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CALIFORNIA ENERGY COMMISSION

In the matter of:

2023-2024 Investment Plan Update)
for Clean Transportation Program) Docket No. 23-ALT-01
_____)

PUBLIC MEETING OF THE ADVISORY COMMITTEE FOR THE
CLEAN TRANSPORTATION PROGRAM INVESTMENT PLAN

REMOTE ACCESS ONLY

TUESDAY, NOVEMBER 14, 2023

9:00 A.M.

Reported by:

Chris Caplan

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COMMITTEE MEMBERS

Ruben Aronin, Better World Group

Will Barrett, American Lung Association in California

Sydney Vergis, PhD, California Air Resources Board

Joel Levin, Plug In America

Bill Elrick, California Fuel Cell Partnership

Larry Engelbrecht, Engelbrecht Consulting

Katherine Garcia, Sierra Club

Matt Gregori, SoCalGas

Kevin Hamilton, Central California Asthma Collaborative

Bill Magavern, Coalition for Clean Air

Robert Meyer, Employment Training Panel

Micah Mitrosky, IBEW 9th District

Samantha Houston, Union of Concerned Scientists

Lori Pepper, California State Transportation Agency

Michael Pimentel, California Transit Association

Jerome Qiriazzi, Humboldt Transit Authority

Mary Solecki, AJW

Tracy Stanhoff, Indigenous Post

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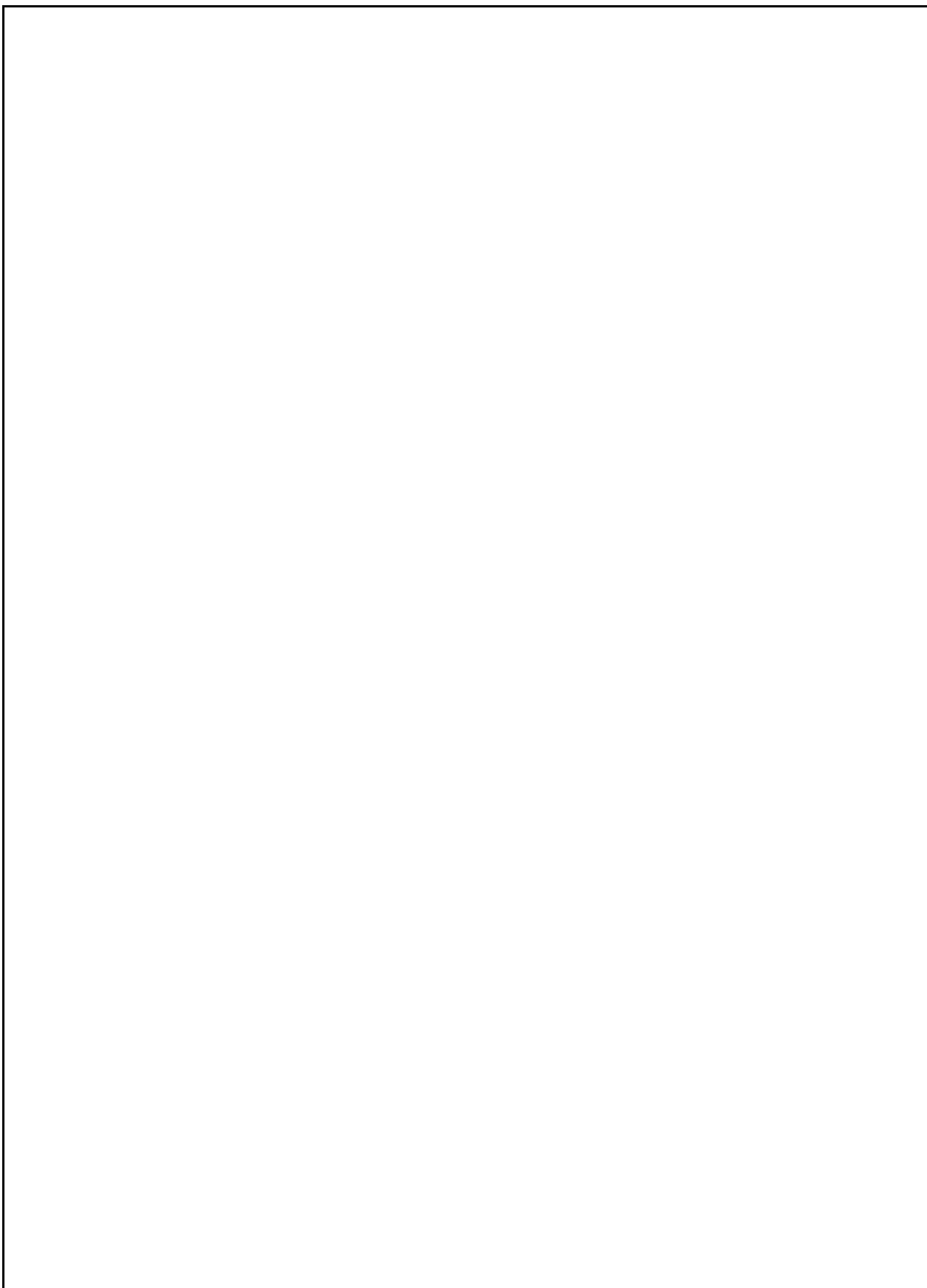
Noah Garcia, EVgo

Katrina Fritz, California Hydrogen Business Council

Jonathan Hart, PowerFlex

Megan Mekelburg, Electric Vehicle Charging Association

Frank Bigelow, MACE Energy Development



P R O C E E D I N G S

9:00 a.m.

TUESDAY, NOVEMBER 14, 2023

MR. TUGGY: All right, I think we can get started. Let me begin by calling a roll for the Advisory Committee. Just one second. All right.

Mary Solecki?

Bill Elrick?

Eileen Tutt?

COMMITTEE MEMBER TUTT: Here.

MR. TUGGY: Perfect.

Matt Gregori?

COMMITTEE MEMBER GREGORI: Good morning.

MR. TUGGY: Tyson Eckerle?

Oh, perfect. Good morning, Matt.

COMMITTEE MEMBER GREGORI: Thanks. Sorry.

MR. TUGGY: No worries.

Tyson Eckerle or Gia Vacin?

COMMITTEE MEMBER VACIN: Here.

MR. TUGGY: Perfect.

Sydney Vergis? It's Vergis. Vergis?

COMMITTEE MEMBER VERGIS: Here. Thank you.

MR. TUGGY: Perfect.

Lori Pepper?

COMMITTEE MEMBER PEPPER: Here.

1 MR. TUGGY: All right.
2 Robert Meyer?
3 COMMITTEE MEMBER MEYER: Here.
4 MR. TUGGY: Sounds good.
5 Bill Magavern?
6 Will Barrett?
7 COMMITTEE MEMBER BARRETT: Good morning. Here.
8 MR. TUGGY: Good morning.
9 Katherine Garcia?
10 COMMITTEE MEMBER GARCIA: Here. Good morning.
11 MR. TUGGY: Perfect.
12 Sam Houston?
13 How about Kevin Hamilton?
14 Jose Lopez?
15 Ruben Aronin?
16 J.B. Tengco? I thought I saw him. J.B., are you
17 present? I see you in the panelists there. I can come
18 back to you.
19 Micah?
20 COMMITTEE MEMBER MITROSKY: Here.
21 MR. TUGGY: Larry Engelbrecht?
22 COMMITTEE MEMBER ENGELBRECHT: Here.
23 MR. TUGGY: Perfect.
24 John Frala?
25 Morgan Caswell?

1 Jerome Qiriazzi?
2 COMMITTEE MEMBER QIRIAZI: Here.
3 MR. TUGGY: Perfect.
4 Michael Pimentel?
5 COMMITTEE MEMBER PIMENTEL: Here.
6 MR. TUGGY: Sounds good.
7 Tracy Stanhoff?
8 Dylan Jaff?
9 COMMITTEE MEMBER JAFF: Here.
10 MR. TUGGY: Joel Levin?
11 COMMITTEE MEMBER LEVIN: I'm here.
12 MR. TUGGY: Perfect.
13 And Morris Lum?
14 COMMITTEE MEMBER LUM: Here.
15 MR. TUGGY: And it looks like Bill Elrick is also
16 here.
17 COMMITTEE MEMBER ELRICK: Yes, here.
18 MR. TUGGY: Awesome. Well, it looks like we have
19 a quorum, so why don't we just get into it.
20 Mabel, if you could go to the next slide? Oh,
21 thank you.
22 I see Sam Houston is also here.
23 So we'll go through a little bit of housekeeping
24 first.
25 First of all, this meeting is being recorded.

1 You can participate virtually either through Zoom, which
2 most of you are doing, or you can also call in via
3 telephone. The meeting event webpage is available at this
4 link.

5 The slides for this presentation were published
6 this morning, so you should all have access to it. There's
7 also the docket for this Investment Plan proceeding.
8 That's docket number 23-ALT-01. And again, the link is
9 here on this slide.

10 One important note, the deadline for comments is
11 this Tuesday, November 28th by 5:00 p.m.

12 All right, next slide, please. Perfect.

13 And this is just a quick overview of our agenda
14 today. So in a minute, we'll hear some opening remarks by
15 Commissioner Monahan, then we'll hear from some other CEC
16 staff on recent updates on Clean Transportation Program
17 activities. That includes funding activities, related
18 federal funding, community benefits and tribal outreach and
19 planning and analysis activities for zero-emission
20 vehicles.

21 After that, we'll get into an overview of the
22 revised staff draft of this year's 2023-2024 Investment
23 Plan Update. And then we'll have the Advisory Committee
24 discussion on that update.

25 At the end of the meeting, there will be time for

1 public comment, and then we'll wrap things up.

2 I think we can go to the next slide.

3 Am I missing anything, Mabel? If not, I think we
4 can turn it over to Commissioner Monahan for opening
5 remarks.

6 COMMISSIONER MONAHAN: Great. Thanks, Benjamin.

7 And I want to ask everybody for a favor, which is
8 can you put your camera on for just a minute? And maybe we
9 can -- I don't know if it's possible to turn off the slide
10 side so we can see each other just for a moment, just
11 because it's really nice to see people. Thanks, you guys.

12 Oh, my gosh. Benjamin is here. Benjamin.

13 I don't know about you guys, but it just makes me
14 happy to see faces. I do feel like we lose a lot by not
15 being in person. And I love that Sam, with the wet hair,
16 is moving around. Don't mean to call you out, Sam, but I
17 just did. Yeah, we just lose something, so I missed seeing
18 you all.

19 And I think back, actually, to the first Advisory
20 Committee meeting where we did like an icebreaker, and we
21 talked about what's your birth order and what does that
22 mean for how you should show up at work? And there's just
23 something that we miss by not being in person. So thank
24 you, guys. It actually just warms my heart to see people
25 always. And sometimes you feel like you're just talking to

1 this, you know, ether when you're on the Zoom screen all by
2 yourself. So you don't have to stay on the whole time, but
3 I just want to say hi, see your faces, and yeah, and just
4 recognize that we lose something when we don't meet in
5 person.

6 And we're going to be doing a survey in a little
7 bit. I think we'll wait until we have more just people,
8 when we're at full numbers, to see what people would prefer
9 going forward in terms of, you know, more of a hybrid or,
10 you know, should we really try to meet in person somewhere?
11 Patrick reminded me that in past Advisory Committee
12 meetings, certainly before my time, kind of before COVID
13 really changed everything -- Ruben misses my cookies --
14 there was Advisory Committee meetings where, you know,
15 things were more in person in general, but there would be
16 one in Sacramento and then one in like Central Valley in a
17 different location.

18 So we could think next year going forward to have
19 something more, like try to have one in person. And I was
20 thinking, oh, we could even try to do a site visit or like
21 pair it with something in the community so we could see the
22 project and just kind of get more of a touch and feel of
23 something. It's a lot harder to organize, so I know the
24 team is like -- Benjamin's like, oh my God, it's already so
25 rough. I think if we had enough planning ahead of time, we

1 could do it and we could make it interesting and just sort
2 of more of a dynamic conversation.

3 And I mean, I think one of the big advantages,
4 which I really appreciate about Zoom is that we can get
5 more people from across the state. I actually think when
6 everything's in Sacramento, it becomes the only people that
7 can really join are either state workers or if you have a
8 Sacramento presence. And we want to make sure that we're
9 really working across the state, that we're really
10 attentive to equity. And, you know, so that means either
11 Zoom or we really try to do something in another part of
12 the state where we bring in, you know, just more, make sure
13 we're kind of attentive to the needs across the, you know,
14 entire state of California.

15 So I just want to say, first off the bat, how
16 exciting it is that AB 126 passed. And I want to thank
17 everybody who was involved in that process. It was just --
18 that was quite a nail biter to the end. I must say, I
19 thought, you know, I tried to stay up for the vote and I
20 had, you know, by midnight, I was like I'm going to bed.
21 But there were some folks in my team who, you know, at the
22 CEC who were actually there for the vote, watching at the
23 end. So just thanks to everybody.

24 Really exciting that we got through 2035. The
25 state is committed to building out infrastructure. And we

1 have new requirements under AB 126, but a few of which I
2 wanted to highlight, you know, the focus on zero-emission,
3 so where possible, so that's great. You know, we don't
4 have to fund. In the past, it was, you know, we can't pick
5 winners and losers. Well, that's not true anymore. The
6 state has to pick winners and it's zero-emission. So we're
7 all in on zero-emission wherever possible.

8 And, you know, some sectors are going to be
9 harder to decarbonize. I think biofuels are, you know,
10 something to think about for some sectors. So just I ask
11 you, the Advisory Committee and you, the stakeholder
12 community, to give us input on what the right balance is
13 and we welcome that.

14 AB 126 also requires that at least 50 percent
15 must benefit disadvantaged and low-income communities and I
16 think that is a really important distinction for us. And
17 we're going through a process right now to better
18 articulate what a benefit looks like for a community.

19 We've all talked about the fact that locating ZEV
20 infrastructure in a community isn't necessarily a benefit,
21 it could be a benefit, but we need to be more deliberate
22 about it. We need to be more thoughtful and have a public
23 process around identifying what a benefit is to be able to
24 really clearly say that and recognize there's, you know,
25 workforce implications that we want to capture. And, you

1 know, it's not just about the environment, but it's about
2 the community and improving a community, helping,
3 supporting community development.

4 So this draft plan, I want to say, it's a draft.
5 Looking out, it's \$1.8 million [sic] over four years
6 through fiscal year '26-27, and it includes just year one
7 of this newly reauthorized Clean Transportation Program,
8 the AB 126 funds, the \$100 million, just year one. And I
9 want to really emphasize that because that's the money that
10 we have really flexibility to allocate. All the other
11 funds in the plan are allocated by the General Fund, by the
12 GGRF monies, they're from the legislature, from the
13 governor. We don't have flexibility to change those
14 categories. So it's really that \$100 million that we have
15 the opportunity to influence.

16 And we haven't had any discussion. I mean, AB
17 126 was newly reauthorized. We haven't had any discussion
18 with you, the Advisory Committee. We haven't had any
19 discussion with public and other stakeholders. So it's a
20 draft plan, so please do think of it that way. Give us
21 your input. We want to make sure that at the end of the
22 day, we have a plan that really reflects the best input
23 that we get from you, the Advisory Committee, from the
24 Disadvantaged Communities advisory Group, who we're going
25 to discuss with, and just the broader stakeholder

1 community.

2 So I want to thank the CEC team. So Benjamin,
3 Tuggy, who you met at the last Advisory Committee meeting,
4 he's our master of ceremonies and really leading this whole
5 process, so thanks, Benjamin. And Mabel has been
6 supportive of this process as well. I want to give a
7 special shout out to Patrick Brecht, who has been our
8 master of ceremonies for many years, and really the one
9 who's helping Benjamin and helping the whole team kind of
10 navigate this process. And Charles Smith, who is the
11 branch manager and who really puts in a lot of energy
12 across. Anytime we ask Charles for help, Charles steps up
13 and helps, so thanks Charles.

14 And you're going to meet a lot of members of the
15 Fuels and Transportation Division today because we're going
16 to go through each of our funding programs, the grant
17 programs that exist today, we'll get like a taste of it. I
18 want to call it like a speed dating taste, so it's really
19 going to be, in less than an hour, we're going to do a walk
20 through all the programs that are ongoing right now, and
21 there's a lot of them.

22 But again, I want to thank Benjamin and the team
23 for getting it down to under an hour, I think that's as
24 long as anyone can sit, so maybe we'll hear the
25 presentations and then take a little seventh inning

1 stretch. But because it's fast, I think the speed dating
2 keeps you paying attention.

3 And I think, oh, I want to say, also, just
4 Benjamin is going to talk more about this as well, but the
5 Advisory Committee term actually ends this year. I mean,
6 we didn't know AB -- we didn't know if the Clean
7 Transportation Program was going to be reauthorized. And I
8 actually think it's helpful for the sake of just diversity
9 that we always have a term with the Advisory Committee,
10 just so that we can make sure that we're getting -- you
11 know, we're representing California and we're providing the
12 opportunity for others to come and provide input.

13 So as you might recall, we had different
14 categories of interest, and we're going to do that again.
15 And, you know, we'll keep this process relatively simple to
16 be able to apply to be an Advisory Committee member.

17 But I just want to put it out there that this is
18 this is our last meeting as this group. I'm guessing that
19 some of you will migrate to our new Advisory Committee, but
20 this may be our last. So just I want to acknowledge that
21 and acknowledge how helpful it has been to work with all of
22 you. And we are definitely -- you know, this -- we're
23 going to focus in on making sure that we represent the
24 diversity that is California, and that's going to be a big
25 goal.

1 I feel a little sad because some of our community
2 organizations dropped off because they wanted to while they
3 were applying for funding. And you can apply for funding
4 as a small community organization as long as the person's
5 name who is on the Advisory Committee is not listed on the
6 grant application. But for small groups where you just
7 don't have a lot of, you know, staff, that can be hard.
8 But that's going to be a goal of ours.

9 So if you can, if you have any thoughts for us
10 about how best we can engage more community organizations
11 and have that represented on the Committee, please do. I
12 welcome that input.

13 Okay, I think we can -- Benjamin, I wonder if we
14 can just run the survey now? Would that be possible? So
15 we have a survey.

16 MR. TUGGY: Yeah, I think we could get into that
17 if it's -- let me just load that up.

18 COMMISSIONER MONAHAN: Oh, yeah. All right, so
19 here's that question that I posed. And this is just for,
20 of course, the Advisory Committee members, this; is that
21 right, it's just the Advisory Committee members?

22 MR. TUGGY: It's available to everyone.

23 COMMISSIONER MONAHAN: Oh, well, I would just say
24 CEC people, do not respond, anybody else, yeah, everybody
25 else besides the Energy Commission.

1 MR. TUGGY: So a lot of results coming in. I'll
2 give it another little bit here.

3 Thanks, Spencer, for setting it up.

4 COMMISSIONER MONAHAN: Yeah, Spencer, thank you.
5 Oh, I should thank Spencer, too, who's been the behind-the-
6 scenes wizard for us.

7 MR. TUGGY: Oh, it says 100 percent -- 53
8 percent -- sorry, the percentages are a little confusing,
9 but I think we're slowing down here if we want to give it
10 another ten seconds or so. All right, I'm going to end the
11 poll.

12 So we have, in-person was 27 percent, remotely
13 was 73 percent.

14 COMMISSIONER MONAHAN: All right, that's quite a
15 resounding remote. All right, thanks everybody for
16 participating.

17 MR. TUGGY: All right. Perfect. And so I guess
18 I'll get back into the slides, Commissioner.

19 Mabel, if you want to load that up? And we can
20 go to the next one there.

21 All right, well, so I'll just introduce myself
22 really quickly. I'm Benjamin Tuggy. I'm the new Project
23 Manager for the Clean Transportation Program Investment
24 Plan.

25 And as Patty said, thanks to Patrick, who's been

1 immensely helpful in helping me kind of get up to speed on
2 this.

3 And I also really want to shout out Mabel Aceves
4 Lopez, who's been the assistant project manager for the
5 Investment Plan and has been just absolutely invaluable, so
6 thank you, Mabel.

7 Next slide, please.

8 So I'll just go through a brief overview. Many
9 of you have already seen kind of this information before,
10 but it's still good to have the background.

11 So the transportation sector is responsible for a
12 lot of greenhouse gas emissions and harm from pollution in
13 California. And that pollution disproportionately affects
14 those in vulnerable and disadvantaged communities. So
15 that's why the Clean Transportation Program was created, to
16 invest in a cleaner and healthier system of transportation
17 for the state.

18 And we have about \$100 million per year in CTP-
19 based funds that's funded through vehicle registration fees
20 and certain license plate fees, I believe. A good thing to
21 note is that that funding amount has stayed the same since
22 AB 126 reauthorized the CTP. We'll get more into that in a
23 bit, though.

24 Next slide, please. And, oh, that was this
25 slide, yeah.

1 And Commissioner Monahan already gave a great
2 overview of this, but Assembly Bill 126 reauthorized the
3 CTP through July 1st, 2035. And as the Commissioner said,
4 there's now a focus on zero-emission technologies where
5 possible. The bill also includes some new equity
6 requirements, such as the requirement to make sure that at
7 least 50 percent of funds benefit those in low-income or
8 disadvantaged communities. That starts 2025.

9 The carve-out for hydrogen funds has been reduced
10 from 20 percent to 15 percent of total CTP-based funds. So
11 at least 15 percent of those base funds need to go to
12 hydrogen projects, with some exceptions. That carve-out
13 ends in July 23.

14 Next slide, please.

15 Also, as the Commissioner said, this Advisory
16 Committee term expires at the end of this year, so we are
17 still developing the plans for the next term of the
18 Committee, so there isn't a whole lot we can share yet on
19 that. But if you go to the link on this slide, again, the
20 slides are public now, you can subscribe to updates on the
21 Clean Transportation Program. And so that will be a way
22 that you can get informed when we're soliciting
23 applications and just know what's going on with that.

24 Next slide, please.

25 All right, and so a couple of highlights from the

1 CTP. So we have, as of this July, nearly 24,500 installed
2 or planned electric vehicle chargers. We have 66 open
3 retail hydrogen refueling stations, 64 more that have been
4 approved for funding. And by the way, those hydrogen
5 numbers are a bit more recent, that's as of October.

6 As far as workforce training, we've provided that
7 for more than 32,000 trainees.

8 We've done block grant projects for both light-
9 duty and medium and heavy duties of emission vehicle
10 infrastructure, as well as 40 ZEV-related manufacturing
11 projects. And it's good to note, too, that these are not
12 just state funds. We've leveraged over a billion dollars
13 in private and other public funds in match share.

14 Next slide, please.

15 So now getting to the kind of the main topic
16 meeting today, which is the Investment Plan, so what is the
17 purpose of the CTP Investment Plan? That guides our
18 investments toward meeting those goals of clean
19 transportation. As the Commissioner said, for this
20 particular Investment Plan, we are only focusing on fiscal
21 year 2023-2024 for the CTP-based funds. For those
22 greenhouse gas reduction funds and General Funds from the
23 state, though, we are going to include multiple years of
24 funding allocations just so that you can get a bit more of
25 a context. So we'll get into that later in this meeting,

1 but that's just a quick preview.

2 The Investment Plan, also, we try to coordinate
3 with other agencies when developing it. And it includes
4 funding for multiple different technologies and sectors.

5 Next slide, please.

6 All right, so now I'd like to talk a little more
7 about our commitment to inclusion, diversity, equity and
8 access. We do try to provide more than 50 percent of our
9 CTP funds already to projects that benefit low-income and
10 disadvantaged communities. So again, that's required by AB
11 126 starting in 2025.

12 We've also been doing outreach and engagement
13 with the Disadvantaged Communities Advisory Group, this
14 great CTP Advisory Committee, as well, and other groups.
15 We've been holding public workshops, sharing info on the
16 CEC website.

17 Next slide, please.

18 Just a few more notes on that. It's important to
19 know that nonprofit organizations are eligible for certain
20 grants from the CEC, and that includes for deploying
21 charging infrastructure. In fact, many of our
22 solicitations incentivize involvement of nonprofits, such
23 as community-based organizations, that can include
24 providing additional points for a solicitation or even just
25 requiring that involvement.

1 We've also been exploring additional strategies
2 to get community-based and nonprofit organizations involved
3 in deploying ZEV infrastructure.

4 And, oh, and one other thing, which is that
5 specifically property owned by nonprofit organizations can
6 also serve as sites for EV charging, so one other detail.

7 Next slide, please.

8 And it's important to have a good definition of
9 how exactly our projects benefit communities, so we've been
10 working on a process for that. The first workshop on this
11 we held at the end of last year, and we held this workshop
12 on our community benefits this March. And so we're looking
13 at ways to measure those benefits beyond just where the
14 project is located, as Commissioner Monahan mentioned, and
15 beyond just other things such as greenhouse gas reduction.
16 So we want to have a more wholistic view of how our
17 projects benefit communities.

18 Next slide, please.

19 And just a few more slides in this overview here.
20 So some keys of policy goals here in California, I won't go
21 through all of these, but I do want to highlight that this
22 September we met the goal of 10,000 DC fast chargers about
23 a year and a half early, so that's pretty good.

24 Next slide, please.

25 And a few more goals here. These are set by

1 Executive Order N-79-20. Again, I'll just kind of skim
2 through these, but that includes the goal of 100 percent
3 zero-emission sales for new passenger cars and trucks by
4 2035, and 100 percent zero-emission medium- and heavy-duty
5 vehicles by 2045, and that's operating vehicles where
6 feasible. And that's also by 2035 for drayage trucks. So
7 both of those goals have been set more recently in CARB
8 regulations.

9 Next slide, please.

10 And then we have some analyses here at the CEC
11 that inform this Investment Plan, which we'll be getting
12 into several of these in a few minutes. So I'll just kind
13 of quickly skim through this slide here, but that includes
14 our Assembly Bill 2127 and Senate Bill 1000 assessments,
15 the Zero-Emission Vehicle Infrastructure Plan, these
16 workshops and workshops with the Disadvantaged Communities
17 Advisory Group, and just experience from what we've learned
18 from the past with these Investment Plans.

19 And the other thing is, of course, the CTP does
20 not exist in a vacuum, so we try to account for federal and
21 other state funds as well.

22 Next slide, please.

23 All right, so this is where we are in the current
24 Investment Plan process. And I do see that we're starting
25 to get some questions from the audience. I believe we'll

1 be getting to those at the end of today. We have a public
2 comment period today, if that sounds good to you,
3 Commissioner? Sounds good.

4 COMMISSIONER MONAHAN: I'm okay with whatever
5 makes the most sense for a process. I mean, If we can
6 answer these, if some of these are simple questions, we
7 might as well just answer them live. If it's complicated,
8 then perhaps we can figure out a different way.

9 MR. TUGGY: Okay, yeah. Yeah, so maybe I'll just
10 finish this slide here, and then we can kind of wrap up the
11 intro slides, and then we'll be transitioning to the next
12 part of the presentation. So I could get into a few
13 questions here, if that should do it.

14 Yeah, so right now we are on our second Advisory
15 Committee meeting, that's today, November 14th. As
16 mentioned, comments are due on November 28th. We plan
17 tentatively to publish the lead Commissioner report version
18 of this Investment Plan Update on January 5th or so. We're
19 hoping to take the report to the CEC business meeting for
20 approving the Investment Plan at the end of January. And
21 then we'd like to publish the final Commission report
22 version in February 2024.

23 All right, so that covers the overview of the
24 CTP. Yeah, we can take a look at a couple of these
25 questions here.

1 And I see, Patty, you'd like to answer the
2 question on the 15 percent carve out.

3 COMMISSIONER MONAHAN: Yeah, I was going to type
4 it in, but then I accidentally pressed the wrong button.
5 But it is a minimum. The 15 percent carve out for hydrogen
6 per the AB126 language is a minimum.

7 MR. TUGGY: And I could add one other detail,
8 which is that one of those extra caveats with it is that if
9 we release a solicitation and it's undersubscribed in a
10 given year, then we're authorized to reallocate the funds.

11 Charles would like to answer another question.
12 Go ahead, Charles.

13 MR. SMITH: Thanks. We have a question about
14 what the CEC's definition of near-zero-emissions entails.
15 So near zero-emissions, it comes from the program statute.
16 In the past, we've interpreted it to be the combination of
17 ultra-low NOx emissions combined with ultra-low carbon
18 fuels. But that definition, there's no preestablished
19 definition for near zero-emission projects. And so to the
20 extent that we have funding opportunities in that area, it
21 will be defined within those funding opportunities.

22 MR. TUGGY: All right. Thank you, Charles.

23 And okay, I see, Patty, what you're saying, so
24 we'll just type in answers. And, yeah, if someone could
25 send a link to the presentation to Michaelina, I believe?

1 All right, so getting on with the presentation,
2 why don't we transition to the staff updates?

3 Next slide, please. And all right.

4 So once again, there will be time for public
5 comment at the end of today's meeting. We will also pause
6 at the end of these staff presentations to see if Advisory
7 Committee members have questions on the staff updates.

8 So we're going to start with some updates on our
9 zero-emission vehicle planning and analysis activities,
10 which inform the Investment Plan, starting with Adam Davis.
11 Go ahead.

12 MR. DAVIS: Thanks, Benjamin.

13 My name is Adam Davis, and I'm staff in the Fuels
14 and Transportation Division at CEC, and I'll be presenting
15 on the staff draft of the second AB 2127 report and on
16 progress towards meeting charging infrastructure targets.
17 The staff draft of the second AB 2127 assessment was
18 published in August, and we presented the results at a
19 workshop in early September.

20 Next slide, please.

21 Assembly Bill 2127 requires the CEC to prepare
22 statewide assessments of the charging structure needed to
23 meet the state's zero-emission vehicle goals through 2030.
24 And Order N-79-20 updated the requirements to include
25 higher targets through 2035.

1 On the light-duty side, the goals are to have at
2 least 5 million EVs sold by 2030 and 100 percent new
3 vehicle ZEV sales by 2035. Because of the acceleration of
4 EV sales in the last few years and pathways set by the
5 Advanced Clean Cars II regulation, the main scenario used
6 in the second AB 2127 assessment includes more than 7
7 million light-duty EVs in 2030. On the medium- and heavy-
8 duty side, the target is 100 percent of operations by 2045
9 where feasible, and many sectors have more aggressive
10 targets.

11 A pathway for these goals is set in part by the
12 Advanced Clean Trucks and Advanced Clean Fleets
13 Regulations. Because AB 2127 requires the CEC to assess
14 charging infrastructure needs, this report focuses on plug-
15 in electric vehicles, which include battery electric
16 vehicles and plug-in hybrid electric vehicles. Hydrogen
17 may play a role in the future of transportation,
18 particularly on the medium- and heavy-duty side.

19 Next slide, please.

20 California has made progress towards meeting
21 these charger needs. There are more than 82,000 public and
22 shared private chargers for light-duty vehicles in
23 California today. As of this September, California has
24 reached the goal of installing 10,000 DC fast chargers
25 statewide by 2025.

1 Next slide, please.

2 This slide shows the number of chargers of
3 various types that will be needed to support light-duty
4 vehicles in California in 2030 and 2035, as projected by
5 the models used in the second AB 2127 report. To support
6 7.1 million plug-in electric vehicles in 2030, the state
7 will need over 1 million chargers. To support 15.2 million
8 plug-in electric vehicles in 2035, the state will need over
9 2.1 million chargers.

10 The charger needs assessed in this report include
11 public chargers and shared private chargers located at
12 private lots in workplaces and multifamily dwellings.
13 High-powered, direct current fast chargers will be
14 increasingly important as long-range battery electric
15 vehicles make up a larger share of the fleet and for people
16 who do not have convenient charging at home or at their
17 workplace.

18 Compared to the first AB 2127 report, this
19 assessment finds a decrease in the number of Level 2
20 chargers away from home and an increase in the number of
21 direct current fast chargers. Among Level 2 chargers, more
22 serve long-duration workplace charging events rather than
23 short-refueling public charging events. These changes
24 largely reflect the shift from plug-in hybrid electric
25 vehicles in the scenarios last time to long-range battery

1 electric vehicles in the market and under the Advanced
2 Clean Cars II regulation, as well as to refine the
3 behavioral models underlying this assessment.

4 Next slide, please.

5 This slide shows the growth in charging
6 infrastructure needed and corresponding power levels
7 through time to support medium- and heavy-duty vehicles, as
8 projected by the models used in the second AB 2127 report.
9 In 2030, almost 110,000 chargers will be needed at depots
10 and 5,500 will be needed for charging enroute. By 2035,
11 that increases to 256,000 depot chargers and 8,500 enroute
12 chargers. More depot chargers are needed than enroute
13 chargers because depot charging allows vehicles to make the
14 best use of vehicle idle time, avoid waiting for charging
15 during the trip, and avoid having to pay for high-powered
16 enroute charging.

17 The model assumes that most vehicles will rely on
18 depot chargers for the bulk of their charging, and will
19 need to charge at a depot every one to three days,
20 depending on driving patterns and vehicle range. Depot
21 chargers can serve vehicles both in the daytime and at
22 night, which is a difference from how it was modeled in the
23 first report.

24 At depots, a wide range of charging speeds and
25 power levels are included, largely in relation to vehicle

1 size and battery capacity, with larger vehicles and
2 batteries requiring higher-speed depot charging.

3 For enroute charging, charging speeds and power
4 levels depend largely on vehicle technology. This
5 assessment assumes that 350 kilowatt chargers will be the
6 default for enroute public chargers because 350 kilowatt
7 charging systems have already begun to be deployed in large
8 numbers. If the megawatt charging system, what's known as
9 MCS, or other charging systems that permit higher charging
10 speeds are adopted rapidly, the resulting charging system
11 would likely include more high-powered public chargers, but
12 fewer total public enroute chargers.

13 In 2030, about 82 percent of total medium- and
14 heavy-duty charging load is estimated to be served by depot
15 charging, and 18 percent served by enroute charging. The
16 CEC will continue to monitor the market and make modeling
17 adjustments over time as the medium- and heavy-duty
18 industry evolves, as it could gravitate towards enroute or
19 higher-powered chargers in greater numbers.

20 Now we'll talk about reliability.

21 MR. SCHELL: Good morning, all. My name is
22 Dustin Schell. I'm a staff in the Fuels and Transportation
23 Division. And this morning I'll be presenting on staff's
24 proposed regulations for EV charger reliability and data
25 collection.

1 Next slide, please.

2 So the CEC is working to improve EV charger
3 reliability through several initiatives. We've started
4 incorporating charger uptime requirements in recent CEC
5 funding solicitations, including a 97 percent uptime
6 requirement, record-keeping and reporting requirements, and
7 maintenance requirements. We've approved a Field Testing
8 Program that will test the reliability of actual charging
9 stations installed in California as well.

10 Funded projects to improve vehicle charger
11 compatibility testing and standardization are also
12 something that we're working on as interoperability
13 failures are a cause of failed charging sessions. And
14 we're also seeking further opportunities to standardize and
15 accelerate EV charger interoperability through other means.

16 Next slide, please.

17 So CEC staff have prepared a draft report
18 proposing new reliability reporting regulations pursuant to
19 Assembly Bill 2061, which requires the CEC to develop
20 reliability reporting standards by January 1st of 2024.
21 These regulations apply to charging stations that are
22 outside of single-family homes and small multi-unit
23 dwellings, that receive an incentive from state agencies or
24 through a charge on ratepayers, and are installed after
25 January 1st of 2024.

1 Staff proposes that networked chargers report
2 detailed downtime, uptime, and status information to the
3 CEC semi-annually. Additionally, networked chargers
4 installed after January 1st of 2026 will report operative
5 status to the CEC electronically on a near-real-time basis
6 through certain communication protocols. Non-networked
7 chargers would report downtime to the CEC semi-annually
8 under these regulations -- or proposed regulations, excuse
9 me. The CEC will report this data through biennial reports
10 starting in 2025 and intends to publicly rank the
11 reliability of major EV charging networks.

12 Next slide, please.

13 Beyond requiring reliability reporting for
14 publicly funded chargers, CEC staff also propose related
15 reporting regulations for reporting the number of chargers
16 and their utilizations. These regulations would be under
17 existing Title 20 authority and would apply to all chargers
18 in California outside of single-family homes and small
19 multi-family dwellings. This data will allow the CEC to
20 better estimate the number of chargers in California and
21 how many are needed to support state goals.

22 Additionally, understanding real-world charging
23 utilization will help the CEC understand charger
24 reliability and direct investments to where chargers are
25 heavily utilized and are more needed.

1 Next slide, please.

2 So to recap, this Draft Staff Report proposes
3 reliability reporting regulations pursuant to AB 2061 and
4 charger inventory and utilization reporting regulations
5 under Title 20 authority. Reliability reporting
6 regulations apply to a smaller subset of chargers than
7 inventory and utilization reporting regulations. And we've
8 received some pushback. Well, actually, I'll get into this
9 on the next slide, I'm sorry.

10 Next slide, please.

11 So CEC staff published the draft report in
12 September and followed by holding a workshop to receive
13 stakeholder feedback on October 9th. We received
14 substantial public comment both in support and some
15 pushback following this workshop.

16 Separately, AB 126 amended the section of the
17 Public Resources Code enacted by AB 2061 to require us to
18 adopt uptime operations and maintenance requirements, as
19 well as to set standards to notify customers about the
20 real-time availability and accessibility of public
21 chargers.

22 Staff have proposed amendments to the draft
23 regulation to both satisfy the requirements of AB 126 and
24 to respond to public comment from the workshop. Those
25 proposed amendments are currently under review by CEC

1 management. We intend to make those amendments public and
2 to solicit feedback prior to opening formal rulemaking.

3 And, actually, that's the end of my slides. I'll
4 pass it over to my colleague, Kristi Villareal.

5 MS. VILLAREAL: Thanks, Dustin.

6 Good morning, everyone. My name is Kristi
7 Villareal, and I am an Air Pollution Specialist with the
8 Hydrogen Unit. Today, I'm providing an update on what we
9 have accomplished since the last Advisory Committee meeting
10 on the CEC's inaugural report pursuant to Senate Bill 643.

11 Next slide, please.

12 As background, SB 643 is a statewide assessment
13 of medium- and heavy-duty and off-road refueling
14 infrastructure, as well as clean hydrogen production in the
15 context of meeting goals set forth in Executive Order N-79-
16 20, as well as complying with statewide regulations that
17 are currently in place, such as CARB's Advanced Clean
18 Fleets.

19 The CEC published a Staff Report for public
20 review in September, and staff is incorporating public
21 feedback received during a workshop held on October 16th
22 and through the docket, which will inform a final SB 643
23 report to the legislature this winter. SB 643 is a
24 triennial reporting requirement through 2030, but the
25 assessment will be an ongoing effort during non-reporting

1 years as well.

2 Next slide, please.

3 In recent years, unprecedented investments have
4 been made at the state and federal levels for clean
5 hydrogen production and refueling infrastructure. These
6 investments are from the California state budget and two
7 federal funding packages.

8 The Bipartisan Infrastructure Law included one of
9 the largest investments in the U.S. Department of Energy's
10 history, \$7 billion toward the establishment of regional
11 clean hydrogen hubs. Through the ARCHES effort, California
12 was awarded \$1.2 billion to support projects intended to
13 create a hydrogen ecosystem in the state.

14 The Inflation Reduction Act provides a major
15 incentive for clean hydrogen production with a tax credit
16 of up to \$3.00 per -- excuse me -- per kilogram produced.

17 Next slide, please.

18 SB 643 separates the discussion of fuel cell
19 electric buses from that of fuel cell electric trucks. One
20 reason for this is that there is a relatively high degree
21 of uncertainty regarding what levels of infrastructure will
22 be needed for hydrogen trucks and off-road applications at
23 this early stage. However, fuel cell electric buses have
24 been utilized by transit agencies for many years using
25 private refueling depots.

1 Nearly five years ago, CARB adopted the
2 Innovative Clean Transit Regulation, which was a world-
3 leading regulation for heavy-duty transportation. These
4 zero-emission fuel cell electric buses are beachhead
5 technologies for heavy-duty vehicle transportation
6 applications. It's also notable that while three transit
7 agencies planned to deploy fuel cell electric buses in
8 2018, now 42 agencies have deployed or are planning to
9 deploy fuel cell electric buses.

10 Next slide, please.

11 Moving on to the developing fuel cell electric
12 truck infrastructure, this slide shows publicly available
13 medium-duty and heavy-duty refueling stations throughout
14 California, most of which rarely recently received public
15 awards from agencies, including the CEC, the California
16 Transportation Commission, and other agencies, and they are
17 still under development.

18 There are three operating stations in Southern
19 California, two of which were partially funded by the CEC
20 and CARB for a demonstration using ten heavy-duty fuel cell
21 electric trucks. Some of the stations on the map are
22 planned as multi-use with refueling nozzles available for
23 both light-duty and heavy-duty fuel cell electric vehicles.

24 Included on this map is a station that is
25 expected to become operational before the end of 2023,

1 which is called the NorCal Zero Project and was jointly
2 funded by the CEC and CARB and will support drayage
3 operations at the Port of Oakland.

4 Next slide, please.

5 The preliminary results from the four refueling
6 infrastructure scenarios presented in the report indicate
7 the level of uncertainty of what the infrastructure needs
8 will be in 2030 and 2035. Much of this uncertainty can be
9 contributed to what fleet owners will decide in terms of
10 which zero-emission technology, battery electric or fuel
11 cell electric will work best for their operations, given
12 many considerations, including operating costs, range, and
13 vehicle availability and purchase price. These scenarios
14 indicated that anywhere from 1 to 602 stations would be
15 needed statewide by 2030. By 2035, anywhere from 11 to
16 over 2,000 stations would be needed.

17 Since the SB 643 assessment is an ongoing effort,
18 the CEC will continue to evaluate the needs of the network
19 as it grows and use models that are under development to
20 help inform the assessment. One example would be the
21 heavy-load model, which was developed by Lawrence Berkeley
22 National Lab for medium-duty and heavy-duty battery
23 electric charging station requirements, as Adam discussed
24 earlier regarding the AB 2127 report. So that model is now
25 going to incorporate hydrogen to produce the future

1 scenarios with both technologies.

2 Next slide, please.

3 Finally, I'd like to discuss clean hydrogen
4 production. So clean hydrogen production in California is
5 nearly non-existent at this time. The map on the right of
6 the slide shows the projects that are under development and
7 operational. The CEC has awarded \$22 million to six clean
8 hydrogen fuel projects that will increase production by
9 nearly 40,000 kilograms per day. Four of the projects will
10 use electrolysis, while two will produce hydrogen through
11 gasification. One is now operational, and the others are
12 scheduled to begin production within the next two years.
13 ARCHES's goals include ramping production to over 500 tons
14 per day by 2030.

15 Finally, for next steps regarding the final SB
16 643 report, staff is working on finalizing the report and
17 to deliver it to the legislature this winter.

18 If you have any questions, I'm happy to answer
19 them later. Thank you. And I'll hand it off to my
20 colleague, Ben de Alba.

21 MR. DE ALBA: Good morning. Thank you, Kristi.

22 Ben de Alba here. I work in the Fuels and
23 Transportation Division. I'm going to highlight our
24 Division's efforts to implement the National Electric
25 Vehicle Infrastructure Formula Program and some of our

1 recent activities to pursue other federal funding
2 opportunities to support the deployment of zero-vision
3 vehicle infrastructure.

4 Next slide, please.

5 The NEVI Program is a \$5 billion formula program
6 that was established under the Infrastructure and
7 Investment Jobs Act of 2021. Through the formula,
8 California will receive approximately \$384 million over the
9 course of five years.

10 The Energy Commission is implementing this
11 program in partnership with Caltrans. To maintain our
12 eligibility, Caltrans must submit a deployment plan to the
13 U.S. Joint Office of Energy and Transportation every year.
14 We received federal approval for our second annual plan in
15 September of this year.

16 Next slide.

17 The primary objective of the NEVI program is to
18 deploy a nationwide network of DC fast charging stations.
19 California will use the NEVI program to deploy DC fast
20 charging stations along approximately 6,600 miles of
21 interstates, U.S. routes, and state routes within the
22 state. The NEVI program requires that at least four fast
23 chargers be installed every 50 miles or less.

24 Moreover, the NEVI program emphasizes equity and
25 inclusion. Fifty percent of the chargers must be located

1 in disadvantaged communities or low-income communities,
2 while 40 percent should be situated in Justice40
3 communities.

4 Next slide, please.

5 The partnership between the Energy Commission and
6 Caltrans is solidified in an interagency agreement. The
7 agreement assigns the responsibility of administering NEVI
8 formula funds to the Energy Commission throughout the
9 program's duration. In addition to administering
10 California's NEVI program, the agreement with Caltrans
11 makes Energy Commission responsible for updating
12 California's NEVI Deployment Plan and designating the
13 state's alternative fuel corridors.

14 While the Commission takes the lead in
15 administering the program, the interagency agreement
16 emphasizes close collaboration between Caltrans and the
17 Commission to ensure the program's success.

18 Next slide, please.

19 On October 26th of this year, the Energy
20 Commission released California's first NEVI Solicitation,
21 otherwise known as GFO-23-601. The solicitation makes
22 available \$40.5 million NEVI formula funds for six corridor
23 projects. Those six corridor projects will deploy 270 DC
24 fast chargers and 26 new charging stations along major
25 routes, including Interstates 5, 8, 40, 105, 110, 210, 405,

1 710, 805 and more. Applications for GFO-23-601 are due
2 January 26th, 2024.

3 Next slide, please.

4 The Fuels and Transportation Division has also
5 been busy pursuing other federal programs for ZEV
6 infrastructure deployment. The Energy Commission has
7 partnered with Caltrans to submit applications for the
8 Federal Highway Administration's Charging and Fueling
9 Infrastructure Discretionary Grant Program and FHWA's
10 Electric Vehicle Charger Reliability and Accessibility
11 Accelerator Program. Our applications to those two
12 programs are still pending award.

13 Thank you very much, and I'll pass it back to
14 Benjamin.

15 MR. TUGGY: All right, thank you, Ben, as well as
16 Dustin and Kristi and Adam.

17 We are going to transition to the second half of
18 our staff updates today, so we'll be talking about funding
19 activities that we've been working on recently related to
20 the Clean Transportation Program.

21 So we'll start with Madison.

22 MS. JARVIS: Thank you so much, Benjamin.

23 Hi all, I'm Madison Jarvis. I'm an Air Pollution
24 Specialist in the Fuels and Transportation Division, and
25 I'll be presenting updates on our recent funding

1 allocations for light-duty EV charging infrastructure.

2 Next slide, please.

3 So our Clean Transportation Program funding
4 opportunities utilize both competitive solicitations as
5 well as block grants, so I want to quickly explain the
6 difference between the two before we dive into the updates.

7 Competitive solicitations or grant funding
8 opportunities are where the CEC directly solicits and funds
9 projects at our own discretion. This allows us more
10 flexibility in the types of projects awarded and project
11 requirements and allows CEC full oversight. Competitive
12 solicitations are generally more costly for the CEC as more
13 resources are required to score and manage projects, but
14 often result in larger projects that address specific clean
15 transportation goals.

16 Block grants, on the other hand, enable funding
17 to be distributed to third-party implementers where they
18 score and oversee projects. Since the third-party
19 implementer is bound to more strict guidelines initially
20 set by the CEC, replicability is maximized allowing for
21 many smaller similar projects. This could be more
22 efficient for the CEC in terms of resources but, again,
23 often results in more smaller generalized projects.

24 Next slide please.

25 So now for the updates. First are our light-duty

1 EV charging infrastructure solicitations. The first of
2 those was the CHiLL-2 Solicitation, or Convenient, High-
3 Visibility, Low-Cost Level 2 Charging. We had \$24 million
4 allocated to the solicitation for high-density, high-
5 visibility Level 2 charging projects. The solicitation
6 received seven applications with five of those being
7 awarded for a total of roughly \$25.7 million. So about
8 \$1.7 million of funding was added to fully fund all the
9 passing projects.

10 Each of the resulting projects are installing
11 between 170 and 600 Level 2 charging ports all within a
12 mile-and-a-half radius in their respective cities, those
13 being Daly City at the two BART stations, Irvine, Los
14 Angeles, Oakland and the UC San Diego campus. Altogether
15 there will be nearly ,2000 new Level 2 charging ports
16 installed from the solicitation equating to roughly \$13,000
17 of CEC dollars spent per port which includes the cost of
18 chargers, as well as site upgrades, installation and
19 project management.

20 Next is the REACH 2.0 Solicitation, which is the
21 second iteration of the Reliable, Equitable, and Affordable
22 Charging for multi-family Housing Solicitation. There was
23 \$20 million set aside for the solicitation aimed at
24 providing Level 1 and Level 2 charging at or near
25 multifamily housing residences. And while the notice of

1 proposed awards has not yet been released, we can share
2 that the solicitation received many applications. The NOPA
3 should be released for the solicitation soon which will
4 announce how many projects will be funded, the number of
5 chargers installed and the number of multifamily housing
6 units served.

7 And we also released the FAST Solicitation which
8 focused on DC FAST charger installations to support public
9 charging and charging for on-demand transportation services
10 such as ride shares and food delivery. Of the ten
11 applications received, three grants were awarded totaling
12 \$10.5 million in funding, and altogether 136 DC FAST
13 charging ports will be installed throughout the state.

14 Next slide, please.

15 Now we'll go through our Light-duty EV
16 Infrastructure Block Grants.

17 The California Electric Vehicle Infrastructure
18 Project, or CALeVIP 1.0, is the first Light-duty EV Block
19 Grant and is no longer open for applications. We refer to
20 it as 1.0 to distinguish from the newer 2.0 project that
21 I'll cover in just a minute.

22 CALeVIP 1.0 was created in 2017 and has allocated
23 \$226 million in incentives for both DC FAST chargers and
24 Level 2 chargers. This includes \$40 million in funding
25 provided through regional partners and covers 36 California

1 County counties. Currently about 11,600 chargers are
2 either installed or in progress as a result of CALeVIP 1.0.

3 CALeVIP 2.0 is for DC FAST chargers only. There
4 is an application window open now that closes on December
5 12, 2023, with up to \$38 million available for incentives.
6 CALeVIP 2.0's first application window closed on March
7 10th, 2023 and funded 396 DC FAST chargers and awarded \$23
8 million in incentives. Only disadvantaged and low-income
9 community sites are eligible for these first two CALeVIP
10 2.0 windows.

11 Now moving to Communities in Charge, this offers
12 incentives for Level 2 chargers and gives scoring priority
13 to disadvantaged and low-income communities. The first
14 application window closed on May 8th, 2023 and awarded
15 nearly \$30 million to install almost 4,900 Level 2
16 chargers. Seventy-six percent of these are in
17 disadvantaged and/or low-income communities. The second
18 application window opened on November 7th and will close on
19 December 22nd this year with up to \$38 million available
20 for incentives.

21 For now, those are all the updates to our light-
22 duty EV charging infrastructure solicitations and block
23 Grants.

24 I'll hand it over to Miki Crowell for updates on
25 hydrogen infrastructure. Thanks.

1 MS. CROWELL: Thank you, Madison.

2 Hello, my name is Miki Crowell and I'm staff with
3 the Hydrogen Refueling Infrastructure Unit, and I am
4 providing a few brief updates on the Light-duty Hydrogen
5 Infrastructure.

6 Next slide, please.

7 The Clean Transportation Program has allocated
8 \$257 million and released six solicitations so far to
9 support development of light-duty hydrogen refueling
10 stations. As a result, we expect 130 stations by 2027
11 based on the most recent station development schedules
12 shared by station developers, and this includes 7 privately
13 funded stations that are not part of any CEC agreement.

14 We have 66 stations that have achieved open
15 retail status. However, 12 of those are temporarily non-
16 operational for various reasons. And 31 stations are in
17 various stages of development, and an additional 33
18 stations are planned.

19 Next slide, please.

20 I want to talk a little bit about the vehicles
21 that these stations support. The cumulative sales of
22 light-duty fuel cell electric vehicles from 2010 through
23 the third quarter of 2023 is 17,442, and we estimate the
24 on-road population to be 14,809. In 2022, CARB estimated
25 34,500 fuel cell electric vehicles by 2025 and 65,600

1 vehicles by 2028 based on the annual auto manufacturer
2 survey responses.

3 Next slide, please.

4 Although the stations that are built and are in
5 development have the nameplate capacity that exceeds the
6 current and projected demand for fuel, these stations are
7 having reliability and availability issues that need to be
8 addressed to ensure current and future fuel cell electric
9 vehicle drivers have sufficient, convenient, and reliable
10 refueling options.

11 The reliability and availability issues are
12 mostly caused by equipment failures, supply chain
13 constraints that have been continuing since the COVID-19
14 pandemic, and hydrogen supply disruptions.

15 Hydrogen price is also a factor that affects
16 drivers. The average hydrogen price in 2022 was \$14.95 per
17 kilogram. The average price in the first quarter of 2023
18 was \$26 per kilogram and the highest price today is \$36 per
19 kilogram which is equivalent to about \$14.40 for a gallon
20 of gasoline.

21 Next slide, please.

22 We are exploring ways to address these barriers.
23 We released an Operations and Maintenance Solicitation,
24 GFO-23-604, on November 3rd, this month. This should help
25 improve the reliability and availability of existing

1 stations.

2 The CEC also provided a Manufacturing Grant to
3 produce hydrogen refueling equipment in California which
4 could help ease supply chain constraints.

5 We also held a joint public workshop on November
6 6th with CARB and GO-Biz to discuss the fuel cell electric
7 vehicle customer experience and receive feedback.

8 We also have a contract with UC Davis to gain a
9 better understanding of customer experiences with light-
10 duty hydrogen refueling and hydrogen refueling market
11 potential.

12 Thank you. And now I'm going to hand it off to
13 my colleague, Alex Wan.

14 MR. WAN: Thank you very much, Miki.

15 Hello. My name is Alex Wan and I'm a staff
16 member of the Medium- and Heavy-Duty Zero-Emission
17 Technologies Branch. Today, I'll be providing an overview
18 of the investments that the CEC is making to provide
19 charging and hydrogen refueling infrastructure for medium-
20 and heavy-duty ZEVs.

21 Next slide, please.

22 One of our mechanisms for supporting ZEVs is the
23 EnergIIIZE Project. EnergIIIZE stands for Energy
24 Infrastructure Incentives for Zero-Emission Commercial
25 Vehicles. EnergIIIZE offers EV charging equipment

1 incentives for medium- and heavy-duty vehicles and some
2 associated infrastructure costs. The project is
3 administered by CALSTART and was designed with four
4 foundational opportunities to serve those who need EV:
5 fast-track for charging infrastructure in the short term,
6 hydrogen refueling infrastructure, EV jumpstart for
7 projects in or benefiting disadvantaged communities and
8 those seeking to construct public EV charging stations.

9 EnergIIZE was expanded last year to match
10 charging infrastructure funds with cars and vehicle
11 incentives via their HVIP Program. Funds have been set
12 aside for HVIP recipients who have drayage fleets, transit
13 fleets, and school bus fleets.

14 Moreover, 2022 was the first year of the
15 EnergIIZE Project. In year two, EnergIIZE has granted
16 awards under the EV fast-track, the hydrogen lane, and EV
17 jumpstart lane. Award announcements are expected for the
18 EV public charging lane near the end of the year. And
19 applications for the EV public charging lane were accepted
20 from October 19th for November 3rd. All these funding
21 opportunities and more will also be available in 2024.
22 Please visit [EnergIIZE.org](https://energize.org) to join the mailing list and to
23 be notified of upcoming workshops and webinars.

24 Next slide, please.

25 And now I'll discuss solicitations.

1 First I'd like to mention GFO-23-603, otherwise
2 known as Implementation of Medium- and Heavy-duty Zero-
3 emission Infrastructure Blueprints. This is a competitive
4 grant solicitation. It seeks projects that will implement
5 zero-emission charging and/or hydrogen refilling
6 infrastructure projects developed and identified in the
7 final blueprint plan documents resulting from GFO-23-601,
8 Blueprint for Medium- and Heavy-duty Zero-emission Vehicle
9 and Infrastructure Solicitation.

10 There are two project groups for this for GFO-23-
11 603, charging infrastructure for medium- and heavy-duty
12 zero-emission vehicles and hydrogen refueling
13 infrastructure for medium- and heavy-duty zero-emission
14 vehicles. \$20 million is available for this solicitation.
15 Award amounts will be between \$2 and \$5 million for the
16 project. This solicitation was released in September 2023
17 and the deadline for applications is November 20th, 2023.

18 Next slide, please.

19 The CEC also recently released GFO-23-602, the
20 CRITICAL PATHS Solicitation, which aims to support medium-
21 and heavy-duty zero-emission vehicle hydrogen refueling
22 and/or electric charging stations along the priority clean
23 freight corridors with directions from the California
24 Transportation Commission. This funding opportunity was
25 released back in September 26th, and applications are due

1 November 29th, with up to \$20 million available. Award
2 amounts will be between \$5 million and \$20 million per
3 project.

4 Next slide, please.

5 In addition, this year the CEC is partnering with
6 CARB to fund the infrastructure portion of projects under
7 Advanced Technology Demonstration and Pilot Projects
8 Solicitation. Specifically, the CEC will allocate \$50
9 million in infrastructure in support of aviation, marine,
10 and rail vehicle projects. The application window was
11 closed on October 26th, 2023.

12 Next slide, please.

13 The CEC also issued solicitation GFO-22-612, the
14 Electric School Bus Bidirectional Infrastructure
15 Solicitation. This solicitation will provide funding for
16 projects that support the ability to enable managed
17 charging and bidirectional power flow for electric school
18 buses and their associated infrastructure. This
19 solicitation is closed, and the Notice of Proposed Awards
20 was posted on September 27th, 2023. In short, \$10.8
21 million was proposed to be awarded to four entities.

22 Also, since we're discussing school buses, I have
23 some further updates from the School Bus Unit. 194 school
24 buses have been delivered to school districts. There are
25 34 buses outstanding to be delivered to school districts in

1 the future. 173 school site charging stations have been
2 constructed and operational, while 55 charging stations are
3 currently outstanding to be completed.

4 And that's it for my slides. I'll now hand it
5 over to my colleague, Jonathan Bobadilla. Thank you very
6 much.

7 MR. BOBADILLA: Thank you, Alex.

8 Good morning. My name is Jonathan Bobadilla,
9 staff in the Fuels and Transportation Division. Today I
10 will be providing information on our zero-emission
11 transportation manufacturing activities.

12 Next slide.

13 For context, California accounts for over 14
14 percent of U.S. manufacturing output with over 1.2 million
15 manufacturing jobs here. Total manufacturing output for
16 California in 2021 was \$394.8 billion, making it a top
17 contributor to state and national GDP. With over 23,000
18 manufacturers, California is the nation's largest
19 manufacturing state.

20 California leads the ZEV supply chain in the
21 United States with 56 commercial ZEV and ZEV-related
22 manufacturing firms and many more clean tech startups
23 working on commercializing. Since 2009, the CEC has
24 committed to investing in ZEV supply chain manufacturing
25 with 40 Clean Transportation Program awards for

1 manufacturing projects.

2 Next slide.

3 Thanks to the ambitious goals of the State of
4 California to electrify and decarbonize transportation, the
5 CEC was entrusted by the legislature with nearly \$250
6 million to support in-state manufacturing projects through
7 our Clean Transportation Program.

8 Grant funding opportunities have been released by
9 the CEC to attract new and expand existing zero-emission
10 vehicle or ZEV-related manufacturing in California,
11 increase number and quality of manufacturing jobs in
12 California, particularly in the ZEV market, bring positive
13 economic impacts to the state by attracting private
14 investment in manufacturing capacity, and contribute to
15 California's goals of zero-emission transportation.

16 Next slide.

17 The CEC released two manufacturing funding
18 opportunities in 2022 and 2023. A breakdown of funding by
19 project categories are shown in the table. Twenty-seven
20 applications were received for funding consideration.
21 Fourteen applications were recommended for funding for \$223
22 million, and if you include match, that's 479 million worth
23 of projects.

24 A CEC-funded block grant is currently being
25 implemented by CALSTART called Power Forward. The Power

1 Forward Solicitation is expected to release additional
2 battery manufacturing projects in California next year.

3 Next slide.

4 As shown in the map, our manufacturing efforts
5 have resulted in award funding in 14 cities and 8 counties
6 throughout California. The projects recommended for
7 funding will promote a diversity of manufacturing of ZEVs,
8 ZEV batteries, electric vehicle supply equipment, and many
9 others. More will be added once the CALSTART Power Forward
10 solicitation is complete. We are very excited to work with
11 our new project partners as they develop new ZEV products,
12 develop operations, and create more high-quality
13 manufacturing jobs for Californians.

14 Next slide.

15 That is the end of my presentation. Thank you.

16 MR. TUGGY: All right. Thank you, everyone.

17 Now, if any Advisory Committee members have
18 questions for staff, you can go ahead and raise your hand.
19 And I see one hand raised.

20 Just as another note, so, once again, we'll have
21 time for public comment at the end of the meeting. And we
22 do request that Advisory Committee members keep these
23 questions brief so we can stay on schedule.

24 With that, go ahead, Michael.

25 COMMITTEE MEMBER PIMENTEL: Yeah, thank you.

1 Now, Advisory Board members, I do want to raise one issue
2 that's come up within my association and use that to parlay
3 into a question.

4 We heard a staff presentation that spoke to the
5 difference of funding structures that the CEC can move
6 forward with between a GFO and a block grant award. I have
7 heard some concerns from some within my membership, transit
8 and rail agencies, that the GFO structure is one that,
9 because of the ongoing oversight and accountability
10 requirements that are built into CEC's programs and the
11 ultimate grant award, that the time associated with
12 complying with those requirements can often have a chilling
13 effect on the interest for the transit and rail agencies
14 actually applying for those dollars. I've heard some
15 accounting of agencies receiving less in the award than
16 what is spent on ultimately grant administration.

17 And so my question for CEC staff is: Has there
18 been any contemplation as we're talking about overall
19 structure for investments, because it ultimately comes down
20 to how we guide the investments, of making any
21 modifications to grant administration for those GFO
22 authorized investments so that we can maybe encourage more
23 parties who otherwise would not participate to participate
24 in those GFO opportunities?

25 MR. TUGGY: Thank you for the question, Michael.

1 And, Charles, it looks like maybe you were going
2 to speak.

3 MR. SMITH: Well, I was just going to maybe
4 clarify. So is the window of opportunity -- is the concern
5 that the window of opportunity is too narrow during the
6 application period in order for applications to be prepared
7 and submitted?

8 COMMITTEE MEMBER PIMENTEL: No, but rather once
9 an agency, in this case, receives a grant award pursuant to
10 a GFO opportunity, those agencies find that the oversight
11 applied by CEC over the grant in terms of reporting on, for
12 example, the pass-through of funds to contractors and
13 subcontractors, some of the information that's required of
14 those contractors and subcontractors related to job quality
15 and wages and so forth, ultimately require quite a lot of
16 hands-on engagement from the agencies in a way that they
17 would not administer any other grant from any other party.

18 It was also just flagged for me that there was
19 some concern that within the scoring process, and this is
20 corollary to the concerns that, at times, the agencies have
21 to identify the contractors that they would be moving
22 forward with and the contractor information, say job
23 quality, for example, is used to provide scoring
24 preference. Now for a lot of public agencies, they're not
25 going to be letting out with a request for proposals to

1 secure a contractor unless they know they have a grant in
2 hand.

3 And so we find ourselves in a bit of a chicken-
4 and-the-egg situation where, again, I think the
5 administration of the GFOs can maybe be streamlined. And
6 my question is: Is there an opportunity within this broader
7 conversation, particularly as we're determining investment
8 between block grants and GFOs to consider how we might make
9 some alterations to better support public agencies in
10 applying for the dollars?

11 MR. SMITH: Got you. Thank you. Yeah, so I
12 think we're, certainly, we're always open to suggestions on
13 opportunities to make our administering of public dollars
14 more efficient. Sometimes there are statutory or
15 regulatory requirements that we have to take on as part of
16 administering those funds, but certainly we are looking for
17 any opportunity to reduce the burden of participation in
18 our funding program and welcome either specific feedback on
19 specific solicitations or on the program in general. And
20 we would be happy to also follow up with you after the
21 meeting on that particular topic.

22 COMMITTEE MEMBER PIMENTEL: Much appreciated.
23 And what I'll do is I'll prepare some notes that I can
24 share with you and the full CEC staff that we can perhaps
25 take into consideration as we evolve conversations on it,

1 so I appreciate the time.

2 MR. SMITH: That would be excellent. Yeah, I
3 would love to have those. If you're amenable to it, we
4 would love to have those comments put into our document as
5 well. Thank you.

6 COMMISSIONER MONAHAN: Yeah. And, Michael, we
7 can also have a separate, since this -- we tend to deal
8 with the big allocations in the Advisory Committee process,
9 and this is getting into more, you know, the solicitation
10 versus block grant, as you said. So I would say there's a
11 difference in constellation of folks involved in that
12 discussion around the solicitations themselves.

13 So what we can do is have a separate
14 conversation, I would suggest, with the folks that deal
15 with the actual grant administration, because we want to
16 make sure, especially with public agencies, we want to make
17 this process as, you know, painless as possible and still
18 be good stewards of the money. So I think this is an
19 opportunity for us to maybe have a deeper dive with you and
20 other, maybe if you can get some friends and agencies that
21 have had this experience so we can learn from them.

22 COMMITTEE MEMBER PIMENTEL: Absolutely. And
23 thank you for that offer.

24 MR. TUGGY: All right. So I think we can go to
25 Joel Levin's question.

1 COMMITTEE MEMBER LEVIN: Hi. So, yeah, I was
2 really happy to see that reliability is now becoming a
3 focus for the program. I think that's really, really
4 important. We do annual surveys at Plug in America of EV-
5 ers concerns and what we've seen is that concerns about
6 reliability in the last year or two have just gone through
7 the roof, like people are really worried about it to the
8 point that it's starting to become like a reason that some
9 people choose not to get an EV because they're worried that
10 chargers are going to be broken, not that there won't be
11 chargers, but when they get there, they're going to be
12 broken. So it's going to be a pretty substantial issue and
13 focusing on that I think is really important.

14 So my question is: How do you assess reliability?
15 And encouraging you to look at it from a consumer
16 perspective and from the consumer experience perspective so
17 that, you know, if someone pulls up to a charger and they
18 have to restart their session four times and they've got to
19 call the 800 number and they eventually go away with a full
20 charge, I wouldn't call that a successful session. So I
21 would encourage you to look at it from the perspective of,
22 you know, was this a smooth, positive consumer experience
23 rather than just, do they ultimately drive away with enough
24 charge?

25 MR. TUGGY: Thank you, Joel.

1 And do any staff want to respond really quickly
2 or --

3 MR. SCHELL: Yeah. Hi. Good morning. Dustin
4 Schell. I'm a technical lead for reliability, EV charger
5 reliability.

6 We look at reliability wholistically, essentially
7 from the perspective of successful charges, when a down
8 charger or a charger that's not up, as people often refer
9 to it, really is just a subset of a failed charging
10 session. And if you were to look at the draft report that
11 we proposed back in September, the data collection element
12 of it includes an entire block of data that are
13 specifically just about successful versus failed charge
14 attempts, and then regulated entities would be required to
15 report a percentage of successful charge attempts that
16 their customers experienced.

17 And we are looking at some other things, I can't
18 get into it because they're still working their way through
19 the approval processes, but we are looking at some other
20 mechanisms to improve that as well.

21 COMMITTEE MEMBER LEVIN: Okay. Great. Thank
22 you. Yeah, to the extent that you can look at it from the
23 sort of consumer experience as much as possible, that's
24 sort of really valuable, so thanks.

25 MR. SCHELL: Absolutely. Thank you.

1 MR. TUGGY: All right, I will go to Bill Elrick.
2 I'll start. I may lower a few hands to the folks who've
3 already spoken.

4 But, Bill, go ahead and ask your question.

5 COMMITTEE MEMBER ELRICK: Yeah. Great. Thank
6 you. And I might be -- I see another similar comment on
7 from CARB.

8 And one, the real question I had, is I'm not
9 seeing the light-duty hydrogen support long term. I'm
10 wondering, I think I have a second question or maybe
11 comment around there, but if you could comment to that
12 first?

13 MR. TUGGY: Yeah, thanks for your question, Bill.

14 Go ahead.

15 COMMISSIONER MONAHAN: I would think that's more
16 in the public comment period, so this is for questions.

17 COMMITTEE MEMBER ELRICK: Okay. Well, then I
18 guess my --

19 COMMISSIONER MONAHAN: So questions on the
20 updates. So we haven't even gotten to the forward-looking
21 Investment Plan, so if you could hold that one. We want to
22 hear it but in the next section.

23 COMMITTEE MEMBER ELRICK: Okay.

24 MR. TUGGY: All right. So as Commissioner
25 Monahan said, we will be getting into the main focus of

1 this presentation in a few moments.

2 Before that, it looks like we're going to take
3 about a ten-minute break. So we'll come back at, let's
4 say, 10:34 and continue with the meeting.

5 (Off the record at 10:24 a.m.)

6 (On the record at 10:34 a.m.)

7 MR. TUGGY: All right, so let's come back to the
8 meeting.

9 Mabel, if you can advance to the next slide? And
10 thank you.

11 We will get into an overview of the revised staff
12 draft of the 2023-2024 Investment Plan Update. And then
13 after that, we'll have the Advisory Committee discussion of
14 the update, followed by public comment.

15 So next slide, please.

16 And once again, my name is Benjamin. I'll be
17 presenting on this overview.

18 Next slide.

19 So I'll start with this summary slide that kind
20 of gives you an overview of the major categories, and then
21 we'll go into more detail.

22 So one thing to note, this total of \$1.85 billion
23 does not include about \$384 million in national electric
24 vehicle infrastructure, or NEVI, funds since those are
25 federal funds.

1 The \$1.85 billion also does not count as base CTP
2 funds after this fiscal year. As mentioned before, this
3 particular Investment Plan Update has not proposed
4 allocations for those base CTP funds after 2023-2024.

5 All right. And one other thing to mention is
6 that the allocations have changed a lot since our April
7 staff draft of the Investment Plan Update.

8 So we can go to the next slide, and thank you.

9 So starting with the light-duty EV charging, the
10 new total is \$658 million through fiscal year 2026-2027.
11 And once again, that does not include NEVI funds.

12 Next slide.

13 Now here are some of the changes that have
14 happened since the April staff draft. So the total amount
15 for light-duty EV charging has gone up a little bit due to
16 an additional fiscal year of state general -- or greenhouse
17 gas reduction funds. For this fiscal year, '23-24, we are
18 proposing to use \$42.6 million in base CTP funds, and
19 that's on top of \$95 million in greenhouse gas reduction
20 funds from the state Budget Act of 2023.

21 And one common theme you'll see in these slides
22 is that a lot of state funds that were previously projected
23 to come from General Funds are now coming from the
24 Greenhouse Gas Reduction Fund. You can also see that
25 specifically for this fiscal year, the new GGRF funds have

1 gone down from the previous General Funds. But again, the
2 total through fiscal year 2026-2027 has gone up a little.

3 Next slide.

4 All right, so for medium- and heavy-duty zero-
5 emission vehicle infrastructure, the total proposed in this
6 Investment Plan Update is \$1.14 billion.

7 Next slide.

8 And that includes -- most of the medium- and
9 heavy-duty categories allow both electric and battery
10 electric and hydrogen projects to be funded. Specifically
11 for this fiscal year, '23-24, we are proposing \$42.6
12 million in CTP-based funds. And that includes, \$15 million
13 of that \$42.6 million will be set aside specifically for
14 MDHD hydrogen projects. However, that is just the minimum
15 amount because, once again, all of the GGRF categories for
16 medium- and heavy-duty also allow hydrogen funding.

17 And then you can see similar to with light-duty,
18 the total amount of MDHD funds has gone up. For this
19 fiscal year, the state GGRF funds have gone down a little
20 bit though.

21 Next slide, please.

22 All right, for the emerging opportunities
23 section, this includes sectors that are still kind of early
24 on in transitioning to zero-emissions, so that includes
25 things like aviation, marine applications, railroads, and

1 also vehicle grid integration to make sure that electric
2 vehicles are good citizens of the grid.

3 Next slide.

4 So for this fiscal year, the state budget act did
5 not award us any funds for emerging opportunities. That's
6 down from previously projected \$35 million. However, the
7 total through fiscal year '26-27 has remained the same at
8 \$46 million. That's all projected to be allocated in
9 fiscal year '25-26, I believe.

10 Next slide, please.

11 We also have low carbon fuels. That includes
12 fuels derived from things like forest waste, low-carbon
13 hydrogen production as well. Compared to this April's
14 staff draft of the Investment Plan Update, we have not
15 changed this allocation. So we are still proposing \$5
16 million in CTP-based funds in fiscal year 23-24 for low
17 carbon fuels.

18 Next slide.

19 For workforce training and development, this is
20 the same story. We are still proposing \$5 million in CTP-
21 based funds for this fiscal year.

22 All right, next slide.

23 So I apologize. This slide is kind of a lot to
24 look at, but it has some additional detail that's
25 important.

1 So once again, we are going to be receiving CTP-
2 based funds past this fiscal year thanks to AB 126. We
3 just have not proposed those allocations yet, so they
4 aren't showing up in the table for fiscal years 2024 to
5 2025 and beyond.

6 These white rows are the CTP-based funds. Those
7 are the funds that we can control here at the CEC. The
8 gray rows are for state GGRF and General Funds which we do
9 not have control over, so that's important to keep in mind.

10 One other note is that while there's no longer a
11 row here for ZEV transit infrastructure, that's because the
12 state Budget Act of 2023 replaced a program for that that
13 was previously planned to go to us with a different program
14 at CalSTA. So we will be implementing that transit
15 program, so that's why we're not including it here, but
16 it's good to know that there's still state Budget Act funds
17 specifically going to zero-emission transit.

18 And I think we can go to the next slide.

19 So this slide is just to highlight those caveats
20 that I mentioned before. One is that these future fiscal
21 years do not include the CTP base fund proposed
22 allocations. And also for the GGRF and General Funds in
23 future fiscal years, those are subject to change because
24 those are not set in law until that year's budget act is
25 approved.

1 Next slide.

2 So for this slide, I tried to cut down all the
3 info to be a little bit simpler. So these are the
4 allocations that we can change here at the CEC. This
5 includes \$42.6 million for light-duty EV charging and \$42.6
6 million for medium- and heavy-duty ZEVs. As you can see,
7 we pretty much split the additional funds that we received
8 once we had a full fiscal year's worth of funding between
9 those two categories. And we also have the \$5 million for
10 low-carbon fuel production and the \$5 million for workforce
11 training and development.

12 I'll also add a note that for light-duty
13 hydrogen, we are proposing to reinvest a significant amount
14 of existing funds. We have about \$34 million from a
15 canceled agreement that will be available to reinvest for
16 that.

17 Next slide, please.

18 So now we have our first question for the
19 Advisory Committee to consider. I normally don't like to
20 just read directly off the slides, but I think these
21 questions, in case anyone is calling in over the phone.

22 So question one is: Now that overall funding
23 allocations have changed significantly, do the proposed
24 CTP-based funding allocations strike the right balance?

25 And, Commissioner, I think we'll go through all

1 four questions and then we'll open it up to the Advisory
2 Committee. Does that sound good?

3 COMMISSIONER MONAHAN: Yeah, that sounds great.

4 MR. TUGGY: Perfect.

5 All right, for question two: Is \$5 million in CTP
6 base funds for low-carbon fuels development appropriate for
7 fiscal year '23-24?

8 Question three: Should fiscal year '23-24 funding
9 be allocated to light-duty hydrogen refueling
10 infrastructure given the significant funds remaining from
11 previous fiscal years?

12 And question four: Can you recommend additional
13 outreach methods as we solicit applications to serve on the
14 CTP Advisory Committee?

15 All right, so we will -- I think we'll load up a
16 different PowerPoint here. We're going to get into the
17 Advisory Committee comments. So if you can keep your
18 comments to three minutes or less each, please state your
19 name and affiliation when you start, and I'll give Mabel a
20 second to transition the slides.

21 Oh, I see a question from Samantha to repeat Q3.

22 Yeah, so I'll go ahead and read out question
23 three. I know Mabel's working on the PowerPoint right now.
24 But question three was: Should fiscal year '23-24 funding
25 be allocated to light-duty hydrogen refueling

1 infrastructure given the significant funds remaining from
2 previous fiscal years?

3 All right, thank you, Mabel, for setting up the
4 slides.

5 COMMISSIONER MONAHAN: Let me say something real
6 quick before we go to public comments --

7 MR. TUGGY: Yeah, sure.

8 COMMISSIONER MONAHAN: -- or comments from the
9 Advisory Committee.

10 So I just want to, you know, call out a couple of
11 things. One is on light-duty hydrogen fronts, and I think
12 this relates to a comment, I think, that Joel made in
13 general about ZEV infrastructure, that we're focusing more
14 on reliability writ large. And, you know, these are new
15 industries, including charging and hydrogen refueling, and
16 we're learning a lot about reliability in this space. And
17 so, you know, we're focusing more on the hydrogen world, as
18 well, on improving reliability.

19 And what we've seen in terms of stations being
20 offline is that -- and I think especially as the low part
21 of the low-carbon fuel have fallen, it's made it really
22 hard for a lot of the ZEV infrastructure industry.

23 So we want to make sure that we are supporting
24 them through this transition to help, you know, improve the
25 customer experience, but also, you know, just recognize

1 that this is kind of hard times. We've had the Shell
2 withdrawal from light-duty hydrogen, we've had the low-
3 carbon fuel standard prices go way down and very high
4 hydrogen prices, and we want to make sure that we do what
5 we can with our grant dollars to support the existing
6 network and make sure that the reliability improves, the
7 customer experience improves, and then we can support more
8 fuel self-interest. And I think that's going to be an
9 increasing focus writ large for both hydrogen and battery
10 electric vehicles is improving the reliability.

11 And I want to say, we are committed to making
12 sure that fuel cell drivers or light-duty vehicles today
13 and into the future have a convenient, reliable network.
14 That commitment is unchanged. So just want to highlight
15 that that is an important consideration for us, is we want
16 to make sure that drivers don't feel stranded by the state
17 when they make investments in zero-emission vehicles.

18 And again, on the biofuels front or low-carbon
19 fuels front, you know, in the past, we've funded biodiesel,
20 ethanol, we funded fuels that are used in internal
21 combustion samples. And, you know, with an increasing
22 focus on ZEV, our question around that is, you know, what
23 should we do in this hybrid going forward?

24 So we just we welcome feedback on the light-duty
25 hydrogen proposal. We welcome feedback on the biofuels

1 proposal. And also, you know, we did kind of a simple
2 split between medium- and heavy-duty ZEV infrastructure,
3 you know, is that the right one? So those are all
4 questions we are looking forward to your feedback on.

5 MR. TUGGY: All right, Thank you, Commissioner.

6 And I just see one hand from, it looks like a
7 member of the public. I want to emphasize that we'll have
8 time for public comment a little bit later.

9 But first, I see Bill Magavern from the Advisory
10 Committee would like to speak.

11 So Bill, go ahead.

12 COMMITTEE MEMBER MAGAVERN: Yeah, thanks a lot.
13 Bill Magavern with Coalition for Clean Air. And I'm really
14 responding to both questions one and three. And my advice
15 is prioritize heavy-duty. And there's a few reasons for
16 that.

17 The first really has to do with public health,
18 because the greatest health risks from air pollution in
19 California are caused by diesel exhaust, primarily from
20 heavy-duty vehicles. And so there's a there's a real
21 urgency to clean that up from a health perspective. And so
22 that's one reason we want to prioritize heavy-duty.

23 Secondly, heavy-duty is further behind in making
24 the ZEV transition. You know, clearly it's more difficult
25 to get to zero-emission with our heavier vehicles. And you

1 know, we have some now, we'll have more in the future. We
2 need the infrastructure to support them and it's a great
3 challenge.

4 And thirdly, I think what is in a lot of ways
5 driving that ZEV transition is a set of regulations that we
6 have. Innovative Clean Transit has been talked about.
7 We've got Advanced Trucks, Advanced Clean Fleets. These
8 are very important rules that many of us spent a lot of
9 time working on at the Air Resources Board and we need the
10 infrastructure to support those regulations.

11 So for those reasons, I would say that it
12 probably makes sense to shift more of the allocation.
13 Instead of doing a 50-50 split, let's lean more towards
14 heavy-duty, particularly since there is a lot of other
15 light-duty infrastructure funding available.

16 And when it comes to hydrogen, again, let's focus
17 on heavy-duty infrastructure, particularly since there has
18 been money available for light-duty that has not been
19 oversubscribed.

20 So thank you for hearing my comments.

21 MR. TUGGY: All right. Thank you, Bill.

22 Let's see, oh yeah, I see it looks like one more
23 hand from Joel, and then Will.

24 So go ahead, Joel.

25 COMMITTEE MEMBER LEVIN: Okay. Thanks. So yeah,

1 I wanted to comment, the overall allocation I think is
2 about right. I think we're very pleased that you're
3 focusing on 50 percent of the funding going to lower income
4 communities and DACs. I think that that's great.

5 Within that, I would encourage a big focus on
6 multifamily dwellings. I think that that is, for light-
7 duty vehicles, kind of our biggest challenge. I mean,
8 there's this dilemma that people who have a single-family
9 home can charge at, you know, inexpensive utility rates,
10 and people who don't, people who live in a multifamily
11 dwelling, have to go out and buy charging, you know, on the
12 public network which, as we talked about before, it's
13 unreliable.

14 It's also more expensive. So you've got this
15 risk that the people who can least afford it are going to
16 pay the highest cost for fuel for their car. I mean, if
17 you think about it with gasoline, everyone pays the same
18 price for gasoline. But with EVs, there's this risk that
19 people who can least afford it are paying the most. So if
20 you have, you know, people living in apartments have to go
21 out and buy fuel at a DC fast charger, that's going to be
22 pretty inequitable.

23 So I would encourage you to think about projects
24 that can allow people in apartment buildings to charge at
25 rates that are equivalent to home charging rates. So there

1 isn't any one solution to that, but I think there's a lot
2 of innovative programs that are people playing with to try
3 to support multifamily dwellers with that. So I really
4 wanted to encourage you to focus that as an area within
5 that 50 percent.

6 So those are, yeah, kind of the main things that
7 I want to mention.

8 So in terms of the hydrogen, you know, I would
9 encourage not doing additional funding to hydrogen and
10 focusing in more on building out the electric
11 infrastructure for modern income communities and
12 reliability. I think those are places that are really,
13 really key.

14 So thanks.

15 MR. TUGGY: All right. Thank you, Joel.

16 Let's go to Will Barrett, and then Ruben Aronin
17 after that.

18 COMMITTEE MEMBER BARRETT: Hi there. Will
19 Barrett with the American Lung Association.

20 First of all, thank you and really do appreciate
21 everyone's efforts to get the reauthorization over the
22 finish line. It's definitely a long and challenging
23 process, but very happy for that great public health
24 outcome and health equity outcome. So thank you for all
25 the leadership shown by everyone in this space.

1 On the first question, you know, I think that the
2 overall base funding allocations do strike a good balance.
3 As Bill Magavern mentioned, we would certainly also argue
4 for more focus on the heavy-duty infrastructure, given
5 again the outsized role that heavy-duty transportation
6 plays in California's worst in the nation air quality
7 challenges and health disparities caused by diesel exhaust.
8 So again, really want to put another finger on the scale
9 for more emphasis on the heavy-duty side in those
10 allocations.

11 We want to also looking at question number two,
12 is \$5 million for low carbon fuels appropriate? I would
13 just say to that that the ultimate goal of this Clean
14 Transportation Program should be non combustion. So we'd
15 want to push for, you know, ongoing focus, moving more and
16 more of the funding to zero-emission technologies that
17 don't produce any emissions on the road or in the
18 communities.

19 On the excess funding for hydrogen, given that
20 unused pot is out there, I would also again agree with Bill
21 on the need for more focus on the heavy-duty side. We
22 don't see a real justification for adding additional
23 funding from this pot into the light-duty hydrogen
24 infrastructure sector. So just wanted to add that for
25 question three and, again, really push on the need for more

1 focus on the heavy-duty side on all applications where
2 possible.

3 And then on question four, really, I think on the
4 membership, you know, there have been, you know, good. You
5 know, additions over the years on the Committee. And I
6 think the focus on outreach to community-based
7 organizations, including some of those who had to step off
8 the Committee for grant reasons or grant pursuit, I think
9 it's important to keep reaching out to those groups that
10 are serving community. It really can help to identify
11 barriers in terms of what is keeping people from moving to
12 zero-emission technologies in their mobility choices, you
13 know, whether that's on the transit side or, you know, in
14 their community, passenger vehicles, that kind of thing,
15 and where the infrastructure might best be served.

16 So I think continuing to look to community-based
17 organizations as a resource, as a partner, and as some
18 organizations that can really help to identify barriers on
19 the ground in those communities to really identify where
20 the health impacts, where the health potential benefits are
21 going to be and what can be done there to kind of move the
22 ball forward.

23 So with that, I really just want to say thank you
24 again and look forward to working with the Committee. And
25 we'll probably be putting in some more formal comments, but

1 really appreciate the opportunity to speak today on moving
2 all of the program to zero-emission as quickly as possible
3 and really keeping that focus on heavy-duty and community
4 health benefits, so thank you.

5 MR. TUGGY: All right. Thank you, Will.

6 I'll pause here, by the way, to let folks know,
7 if any Advisory Committee members are calling in by
8 telephone, you can press star nine to raise your hand and
9 star six to unmute.

10 Next we have Ruben, and then Eileen.

11 Ruben, go ahead.

12 COMMITTEE MEMBER ARONIN: Thanks so much. And
13 congratulations, Benjamin and Patty and all of your
14 colleagues, on the really impressive work that you've done
15 and are doing to give us a snapshot analysis of where this
16 unique funding can be additive to the big state pots.

17 What strikes me is the giant gaps that remain on
18 infrastructure. And so I can't quite answer the questions
19 direct on, I'm going to reframe a few of them.

20 I'm really curious how, going forward, these
21 public dollars can leverage more private investments, as
22 well as all of the other stripes of public funding, of
23 federal in particular, that might be available and so that
24 we can maximize closing that gap. I tend to agree with my
25 colleagues Bill and Will, that if I were to lean on

1 anything, it would be heavy-duty. And the light-duty
2 investments that can support the Class 2, 3, or even 4
3 vehicles that can charge in the light-duty, you know,
4 public charging, that's going to be really critical in
5 addition to the multifamily challenges that Joel alluded to
6 for light-duty.

7 On low-carbon fuels, and this may be beyond the
8 bounds, we want to eliminate combustion for transportation
9 and use low-carbon fuels for hard-to-electrify sectors.
10 We're challenged by this in the LCFS area as well. So
11 where can we be investing in development where those fuels
12 can be appropriately put into hard-to-electrify sectors
13 that we can't easily electrify as opposed to transportation
14 that's right for zero-emission?

15 On the hydrogen front, I tend to agree that
16 looking at where hydrogen is right for investments for
17 medium- and heavy-duty makes more sense. The other thing
18 that I want to think about in your metrics for frontline
19 community benefits, you know, checking the box for chargers
20 within communities, adjacent to communities, isn't the only
21 benefit. It really needs to, on the heavy-duty side, be
22 accelerating the transition of dirty diesel trucks to
23 electric trucks. That doesn't mean the chargers have to be
24 in the frontline communities, but how are we ensuring in
25 the corridors that you're going to accelerate that

1 transition most quickly?

2 And similarly on the light-duty front, can we be
3 thinking wholistically about where charging can be
4 supporting e-bike infrastructure, other micro mobility and
5 car sharing services? So how can we match the
6 infrastructure to vehicle incentives and deployment so that
7 we can bring stick transportation service to frontline
8 communities? The charging, you know, infrastructure
9 investments don't do that alone.

10 And then I just wanted to give a shout out to the
11 workforce priority. I think that's a critical investment,
12 tangible outcomes for our people, and this emerging sector
13 that we need to figure out a vehicle to grid integration.
14 Love to see the investments in the School Buses Program on
15 that front, but how are we thinking about incorporating
16 that opportunity that also can be an investment opportunity
17 in communities as well?

18 I will look forward to putting more comments into
19 writing, but thank you for your time. My apologies for
20 needing to duck out to another meeting for a few minutes,
21 but I will be back.

22 MR. TUGGY: All right. Thank you, Ruben.

23 Up next is Eileen, and then Sydney.

24 Go ahead, Eileen.

25 COMMITTEE MEMBER TUTT: Thank you, Benjamin.

1 Eileen Tutt with the Electric Transportation Community
2 Development Corporation. We're a community development
3 corporation focusing on economic opportunities associated
4 and mobility opportunities associated with the zero-
5 emission vehicle transportation.

6 I do want to say that I get -- I want to push
7 back a little bit, not hard, but a little bit on this
8 prioritizing heavy-duty vehicles, because I will tell you
9 that in the communities that I work in, and I work in
10 exclusively frontline, low-income, disadvantaged, whatever
11 you want to call these communities, and we are not seeing
12 the progress that we're seeing in the rest of the state, so
13 we see these big announcements and we see these press
14 releases.

15 And I will say, personally, that I've been on
16 this Committee for a number of years now. The staff has
17 just done -- I wish there were the little emojis or
18 whatever, we could clap for them as Patty was thanking them
19 all. The Commissioner has really led this whole Advisory
20 Committee in a much more equitable direction. I'm looking
21 forward to the next phase. But at the end of the day, when
22 you go into these communities, they don't have access to
23 charging infrastructure for their vehicles. As Joel and
24 Reuben and others have said, you know, it's not just multi-
25 unit dwellings. Entire communities don't have access to

1 charging infrastructure and don't even understand what
2 electric vehicles are.

3 And so we are not -- we have made great progress
4 in the light-duty side everywhere except on the equity
5 front. And even there we've made incremental progress, but
6 very little. So I don't think we can pull back on
7 prioritizing, particularly equity. You know, I just don't
8 think there is a -- there's a tension between the two. I
9 think we need to prioritize zero-emission vehicles and
10 access to equitable mobility, not heavy-duty versus medium-
11 duty. And I have a feeling that those who commented would
12 probably agree.

13 I do think that a lot of organizations in the
14 state have looked at how we address this issue. And
15 there's both a utility side and a customer side issue here
16 where the actual grid infrastructure in a lot of these
17 communities cannot support electrification and the
18 utilities are really working hard on that. They're working
19 with us. They've made investments. But the state side
20 also needs to come in. And I will say CVRP is looking at
21 the vouchers for fueling costs, but that's not equitable.
22 Only people who apply for that money will have access to
23 low-cost charging. What we need is something for all
24 Californians that makes it affordable. And I think we have
25 some ideas for programs that this money could be used for.

1 On the equity group side, I do think that there
2 are -- I think we need to think about how you allow for
3 people on this Committee, for organizations to apply for
4 the money. And we can have restrictions on it and all
5 that, but I think a rethink on that will help you get more
6 community members.

7 And we'll submit written comments on the other
8 questions. I think the questions are excellent. I really
9 laud the staff and the lead Commissioner on this. It's
10 been a really amazing process.

11 COMMISSIONER MONAHAN: Hey, can I, Benjamin, can
12 I interrupt, just because Eileen raised this issue, I just
13 want to clarify around the fact that the member
14 organizations of an Advisory Committee member can apply for
15 funding. It's just that the Advisory Committee person
16 cannot be on that application, so their name cannot show up
17 on the application. And that's the legal constraint that
18 is unbeautiful, but your organization cannot apply for
19 funding. But I think --

20 COMMITTEE MEMBER TUTT: And can I just say, one
21 of the challenges, Commissioner, is that those
22 organizations, small organizations don't even have the
23 resource to actually fill out the application. It's
24 challenging.

25 COMMISSIONER MONAHAN: Right.

1 COMMITTEE MEMBER TUTT: And a lot of
2 philanthropic -- so I just, I think there are ways to do
3 this.

4 COMMISSIONER MONAHAN: Having that makes --

5 COMMITTEE MEMBER TUTT: Yeah.

6 COMMISSIONER MONAHAN: Okay. Thank you.

7 COMMITTEE MEMBER TUTT: Uh-huh.

8 MR. TUGGY: All right, so I think we can go next
9 to Sydney, followed by Sam Houston.

10 Sydney, go ahead.

11 COMMITTEE MEMBER VERGIS: Great. Thanks. Sydney
12 Vergis, Deputy Executive Officer at CARB.

13 So to the CEC team, congratulations on putting
14 this presentation and document and analysis together. I
15 know it's a lot of work, so I wanted to say thank you.

16 First, I want to just overall recognize and thank
17 the Energy Commission for our longstanding partnership and
18 supporting vehicles and infrastructure that's going to
19 carry us to a clean transportation future. And of course,
20 a special thank you in advance to Hannon (phonetic) for
21 joining us at our board meeting this Thursday to share his
22 perspective as the CARB Board here's our funding plan for
23 clean transportation incentives.

24 So we fully support the investments detailed in
25 the Draft Staff Report. This continued strategic

1 investment in light-duty charging and hydrogen stations
2 will be critical and meeting our state ZEV goals, meaning
3 both battery electric and hydrogen.

4 On light-duty, we support CEC's recent efforts to
5 improve charge reliability, including proceedings to
6 develop charge reliability regulations, and of course,
7 looking forward to continued inter-agency collaboration.

8 On a personal note, as we look to 2030, we'll
9 likely need all overnight charging options available. And
10 I am personally very interested in learning more about
11 CEC's approach to curbside charging.

12 In addition, we enthusiastically support CEC's
13 increased emphasis on funding for heavy-duty ZEV
14 infrastructure, the proposed infrastructure, plus targeted
15 investments for trade infrastructure will provide really
16 critical support to fleets looking to meet CARB's
17 regulations related to both trucks and buses.

18 With that, I want to say, we continue to support
19 the Clean Transportation Program Investment Plan brought
20 forward to us today and look forward to continue to work
21 closely with you all.

22 Thank you.

23 COMMISSIONER MONAHAN: I'm going to keep
24 interrupting, I'm sorry, but I just want to say, thank you,
25 Sydney, and thanks to CARB for your partnership, and we

1 really do view this as a partnership, that we're -- we need
2 to build out ZEV infrastructure to meet the regulations
3 that CARB is passing in order to improve their quality for
4 communities that are disproportionately impacted.

5 And just want to give a shout out to all the
6 great work of the Air Resources Board and how seminal it is
7 to helping California reach our targets for climate and
8 clean air. And just this partnership is, I think,
9 increasingly clear that you are the vehicles folks, we are
10 the infrastructure folks, and we have to partner super
11 closely together to make sure that this is a success.

12 And for anybody who doesn't know, Sydney was
13 recently promoted to Deputy Executive Officer and so a
14 shout out to Sydney and congratulations.

15 COMMITTEE MEMBER VERGIS: Thank you so much.
16 Appreciate it.

17 MR. TUGGY: All right, so the next one we have is
18 Sam Houston.

19 Go ahead.

20 COMMITTEE MEMBER HOUSTON: Thank you. My name is
21 Sam Houston. I'm with the Union of Concerned Scientists.

22 And to begin, let me just reiterate the thanks
23 that others have said, Benjamin, Patty and Team, for the
24 report, and also the really excellent presentation of the
25 material as well.

1 The first question I find really hard and I think
2 we're hearing that in some of the comments. I like to
3 generally avoid sort of an LD versus HD mentality. I am
4 supportive of many of the calls for more support for heavy-
5 duty, so please don't get me wrong there. I think that
6 segment is really important and needs to be driven forward
7 really quickly to meet the state goals and what we need to
8 do for climate and air quality in particular.

9 So I want to take, you know, a page out of
10 Ruben's book here and maybe reframe a little bit, I think,
11 like I said, supporting the shift to heavy-duty, but what
12 we have here is a bucket for medium- and heavy-duty and a
13 bucket for light-duty and those are the only two that we're
14 talking about. I think for me it would be really helpful
15 to also see some breakdown among the medium- and heavy-duty
16 sectors.

17 So it's not something that's able to be
18 implemented in this planning cycle, perhaps something to
19 think about as we have the good fortune to continue the
20 Clean Transportation Program with the funding reauthorized
21 in the years to come. I think that will give us a more
22 meaningful chance to really zero in on our priorities
23 across segments.

24 My other concern is with light-duty, like Eileen,
25 I feel really passionately about the access to charging for

1 the mobility that individual folks and households need. So
2 on that, I would say, if we're shifting money out of the
3 light-duty bucket, let's up the targets within the goals
4 for implementing those light-duty programs within
5 disadvantaged low-income rural tribal communities. So I
6 think, to me, if you're going to move one thing in terms of
7 light-duty to heavy-duty, let's make sure that the light-
8 duty is really prioritizing those who need it the very
9 most.

10 The other questions about the (indiscernible), I
11 also support the spending down of light-duty hydrogen money
12 before allocating more light-duty money there, but
13 appreciate the need for some hydrogen fueling
14 infrastructure on the heavy-duty side as well.

15 On the outreach for reforming this Committee, I
16 would say sort of the community-based organization approach
17 that's been mentioned is really important, and generally
18 not just relying on sort of the internet-based outreach,
19 recognizing that some folks don't have great broadband
20 access or access to a computer. I think the non-digital
21 approaches, whether that's radio, in-person, et cetera,
22 will be really important to making sure this body has
23 really robust, diverse representation, and in particular,
24 those voices really, really need it the most.

25 COMMISSIONER MONAHAN: Well, again, I just have

1 to apologize, Sam, for calling you out for having wet hair
2 at the beginning. I constantly have wet hair. I just want
3 to say it came from a place, and I relate to that, so --

4 MR. TUGGY: All right, next up, we have
5 Katherine, followed by Bill.

6 So, Katherine, go ahead and speak.

7 COMMITTEE MEMBER GARCIA: Thank you so much, and
8 I'm Katherine Garcia from Sierra Club. I lead the Clean
9 Transportation for All campaign. Thank you so much for
10 holding today's Advisory Committee meeting, and to all the
11 staff for giving the presentations, and for giving us this
12 wonderful update.

13 So in terms of question one, and I will be
14 submitting comments with our chapter, Sierra Club
15 California, but I wanted to give some initial feedback in
16 this meeting.

17 So on point number one, I do want to just raise
18 the point that the NEVI money allocation was specifically
19 cited on the light-duty vehicle charging slide. And I know
20 that that was an issue when we were giving comments to the
21 Joint Office, how is the NEVI money being allocated? I
22 have heard from the Joint Office that it's really up to
23 each state where that money goes.

24 And so I do just want to recognize that if that
25 money is going towards light-duty vehicle charging, that

1 does leave us a gap on medium- and heavy-duty charging, and
2 I think that is a very difficult balance. Just kind of
3 raising the points from Eileen and Sam previously, we
4 really do need to be ensuring that disadvantaged
5 communities are able to electrify and are not left behind
6 in this transition.

7 But to Bill and Will's points earlier, we are
8 moving much too slowly on medium- and heavy-duty charging
9 infrastructure. And it is really affecting how we
10 transition dirty diesel vehicles that are actually
11 impacting many of these disadvantaged communities. So the
12 residents themselves are facing the burden of diesel
13 trucks, but then they're not able to have the same charging
14 infrastructure as other parts of the state.

15 So that is a challenge and I'd love to explore
16 how we move past that. But I do want to recognize that the
17 NEVI money could be a way of balancing that discrepancy.

18 I do want to support the charging for school
19 buses and, also, the investment for school buses. I've
20 been very involved in the EPA's Clean School Bus Program,
21 and we've been seeing some challenges on how different
22 school districts across the country are able to apply for
23 the grants or rebates program. So I do want to commend the
24 money that is coming from the CEC because that's extremely
25 valuable.

1 And on the last, on the third point in terms of
2 hydrogen, we do really want to see clean hydrogen
3 production in the state of California. We really need some
4 investment and to make sure that clean hydrogen is moving
5 forward in terms of making sure that it's clean for the
6 investment of hydrogen.

7 Thank you.

8 MR. TUGGY: All right. Thank you, Katherine.

9 Up next is Bill, followed by Matt.

10 So, Bill, you can speak.

11 COMMITTEE MEMBER ELRICK: Great. Thank you. I
12 think I'll start with focusing. I like what we heard, a
13 lot about the heavy-duty focus. We know that as a market
14 that we need to accelerate quickly, especially tying it to
15 the community benefits. And I think it was Reuben that
16 said looking not just the infrastructure where it's placed,
17 but that these vehicles are hitting those markets and
18 going -- you know, that's the use in the right places, so I
19 think that's really good.

20 I also like in the hydrogen sphere looking at the
21 reliability, that's very good. We're working on that in
22 our organization and so that's a great recognition.

23 I also want to point out that we still need to,
24 to the point of the full transition to 100 percent ZEV, we
25 need to keep supporting the light-duty hydrogen market for

1 a number of reasons. First and foremost, we used to lead
2 the world in this area, and now we are falling behind on
3 almost all measures as far as numbers of stations, numbers
4 of vehicles. And we've seen new makes and models be
5 announced in Europe, Japan, even this week Nissan announced
6 a new light-duty hydrogen vehicle for Japan, and this is
7 all because we are starting to fall behind on that light-
8 duty hydrogen network, and so we need to keep that up for
9 that.

10 Again, I mentioned the reliability, that's a
11 great focus. However, part of the reliability issue is
12 related to we now have so many vehicles per station
13 compared to others that that's a significant cause of that
14 reliability, so getting stations back out in front of
15 vehicle deployments is very important.

16 And this is the only light-duty fueling for
17 hydrogen -- (clears throat) excuse me -- funding. I think
18 I quickly counted over a couple billion dollars from
19 utilities, NEVI, BDW (phonetic) funds for light-duty
20 charging, and we know that that can happen at home, so as
21 the only source for light-duty hydrogen funding, that's
22 important.

23 Another really critical market we don't talk
24 enough about, we often group medium-duty with heavy-duty.
25 However, medium-duty really requires, if we look at

1 everything from big pickups and SUVs to cargo vans and
2 delivery vehicles, they require the public refueling
3 network, and so that really looks back to the light-duty.
4 And I think it's more appropriate to group medium-duty
5 fueling needs with the light-duty application because
6 that's where those vehicles more typically go.

7 And then really something we've talked about for
8 years is trying to see what the big, long-term vision, now
9 that we're 100 percent set of focus, is for light-duty
10 hydrogen. The only study I know for hydrogen light-duty
11 comes out of CARB's self-sufficiency study, I think that
12 was very interesting. It didn't go far enough to really
13 look at the big picture and do things like 643 or 2127,
14 because those are the signals that the market looks for
15 back to more makes and models across the board.

16 So we need every ZEV we can get, light-duty,
17 heavy-duty, hydrogen and battery and continue to see that
18 improvement across the allocations there.

19 So thank you.

20 MR. TUGGY: All right. Thank you, Bill.

21 And next up is --

22 COMMISSIONER MONAHAN: Oh, Benjamin, can I, I'm
23 sorry, can I just really quick?

24 And, Bill, welcome working with you more closely
25 on the reliability side and just wanting to do all we can

1 to make sure that we support the hydrogen industry during
2 this time. So I suggest we have a meeting just to focused,
3 have a focused discussion on that.

4 COMMITTEE MEMBER ELRICK: That'd be great. I'll
5 follow up offline.

6 COMMISSIONER MONAHAN: Okay. Great.

7 COMMITTEE MEMBER ELRICK: Thank you, Patty.

8 MR. TUGGY: All right, I will move to Matt.
9 Go ahead, Matt.

10 COMMITTEE MEMBER GREGORI: Thanks. Good morning,
11 everybody. Thanks for the presentation and the meeting.

12 I just want to provide support around the
13 reliability focus, we think this is super important on the
14 EV side, EV charging, and also hydrogen fueling. So, you
15 know, interested in kind of opportunities around that,
16 around performance-based incentives within the program
17 structure or making sure that there's funding allocated to
18 provide for operations and maintenance or ongoing service
19 for these facilities. I think that's super important.

20 Hydrogen production for the biofuel section, the
21 low-carbon fuels section at \$5 million, I think that's
22 probably low. Particularly if you're looking at hydrogen
23 production infrastructure, \$5 million is not going to go a
24 long way within as far as hydrogen infrastructure buildout
25 or production infrastructure buildout.

1 And we talk a lot about medium-, heavy-duty,
2 light-duty. I think transit is a super interesting space,
3 particularly within hydrogen. We're seeing a lot of
4 transit agencies transition from battery electric buses to
5 fuel cell electric buses. They just see that as a better
6 fit for their operations. And the way that transit
7 interacts with communities, particularly frontline
8 communities or disadvantaged communities, I feel like
9 that's a really interesting leverage point to create really
10 good community benefits focusing on a single fleet so it's
11 an easy move to provide a large amount of benefits.

12 And I also thought it was super interesting that
13 you guys have the emerging technology section. My program,
14 Research, Development and Demonstration here at SoCalGas,
15 we fund research projects to develop new technologies. So
16 I'd be very interested to connect with staff in that
17 respect.

18 We've got two paratransit medium-duty buses that
19 are going out to Sunline Transit that will be fuel cell
20 powered to be deployed in their fleet. We're working on
21 with Sierra Northern to convert a switcher locomotive, and
22 this is with CARB, convert a switcher locomotive from
23 diesel to hydrogen fuel cell. We're working on some zero-
24 emissions harbor craft.

25 So we've done a lot of work in this space to

1 develop these new technologies and would love to connect
2 with CEC staff on that.

3 Thank you very much.

4 MR. TUGGY: All right. Thank you, Matt.

5 I don't currently see more hands up from Advisory
6 Committee members, but do any other Advisory Committee
7 members want to speak? Oh, now I see one.

8 So, Gia, go ahead.

9 COMMITTEE MEMBER VACIN: Great. Thanks.

10 Yeah, so I'd just start with first off, yay,
11 reauthorization. Congratulations. We're all delighted
12 about that.

13 I want to echo what others have said here about
14 congratulating CEC and just really acknowledging the hard
15 work, Commissioner Monahan and the staff really, to produce
16 this update. I think it's -- I feel like I say this every
17 time I have the opportunity to sit on the Committee, and
18 it's really clear to me that you've placed kind of focus on
19 evolving the investments and creating these new methods of
20 getting funding out there, and incorporating feedback in
21 lessons learned as the market's growing and changing. And
22 I think it's just a really much more increasingly elegant,
23 you know, funding situation here, so bravo for that.

24 A few things that stand out. I think I wanted to
25 say what others have said before as well around this piece

1 around improving reliability. I think both on the battery
2 electric and fuels electric side is fantastic and really
3 understanding where those hurdles are. We want to help
4 there, too, so if there's anything we can do.

5 Also just in terms of the equity investments
6 piece and the kind of low-income and disadvantaged
7 communities, this broadening the thinking about what
8 benefits mean and the metrics to measure that and how do we
9 really ensure that, you know, what is intended to be felt
10 is actually being felt by those who are trying to
11 positively impact. And so I just really appreciate that
12 part and also the deepening the work with the tribal
13 communities.

14 So I think many are aware that we will have,
15 hopefully soon, as an equity advocate that was placed on
16 our team via SB 1251, and just hoping that we can help with
17 this kind of deeper expertise on our team, we can help move
18 things forward and help advance kind of some of those
19 pieces for CEC as well.

20 I have one minute left, so I do think that the
21 CTP strikes the right balance. I was thinking of it more
22 in terms of the combined allocation; right? Like we have
23 nearly twice as much for medium- and heavy-duty in this
24 combined allocation, and I think the balance of what people
25 have presented already is right. I won't reiterate that,

1 but these different factors are hard to balance.

2 I'm going to jump to question three in the
3 interest of the time I have here.

4 So on the topic of hydrogen, I do appreciate that
5 CEC is committed to providing sufficient infrastructure for
6 those drivers that exist and focusing on challenges,
7 reliability, the recent O&M solicitation, the customer
8 experience workshop, so great acknowledgement there.

9 And I just will echo what Bill said, which is I
10 think in hydrogen side, we need to think of it more as like
11 light-duty, medium-duty, and then heavy-duty, and there is
12 a gap there and an opportunity there. So I think moving
13 that out and getting through the issues that we currently
14 have around station operation and those kinds of things is
15 really key before we start, you know, just throwing more
16 out -- money out to build, more -- (clears throat) sorry,
17 give me 30 more seconds.

18 And then I guess I want to just note that
19 thinking about the hydrogen hubs and the award that we had
20 over the Federal Hydrogen Hub, if we can just make sure
21 that we're maintaining the ability to incorporate and
22 integrate into that system; right? A big piece of that is
23 heavy-duty trucks and buses and the supporting
24 infrastructure there, so how do we help enable those
25 investments as the state puts their funding in?

1 And I have gone over my time, so I'll come back
2 if we still have more time for others, but all in all,
3 great work and thanks for the opportunity to provide input.

4 COMMISSIONER MONAHAN: And, Gia, I just have to
5 say, congratulations to you and the GO-Biz team on the
6 hydrogen hub with ARCHES. And I mean, that was tremendous.
7 It's actually been a little hard to get federal funding for
8 California and so this was a big win for us, and just
9 looking forward to working with you and GO-Biz and making
10 sure that we can accelerate a clean hydrogen system and use
11 it in the right places to decarbonize our economy.

12 COMMITTEE MEMBER VACIN: Yeah. Thank you. Yeah,
13 it's a big deal. We're excited.

14 MR. TUGGY: All right, next we have Dylan,
15 followed by Morris.

16 So, Dylan, go ahead.

17 COMMITTEE MEMBER JAFF: Thanks. Good morning.

18 First, I'll start by, you know, thanking CEC
19 staff for putting together this report and presentation,
20 and also congratulate everybody on getting reauthorization
21 passed. This program is really a critical funding source
22 to give consumers a peace of mind that the state's
23 infrastructure is going to be ready and available for all
24 consumers who choose to go electric.

25 Also really want to acknowledge the importance of

1 maintaining an all-of-the-above approach when it comes to
2 fuel infrastructure investments, particularly to electrify
3 sectors, so long as the goal is achieving zero-emissions
4 across the lifecycle and all the fuels obtain affordability
5 for consumers, regardless of fuel type.

6 Regarding the funding allocations, you know,
7 we'll also acknowledge that it is critical to ensure that,
8 you know, funding is allocated towards the medium- and
9 heavy-duty sector, cleaning up one of the most polluted
10 transportation sectors, but it's also important that these
11 funds don't compete with light-duty infrastructure funding.
12 We still see that in our surveys as a really critical
13 barrier to overcome to get consumers comfortable with
14 transitioning to full EVs. So it's still ensuring that
15 there's a consistent funding source for light-duty
16 vehicles, particularly in low-income and disadvantaged
17 communities and from residents of multifamily housing.
18 It's going to be a critical piece to continue on moving
19 forward.

20 On that note, you know, appreciate the inclusion
21 of a 50 percent floor and reauthorization for equity
22 funding and ensuring that these funds directly benefit the
23 residents of the communities that the investments are being
24 placed in. CEC has done a good job to ensure that these
25 funds are going to priority communities but, you know, I

1 just want to continue to acknowledge that the 50 percent
2 should be a floor and we should still continue to look for
3 opportunities in the future to maximize the investments
4 that we can in these communities and need them the most.

5 Also just give a shout out to the inclusion of
6 reliability, maintenance, and uptime reporting, you know,
7 another critical piece to get consumers on board with this
8 transition. Also, the data gathered will be important to
9 ensure greater accountability of the funds being dispersed
10 and really just give consumers peace of mind that the
11 infrastructure available to them is reliable, is usable,
12 and is accessible.

13 Yeah, and I guess one last thing, I just really
14 want to encourage the Commission to find and fund
15 additional opportunities to promote community outreach and
16 engagement through the grantees. Our analysis have shown
17 that increased awareness and education around EVs does lead
18 to greater interest in purchasing an EV. So this program
19 really has a great opportunity to, you know, establish more
20 tools to increase consumer awareness of clean technologies
21 and really get consumers excited about the transition to a
22 clean economy.

23 Thank you.

24 MR. TUGGY: Thank you, Dylan.

25 I'll give another reminder, if any Advisory

1 Committee member is calling in by a phone, they can press
2 star nine to raise their hand and star six to unmute.

3 Up next is Morris.

4 COMMITTEE MEMBER LUM: Hi, Morris Lum, a director
5 with the Recreational Boaters of California.

6 Item one, I agree with the clean transportation-
7 based funding allocations.

8 Item two, low-carbon fuels development is a great
9 middle ground until there is greater deployment of
10 affordable electric vehicles.

11 Item three, light-duty hydrogen is a continuing
12 need for future vehicles.

13 And item four, outreach for Clean Transportation
14 Program advisory, possibly for more awareness, giving an
15 informational type of public seminar on how CTP will help
16 local communities as compared to overall state benefits.
17 It could help with inclusion.

18 Thank you very much.

19 MR. TUGGY: All right. Thank you, Morris.

20 Commissioner Monahan, I don't see other hands
21 right now from Advisory Committee.

22 COMMISSIONER MONAHAN: Yeah. Well, I want to say
23 that I know there's some Advisory Committee members who
24 have not spoken and usually they do speak. So I don't want
25 to call them out, but I do want to say, you know, Advisory

1 Committee members, this is your opportunity. It's sort of
2 a unique platform. So I just encourage anybody who has not
3 yet spoken, who has something to say to raise your hand.
4 So let's give them a minute.

5 And then we can also say, since we have some
6 time, if Advisory Committee members who have spoken but
7 used their three minutes have something else they want to
8 say or something that somebody else has said that has
9 spurred them to, you know, want to add something to their
10 comment, please do feel free to raise your hand.

11 MR. TUGGY: I see Lori Pepper.

12 Lori, go ahead.

13 COMMITTEE MEMBER PEPPER: Thank you. I want to
14 say ditto to a lot of what's already been said, but there
15 are just a couple things to call out specifically.

16 First, just congratulations to the Energy
17 Commission, the entire team for putting this together. I
18 do think overall it's a great plan.

19 Similar to Gia, I kind of think of this as really
20 a holistic, like one piece of the puzzle. And I think, you
21 know, we can't solve all issues in one piece of the puzzle.
22 We really have to look at the entirety of what we have
23 going on. We have been very fortunate with the funding
24 that we're getting from the federal government and looking
25 at how that all comes together I think is really important.

1 I want to also thank the CEC for their
2 partnership on everything NEVI. I think, you know, that
3 has been at times very trying, and the number of times I
4 think we've asked, you know, can't the funding just go to
5 our experts, you know, I think it's been really kind of
6 eye-opening. But I think it really has laid the groundwork
7 for a long-term partnership going forward as more of these
8 funding mechanisms come through.

9 On the question number, where is it, question
10 four, I think we have some, and this is on additional
11 outreach methods as we're looking towards kind of the next
12 version of the Advisory Committee, I think we have some
13 entities that have been created in the state that could be
14 useful for finding potentially some new groups to include.

15 One of them I do want to call out is the CalSTA-
16 Caltrans-CTC Equity Advisory Committee that we have put
17 together, and I will absolutely volunteer to get -- you
18 know, connect everyone. I think that could be -- you know,
19 we should look at kind of what do we have in the state in
20 order to be able to, I guess, be more widespread in our
21 solicitations and our outreach and, you know, trying to
22 figure out who to reach out to and the ability to reach out
23 to the right people.

24 So on that, I will stop. Thank you so much.

25 COMMISSIONER MONAHAN: Lori, thank you. And just

1 thank Caltrans. This has been a great partnership, but
2 also trying, I would say, the logistics, the legal side,
3 but just the deep commitment all the way to the top and
4 everybody's willing to roll up their sleeves and work hard
5 to overcome those barriers and make sure that nobody else
6 from the outside world actually sees them.

7 COMMITTEE MEMBER PEPPER: That's our goal.

8 COMMISSIONER MONAHAN: But it's just been
9 wonderful to work with you and Caltrans on this program, so
10 just thank you. And look forward to following up on that.
11 I think you're right that this issue is like, we want to
12 make sure we're engaging in community organizations and we
13 don't want to overtax them by saying, can you belong to
14 every single Committee that the state has? So appreciate
15 that balance.

16 COMMITTEE MEMBER PEPPER: Yeah. Thank you.

17 MR. TUGGY: All right, Mary is up next.

18 I'll quickly mention, we had a question from one
19 of the audience members. So, yes, we will be getting to
20 public comment after this Advisory Committee comment
21 period.

22 All right, Mary, go ahead.

23 COMMITTEE MEMBER SOLECKI: Hi. Good morning,
24 everybody. Thanks for this overview, CEC staff. This was
25 very useful. And I benefit so much from sitting in on

1 this Advisory Committee and getting this overview from
2 staff on a regular basis, I help a range of different
3 stakeholders survey and look for funding opportunities that
4 come out of the CEC throughout the year.

5 And I was just reflecting on how this is my best
6 opportunity to sort of get that overview. And I wonder if
7 in terms of communicating these, so it's a little bit
8 easier and more accessible for a lot of folks, especially
9 community organizations, if there can be more like handy,
10 simple overview pages or slides that are on the Clean
11 Transportation Program website, kind of right up front so
12 that people can have like a simple lay of the land so that
13 they can then start delving into, okay, I'm hydrogen, let
14 me click through these different hydrogen programs and see
15 what the eligibility criteria?

16 Of course, so many of us do subscribe to the CEC
17 LISTSERVs and that those can be somewhat overwhelming, so
18 it's easy to miss some of the critical information. I know
19 that you all put the information out there. It just can be
20 easy to miss it in the sea of information that does come.

21 So I'm just trying to think about how to roll
22 this up and communicate the information easily, especially
23 to resource constrained individuals that can't have the
24 benefit of somebody that's surveying this and sitting on
25 the Advisory Committee for them.

1 MR. TUGGY: All right. Thank you, Mary.

2 Any other Advisory Committee members want to
3 speak or add a little more to their previous comments? If
4 so, please raise your hand now.

5 Sam Houston, go ahead. Oh, Samantha, you can go
6 ahead and speak. Sorry.

7 COMMITTEE MEMBER HOUSTON: Can you hear me now?

8 MR. TUGGY: Yeah.

9 COMMITTEE MEMBER HOUSTON: Okay. Great. Sorry
10 about that. One day I'll have the double mute down, but
11 until that day, so I just wanted to spend my bonus minute
12 and just offering a really quick support for several things
13 which have been mentioned. I just want to get behind these
14 few things as well.

15 One is the continued effort on refining of equity
16 metrics and other ways to think about benefits. I saw that
17 there was a change in the calculation even on location
18 benefits, and so I'm appreciating that and look forward to
19 seeing more on that.

20 I also saw a continuation of exploring loans as a
21 potential funding mechanism. I don't think it will work
22 for everything at this point, but I think loans are a
23 really important way to explore how we can stretch our
24 funding further while still supporting the transition.

25 I saw vehicle grant integration still featured

1 prominently in emerging tech. I think that's so important,
2 and always want to encourage the inclusion of VGI
3 strategies across all of the grants and opportunities.

4 Plus one for reliability. We know the
5 infrastructure is there, but it's not reliable, it's not
6 useful. Thanks for your continued work on that, as well as
7 workforce.

8 I also want to support the set-asides to match
9 infrastructure funding with vehicle funding. I think even
10 more could be done for that, like a common app, perhaps,
11 but I think it's so important to make sure we have funding
12 for all elements of electrification and to really make the
13 most important project viable.

14 So let me stop there. Thank you.

15 MR. TUGGY: All right. Thank you, Sam.

16 Commissioner, I'm not seeing any more hands from
17 the Advisory Committee, so maybe we can switch to public
18 comment.

19 COMMISSIONER MONAHAN: Yeah, that sounds good.

20 And just a reminder, of course, we welcome
21 feedback in any form, so written comments, you can schedule
22 a meeting with us, do it here, but just anybody who didn't
23 want to speak on the Advisory Committee, just feel free to
24 submit your comments however you -- whatever way is most
25 convenient.

1 MR. TUGGY: All right, and just bear with us for
2 a second here. We're going to rejigger the slides a little
3 bit here. It looks like we'll have two minutes for each
4 member of the public who'd like to speak. We're doing okay
5 on time so far.

6 All right, the first person I have is Leslie
7 Stern, go ahead, and I will allow you to speak. Leslie
8 Stern, are you available? And if you're unmuted, we can't
9 hear you.

10 MS. STERN: Are you able to hear me now?

11 MR. TUGGY: Yeah, there you go.

12 MS. STERN: Okay. All right. Thank you so much
13 for the opportunity to speak. I really appreciate all the
14 hard work that you've put together and putting these slides
15 together.

16 I do think that more is needed in the light-duty
17 hydrogen space. I think where we're at right now is
18 because of all the work that we've done in light-duty, and
19 we wouldn't even be looking at medium or heavy-duty without
20 that work and the continued work that's happening in the
21 light-duty sector. If we want that to continue, I think we
22 do need additional funding for light-duty and that medium-
23 duty. There's a bridge and a gap, and if we don't continue
24 in that space, we're actually going to see that space
25 disappear. It is very, very important for the ongoing

1 support of medium- and heavy-duty in the codes and
2 standards, in the hydrogen contaminant detection area.

3 There's a lot of information that's happening in
4 the light-duty sector that is transferable into the medium-
5 and heavy-duty sector. And if we want to see that
6 reliability continue and grow in that medium- and heavy-
7 duty sector, we need to support it in the light-duty
8 sector, or we're going to see a backslide.

9 So I encourage you to look at that sector. It's
10 unfortunate that Shell's (indiscernible) fell through, but
11 we do need that support to get to that 200 stations. And
12 this is really the only sector of funding that that light-
13 duty sector can look at, at this point. Everything's
14 moving towards medium- and heavy-duty and electrification,
15 and we can't leave these vehicles and these people stranded
16 that started this movement.

17 Thank you so much for your time. I hope you
18 consider those comments.

19 MR. TUGGY: All right. Thank you, Leslie.

20 Apologies. I just want to ask folks to make sure
21 to state your name and any affiliation when you're making
22 public comment.

23 So next we'll go to Susanna, and I will allow you
24 to speak.

25 MS. SAUNDERS: Good morning. Can you hear me?

1 MR. TUGGY: Yes.

2 MS. SAUNDERS: Great. I'm Sue Saunders, and I'm
3 actually chair of a small town Climate Action Commission
4 that has been working on the reliability charging issue and
5 also Level 2 charges for multifamily housing.

6 And, you know, one of the things we found is
7 that there needs to be a set aside for funding for
8 maintenance, that this should be required of the charging
9 companies.

10 We also found that a big source of the failure is
11 credit card readers. So, you know, people being able to
12 use an app instead of having the credit card reader would
13 eliminate some of the dysfunction of the chargers.

14 And also, you know, an escrow account that has to
15 have three to five percent of the infrastructure costs set
16 aside until the companies, you know, prove their
17 reliability would be, I think, a good idea.

18 I also wanted to know what the CEC thinks
19 about -- you know, the apartment buildings are old. To
20 update the electrical panel is very expensive. Sometimes
21 the utilities can't even supply them with the
22 infrastructure they need to have the electricity for
23 chargers. So I'm wondering what about putting Level 2
24 chargers near buildings, you know, investing in street
25 parking chargers to avoid that sort of difficulty?

1 And also, nightttime charging, you know, is ten
2 times more carbon intensive than daytime charging when
3 there's so much California solar, and that the utilities
4 have an EV rate that will keep the charging cheap until
5 3:00 p.m. So there should be a focus on workplace
6 charging, as well, so that we have clean energy for those
7 chargers.

8 And you know, I did come in contact with a group
9 from Brooklyn that has a charging system that is really
10 amazing, and they use the existing building's electricity
11 and run a wire under the sidewalk and then that way they
12 can have quick electricity and they, you know, incentivize
13 the builders to do -- the building to do this by revenue
14 sharing with them from the chargers. So I just thought
15 that was a really interesting idea.

16 And they also have, just if I could have a few
17 more seconds, they also have a system that has chargers
18 that pop in and out of a base. So if a charger is broken,
19 they don't have to wait to repair it. They just take out
20 the broken charger and replace it with a new charger. And
21 I'm not suggesting you use that company. I just think
22 that's the kind of design we need to keep the public
23 charging reliable.

24 So thank you.

25 MR. TUGGY: All right. Thank you, Sue.

1 Up next we have Noah. Please state your name and
2 affiliation and I'll allow you to speak.

3 MR. GARCIA: All right. Hi. Can you hear me?

4 MR. TUGGY: Yeah.

5 MR. GARCIA: Great. This is Noah Garcia with
6 EVgo.

7 I just wanted to take a quick second to thank the
8 Commission for its continued ZEV leadership and really
9 thoughtful approach to developing this Clean Transportation
10 Program update. You know, I think there's a range of
11 competing ZEV priorities that the state needs to be mindful
12 of. And I think this report and update really, again,
13 provides a balanced pathway to meeting many of the zero-
14 emission vehicle goals that we have as a state and in
15 particular, really appreciate the focus on electrification
16 as a primary pathway to, again, hitting our ZEV and climate
17 and clean air and economic development goals.

18 So just again, kudos to the CEC. We're really
19 pleased that reauthorization now provides the Energy
20 Commission with long-term stable funding to continue to
21 make progress on many of these ZEV infrastructure areas and
22 will help, again, position the state to continue to achieve
23 our milestones early like we did this year with the 10,000
24 DC fast charging vehicle goals.

25 So again, just appreciate all the leadership and

1 looking forward to continuing to coordinate and partner
2 with the CEC to make good on these ZEV commitments and
3 goals.

4 Thank you.

5 MR. TUGGY: Thank you, Noah.

6 Next is Katrina. Please state your name and
7 affiliation and I will allow you to talk.

8 MS. FRITZ: Good morning. I'm Katrina Fritz,
9 Executive Director of the California Hydrogen Business
10 Council. Thanks for the opportunity to comment today.

11 The CHBC is the largest and longest established
12 hydrogen trade association in the U.S. with over 130
13 members. And we have several requests related to the Clean
14 Transportation Program Investment Plan.

15 First, we request that the plan and program
16 follow legislative intent in the program reauthorization
17 for the 15 percent floor to go toward retail stations that
18 serve both light-duty and medium-duty fuel cell electric
19 vehicles, as the current plan doesn't offer any support for
20 vehicles in this class.

21 The reauthorization calls for 15 percent of
22 program funding allocation to hydrogen as a floor, not a
23 ceiling, because the General Fund monies are explicitly
24 designated for heavy-duty, dry edge and transit. The only
25 funding available to light-duty and medium-duty is from the

1 Clean Transportation Program. If the CEC allocates 15
2 percent of the Clean Transportation Program to heavy-duty,
3 we still request that an equal share of General Funds be
4 made available for the heavy-duty hydrogen applications.

5 We also encourage the CEC to work with station
6 developers to ensure Category D fueling capabilities for
7 medium-duty trucks on a go-forward basis and for discussion
8 on how we could meet fueling demand of medium-duty trucks
9 at many of the stations that are already in operation
10 today.

11 Thanks for the opportunity to comment. We look
12 forward to working with the CEC and the Future Advisory
13 Committee to maximize the impact of program funding across
14 the mobility sectors.

15 MR. TUGGY: All right. Thank you, Katrina.

16 Next is Jonathan. Please state your name and
17 affiliation and I'll allow you to talk.

18 MR. HART: Hello. I'm Jon Hart with PowerFlex.
19 We are a solar storage and EV charging installer.

20 I wanted to answer the first question of the
21 Advisory Committee questions you had about the allocation
22 of funding. We're very supportive of the split primarily
23 between light-duty and medium-duty and heavy-duty. We
24 provide non-residential charging for both or for all those
25 types of customers.

1 There was a comment earlier about still providing
2 funding for workplace charging. We're very supportive of
3 that. We provide mostly workplace charging. There's still
4 a big need for it and, as was mentioned, it typically
5 coincides with the least expensive time for both the
6 customer and grid perspective when charging occurs at
7 workplaces, typically the lowest greenhouse gas emission
8 time periods, typically least expensive for the drivers for
9 the gasoline or the cost of fuel. So all around a really
10 good choice and still a big need for that within
11 California.

12 At the same time, very supportive of the
13 transition funding for medium- and heavy-duty as well and
14 support the Commission's proposal as is in the draft plan
15 now.

16 Thank you.

17 MR. TUGGY: All right. Thank you for your
18 comment.

19 Up next is Megan. Please state your name and
20 affiliation and I'm allowing you to talk.

21 MS. MEKELBURG: Hi there. Thank you. My name is
22 Megan Mekelburg. I'm representing the Electric Vehicle
23 Charging Association, also known as EVCA. EVCA is a trade
24 association comprised of more than 22 member companies
25 collectively representing the majority of firms spanning

1 the EV charging ecosystem.

2 We want to thank the CEC for their development of
3 the Clean Transportation Program Update and continued ZEV
4 leadership as the state works to meet its ambitious
5 transportation, electrification and climate goals. We'd
6 like to express our appreciation for the strong focus on
7 electrification in the Clean Transportation Program
8 Investment Plan. Widespread adoption of EVs is a critical
9 pillar of California's climate, air quality and economic
10 goals, and the Clean Transportation Program will continue
11 to play a critical role in ensuring that the benefits of
12 EVs are recognized across the state.

13 As noted in the Staff Report, the Clean
14 Transportation Program has allowed the state to invest in
15 the installation or planning of nearly 24,500 chargers.
16 This year's successful reauthorization of the Clean
17 Transportation Program will allow these investments to
18 continue and bolster the growth of the state's charging
19 network to support convenient EV charging where
20 Californians live, work and play. EVCA stands ready to
21 support the CEC's zero-emission vehicle goals and looks
22 forward to continued engagement.

23 Thank you.

24 MR. TUGGY: All right. Thank you, Megan.

25 Next is Frank Bigelow. Please state your name

1 and any affiliation I'm allowing you to talk. Frank, are
2 you available to unmute?

3 MR. BIGELOW: I'm sorry. Is this better?

4 MR. TUGGY: Yeah, now I can hear you.

5 MR. BIGELOW: Okay. My apologies. My name is
6 Frank Bigelow. I am involved with a California business
7 entity called MACE Energy Development. The MACE acronym
8 stands for Mass Airflow Collection Equipment. And the
9 company holds the patent, a United States patent, for a
10 process which -- and equipment which captures the mass
11 airflow generated by subway trains and converts it into
12 electricity for use either in AC or DC format.

13 And we are very interested in moving forward with
14 this. We've been working with LA Metro, as I said, and we
15 think that this is a way of capturing otherwise unused
16 airflow, and it could be used for generating, for example,
17 for -- fueling is the wrong word -- but facilities for
18 automobiles at train stations, plus on an AC basis, or
19 other possible uses as well.

20 So I just wanted to alert the Committee that this
21 technology is now available and we are very happy to be
22 working with Los Angeles Metro in its development.

23 MR. TUGGY: All right. Thank you, Frank.

24 I'll just give a reminder, for any members of the
25 public who are calling in via telephone, you can press star

1 nine to raise your hand and star six to unmute. Let's give
2 folks another few moments if anyone else would like to
3 raise their hand and speak.

4 I'm not seeing any other hands so far,
5 Commissioner.

6 COMMISSIONER MONAHAN: All right, should we --
7 Benjamin, do you want to just go to -- is there a next step
8 slide or how to submit a comment slide? And then I'll make
9 some final remarks.

10 MR. TUGGY: Yeah, sounds good. So I'll give
11 Mabel a second to switch presentations here and we'll get
12 to the closing steps.

13 All right, so once again, this presentation is
14 already public on the document -- on the Docket 23-ALT-01.
15 So you can take a look at these slides and follow these
16 links. So we have more information on just general CEC
17 transportation activities here at this first link.

18 Once again, the deadline to submit comments on
19 this Advisory Committee meeting and the Revised Staff Draft
20 of the Investment Plan is November 28th by 5:00 p.m., so
21 you can submit those electronic comments here at this link.

22 I'm also the contact person for if you may have
23 questions.

24 And I think that's about what I wanted to cover,
25 so maybe, Commissioner, I can turn it over to you for

1 closing remarks?

2 COMMISSIONER MONAHAN: Yeah, thanks, Benjamin.
3 And thanks. You did a great job today, so just a big clap
4 for Benjamin for all the facilitation.

5 And I just want to thank, well, first I want to
6 thank all the Advisory Committee members. I mean, it's
7 been just wonderful to work with you. I mean, you're all
8 part of the reconstituted Advisory Committee and just we've
9 had really great participation. And we listen to your
10 feedback. I mean, I really am committed to a public
11 process, committed to ensuring that we are responsive to
12 the public, that we're increasingly attentive to equity.
13 And I say increasingly, maybe I should just say that we are
14 always attentive to equity and our understanding evolves.
15 So we need to kind of just be constantly open to evolution,
16 constantly open to new ideas about how we can improve our
17 attentiveness to the needs of communities and especially
18 lower income and disadvantaged communities.

19 I think you've heard from us a strong commitment
20 to partnering with the resources board, partnering with
21 Caltrans, partnering with GO-Biz, like we want to make sure
22 that we are one state working together to reach our goals.
23 And that requires a lot of collaboration behind the scenes
24 that hopefully, as I said, the outside world has no idea of
25 what that looks like, and at the end of the day, it is

1 just, you know, an easy experience. And we recognize that
2 we've made progress and we recognize that we can do better
3 on that front.

4 So just thank you to all the Advisory Committee
5 members for all you've done. And I'm guessing some of you,
6 I'm hoping some of you will apply and be part of our, you
7 know, new Advisory Committee going forward. And again, if
8 you have ideas about the Advisory Committee and how we can
9 make it even, you know, better, that does not apply. So
10 you can reach out to me directly with your ideas, but the
11 comments are really specific to the allocations in the
12 Investment Plan.

13 And just want to thank all the attendees who
14 joined too. It's hard to sit through a long Zoom meeting.
15 I'm glad we're ending right, pretty much, at noon, but just
16 appreciate everybody's input.

17 Again, please do give us comments in whatever way
18 is easiest for you. Happy to have verbal comments, happy
19 to have the e-comments, written comments.

20 And also we're going to be asking Advisory
21 Committee members who want to give verbal comments at our
22 business meeting when we actually move to approve a revised
23 Investment Plan, that you'll have that opportunity to give
24 verbal feedback as well.

25 So I think that's it. Thanks everybody. Hope

1 you have a good rest of your day. Glad we're ending right
2 at noon.

3 MR. TUGGY: All right. Sounds good. Have a good
4 rest of your day, everyone.

5 (The public meeting adjourned at 12:01 p.m.)
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REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the

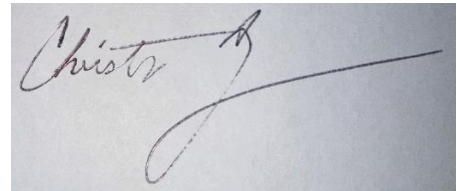
foregoing hearing was taken at the time and place

therein stated; that the testimony of said witnesses were reported by me, a notary public and certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF,

I have hereunto set my hand this 30th day of November, 2023.

A photograph of a handwritten signature in dark ink on a light-colored surface. The signature is cursive and appears to read "Chris Caplan".

Chris Caplan
Electronic Reporter
CER**1971

CERTIFICATE OF TRANSCRIBER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

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



MARTHA L. NELSON, CERT**367

November 29, 2023