rural. These communities have
16 the least access to public fast charging. About
17 69 percent of low-income rural communities have
18 drive times of ten minutes or more to a public DC
19 fast charger, which is more than any other group.
20 This illustrates that we have to look at the
21 intersections of attributes of communities and
22 that solutions will vary too.

23 Next slide, please.

24 We plan to publish these results in May
25 and are assessing how these results will inform

1 new block grant programs and grant funding
2 opportunities. The report, drive time maps, and
3 spreadsheets, which include results by census
4 tracts, will be available on our SB 1000 webpage.
5 We'll continue to refine and update the analysis
6 to identify charging network gaps and build out
7 infrastructure in a way that serves all
8 Californians.

9 I'm happy to answer any questions folks
10 may have during the discussion period. And I'll
11 go ahead and hand it back over to Patrick.

12 Thanks.

13 MR. BRECHT: Thanks, everyone. I'm just
14 going to bring back a few slides that we had
15 earlier and just touch on a few things, then
16 we'll have a break here, so just wanted to bring
17 up the next slide.

18 Just, again, the schedule that we have,
19 we have the meeting today, and we'll have
20 about -- a little bit over two weeks to submit
21 comments to the docket, which we strongly
22 encourage. And just these are some of the
23 tentative dates but, of course, it's all
24 dependent on the legislative process and the
25 budget process, so these may change.

1 Next slide. Go ahead and go to the next
2 slide.

3 And here, again, is our allocations for
4 the 2023-2024 -- or excuse me, 2022-2023
5 Investment Plan update. And it's unchanged, as
6 mentioned earlier, from last year. And the
7 purpose, again, is for certainty. But we look
8 for your feedback after this meeting if these
9 allocations are appropriate.

10 So with that, I will just mention -- next
11 slide. We'll bring -- we'll come back to the
12 table shortly.

13 Again, the 29th is the deadline to submit
14 comments and here's the location on where to
15 submit your comments by five o'clock on the 29th.
16 And feel free to always contact me if you have
17 any questions.

18 And with that, we will have a ten-minute
19 break. My time shows 10:33 and we'll be back at
20 10:43 -- 10:45? 10:45. Okay. Thank you very
21 much.

22 (Off the record at 10:33 a.m.)

23 (On the record at 10:46 a.m.)

24 COMMISSIONER MONAHAN: Well, so you've
25 gotten a lot of information from our team. And

1 now we just, we want to hear from you. So we
2 were thinking that we would provide three minutes
3 per person for comments. And if there's time at
4 the end, we'll have like a lightening round of
5 one minute, but it really depends on how much
6 time it takes to get through every person on the
7 Advisory Committee.

8 As I said at the start, I want to make
9 sure everybody has a chance to speak. So don't
10 feel pressured to speak right away but I hope, as
11 others speak, maybe it stirs you to some ideas
12 about how you would like to give us feedback.

13 So I want to make sure, also, that we
14 provide space for people on the phone, so -- and
15 I think I can do this, the raise-hand. So for
16 folks who are part of the Advisory Committee and
17 on the phone, feel free to raise your hand.

18 For people in the room, feel free to lift
19 up your name card and I'll just call on you as I
20 see people ready to speak.

21 And I want to make sure, can somebody
22 help me? Tami, can you help me with the making
23 sure that I see raised hands? That's a panelist;
24 right? I don't know how else to -- I mean, I
25 guess Tami can do it from the side but -- okay.

1 Okay.

2 Eileen?

3 MS. TUTT: So I'm sorry. I have a
4 clarification question --

5 COMMISSIONER MONAHAN: Uh-huh.

6 MS. TUTT: -- which I think is the time.

7 On slide 39 the CEC staffer, and I can't
8 remember who it was -- but by the way, the team
9 is just really awesome. This is actually the
10 best plan I've ever read and that's not just
11 because it focuses on us.

12 But they said something about the EV jump
13 on EnergIIZE, that the only funded projects would
14 be 150, it's not on the slide, but 150 kilowatt
15 hours or greater. And I just wanted to get a
16 clarification there and, also, point out that
17 like, at least in the existing applications that
18 we're -- that the utilities are installing
19 charging infrastructure or -- many of them are at
20 like 50. There's school buses. There's a lot.
21 There's anything that doesn't -- transit.
22 There's a lot of applications where you don't
23 need high-power charging and where it can be done
24 a lot quicker because the grid doesn't need it.

25 So I just am wondering, I was just

1 clarifying that, because I didn't see it in the
2 report. And I actually looked through it again
3 just now, just searching, and I didn't see it
4 anywhere. And I just didn't know if that's a
5 requirement to get the money or --

6 COMMISSIONER MONAHAN: I think that was
7 Manny.

8 MS. TUTT: -- or not?

9 COMMISSIONER MONAHAN: Was it Manuel
10 that -- Manny, are you on the line?

11 MR. AGUILA: Yes.

12 MS. TUTT: And it can be a follow up.

13 MR. AGUILA: Yes. My apologies.

14 COMMISSIONER MONAHAN: And did you hear
15 that question?

16 MR. AGUILA: Yes. So, yes, currently the
17 150 kilowatt is what's being planned for the EV
18 public charging stations. That is the minimum
19 requirement that we're working through with
20 CALSTART. We have taken quite a bit of feedback
21 into account but are more than willing to accept
22 more because everything -- not everything has
23 been finalized yet. But the plan right now is to
24 fund, minimum, 150 kilowatt DC fast chargers.

25 MS. TUTT: Sorry. Is that for all of the

1 money or just -- because public charging -- and
2 sometimes public charging is like -- is -- are
3 school buses if they open their charging. I
4 mean, I don't -- defining public charging in the
5 medium- and heavy-duty world is a little weirder.

6 So I'm just, is that -- does that mean
7 like none of the money could be used, except for
8 that 150 kilowatt level, or you are
9 considering -- because we will definitely comment
10 on that.

11 I will just point out that that's not in
12 the report itself, so like I just heard it, so I
13 don't know. I mean, I'm happy to have, maybe, an
14 offline discussion about it.

15 MR. AGUILA: Yeah, definitely we can
16 provide further clarification on that, as well,
17 but it is for just medium-duty and heavy-duty
18 infrastructure incentives. It is only for this
19 particular funding lane, so it's not a
20 requirement for all funding lanes.

21 COMMISSIONER MONAHAN: All right. So I
22 suggest that we provide staff contacts with
23 emails for everybody so that there can be deeper
24 conversations if there need to be. But that
25 comment, in our plan, we should be really clear

1 about what the lanes are. It could be helpful
2 for public commenters going forward.

3 MR. AGUILA: Yes, definitely.

4 COMMISSIONER MONAHAN: Okay. Thanks,
5 Manuel.

6 MR. COMITER: We don't currently have any
7 raised hands in the attendees group, unless, I
8 know earlier, Willfort, Andreas, had their hand
9 raised.

10 If you would like to make a comment now,
11 I can allow you to talk. I noticed you had your
12 hand raised earlier and you made a couple
13 comments in the Q&A box. But if you'd like to
14 make a public comment now, feel free to.

15 MR. WILLFORT: Yes. Great. Thank you
16 very much for allowing me to make some comments.

17 MR. COMITER: Oh, sir, could you also
18 state your name and affiliation for us?

19 MR. WILLFORT: Sure. My name is Andreas
20 Willfort. I'm with Weh Technologies. We are a
21 private-owned small company producing --

22 COMMISSIONER MONAHAN: Oh, I'm sorry.
23 I'm sorry to interrupt. We shouldn't be --

24 MR. WILLFORT: Yeah.

25 COMMISSIONER MONAHAN: I wasn't clear

1 that this is just for Advisory Committee members.
2 There's going to be a public comment period after
3 the Advisory Committee members have been able to
4 provide feedback.

5 MR. WILLFORT: Okay.

6 COMMISSIONER MONAHAN: So --

7 MR. WILLFORT: I apologize.

8 COMMISSIONER MONAHAN: -- the only --
9 yeah, sorry about that.

10 MR. WILLFORT: I will talk later.

11 COMMISSIONER MONAHAN: Sorry about that
12 confusion. Okay.

13 MR. WILLFORT: I will talk later, no
14 problem. Okay. Bye-bye.

15 COMMISSIONER MONAHAN: Perfect.

16 And, Michael, I think it's just the
17 participants that are in the category of
18 panelist.

19 MR. COMITER: Sure. Okay.

20 COMMISSIONER MONAHAN: Okay.

21 MR. COMITER: Go ahead, Kevin.

22 MR. HAMILTON: Good morning. Thank you.

23 A couple of things. And thanks for the great
24 presentation, by the way. It did take me a
25 little bit to get on. My computer crashed and

1 burned and I'm using another one. And I found
2 that when you join a meeting, it doesn't always
3 say who you are in the right way. But thanks for
4 working that out for me, whoever did.

5 So a couple of things. I come back to
6 something that Rey Leon and myself raised -- this
7 is Kevin Hamilton, Central California Asthma
8 Collaborative here in the San Joaquin -- on the
9 hydrogen infrastructure. We called this out once
10 before and I see nothing's really changed there.
11 We still have the one station going in over there
12 on the 99 and sort of these clusters north and
13 south.

14 Is there -- can you give me the rationale
15 for that? I mean, the idea was to have a
16 distributive hydrogen infrastructure that at
17 least had -- pretended to have an equity face.
18 And so, you know, an entire section of California
19 with 4.4 million people in it has been left out.

20 So is there -- can you explain this for
21 me?

22 MR. JOHNSON: Hi, Kevin, it's Mark
23 Johnson here.

24 MR. HAMILTON: Hi, Mark.

25 MR. JOHNSON: Yeah. So, currently, we're

1 going through GFO-19-602. And that solicitation
2 allows developers to kind of pick where they go.
3 And then we do look at disadvantaged communities
4 and they are welcome, and also welcome in more
5 rural areas, but it's kind of based more on where
6 the developers have proposed locations.

7 So right now, that's kind of where we
8 stand, but we do have another 82 stations that
9 are going to be proposed. Hopefully, that will
10 kind of go through or be proposed in those other
11 locations that you're talking about, but those
12 were not shown on the map yet.

13 MR. HAMILTON: Okay, so we'll be watching
14 that closely.

15 MR. JOHNSON: Yes.

16 MR. HAMILTON: I, too, want to comment
17 that, you know, staff have regularly involved
18 themselves in at least program staffing in
19 various proposals in guiding
20 developers/contractors into places where they
21 feel they should be going.

22 And there is certainly some authority
23 within the CEC -- (coughs) excuse me -- and
24 ability to require that at least some of these
25 facilities be moved into at least the five or six

1 largest cities in California, which Fresno would
2 be one, Bakersfield would be another with, you
3 know, Fresno sitting at about 1 million people
4 here and Bakersfield at 100 -- 800,000 there,
5 both in the metro areas of both of them.

6 So, you know, we're getting a pretty
7 significant amount of EV charging. But, again,
8 we all know the future, especially with regard
9 to -- at least of feel that the future with
10 regard to, especially, heavy-duty is going to be
11 access to hydrogen charging. And given the
12 proliferation of distribution centers and
13 warehouses up and down the 99, which is starting
14 to look like the 215, it's really critical that
15 this infrastructure be already in place.

16 We were happy to see the first electric
17 truck stop be placed in the valley that WattEV
18 chose to do that and we're excited about that,
19 and the CEC worked and funded that, but we need
20 this hydrogen infrastructure.

21 The second piece is on charging
22 infrastructure. And again, we're seeing -- and
23 thank you for the 150 kilowatts. We feel for the
24 public, especially if we're actually going to see
25 public stop and charge. I think we all now know

1 that it's got to be DC fast chargers. It's got
2 to be at least 150 kilowatts. People need to be
3 able to get in and out of a charging station in
4 20 minutes or less and that's the only way it
5 will happen.

6 So while I'm sympathetic to the comments
7 earlier regarding, of course, school buses, I
8 don't expect them to be using a DC fast charger
9 at a shopping center, or one that is put
10 somewhere in a convenient location for
11 multifamily housing where people can park and
12 charge since most of the multifamily housing that
13 we see, at least, is not going to lend itself
14 easily to even Level 2 charge installation, but I
15 appreciate that.

16 But I still notice, again, really large
17 gaps north of Fresno, south of San Joaquin
18 County, and not much going on in Bakersfield and
19 north of there, yet we're seeing a huge
20 proliferation of electric vehicles, as well. And
21 so you just about can't walk down a street in
22 Fresno without stumbling over an EV these days,
23 so -- which is great. We love to see that. But
24 how is that --

25 MR. COMITER: I think that the time --

1 MR. HAMILTON: -- how do we see that
2 happening?

3 MR. COMITER: -- I think the time is over
4 --

5 COMMISSIONER MONAHAN: Kevin?

6 MR. COMITER: -- for this --

7 COMMISSIONER MONAHAN: So, Kevin, I just
8 want to -- we had a three-minute limit on
9 comments.

10 MR. HAMILTON: Oh, sorry.

11 COMMISSIONER MONAHAN: We were giving you
12 some extra time because you were asking questions
13 and I wanted --

14 MR. HAMILTON: Thanks. I appreciate it.

15 COMMISSIONER MONAHAN: -- to make sure
16 you had space, but, okay. Great. Thank you.

17 MR. MAGAVERN: Really quick --

18 COMMISSIONER MONAHAN: And I see Bill
19 Magavern with his placard up, so I'll turn it
20 over to Bill.

21 MR. MAGAVERN: Yeah. Thanks.

22 I also think that the plan that you
23 approved in November is an excellent plan, so I
24 agree with staying the course on that.

25 It seems like, if the budget goes well,

1 you know, as the governor has proposed it and
2 many of us are advocating for that budget in the
3 legislature, then what will be most important
4 this year will be planning for the expenditure of
5 those new funds. So I'm interested in hearing
6 more about the process for that. I know there's
7 a meeting planned for this summer.

8 But one of the, to me, one of the most
9 important points of the current plan is the goal
10 of spending at least half to benefit
11 disadvantaged and low-income communities. I
12 didn't hear it in the report, and sorry if I
13 missed it, any tracking of how that is
14 progressing so far, if we have any numbers on,
15 you know, where exactly that percentage is now.

16 And I also know that you were trying to
17 kind of hone in on what exactly it means to
18 benefit those communities, and I wonder where you
19 are on that?

20 COMMISSIONER MONAHAN: And I'm not sure
21 if we'll be able to answer all the questions. I
22 worry a little bit we won't be able to get
23 feedback from all the members if we get into
24 prolonged question and answer.

25 Any of the most recent data, I don't know

1 if we -- do we have data on our most recent share
2 that is in disadvantaged or low-income
3 communities?

4 MR. SMITH: Hi. Excuse me. This is
5 Charles Smith at the Energy Commission.

6 I was looking through the Investment Plan
7 real quick. So Figure 2 does have a donut charge
8 capturing, at least geographically speaking,
9 where our project funds have gone thus far. And
10 it looks like it's at about 48 percent. Thank
11 you, Patrick. So just under half of funding has
12 gone into either low-income or disadvantaged
13 communities.

14 And then another share, about 15 to 20
15 percent, has kind of gone -- or sorry, a larger
16 percent, 33 percent has kind of gone statewide to
17 where some of those benefits could be flowing
18 into low-income disadvantaged communities but we
19 just haven't been able to track those funds with
20 that geographic specificity.

21 But that's -- so that's a metric that
22 we've had for a while. And while we've been
23 happy to report it, we want to be doing more,
24 just to confirm that the projects themselves
25 aren't just being located in low-income

1 disadvantaged communities but that they're
2 providing actual benefits to residents in those
3 communities.

4 And so we are still kind of in the midst
5 of an internal discussion about what we -- what
6 steps we can undertake to do more outreach and
7 education on our behalf of, you know, what
8 metrics would be of value to all Californians,
9 and then how we can set ourselves up to better
10 track and measure and report out those metrics
11 over time.

12 COMMISSIONER MONAHAN: Yeah. And I will
13 say we're committed to a process, a public
14 process, around that. That won't be a closed
15 door exercise. But there is a lot to work
16 through. I mean, the team is going from handling
17 about \$100 million per year to \$800 million last
18 year, so there's a big ramp-up in staffing.
19 We're really trying to make sure that we get
20 money out the door swiftly and it takes staffing
21 to do some of this.

22 So let's just say we're committed to it,
23 it's that we are also committed to getting the
24 money out the door swiftly, so those two are
25 in -- we're holding those, both of those,

1 simultaneously.

2 MR. MAGAVERN: It's a good problem to
3 have.

4 COMMISSIONER MONAHAN: Yeah. I mean, as
5 problems -- in the world of problems, I'd rather
6 have this problem.

7 Oh, sorry, Michael. I didn't see it.
8 And just say your name and organization.

9 If everybody could say their name and
10 organization, just for the people on the phone, I
11 think that will be helpful.

12 MR. PIMENTEL: Sure thing. Michael
13 Pimentel with the California Transit Association.
14 I'm going not echo the remarks that came from
15 other Advisory Committee members regarding the
16 quality of the plan and the really significant
17 and meaningful investments that are made within
18 it.

19 I do want to say that, you know,
20 generally speaking, we as an association do
21 continue to see great value in the set-asides
22 that are identified within this plan. Of course,
23 those are dictated by the legislature in their
24 budget, but we do see that as being one way to
25 distinctly advantage public transit within the

1 larger conversation on medium- and heavy-duty
2 vehicles.

3 I will note, though, that as we are
4 moving forward as an industry, we are recognizing
5 and expanding regulatory landscape with regards
6 to zero-emission transit technologies, here I'm
7 talking about ferries and, eventually,
8 locomotives. And with that, I understand that
9 the Governor's Budget has included some monies
10 for emerging opportunities.

11 I think that as those monies float,
12 ultimately, to CEC and we're thinking about the
13 suballocation for those dollars, that we should
14 really be working to tie the funds to those
15 regulatory opportunities that are on the horizon.

16 And then I do want to just make a
17 request, particularly as the plan continues to
18 evolve, and this may be something that's most
19 appropriate for Advisory Committee members or,
20 perhaps, it's something that can be made public,
21 but I think it would be helpful to have a funding
22 table breakdown that shows the various funding
23 activities, transit versus drayage, for example,
24 and how they relate to specific GFOs, so we have
25 an understanding of how those GFOs ultimately

1 fold up into the line items that are designated
2 for an individual category.

3 And then breaking down further within the
4 GFOs, I think it would be helpful for us to
5 understand the sectoral balance in the
6 investments. So if we have an opportunity that's
7 fungible across drayage and transit, that we can
8 have an understanding of what that is. If there
9 are projects that are not being funded for one
10 sector versus another, that can help us better
11 identify where additional resources may be
12 necessary.

13 COMMISSIONER MONAHAN: Thanks, Michael.
14 That's great.

15 Casey is next.

16 Oh, thank you. Mary is next.

17 I'm actually going to sit down because I
18 think I'll be able to see better sitting up here
19 because the podium gets in the way.

20 MS. SOLECKI: Hello. Mary Solecki,
21 again, with AJW.

22 And I wanted to say congratulations.
23 This is a really great plan and a lot of really
24 fantastic GFOs that are focused well on the
25 state's priorities of getting to zero-carbon

1 transportation. And I think that the governor
2 and the budget sending so much funding to the CEC
3 is validation of this program's success. And the
4 fact that you are getting money out the door is
5 shown by the statement of confidence with all the
6 additional funding that's coming in.

7 I've been thinking just a lot about
8 challenges down the road and challenges today and
9 some of the -- and it has led me to wonder if
10 there could or should be, maybe within some of
11 the money that is going to be allocated,
12 hopefully allocated by the Governor's Budget for
13 some sort of an innovation or just flexible
14 amount of funding for debottlenecking issues that
15 arise, and let me be more specific about that.

16 I'm thinking about, for example, and
17 maybe I didn't catch it, but just more funding
18 for rental units, charging stations. That seems
19 to be a major bottleneck for a lot of people
20 being able to adopt or purchase electric
21 vehicles.

22 And I'm thinking about -- I'm hearing
23 quite a bit about the -- some of the chargers
24 that are not being -- once they break they're not
25 necessarily being serviced in a timely manner and

1 a lot of customer frustration that a growing
2 percentage of chargers are actually not
3 functional when they pull up and try to charge
4 their car. And I don't know if that is a
5 government problem to solve. I would like to
6 learn a little bit more about that. That's not
7 necessarily your problem to solve for me.

8 But I do -- to me, it does point to the
9 possibility of just having some funding that is
10 flexible and able to sort of pivot to some of
11 these problems that might arise.

12 So that is all. Congratulations and
13 thank you for the presentation.

14 COMMISSIONER MONAHAN: Thanks, Mary.
15 That's great feedback.

16 Casey, you're next.

17 MR. GALLAGHER: Thank you.

18 COMMISSIONER MONAHAN: And say your name
19 and organization for people on the phone.

20 MR. GALLAGHER: Will do. Casey
21 Gallagher, California Labor Federation, AFL/CIO.

22 Thank you, Commissioner Monahan, and also
23 thank you to the staff of the CEC on a great plan
24 and great report and all the work that goes into
25 this.

1 I wanted to also thank the CEC for also
2 acknowledging the support and commitment to
3 equity, as well as the support for high-road
4 principles and not just thinking about job
5 quantity but, actually, job quality. And that's
6 the way we lift up all Californians.

7 I'm not sure if it falls for the Advisory
8 Committee, but within the plan there is a mention
9 of the Hueso bill, Senate Bill 589, how it
10 adapted AB 2127 and how it's going to work
11 towards workforce needs and assessments for the
12 infrastructure for ZEVs.

13 My question is, is like what is that
14 assessment going to look like? And is there
15 going to be comment or feedback asked of the
16 Advisory Committee or the public on how do we
17 expand these opportunities for all California
18 workers, not just the future workforce but the
19 current incumbent workers to be trained up and as
20 technology changes?

21 Thank you.

22 COMMISSIONER MONAHAN: Casey, I suggest,
23 since we're trying to move more -- make sure
24 everybody has a chance to speak, let's make sure
25 that Larry and you have a follow-up discussion

1 about that. So when we circulate, Larry's the
2 guy to --

3 MR. GALLAGHER: Oh, not a problem. I
4 will be contacting him. Thank you very much.

5 COMMISSIONER MONAHAN: All right, Lori.

6 MS. PEPPER: Thank you. Lori Pepper with
7 the State Transportation Agency. I do just want
8 to say ditto to the fantastic work and
9 presentation here today.

10 I'm going to follow up with Jeffrey Lu on
11 your staff on the talking about the improved
12 customer experience and kind of the overall
13 advanced charging features but wanted to just
14 mention that as we're looking at this, and as
15 we're looking at potential standards for
16 chargers, that maybe we don't just look at kind
17 of the charging features; right? Look at kind of
18 the entirety of broadband hotspots and thinking
19 about how people -- how long people are going to
20 be sitting there and what do they need for
21 charging, for payments, technology, for all these
22 things.

23 And so, Jeffrey, I will be following up
24 with you just to find out more about what you all
25 are thinking. But I'm really excited about the

1 two projects that you have listed here that
2 you're funding, so thank you so much.

3 COMMISSIONER MONAHAN: Thanks, Lori,
4 appreciate that. And it's something our two
5 agencies may also want to coordinate on,
6 broadband access, because I think that's a
7 scenario that we need to collaborate to move
8 forward on.

9 MS. PEPPER: Yeah. And it's something
10 we've spoken about with Hanan and some of the
11 people on his team about what we're doing through
12 Cal-ITP on payment features and stuff like that,
13 and also talking about the broadband, the middle-
14 mile network and all the work we're kind of doing
15 with that respect. And it would be great to just
16 bring it all together --

17 COMMISSIONER MONAHAN: Yeah.

18 MS. PEPPER: -- as we're planning

19 COMMISSIONER MONAHAN: That's great.
20 Thank you.

21 I see Matt.

22 MR. GREGORI: Thank you. Matt Gregori,
23 SoCalGas Research, Development, and
24 Demonstration. My pronouns are he, him and his.
25 Thank you for the opportunity to speak and it's

1 good to see everybody and be in person.

2 Although I will be reaching out to my
3 state legislator to talk about these in-person
4 rules, because I do agree that there's an equity
5 component and, also, I noted my 700 pounds of CO2
6 emitted flying into Sacramento, so I thought the
7 presentation was great. I wanted to highlight a
8 couple of things that I thought were super
9 interesting.

10 Tiffany Hoang's analysis of drive times
11 to fast chargers, I thought this was a really
12 compelling analysis because it gives you really
13 actionable data on how to deploy projects. Where
14 do we need to deploy more fast chargers?

15 I'd be interested to know if a similar
16 analysis could be done with hydrogen fueling
17 stations to see what communities could be served
18 by hydrogen fueling stations in the same way that
19 they could be served by fast chargers, and a
20 greater sort of theme around the complementarity
21 of electric vehicle charging and hydrogen fueling
22 stations? I notice in the presentations, and I
23 think in our discussion, we often silo the two.
24 We think about battery-electric vehicles and
25 hydrogen fueling and they're completely

1 separated.

2 I just saw a note this morning from the
3 Federal Transportation Administration -- Federal
4 Transit Administration, a funding opportunity
5 about bus exportable power systems, so basically
6 vehicle-to-grid for buses that includes battery-
7 electric buses and hydrogen fuel cell electric
8 buses. So they both can provide these benefits.
9 This is for emergency situations if there's power
10 outages. Both can provide grid benefits. I
11 think it would be -- and you know, hydrogen
12 fueling is very fast, it's good for high-density
13 areas.

14 So thinking about the analysis of
15 underserved or under-resourced, historically
16 under-resourced communities, and how do we
17 provide zero-emission vehicle access to them?
18 How can hydrogen fueling stations compliment DC
19 fast charging station access? And then just, in
20 general, broader thinking about those two
21 technologies as complimentary and not sort of
22 competitive or siloed or separated.

23 So thanks a lot. Appreciate it.

24 COMMISSIONER MONAHAN: Thanks, Matt.

25 Appreciate those comments. And we do have the AB

1 8 report which does provide some information.

2 But you're right about the siloing. You
3 know, we had the 2127 report, it's just about EV
4 charging, we have the AB report, it's just about
5 hydrogen, so you know, thinking about what that
6 looks like in an integrated way. I mean, and
7 some of this is because the legislature requires
8 us to do these reports, so there's a legislative
9 aspect to this.

10 Oh, Jose.

11 MR. LOPEZ: Thank you. Thank you,
12 Commissioner Monahan, and thank you staff for the
13 great presentation. I'll just to be a little bit
14 constructive in terms of not asking a question
15 but just kind of thinking forward of -- sorry,
16 again, this is Jose Lopez, private citizen --
17 just also thinking about, you know, beyond the
18 program where we're thinking about extending it.
19 I think I will also kind of highlight the need
20 to -- I think we're doing great in terms of
21 identifying data and coming up with metrics to
22 really understand where the funding is going.
23 But I think more will definitely help us
24 determine bigger needs.

25 I think we saw a lot of great -- you

1 know, identified key gaps and, of course,
2 potentials to be trends, not only as part
3 of -- transportation investments, just in
4 general, tend to go to the bigger metropolitan
5 areas, so just kind of thinking about that.

6 But I guess just my comment was going to
7 be a suggestion. I know the California Air
8 Resources Board has the Sustainable
9 Transportation Equity Project. And as part of
10 that pilot program, they give out grants to do
11 also help with transportation needs assessments.

12 So I'm wondering if there's some type of
13 alignment of conversation that it happening in
14 the Air Resources Board about, you know, maybe
15 utilizing some of that, those opportunities, or
16 helping find, you know, what needs have been
17 maybe identified at a more localized level that
18 can also help, you know, this program moving
19 forward to help kind of target those goals?

20 And so with that, I'll also just kind of
21 make the comment about what conversations might
22 be happening between the CEC, CARB, Caltrans, and
23 all of the other transportation agencies
24 regarding the federal funding that is going to be
25 coming, and specifically thinking about the

1 Justice40 and how it's primarily prioritizing
2 something that's going to go to disadvantaged
3 communities. There's a lot of alignment and
4 synergy there. I'm just wondering if those
5 conversations are happening or should be
6 happening?

7 COMMISSIONER MONAHAN: Thanks, Jose.

8 And I think I might -- I know Ruben was
9 first but I might let Sydney Vergis from CARB go.

10 But before I do, I'll just say, we talked
11 about our medium- and heavy-duty planning grants.
12 We also had light-duty EV planning grants. Those
13 were wildly popular as well. And I think this
14 planning we're -- this idea that, you know, to
15 really be able to meet the demands of a community
16 you have to plan first and really think through
17 what your ZEV infrastructure needs are. That's a
18 really good observation. Thank you.

19 MS. VERGIS: Yeah. So Sydney Vergis,
20 California Air Resources Board. Always
21 appreciate a shoutout for STEP, so thank you very
22 much.

23 One of the things that I thought you
24 might be particularly interested, if you're not
25 already aware of, which you might be fully, is

1 one of the areas that we're very proud of in
2 terms of CARB-CEC collaboration is on the
3 California Statewide CMO Project. It will be our
4 second year of collaborating on that particular
5 voucher program. And we'll be expanding the
6 network through the second year. So thank you
7 for an opportunity to raise that up.

8 There's a couple of other places that I,
9 you know, wanted to note in support. One was the
10 theme around workforce development. I really
11 appreciate the Energy Commission's ongoing
12 dedication here, you know, and particularly, this
13 plan is focused on disadvantaged communities with
14 prioritizing ZEV training, really critical as we
15 transition to this zero-emission present and
16 future.

17 Given my background, I'd also be remiss
18 if I didn't speak to the continued emphasis for
19 heavy-duty zero-emission infrastructure. At
20 CARB, we have the Innovative Clean Transit
21 Regulation, the Advanced Clean Truck Regulation,
22 and the proposed Advanced Clean Fleets, and
23 Offroad Regulations that will really propelling
24 zero-emission trucks and offroad equipment to the
25 forefront. But private and public early

1 infrastructure investments are really critical to
2 help us see those regulations through.

3 I was also just very enthusiastic, I
4 guess, during the presentation around the AB 2127
5 work. When talking about zero-emission policy
6 there's often fear's voice, usually be entrenched
7 interests around the grid's ability to handle
8 this transition to this zero-emission future and
9 zero-emission vehicles.

10 And there was a theme mentioned during
11 the review of the AB 2127 work which is that
12 electric vehicles, light-, medium- and heavy-
13 duty, can really be part of the solution in terms
14 of evening out the demands on the demands on the
15 grid. And so I thought that was both refreshing
16 and, also, important.

17 COMMISSIONER MONAHAN: Thanks, Syd.

18 Ruben?

19 MR. ARONIN: Thanks so much for all of
20 the hard, good work. And great to be able to be
21 here with you in person again.

22 On the plan itself, I agree, staying the
23 course makes --

24 COMMISSIONER MONAHAN: Oh, Ruben, I'm
25 sorry. Just say your name, your full name, and

1 your organization.

2 MR. ARONIN: Sure. Sorry. Ruben Aronin
3 with Better World Group. And I primarily work
4 with advocate coalitions to accelerate the light-
5 and heavy-duty EV marketplace.

6 And with regards to the plan itself, I
7 agree that staying the course makes sense and
8 that the big game has yet to come with the next
9 allocate of dollars. And I do think that the
10 roadmaps that you're implementing are so critical
11 because we're going to need these continued
12 investments, right, for years and decades to come
13 to meet the 100 percent electrification
14 objectives.

15 You know, towards that end of thinking
16 about kind of current programs but better models
17 for the infusion of dollars that we are hoping
18 will continue to flow, I wanted to give
19 recognition to Larry and Samantha and the Equity
20 Working Group that has been doing such a really
21 good job of pulling out engagement strategies,
22 definitions, and kind of roadmaps for engaging
23 with equity.

24 And I thought the metrics for the
25 Workforce Program was extraordinary to see in the

1 report. And I'm curious if beyond the 48 percent
2 note of hitting investments in frontline
3 communities, it would be nice to see the
4 qualitative data, how many partnerships with
5 equity groups are we seeing? And as projects,
6 like Valley CAN, and others, Clean Cars for All,
7 incentives programs are getting funding, I'd be
8 curious about the partnerships in standing up the
9 infrastructure to support the escalation of the
10 equity programs that, hopefully, the next budget
11 will be giving more dollars to?

12 So a win for a community is
13 infrastructure and vehicles, right, not one or
14 the other. So the more that can be synced up the
15 better.

16 And I'm also curious on how the GO-Biz
17 awards to both the Valley CAN and (indiscernible)
18 contingent might be a collaborative opportunity
19 for not just the marketing efforts but, actually,
20 to pull through for infrastructure and vehicle
21 deployment in frontline communities so that we
22 can have these, you know, successful, scalable
23 programs?

24 I also wanted to note, it was good to see
25 some of the parallel investments, like around

1 school buses. And I think schools are such a
2 great anchor climate resiliency space for us to
3 think about how do we build out the ecosystem of
4 infrastructure for school buses, but other
5 medium- and heavy-duty vehicles within the school
6 zones, as well as light-duty, so thinking about
7 where you can really double down investments in
8 those communities that are so iconic.

9 And on the heavy-duty side, I would just
10 want to flag to make sure that we think about
11 infrastructure investments in our warehouse
12 communities, not just on the port complexes.
13 We're not going to see trucks changing quickly,
14 you know, to 100 percent overnight. But pointing
15 to the infrastructure that's going to manifest
16 that transition for the communities that are
17 bearing a terrible burden because of the, you
18 know, 24/7 port operations in Southern California
19 and the increased dependence on freight movement,
20 that promise of investment is really critical.

21 So I would just encourage us to not only
22 look on the port complex where we have to get
23 onward by '35, but the real ecosystem of about
24 that 150-mile corridor.

25 So, again, thanks for all the terrific

1 work and the more to come.

2 COMMISSIONER MONAHAN: Thanks, Ruben.

3 Great feedback.

4 Oh, Zac?

5 MR. THOMPSON: Hi. Zac Thompson with
6 East Bay Community Energy.

7 I want to echo the comments made by
8 everyone else in acknowledging CEC staff on this
9 report. I think it's really great. Really
10 appreciate seeing more of a focus on multifamily
11 residents in this report and how that has sort of
12 been incorporated into your language around
13 equity. I think it's really, really important to
14 include that, so that's good to see.

15 And then just want to encourage the CEC
16 to, you know, utilize any leverage that you can
17 for those manufacturing funds to ensure that
18 those help lower the cost of EVs, particularly
19 with medium- and heavy-duty EVs.

20 You know, we know that a lot of those
21 medium- and heavy-duty trucks operating in
22 California are driven by independent owner-
23 operators; right? So they're not necessarily
24 going to have the money to go out and procure new
25 medium- and heavy-duty EVs. And they're not

1 going to have the time and the bandwidth to go
2 out and apply for competitive funds to do so
3 either. So lowering those costs for them is
4 really important.

5 And then, additionally, you know, with
6 that, the money coming from the -- hopefully
7 coming from the Governor's Budget, I encourage
8 the CEC to allocate those funds toward not only
9 lowering the cost of EVs but, also, towards
10 charging infrastructure and aiming at that 8
11 million EVs on the road by 2030 goal, and to
12 close that gap that the AB 2127 Report identified
13 of nearly 900,000 light-duty chargers and over
14 150,000 medium- and heavy-duty chargers needed by
15 2030 to support that goal.

16 So thank you.

17 COMMISSIONER MONAHAN: Great. Thanks,
18 Zac.

19 (Indiscernible), if you don't mind
20 waiting for a sec, we have a few people with
21 their hands raised on the phone and I want to
22 make sure we give them some space?

23 Michael, can you facilitate that?

24 MR. COMITER: Yes. So let's go ahead and
25 start with Neena Mohan.

1 MS. MOHAN: Great. Thank you. Hi,
2 everyone. This is Neena Mohan with the
3 California Environmental Justice Alliance, or
4 SEJA. We represent ten EJ communities across the
5 state.

6 Just want to, again, echo the
7 appreciation that everyone has been giving. This
8 plan is, yeah, really great and really appreciate
9 the clear presentations. I just want to flag a
10 couple things.

11 So I think the first is, as folks have
12 mentioned, you know, really pleased to see the
13 CEC's continued shift towards increased
14 investments in medium- and heavy-duty
15 infrastructure, right, which we all agree yields
16 greater health benefits to DACs. And, you know,
17 want to encourage the CEC to continue ramping up
18 these investments in (indiscernible) with the
19 related CARB regulations.

20 And I think someone else also mentioned
21 the transit piece. You know, mass transit is a
22 critical VMT reduction strategy and that is going
23 to require accelerated deployment of ZEV transit
24 buses and ZEV heavy-duty trucks. And so also
25 hope to see, you know, more robust infrastructure

1 investments towards transit.

2 When it comes to the CALeVIP investments,
3 I guess I had a question about why there were --
4 maybe this is to Kevin's point -- less
5 investments in some rural areas. So I saw that
6 there were no fast chargers going into Fresno and
7 greater disproportionate investments in places
8 like the Silicon Valley.

9 So I just want to, you know, uplift the
10 idea of really addressing the unique needs of
11 rural areas which are home to many disadvantaged
12 communities and that being a critical component
13 to achieving the state's climate and equity goals
14 and really try to think about community
15 engagement from the perspective of investing in
16 community-driven and community-informed solutions
17 that wholistically are going to address the clean
18 and accessible mobility options and the needs
19 that are coming up for people.

20 Another piece that I want to lift up is
21 just appreciating the reduction in investment in
22 some polluting low-carbon fuels and reallocating
23 those resources to supporting truly zero-emission
24 solutions. That's, yeah, that's really great and
25 very important.

1 And I think, given the scale of
2 investments necessary to build out the state's
3 zero-emissions infrastructure, you know, as folks
4 mentioned, the increase in ZEVs we're seeing on
5 the road, really want to call on the CEC to
6 further cut these investments in infrastructure
7 that just don't align with our state's climate
8 goals.

9 And on the issue of hydrogen, just want
10 to flag that while it is classified as a zero-
11 emissions fuel, all hydrogen is not equal; right?
12 And hydrogen produced from biogas or from steam
13 methane reformation are not -- is not clean. And
14 so I really want to encourage the CEC to leverage
15 any sort of procurement power it has to invest in
16 hydrogen fuel that is truly green, right, that is
17 formed from electrolysis powered by renewable
18 energy.

19 So I think I'm running out of time but
20 just want to appreciate that and echo the
21 comments around further defining what a benefit
22 looks like to DACs. And would love to hear more
23 updates about how that's going to define equity,
24 to define benefits, and to really get more
25 granular about those metrics.

1 So thank you so much.

2 MR. COMITER: Great.

3 COMMISSIONER MONAHAN: Thanks, Neena.

4 And, Michael, just a quick comment.

5 We didn't talk about the proposed
6 investments in green hydrogen but the governor
7 proposes \$100 million in green hydrogen for the
8 Energy Commission to manage, so just in response
9 to the opportunity for the budget to accelerate
10 some of the investments that we're hoping to make
11 in, really, zero-carbon hydrogen.

12 MS. MOHAN: Great. Thank you.

13 MR. COMITER: All right. And next we're
14 going to move on to Sam Houston.

15 Please go ahead.

16 MS. HOUSTON: Thanks. I'd actually like
17 to follow Leslie Aguayo if I may go after her
18 instead?

19 MR. COMITER: Oh, yes. Go ahead, Leslie.

20 MS. AGUAYO: Thanks, Ann.

21 Good morning, everyone. This is Leslie
22 Aquayo. I'm a Climate Equity Program Manager
23 from the Greenlining Institute.

24 First, similarly, I'd like to start off
25 by thanking the CEC again for their hard work and

1 commitment to equity. This is a good plan. And
2 we've seen, through engagement with staff and
3 Commissioner, that the commitment to equity is
4 there, so I wanted to elevate that.

5 I also wanted to highlight some comments
6 made previously by Bill, Bill Magavern, and some
7 other folks, as well, around the importance of
8 defining equity and defining benefit, as well as
9 the metrics that accompany these definitions. I
10 know that there are going to be continuing
11 processes to be able to include various
12 stakeholders in these definitions. So just
13 wanted to elevate how important that is to get
14 that right as a first step.

15 Also, it's very important to get people
16 at the table early and often and consider
17 different stakeholders abilities to participate
18 and, therefore, offer certain relevant
19 compensation.

20 And understanding that equity is an
21 iterative process; right? and so we should be
22 able to review these definitions through a
23 process that enables us to define it over -- as
24 we progress as a society and over a period of
25 Investment Plans and years.

1 So my question is: How can we get further
2 involved in this process; right? There have been
3 already some efforts with through the Strike
4 Force, as well as through this Advisory
5 Committee, but I really wanted to get clear on
6 what that process is and will look like for folks
7 to be able to engage early and often.

8 I'd also like to, similarly, highlight
9 the great work of Tiffany Hoang and the drive
10 time and her analysis with that map and would
11 love to get involved in next steps on how to be
12 able to close those gaps.

13 And, similarly, elevate some of the work
14 that she and her colleagues have done over the
15 last couple of years around accessibility versus
16 deployment and understand that, you know, as is
17 mentioned in the Investment Plan, deployment
18 based on geography is not the same as
19 accessibility and not the same as being able to
20 have folks equitably be able to use the
21 infrastructure and investments.

22 I'd also like to ask, if we have time,
23 how does CEC plan to align to Justice40 goals?
24 And we're, also, going to set the bar as a state
25 for other states to be able to not only reach 40

1 percent but surpass it?

2 And, lastly, I also wanted to echo Ruben
3 and a couple other folks around the importance of
4 a breakdown of investments and just aggregating
5 Figure 2 if that's possible? I think as
6 advocates and as folks who are trying to
7 understand where the investments to date are
8 going, it would be really helpful to be able to
9 see clearly the qualitative and quantitative data
10 of those equity investments.

11 And, lastly, I'm running out of time but
12 would like to leave on the note that this is a
13 real opportunity and real communities will be
14 impacted by these investments. And so trying to
15 see this as not only an investment in electric
16 vehicles and charging but, also, as a community
17 benefits investment. And being able to
18 understand that this is a wealth-building
19 opportunity for folks is really important.

20 So I'll stop there. And thank you so
21 much for the time.

22 MR. COMITER: All right.

23 COMMISSIONER MONAHAN: Thanks, Leslie.
24 Appreciate those comments.

25 MR. COMITER: Thank you.

1 So let's move on to Sam Houston.

2 MS. HOUSTON: Thanks so much. Sam
3 Houston here with Union of Concerned Scientists.
4 And thanks for letting me do that little
5 switcheroo on the order. It really helps me to
6 be able to take cues from folks like Leslie, and
7 Neena before her, and others. A few things I
8 wanted to pick up on related to what they said.

9 The development of -- commitments and
10 development of additional metrics and tracking
11 for benefits to communities, you know, I saw that
12 commitment in the report but just want to
13 underscore what Neena, Leslie and others have
14 said about the importance of getting -- you know,
15 doing that in a meaningful way.

16 I appreciate the shoutouts to the Strike
17 Force and the Equity Working Group thereof. The
18 stakeholders participants in that Equity Working
19 Group are, you know, honing in on some things
20 that I think will be relevant to that effort.
21 And I hope we can continue to sort of cross
22 pollinate, not only that effort but other
23 efforts, to really work in the equity metrics in
24 a meaningful way.

25 I also want to touch on the hydrogen

1 issue. You know, I appreciate, Neena raised the
2 pathway is relevant, and appreciate Patty's
3 clarification about focusing on investments in
4 green hydrogen. I think that's super important.

5 And related to medium- and heavy-duty in
6 particular, it would be helpful in the summary
7 figure to have a better understanding of how the
8 medium- and heavy-duty investments will break
9 down across electrification and hydrogen fuel
10 pathways. I think that will make for some richer
11 dialogue.

12 And sort of to a similar point earlier
13 about understanding how the different GFOs fold
14 up and just get -- really have an opportunity for
15 more meaningful conversation around, you know,
16 what do these huge numbers mean? It's so
17 exciting to see these huge numbers in the summary
18 table but I quickly lose touch with those mean
19 without being able to see how the different
20 programs roll up into those numbers. So just
21 wanted to sort of second that desire to see that.

22 And I'll also just touch on the charging
23 speeds that was brought up right at the beginning
24 with regard to the sort of 150 kilowatt number.

25 Thank you so much, Esther, for dropping

1 the fact sheets related to EnergIIZE in the chat.
2 I saw that that 150 kilowatt hour -- excuse me,
3 kilowatt was related to the public charging. I
4 personally think that's fine where public
5 charging is concerned for medium- and heavy-duty.
6 But I would also underscore Eileen's point that,
7 where we can have lower-power charging for some
8 medium- and heavy-duty sectors outside of the
9 public space in the depot space, then that will
10 help us save infrastructure costs and reduce
11 potential grid stresses.

12 So thanks so much.

13 COMMISSIONER MONAHAN: Thanks, Sam.
14 Appreciate those comments. And also appreciate
15 your working with Larry in helping facilitate the
16 workgroup, the Equity Work Group or the ZEV --
17 the EV Charging Infrastructure Strike Force.

18 MR. COMITER: And we have one --

19 COMMISSIONER MONAHAN: And is that it for
20 the --

21 MR. COMITER: We have, well --

22 COMMISSIONER MONAHAN: Oh, sorry.

23 MR. COMITER: -- it looks like we have
24 two raised hands.

25 COMMISSIONER MONAHAN: All right. I

1 think we'll go back to the room because people
2 have been waiting, and then we'll go to the phone
3 again, so I'll turn to Gia.

4 MS. VACIN: Thank you. Gia Vacin with
5 GO-Biz.

6 I think I -- everybody has gone ahead of
7 me and said how much we appreciate this report
8 but I want to say it as well. I feel like I have
9 a pretty good sense of, you know, their various
10 programs and GFOs and things. But every time I
11 read these Investment Plans, I feel impressed at
12 the breadth and the depth and just sort of what
13 the team is working on and how you've outlined
14 these expenditures, so I agree with kind of
15 staying the course and I think that's a good
16 approach for now.

17 I wanted to focus some of my comments on
18 thinking about leveraging federal dollars and how
19 we might be able to do that. So I noticed that
20 there was, you know, a small section devoted to
21 the IIJ, and that's great, and thinking about
22 looking -- following on, as federal guidance
23 comes out, thinking about how we might be able
24 to, if the CTP can appropriate some of that for
25 match share, I think that that's really smart.

1 And maybe would just recommend that we
2 take it a step further and think about how to
3 stay flexible on that. And that's across the
4 different spending categories but I think I'll
5 dig in on hydrogen hubs because it's been a lot
6 of my life these days. And so I think there's
7 pretty broad agreement that we want one in
8 California, zero/low-carbon/green, and that we
9 are really well positioned to win here if we
10 bring our A game. I think that it's going to be
11 super competitive and there's a lot of
12 organization going on. And we need to think
13 about ways that we can show what California can
14 bring in dollars and otherwise.

15 And so it doesn't necessarily mean that
16 we need more dollars. But what I'm encouraging
17 CEC to think about is whether there may be some
18 need for carveouts for hydrogen or otherwise?
19 And so just ensuring that the Investment Plan has
20 enough flexibility baked into it that CEC does
21 have this sort of discretion to direct funds in
22 this way, if needed, if it helps our
23 competitiveness while still advancing our goals.

24 And so I think, you know, Patty mentioned
25 one area that may be really obvious if the \$100

1 million for green hydrogen goes through. And you
2 know, that seems like that could be a great spot,
3 but there are many, many opportunities in this
4 proposed spending plan, Investment Plan and so,
5 yeah, thinking about how to create that
6 flexibility.

7 Thank you.

8 COMMISSIONER MONAHAN: Thanks, Gia. I
9 appreciate that. I appreciate your leadership on
10 the hydrogen hubs. Great comments.

11 And we have Robert.

12 MR. MEYER: Thank you. I'm going to
13 actually go the other way with the report and
14 just say it was okay. Actually, just echoing
15 what Gia said, it's very refreshing to have such
16 thorough and assessment, let alone things that
17 lead in and stoke conversations among not only
18 our stakeholders but the public as a whole. It's
19 very responsible and prudent in terms of overall
20 investment efforts. And I think it's remarkable
21 in terms of a state program having such an impact
22 on a national level, so thank you.

23 In terms of the report itself, I've just
24 made some notes. We will be reaching out to
25 Tiffany regarding the definition of the equity

1 piece. We are fortunate enough to contract with
2 a couple of the disadvantaged communities'
3 members as an organization, as ETP. And we think
4 that there's a tremendous opportunity for impact
5 to be able to leverage your definitions into our
6 programs and, hopefully, other elements of the
7 California workforce system, so we're looking at
8 that.

9 The second component, I definitely would
10 be remiss if I didn't stress the importance of
11 paper performance-based investments in terms of
12 the workforce and other components of
13 manufacturing. This gives us jobs, tangible
14 outcomes, and gets us a connection into the
15 equity pieces that we want. We know who we are
16 training and serving and where the employers are
17 working and are located, so those are there.

18 I would also agree with Casey's
19 recommendation and will follow up with Larry, all
20 things go to Larry, to echo the conversation
21 regarding the assessments that are going to be on
22 these programs.

23 I'd like to also thank Larry and Jonathan
24 Bobadilla for their engagement with GO-Biz. We
25 have an Interagency Group that works to align

1 incentive opportunities. And we've seen
2 tremendous amounts of activity in the EV space
3 with hydrogen, also the wider range of industry
4 sectors, including rare earth mining and
5 minerals. Where ETP has been engaged, we're now
6 seeing more easy and facilitative connections to
7 other investments with the Energy Commission, so
8 I just wanted to call out that work. It's
9 really, really good. It's also a great
10 partnership with GO-Biz and I think it's landing
11 some tremendous impacts, so thank you there.

12 And then, lastly, ETP has just completed
13 \$55 million in job training funding in two
14 General Fund programs dealing with the
15 reemergence of the pandemic. We took the
16 opportunity to widen the definition of employers
17 to include public transit, as well as the
18 manufacturing sectors.

19 Notably, the California Labor Federation
20 has contracted with ETP to support the training
21 of public transit fleets to continue the support
22 for adoption not normally funded under our CORE
23 Program guidelines.

24 And then with the \$13 million for
25 community collage partnership, we have funding

1 for EV for public transit, as well as other
2 investments, in communities, including, and I
3 noted, Kern Community College District as one of
4 your program recipients, so thank you for the
5 investment there in the Central Valley.

6 So with that, that's my comments.

7 COMMISSIONER MONAHAN: Thank you.

8 And we have Morgan, and then we'll turn
9 to the folks on the phone again.

10 MS. CASWELL: Great. Thank you. Morgan
11 Caswell with the Port of Long Beach. Just want
12 to echo what everyone has said. It's a really
13 thoughtful plan. And I think what stood out to
14 me is how much the CEC has been able to
15 accomplish.

16 I also want to echo the comments that,
17 you know, we appreciate the focus on equity, on
18 investing in and creating benefits for
19 disadvantaged communities. Seaports are in
20 disadvantaged communities. We acknowledge we
21 have a negative environmental and public health
22 impact, so we're glad to see that focus.

23 And, of course, we do support the
24 expansion of workforce development projects. We
25 have been able to actually bolster our

1 relationships with our local community colleges
2 as a result of the CEC funding.

3 I want to focus on the seaport
4 perspective and, you know, kind of what we're
5 grappling with right now. There are a lot of
6 rulemakings underway or recently adopted that
7 influence the ports and for good reason. But I
8 think it's important to kind of think of the
9 whole hemisphere of issues we're trying to tackle
10 at once.

11 The At Berth Regulation was adopted by
12 CARB, as well as the Harbor Craft Regulation.
13 And those will lead to additional
14 electrification. And it's going to influence how
15 successfully we implement these other rules and
16 these other initiatives that we have. So I
17 wanted to keep that context in mind.

18 And also just point to some of the other
19 work that you've been able to do focused on
20 harbor craft in particular, as well as
21 locomotives. It would be great to understand how
22 you plan to build on those. I know you had the
23 hydrogen fuel cell demonstration in rail and
24 marine applications. And I'm curious to hear,
25 okay, how do we build on those and expand them?

1 And then the other item I wanted to bring
2 up is to maybe clearly draw the limits of your
3 funding programs. I know you focused heavily on
4 on-road but we've -- I mean, you've been very
5 creative with being able to fund offroad. And so
6 a lot of seaports look to your program for those
7 investments. And I think it would just be good
8 to explain the limitations and how you've been
9 able to be creative with your dollars and how you
10 plan to do in the future.

11 So those are my comments. And I just
12 thank you for the opportunity.

13 COMMISSIONER MONAHAN: Great. Thanks to
14 you, Morgan. And this might be something we can
15 deepen in the Port's collaborative discussions --

16 MS. CASWELL: Um-hmm.

17 COMMISSIONER MONAHAN: -- because I think
18 there's -- it is confusing. It's confusing to us
19 sometimes. And you know, the nexus between where
20 we get the funds for CTP and what we can deploy
21 needs to be very clear and transparent. So --

22 MS. CASWELL: Great.

23 COMMISSIONER MONAHAN: -- let's just
24 table that and put it in the Port's
25 collaborative.

1 MS. CASWELL: Great.

2 MR. COMITER: All right. We'll move on
3 to panelists in the Zoom session. We have three
4 hands raised currently.

5 Let's start with Katherine Garcia.

6 MS. GARCIA: Hello. I am Katherine
7 Garcia from Sierra Club. Thank you so much for
8 this opportunity to comment.

9 I am so appreciative of this report and
10 today's presentation. Thank you for all of the
11 work you've done to advance clean transportation
12 in the state and really creating a template for
13 the entire country. I appreciate all of CEC's
14 staff for their work on this update and for the
15 presentations that were shared today.

16 My comments today really focus on the
17 number of EV chargers planned, medium- and heavy-
18 duty charging, hydrogen, and also workforce.

19 So, first, we want to recommend that the
20 CEC use a forecast of 3 million vehicles for
21 2025. This really aligns with CARB's recently
22 approved Mobile Source Strategy which estimates
23 that there will be -- there needs to be 3 million
24 light-duty EVs by 2025 and 8 million by 2030 to
25 come close to supporting the governor's goal of

1 having 100 percent new light-duty vehicle sales
2 be zero-emission by 2035.

3 So taking these corrective actions now
4 could support California leading the nation in
5 how to successfully plan for and implement
6 charging infrastructure to support the rapidly
7 growing EV fleets.

8 And the second point is we recommend that
9 the CEC prepare a statewide map and plan showing
10 approximately where there needs to be charging
11 plazas along major and secondary corridors to
12 support the parking, dwell time, and high-power
13 charging needs of medium- and heavy-duty trucks.

14 I do want to echo Ruben's point about
15 school buses which is a very important project
16 for me. I work a lot on electric school buses.
17 And often when we talk about school buses we
18 focus on their charging needs at the school. And
19 I just wanted to flag that we also need to be
20 aware of their charging needs while on field
21 trips and traveling to supporting events. And I
22 think that having a robust charging network for
23 these medium- and heavy-duty trucks and buses,
24 including school buses, is important.

25 I noticed that on slide 70 it mentions

1 the federal discretionary competitive funding
2 opportunities from the Infrastructure Investment
3 and Jobs Act. Moving forward, it would be great
4 to see more information on how the state is
5 looking into that funding and different types of
6 vehicles that that is going to support.

7 Thirdly, I'm going to be sharing in the
8 chat, and also including in my written comments,
9 some information about hydrogen that Sierra Club
10 just prepared. While both battery-electric
11 vehicles and fuel cell vehicles are zero-emission
12 at the tailpipe, it's important to consider the
13 renewable -- it's important to consider the
14 significant impact of how the hydrogen is made
15 and how that impacts fuel cell electric vehicles.

16 So Sierra Club just produced a helpful
17 resource that outlines how hydrogen is produced
18 and the most efficient use cases for hydrogen
19 that said, since California is investing millions
20 of dollars in hydrogen fueling stations, we
21 recommend that the CEC work with CARB to increase
22 the amount of renewable content in hydrogen fuel,
23 ultimately rising to 100 percent green hydrogen
24 to maximizes the pollution emissions reductions.
25 But, ultimately, we believe that the state is

1 overbuilding hydrogen fuel infrastructure and not
2 making effuse of these public funds.

3 Finally, thank you for the update on
4 workforce development investments. It's so
5 important that the transition to a clean energy
6 economy must create good, family-sustaining jobs.
7 And I'm so pleased to see that CEC is dedicated
8 to workforce development.

9 Thank you.

10 COMMISSIONER MONAHAN: Great. Thanks.
11 Thanks, Katherine.

12 So how about Bill Elrick next?

13 MR. ELRICK: Great. Thank you. And I
14 apologize in advance for any background noise I
15 have at my location.

16 Let me start with, you know, accolades
17 for the staff and CEC for this report. There's a
18 lot of great things in there. And it's really
19 part of the reason why California is not just
20 leading the nation but globally watched for
21 market conditions, development, and approaches.

22 For hydrogen, clearly, it's the largest
23 and only consumer-based fuel cell vehicle market
24 in the world and there's much more to go. And as
25 the staff report showed, there's market

1 approaches now about sustainable marketplace
2 showing cost reductions in hydrogen resembling
3 early solar, wind, and battery cross curves. So
4 this is really exciting. And really applaud on
5 the zero -- the equity focus being top of the
6 bill now.

7 I do have a couple of really
8 disappointing parts in this plan in that we're
9 not aiming hydrogen technology towards the
10 state's most important goals, and I have three
11 areas of improvement.

12 The first is, the foremost, the state's
13 goals are 100 percent ZEVs, yet the program
14 continues to restrict itself with the limiting
15 language within AB 8 and focus on 200 stations
16 instead of 100 percent ZEV transition. And so
17 that's really important to aim for success and
18 not the limited near-term metrics as we go. And
19 it doesn't matter if the money is going there but
20 the idea of looking at a larger program.

21 CEC, as well as other government and
22 industry players, put together the published
23 roadmap for hydrogen and fuel cells which looked
24 at a million vehicles and 1,000 stations that
25 could easily be referenced and aimed for to get

1 us there.

2 And I think if we look at the way that
3 the BEV side of charging is going to meet the
4 state goals, not just limiting to the current
5 market conditions or update because we are behind
6 all our ZEV objectives, and that's why fuel cells
7 need to be looked at in this plan too.

8 The second item is that I don't see
9 anywhere in this plan the CARB Light-Duty Fuel
10 Cell Vehicle Self-Sufficiency Report. You know,
11 this was created to inform the CTP program. And
12 it's got great data that we should be able to
13 work at for this Committee to review and discuss.

14 And the fact that the report put out this
15 could be the first identified self-sufficient ZEV
16 pathway of any technology anywhere in the world,
17 and at about ten percent of this year's ZEV
18 budget, I think that's something we should be
19 talking about more, so I look forward to seeing
20 that in the report, as well.

21 And then, finally, some more metrics and
22 tools. Basically, we used to see greenhouse gas
23 and emission reductions, petroleum displacement,
24 those are hard datapoints we can look at and see
25 the program results. I think station utilization

1 would be really good to consider here. We know
2 the stations are at about 50 percent capacity,
3 that's great, but if we took a harder look we
4 might get more knowledge and sharing.

5 And then I want to just have a last
6 comment here about, you know, the clean fuel use
7 with some of the previous comments. You know, we
8 need to separate the vehicle deployment and the
9 fuel production pathways that we're getting as
10 much decarbonized renewable fuels and productions
11 as quickly as possible but get as many ZEVs out
12 there because they are agnostic.

13 And I know that for fuel cells, vehicles
14 are tied to the amount of renewable fuel or
15 decarbonized fuel in the production. I don't
16 know if that's the same with BEVs, but let's take
17 a closer look at that. You know, what do we need
18 to do when we look at the fuel production and how
19 they're tied to vehicles?

20 So I think just getting more of the tools
21 that are created around charging, aiming fuel
22 cells for the same success, you know, we've got a
23 lot of hard work before us but you've got the
24 tools, the experience. We just need to see those
25 reflected in this report.

1 Thanks. Great work.

2 COMMISSIONER MONAHAN: Great. Thanks,
3 Bill.

4 I think Jerome is next. Jerome, you have
5 your hand raised, I believe.

6 MR. COMITER: Looks like he may be muted.
7 Might want to check your microphone.

8 MS. QIRIAZI: Thank you. Can you hear me
9 now?

10 MR. COMITER: Yes. Perfect.

11 MS. QIRIAZI: I apologize for that.

12 Thanks for this opportunity. Jerome Qiriazzi from
13 the Humboldt Transit Authority. A few notes.

14 One, I want to echo, as everyone else
15 has, that staying the course here, I think, is a
16 great plan for now. And continue to appreciate
17 and be impressed by the content of your
18 Investment Plans.

19 And I just want to provide a few notes
20 regarding project ideas, primarily, and a couple
21 of challenges with a rural focus and a transit
22 focus.

23 One, we do continue to see electric
24 utility line capacity as a significant barrier to
25 deployment of charging infrastructure in rural

1 areas. We do have -- our IOUs do have their
2 incentive programs that help subsidize upstream
3 infrastructure. But we are -- we see an
4 unwillingness to fund necessary upgrades to allow
5 transit agencies and others to put in the
6 infrastructure that they need.

7 I want to point out a caution, a word of
8 caution regarding deploying relatively new and
9 complex technologies, such as vehicle-to-grid
10 bidirectional charging and microgrids at public
11 institutions, such as schools, many of which are
12 chronically underfunded. And my point here is
13 concern around the unknown operation and
14 maintenance costs of this infrastructure, as well
15 as the complexity of actually deploying this
16 successfully. And I have seen some challenges,
17 as well as overpromising, by very reputable
18 engineering firms at schools.

19 So I think investment there is important
20 and we need to investment in these institutions
21 but recognizing that this technology is
22 relatively new and complex. And if there's a way
23 to ensure that there's sustained follow-up with
24 these organizations and if there's a way that the
25 CEC can continue to nurture those investments, I

1 think that would be critical.

2 And the last couple of points. I'm very
3 excited about the revolving loan effort. This is
4 very important, particularly for rural transit
5 agencies who just simply don't have the cash flow
6 to manage large infrastructure projects,
7 particularly via grants that are reimbursement
8 structure, so I really encourage that work to go
9 forward.

10 And lastly, the SB 643 Infrastructure
11 Assessment, I'm excited to see that report and
12 encourage you to reach out to the North State
13 Super Region, who has recently integrated the FAR
14 North Transit Working Group as -- or Consortium
15 as a working group within the North State Super
16 Region. And that group has already started that
17 sort of broader north state planning and
18 collaboration of hydrogen infrastructure across
19 multiple transit agencies.

20 So with that, thank you.

21 COMMISSIONER MONAHAN: Great. Thank you.

22 Is there anybody who has not yet provided
23 comments from the Advisory Committee? I can't
24 see the Zoom, so --

25 MR. COMITER: There ae no raised hands.

1 COMMISSIONER MONAHAN: Okay. That's
2 perfect.

3 I know that -- so Rey Leon, who was on
4 the Advisory Committee, recently resigned from
5 the Committee but he had his hand raised, so I
6 wanted to give Rey a space to speak if he wants
7 to make a comment.

8 MR. COMITER: Sure. I'll allow him to
9 talk right now.

10 MR. LEON: Hello, everybody. It's good
11 to hear everybody. Thank you for all the work,
12 CEC staff. Greetings, Commissioner Monahan. And
13 I just want to share a few comments.

14 I, in hearing the presentation, heard a
15 lot of good things, one of them, the resources
16 for providing more EV mobility, and the funding
17 to companies like Lyft and Uber was mentioned.

18 I just wanted to remind folks that
19 grassroots efforts have initiated since 2018, at
20 least there's Green Raiteros out here in the
21 valley, to provide farmworker families with
22 electric vehicle rides to their essential
23 appointments and trips. And so do not forget
24 about those fleets, you know, in the midst of,
25 you know, the corporations that have a lot more

1 money and just operate a little bit differently.

2 But I, also, I wanted to comment and lift
3 up -- and I'm also the Mayor of the City of Huron
4 and I have good relationships with all of our
5 small businesses. One of our businesses is an
6 agricultural operation, the last one that is
7 located within the city. And I went out there to
8 check them out because my brother works there, as
9 well, and they have these huge machines. One of
10 them is a tomato machine, you know, tomato. If
11 you've had catsup or pizza, you've had some of
12 our tomatoes. But you know, they're still the
13 old-school machines that aren't, you know,
14 electric.

15 And so I just wanted to lift that up in
16 terms of when are those going to be electric?
17 They're probably happening now. I don't know how
18 much. I know they're offroad. They're heavy-
19 duty but they're also offroad. I don't know if
20 that's taken into consideration but I just wanted
21 to bring that up and share with folks.

22 The other day I started a new coalition
23 with almost 100 parents from the community
24 because their children -- farmworkers go to work
25 at about 5:30 in the morning. And their children

1 that are, you know, going to first grade,
2 kindergarten, they struggle in getting them to
3 school because they're no longer there, they're
4 probably with their caretaker, and they've to get
5 them to school.

6 So the bus that used to provide the rides
7 cannot no longer, due to insurance issues --
8 but -- so I'm organizing with them to see how we
9 could use Green Raiteros to transport about 100
10 kids across the state route, which is very
11 dangerous when you're a little kid; right?

12 So anyhow, I'm hoping that these
13 investments are able to support those type of
14 efforts that are very grassroots, that are very
15 specific to the needs to people in priority
16 populations. And those -- you know, Green
17 Raiteros is expanding. And we're hoping that
18 this nonprofit-based effort is able to, you know,
19 give them support there from the CEC, as well.

20 But all right. Por saludos and thank
21 you.

22 COMMISSIONER MONAHAN: And, Rey, I just
23 want to thank you for being an Advisory Committee
24 member and just to reiterate that, whether you're
25 an Advisory Committee member or not, and this is

1 for the broader stakeholder community, I mean, we
2 are -- we encourage and want your feedback and
3 dialogue. So it's not like you can only be on
4 the Advisory Committee membership to have a voice
5 in our funding decisions.

6 MR. LEON: Thank you.

7 COMMISSIONER MONAHAN: And one last quick
8 comment. Mayor Leon and I were, just a few weeks
9 ago, in Brawley where the first public EV charger
10 in the entire Imperial County was opened for
11 business. And the reason that that charger made
12 it to the finish line is because there was one
13 very committed NGO that really -- Comite Civico
14 that really pushed it. And General Motors ponied
15 up \$40,000. We put \$8,000. That's the only
16 reason it got to the finish line. It was very
17 expensive to build out infrastructure in a rural
18 community like Brawley.

19 So I thought that was just really, you
20 know, inspirational, but also somewhat
21 disheartening in terms of, you know, we really
22 need to figure out how to make sure that rural
23 communities, in particular, can get access.

24 MR. LEON: You know, we --

25 COMMISSIONER MONAHAN: So we -- oh,

1 sorry, Rey.

2 MR. LEON: One quick comment. Just I
3 think infrastructure is people's homes is also
4 critical because what I'm noticing is that even
5 though it seems like everybody's using Russia as
6 an excuse to pick up the prices on everything and
7 the best way to charge and the cheapest way to
8 charge is at home. So having an infrastructure
9 in the household of the families that are able to
10 acquire an EV is the ideal; right?

11 COMMISSIONER MONAHAN: Yeah. Thanks,
12 Rey.

13 So we have a little bit more than ten
14 minutes before we're going to open it up for
15 public comment. And I want to give the Advisory
16 Committee members, as you've had a chance to hear
17 others, if you have like a one-minute lightning-
18 round comment that you want to make, you should
19 feel free to make it now. If there aren't any,
20 we'll move to public comment.

21 All right, Lori.

22 MS. PEPPER: Okay. Lori Pepper, State
23 Transportation Agency. Wanted to address kind of
24 two issues. One is on the NEVI (phonetic)
25 funding from the IHAA. Just wanted to let

1 everybody know, Caltrans has a working group
2 that's a publicly -- a public stakeholder-
3 available working group that's ongoing. Let me
4 know if you would like to join if you're not
5 already involved.

6 The other piece of it is that we are
7 close to signing an MOU with the CEC to make sure
8 that the NEVI funds go to support the broader
9 infrastructure plan, the ZIP, and that everything
10 works together, so I wanted to say that.

11 The other thing is a little off topic but
12 we actually just posted a job opportunity at
13 Caltrans for an executive level Assistant Deputy
14 Director for Transportation Electrification. So
15 if you know anybody or if you would like to
16 apply, please, we are taking applications now.
17 And, again, you can reach out to me with any
18 questions.

19 Thank you.

20 COMMISSIONER MONAHAN: Thanks, Lori.

21 Matt?

22 MR. GREGORI: Thanks. Matt Gregori,
23 SoCalGas Research Development and Demonstration.

24 I just remembered, I recalled seeing in
25 the presentation a couple photos of EV chargers

1 set up on curbs or with pilons in front of them.
2 And I had remembered some Twitter conversations I
3 had seen recently about disability access,
4 disabled people's access to EV chargers. And so
5 I hope that is something that's taken into
6 consideration under the equity component of
7 deployment.

8 Thanks.

9 COMMISSIONER MONAHAN: Thanks, Matt.

10 Robert?

11 MR. MEYER: Thank you. Robert Meyer with
12 the Employment Training Panel.

13 We just want to offer to the group that
14 if you have organizations or memberships
15 comprised of employers in this space that would
16 be interested or have workforce training needs
17 that might benefit from our funding to support or
18 augment efforts in advancing the deployment of
19 these technologies, please, don't hesitate to
20 contact us.

21 I know that sounds like a shameless plug
22 but we are -- you know, the economy is booming
23 and we are being dragged into many directions.
24 But I wanted to put that out there because this
25 still remains a key partnership for us.

1 Thank you.

2 COMMISSIONER MONAHAN: Thanks, Robert. I
3 think Lori opened that door, so it's fine.

4 Morgan?

5 Michael, is there anybody on the phone
6 who has their hand raised?

7 MR. COMITER: We have two raised hands.

8 So we can start with Bill.

9 MR. ELRICK: Thank you. I wanted to kind
10 of throw out two things.

11 One, as we're looking at now everything,
12 regulations to executive orders, aiming to get
13 100 percent ZEVs, we switched the program's
14 mentality from market launch and market
15 development to one of, really, market success and
16 sustainability. So I'd encourage, I don't know
17 if we're going to have time since this doesn't
18 seem to be a back-and-forth dialogue, but for CEC
19 to come in next time and talk about how we start
20 planning for an exit ramp from government
21 subsidy, CTP and anything else. I think that's
22 what the success rate needs to be aiming for.

23 And then the other is just asking why we
24 don't see the CARB report on self-sufficiency and
25 hydrogen even referenced yet?

1 MR. COMITER: All right.

2 And then next is Kevin.

3 MR. HAMILTON: Yes. Thanks. I did want
4 to make sure that I call out, first of all, the
5 hard work staff did on this report. It actually
6 wasn't a bad read. I got through most of it.

7 I also wanted to mention that I still
8 don't see that kind of interaction with CARB that
9 I feel like we need to see where CARB is moving
10 ahead and some areas and CEC is behind.

11 I think we recently, in some work we did
12 with CARB, mapped out charging infrastructure via
13 the various public access pages in the valley and
14 the rest of California and uncovered that the
15 only DC fast chargers that we could find, at
16 least on the public networks, were installed by
17 Electrify America, with one exception, so -- and
18 that was between San Joaquin and Kern County, and
19 so we need to fix that.

20 We need to make sure that as we're moving
21 this Level 3 infrastructure into place that
22 areas, like the valley, I think the Brawley story
23 is great, but others and, again, certainly not
24 forgetting the rural communities in the valley.
25 But you know, it would be great if the main

1 arteries, Highway 33 running up the middle
2 through the ag towns, up the 99, up the 41 and
3 the 43, there's about five major arteries that
4 you could just look at a map and say, wow, it
5 looks like where most of the cities are located,
6 small or large along there, and start from there.

7 And so we really need to see a
8 concentrated effort in that from the CEC
9 planning. And happy to work with you on that but
10 I'm afraid I'm just not seeing it. And I'm happy
11 to meet with staff and find out where I'm missing
12 it but just not seeing it in this plan.

13 Thank you.

14 COMMISSIONER MONAHAN: Thanks, Kevin.
15 Appreciate that feedback.

16 And I will say, it intersects with some
17 of the funding that Lori was talking about from
18 the federal government in terms of these
19 corridors where we have opportunity to leverage
20 federal funding for DC fast charging.

21 MR. HAMILTON: I understand and that's
22 great. That's, absolutely, freight corridors.

23 COMMISSIONER MONAHAN: So --

24 MR. COMITER: There are no more raised
25 hands.

1 COMMISSIONER MONAHAN: Great. Thanks,
2 Michael.

3 And I think in the room is there -- am I
4 missing any cards?

5 Oh, sorry, Ruben, I couldn't -- it's like
6 sideways.

7 MR. ARONIN: No worries. I will echo
8 Kevin's call for a race to the top between our
9 agencies. But I'll also share, as we get to
10 tipping point, a lot of folks who weren't paying
11 attention to the sector are starting to clue in.
12 So this whole-of-government approach where we
13 make it easy for people, whether they're at CEC's
14 website or CARB's, to find each other's data and
15 have them speak to each other will be helpful.
16 Because I think a lot of people are going to be
17 looking at what are the government incentives and
18 programs to help with this, accelerate this
19 transition in light- and heavy-duty.

20 And so I know there's lots of effort and
21 it is work to work collaboratively in COVID and
22 non-COVID times but I would encourage that.

23 And I also want to lift up what I heard
24 Mary Solecki say at the start of comments, which
25 is identifying some of these sticky barriers, the

1 multifamily charging, maybe the ongoing
2 operability or the needs for maintenance for, as
3 well as investment in the charging
4 infrastructure, is going to be useful learnings.
5 And as -- you know, do we overcome the challenge
6 of figuring out multifamily or is it high-speed,
7 you know, publicly-accessible charging that's the
8 fix?

9 But those learnings and highlighting that
10 to debunk the opponents that are trying to delay
11 the transition, there's not necessarily one
12 throughput but where are we finding pathways to
13 success? And how can the analytics help identify
14 where that is, as well as call out where there's
15 work to be done to overcome barriers?

16 I just wanted to present those thoughts.

17 COMMISSIONER MONAHAN: All right. I
18 don't see any more raised placards.

19 Just really want to say thank you to
20 everybody who's given us feedback and comments,
21 like we're taking them seriously, I'm listening
22 intently. And, you know, we are committed to
23 building out ZEV infrastructure that's accessible
24 to rural communities, to disadvantaged
25 communities, to low-income communities, and

1 making sure that, at least from our investments,
2 that we're trying not to leave people behind. I
3 will say, you know, multifamily dwellings, it's
4 hard.

5 So I don't want to gloss over some of the
6 challenges that we face. And, you know, it's
7 going to need all hands on deck, private industry
8 partnering with us to share learning, to make
9 sure that we're finding out what works and what
10 doesn't work, and we're really leaning in on what
11 works.

12 The costs of, you know, retrofitting some
13 of these older buildings to make sure that
14 there's ZEV infrastructure, charging
15 infrastructure in the case of multifamily
16 dwellings like onsite can be very expensive. So
17 then we think, well, what's nearby, and it gets
18 increasingly more difficult. But it's something
19 that we are committed to working on and to doing
20 our best to ensure that if you live in an
21 apartment building, that you can buy a zero-
22 emission vehicle and feel confident that you can
23 refuel it.

24 So thanks to everybody.

25 And I also want to say, we want to make

1 sure that we have time for the public to provide
2 feedback.

3 So we're going to turn now to public
4 comments. And I show (indiscernible) is
5 facilitating. Is this Michael?

6 MR. SMITH: This is Charles. So I think
7 what we might propose is that Michael will call
8 on folks in order of hand raised.

9 And, Tami, can you get the timer ready
10 again? Who are we --

11 COMMISSIONER MONAHAN: We're going to see
12 how many public commenters we have.

13 MR. SMITH: We have two so far.

14 MR. COMITER: We have six now. It's been
15 ticking up.

16 MR. SMITH: Okay.

17 MR. COMITER: Seven now.

18 COMMISSIONER MONAHAN: All right. Let's
19 give it a minute to see how many.

20 MR. COMITER: It's ticking.

21 COMMISSIONER MONAHAN: Okay, let's give
22 it a minute because we, I mean, we'll go to one
23 minute per speaker if we have a lot, two minutes
24 if we don't.

25 MR. COMITER: Okay. It looks like --

1 COMMISSIONER MONAHAN: If there's more
2 than ten --

3 MR. COMITER: -- we're steady at eight.

4 COMMISSIONER MONAHAN: Okay, then two
5 minutes each.

6 MR. COMITER: All right. Okay. I'll go
7 ahead and get started.

8 Let's start with Mikhael Skvarla. And
9 please state your name and affiliation. Oh, let
10 me -- go ahead.

11 MR. SKVARLA: Hi. Mikhael Skvarla on
12 behalf of the California Hydrogen Coalition. I
13 want to express our appreciation for the
14 opportunity to comment today and interested in
15 taking a deeper dive into the materials presented
16 today.

17 I think we want to echo some of the
18 comments from Bill Elrick at the Fuel Cell
19 Partnership with regard to needing a statewide
20 vision for hydrogen infrastructure, both light-
21 duty and heavy-duty.

22 Also, there should be a deeper analysis
23 on medium-duty as these vehicles are kind of
24 fungible across different infrastructure types as
25 Class 3 and below will most likely utilize light-

1 duty hydrogen infrastructure, whereas somewhere
2 around Class 5 and above will use the heavy-duty,
3 and then there's everything in between, which
4 will probably be accessing both types. And so
5 that drives the need for a statewide vision for
6 hydrogen, a statewide network.

7 As laid out in the vision, 1,000 stations
8 would provide access to 97 percent of
9 California -- or 97 percent of disadvantaged
10 communities and 94 percent of the population
11 within 15 minutes or two-thirds of the population
12 within 6 minutes. It's kind of what we're used
13 to today with gasoline and diesel.

14 Furthermore, our Coalition was founded
15 two years ago. We did a significant outreach to
16 a lot of environmental NGOs with the hope to talk
17 and dispel some of the fear, uncertainty and
18 doubt in and around hydrogen fuel production.
19 That offer stands. And anyone who wants to have
20 that conversation, our doors are open, and we
21 continue to reach out.

22 Fuel being delivered today is 92 percent
23 renewable with a carbon intensity lesser than
24 that of the grid average. We're ready to
25 compete, heads-up, when it comes to the

1 environmental stuff. The vehicles are lower
2 carbon than -- (Zoom audio issues)
3 (indiscernible) --

4 MR. COMITER: Oh, you're starting to
5 break up a bit but --

6 MR. SKVARLA: -- (indiscernible).

7 MR. COMITER: -- we just hit the --

8 MR. SKVARLA: We're here to decarbonized.
9 We're here, willing partners. Thank you.

10 MR. COMITER: Perfect. Okay.

11 Next, we're going to move on to Jaimie
12 Levin. Please state your name and affiliation.

13 MR. LEVIN: Thank you. Jaimie Levin with
14 the Center for Transportation and the
15 Environment. It's so exciting to see all this
16 money and all the effort the CEC is putting into
17 this transition. It's remarkable. I have three
18 comments.

19 One, Patty knows this, we have this
20 wonderful opportunity for the State of California
21 to go after what could be \$1 billion to \$2
22 billion of a program -- or half a billion to \$1
23 billion for the Hydrogen Hub Program. So it's
24 very important this plan reflect how it can --
25 how CEC can collaborate with private industry to

1 provide cost share.

2 Secondly, I would like to see in the
3 EnergIIZE Program a recognition that it's not
4 only fueling stations that need a subsidy but
5 facility upgrades with respect to hydrogen to be
6 able to safely work on hydrogen fuel cell
7 vehicles.

8 Also, I think more than 15 percent of
9 the -- or excuse me, 30 percent of the available
10 funds should be made for -- made available to
11 fuel cell and hydrogen as opposed to the -- in
12 other words, it should be 50 percent to select
13 both the technologies, fuel cell and battery-
14 electric.

15 And then, lastly, in the past, CEC has
16 funded prototype developments in the vehicle side
17 of the equation. And I'm wondering if you're
18 giving consideration to such things as vehicle
19 efficiencies where we can make major improvements
20 on efficiencies with prototypes? I would like to
21 see some funding allocated for that.

22 Thank you very much.

23 MR. COMITER: All right. Next, we're
24 going to move on to Chris King. State your name
25 and affiliation. Go ahead, Chris King.

1 MR. KING: Sorry. I was muted. Chris
2 King with Siemens. Thank you for the opportunity
3 here.

4 I want to focus on the EV driver
5 experience for a minute. We all saw the Cal
6 study that said that something like 35 percent of
7 EV drivers will not buy another EV because of the
8 fast charging experiences. One element is
9 interoperability with preventing (indiscernible)
10 lock in to improve customer choice, lowering
11 costs through increased competition, and reducing
12 the risk of stranded assets. And it also
13 simplifies workforce training.

14 We need to send the vehicle to the
15 charger and the charger to the EVSP cloud to
16 protect those choices. Any publicly-funded
17 chargers should comply with those open standards.

18 The CEC funding, so far a lot of it has
19 gone to proprietary technologies. But I do want
20 to compliment the CEC on working to address this
21 issue but urge it to work faster and harder.

22 The second point is futureproofing.
23 Higher power levels are coming.

24 Another is plugin charge. This is where
25 you come, you plug in your vehicle, and the

1 vehicle talks to the charger and authenticates to
2 charge, a big improvement in driver experience.
3 You need a chip in the charger and a chip in the
4 vehicle. The CEC has the recommendation on this.
5 The Standard is 15118. And we strongly endorse
6 the recommendation and urge you to require it in
7 all of your solicitations.

8 Finally, data access. Tesla drivers know
9 the charger status, whether it's available,
10 functional, weather cost to charge. All drivers
11 should have that access in real time and through
12 an open API that all app developers can use.

13 Thank you.

14 MR. COMITER: Perfect. All right.

15 Next, we're going to move on to Glen
16 Choe. Please state your name and affiliation.

17 MR. CHOE: Thank you. Glen Choe from
18 Toyota Motors North America.

19 Toyota appreciates the compliments of
20 plans that the CEC has offered. And we're always
21 grateful for the fact that there's a lot of
22 diligence and thought process placed by the staff
23 on these topics.

24 However, we would like to say, as Toyota
25 prepares for talk on this ACC2 (phonetic)

1 regulation, we're not really looking at targets
2 or adoptions. Instead, we're looking at
3 conquest, conquest of consumers' hearts and
4 minds, to have them unwind their gas in vehicles
5 and transition to zero-emission vehicles. For
6 that, we also recognize that Californians have
7 various use cases, as well as varying duty cycles
8 that we have to address as carmakers.

9 For those reasons, we do appreciate and
10 recognize that CEC is addressing both the plugin
11 and the hydrogen equation. However, we would
12 like to state on the hydrogen side that we kind
13 of want to recommend CEC move beyond the 200
14 numbers. As Bill Elrick mentioned, it should be
15 really focused on 100 percent ZEV, more so than
16 200 hydrogen stations. We do believe that
17 additional funding will be grateful and that it
18 will spur private investments into the hydrogen
19 equation.

20 And, again, we really are always
21 appreciative of CEC's effort and energy to
22 support the rollout of infrastructure, to support
23 light-duty, as well as medium-duty. But we also
24 recognize that one should not be taking away from
25 the other. There should be complimentary

1 parallel pathways to both light-duty and heavy-
2 duty to transition the state towards a zero-
3 emission future.

4 Thank you.

5 MR. COMITER: Perfect.

6 Next, we have Mark M. Go ahead and
7 please state your name and affiliation.

8 MR. MARBURY: Hi. My name is Mark
9 Marbury and I'm a private citizen.

10 Ironically, six years ago today, I drove
11 away from Toyota of Orange in a brand new Toyota
12 Mirai, and I'm an apartment dweller. I've been
13 driving on hydrogen now for exactly six years.

14 So if there are other private citizens
15 out there wondering about, can you really do this
16 with hydrogen and driving, I've done it for six
17 years.

18 Thank you.

19 MR. COMITER: Okay. Next, we're going to
20 move on to Wayne Leighty. Please go ahead and
21 state your name and affiliation.

22 MR. LEIGHTY: Hello. My name is Wayne
23 Leighty. I'm the commercial head at Shell
24 Hydrogen. Thanks for the good consideration
25 today. I'd like to add a few points to the

1 discussion.

2 First, it's very difficult for the
3 infrastructure development to catch up with
4 demand. And it's difficult for customers to
5 adopt ZEVs without access to charging and
6 fueling.

7 So for the widespread adoption and the
8 state ZEV goals, it really depends on
9 infrastructure availability and capacity
10 exceeding the current demand. I'd encourage you
11 to keep planning for success in the policy goals,
12 anticipating adoption rather than waiting to see
13 it before continuing programs.

14 The second point is we see important
15 customer segments for both battery-electric and
16 fuel cell electric vehicles across all vehicle
17 classes, so would continue -- suggest continuing
18 the support for fueling infrastructure, light-,
19 medium- and heavy-duty across ZEVs and fuel cell.

20 And last point. There's a lot of great
21 complementarity between light-duty and heavy-duty
22 vehicles, between battery-electric and fuel cell
23 electric vehicles, both for the vehicles and the
24 fuel, and for the resilient and affordable
25 decarbonized energy systems for California. So I

1 appreciate your continued support for all of
2 those.

3 Thank you.

4 MR. COMITER: All right. Thank you.

5 And now we'll be moving on to Samantha
6 Ortego. Please state your name and affiliation.

7 MS. ORTEGO: Good afternoon, everyone.

8 This is Samantha Ortego on behalf of ChargerHelp!
9 We're a small business headquartered in Los
10 Angeles, women-owned, minority-owned, and we
11 provide diagnostics, maintenance, and repair for
12 Level 2s and DC fast charging software and
13 hardware. And we provide the services to some of
14 the major software manufacturing companies and
15 utility companies in California. And we want to
16 thank the CEC for all that you do and all the
17 great progress that you guys have done.

18 We wanted to highlight that the
19 operations and maintenance is a clean tech
20 occupational class. And we've had, you know,
21 previously had conversations regarding the
22 specialized work that we do. So we ask that in
23 every aspect of funding operations and
24 maintenance that the workforce of technicians are
25 considered. The major issues that the charging

1 stations experience are software and hardware.

2 Additionally, we recommend that 25
3 percent of the funding for deployment is
4 considered for the operations and the
5 maintenance.

6 And I'll leave with this. The CEC should
7 consider incorporating service-level agreements
8 with their funding so that there's a partnership
9 between the software company manufacturer and the
10 site host so that there could be a fast uptime
11 requirements.

12 Thank you.

13 MR. COMITER: All right. Then next we're
14 going to have David Park. Please state your name
15 and affiliation.

16 MR. PARK: Good afternoon. Thanks. This
17 is David Park. I'm with the California Fuel Cell
18 Partnership and Frontier Energy. I am the
19 Industry Affairs Coordinator for the Partnership.

20 I just want to recognize Commissioner
21 Monahan's last remark regarding high-density
22 housing and implementation of zero-emission
23 vehicles in that duty cycle and just point out
24 that hydrogen and fuel cell electric vehicles
25 offer a gasoline-like experience where you can

1 see centralized fueling versus distributed
2 charging. So in those hard-to-reach areas,
3 hydrogen and fuel cell is very much complimentary
4 to battery-electric vehicle deployment.

5 And then that crosses over to the equity
6 side. And I just want to point out, from the
7 trenches of Long Beach, California, and I'd like
8 to acknowledge the representative from the Port
9 of Long Beach and the equity issues here, but in
10 Long Beach itself, I am seeing more fuel cell
11 electric vehicles penetrating in the lower income
12 to middle income stratus -- strata.

13 And where I'm seeing, it's an economic
14 decision to adopt these vehicles given, you know,
15 supply shortages and the price of gasoline, given
16 the offer of fueling. With each -- the second --
17 first generation Mirai, they're now on the second
18 generation. So we're seeing a return of the
19 first generation Mirai into those lower-income
20 neighborhoods where they're buying them off of
21 used car lots.

22 I would call this a program success, so
23 congratulations to all.

24 MR. COMITER: All right. Thank you.

25 And I think we have one more raised hand

1 and that was from Roy Bant, so go ahead and state
2 your name and affiliation.

3 MR. BANT: Yes, sir. Thank you. Roy
4 Bant, Chart Industries. Chart is a liquid
5 hydrogen equipment and hydrogen station
6 manufacturer, both hydrogen gas and hydrogen --
7 liquid hydrogen dispensing.

8 First and foremost, Chart Industries
9 appreciates CEC funding of hydrogen fueling
10 stations.

11 Number two, per the CARB's Self-
12 Sufficiency Study, incremental investment into
13 the light-duty hydrogen fueling infrastructure
14 will light up private investment into this space
15 and enhance a self-sufficient and sustainable
16 light-duty marketplace.

17 And thirdly, I'm echoing many speakers
18 before me, I'm going to echo the same point,
19 heavy-duty should roll out in parallel with
20 light-duty and not one at the sacrifice of the
21 other.

22 Thank you very much.

23 MR. COMITER: All right. Thank you. And
24 then we have Willfort, Andreas, raise their hand,
25 and I'll just let them speak now.

1 And go ahead and state your name and
2 affiliation.

3 MR. WILLFORT: Yes. Hi, guys. Andreas
4 Willfort from Weh Technologies stationed in
5 Texas. and we are also a small company who
6 provides all sorts of special parts for the
7 hydrogen. And we are fully, fully committed to
8 the hydrogen, including new developments of
9 everything.

10 But what I wanted to say, basically, is
11 not only thank you for all the money allowed for
12 these investments in stations, which are
13 absolutely needed for developing the
14 infrastructure, I think there should be some sort
15 of pressure, some sort of, I don't know, whether
16 it's an incentive or something to reduce the
17 approval times for those hydrogen stations. It
18 has been -- it is, in general, longer than two
19 years. and I don't know what you can do or not.

20 But if there is something which can be
21 done on it, I think this would help to propel the
22 acceptance, the criticism that there are not
23 enough stations, and grow the hydrogen cars which
24 are fantastic cars. And all owners love it but
25 they all say there is not enough stations around.

1 And that approval time, if there's something
2 which you guys can do at the CEC level, that
3 would definitely be a big, big push.

4 That's all that I wanted to comment.

5 MR. COMITER: All right. And with that,
6 we have no more raised hands from attendees.

7 COMMISSIONER MONAHAN: Great. Well,
8 thanks to everybody who participated remotely.
9 I'm sure it was difficult to be on the phone, not
10 seeing people's faces, and still being able to
11 pay attention to this meeting, so just appreciate
12 your fortitude.

13 And, Patrick, do you want to just close
14 out with just a reminder about timing for written
15 comments to the docket?

16 MR. BRECHT: Sure. Thank you,
17 Commissioner Monahan. Yes, just a couple things.

18 Our PowerPoint of this, the PowerPoint
19 that you saw today, is already up on our website.
20 A recording of the meeting will be up soon.
21 There will be a transcript of the meeting which
22 will probably be up on our docket or website next
23 week. And, of course, please email me if you
24 have any questions that didn't come up through
25 the mtg.

1 And as the slide shows, comments are due
2 April 29th by five o'clock. And we strongly
3 encourage those in the public, those here in the
4 room, remote Advisory Committee members to submit
5 those comments within the next two weeks and a
6 day, I think it is.

7 And with that -- oh, I want to also thank
8 the IT Team for making this a reality today. It
9 was very difficult. So I'd like to thank Giana
10 Villegas and Kenny Sanders, along with many
11 others who are behind the scenes that made this a
12 possibility.

13 So with that, I'll turn it back over to
14 you, Commissioner Monahan.

15 COMMISSIONER MONAHAN: Just a reminder,
16 we purposely timed the next Advisory Committee
17 meeting to be after, hopefully, budget decisions
18 have been made in the legislature. So the team
19 will put forth, if there is additional funding,
20 we'll put forth some recommendations for -- or a
21 draft of where we think this funding makes sense
22 and look forward to your engagement in that
23 process.

24 I think there are lots of venues that
25 we're intersecting. I'm intersecting with many

1 of you in different venues. I just want to make
2 sure those conversations continue and are also a
3 place to help inform the decisions that we make
4 at the Energy Commission. And really encourage
5 the public, also, to give us feedback.

6 So thanks to everybody. Thanks for
7 coming. Again, if you haven't taken a cookie,
8 please take one. I think there are some extras
9 so you can bring some home to your family if you
10 would like. So thanks, everybody.

11 (The workshop adjourned at 12:34 p.m.)

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