

DOCKETED

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In the Matter of:

Business Meeting

The California Energy Commission's June 9, 2021 Business Meeting will be held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. The public is able to participate and observe the meeting consistent with the direction in these Executive Orders. Instructions for remote participation can be found in the notice for this meeting and as set forth in this agenda.

10:00 A.M.

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APPEARANCES

Commissioners

David Hochschild, Chair
Karen Douglas
Siva Gunda
Andrew McAllister
Patricia Monahan

Staff Present:

*Noemi Gallardo, Public Advisor
*Kiel Pratt, Transportation Planning and Analysis Unit,
Fuels and Transportation Division
*Drew Bohan, Executive Director
*Linda Barrera, Chief Counsel
Eric Veerkamp, Compliance Project Manager
Leonidas Payne, STEP Project Manager
Joseph Hughes, Air Resources Supervisor
*Kerry Willis, Staff Counsel
*Elizabeth Huber, Manager, Compliance Monitoring &
Enforcement Office, Siting, Transmission and Environmental
Protection Division
*Geoff Lesh, Manager STEP Engineering and Siting and
Environmental Offices
*Eric Knight, STEP Engineering and Siting and Environmental
Offices
*Ryan Eggers, Energy Assessments Division
*Jonathan Fong, Manager, School Stimulus Office,
Renewable Energy Division
Mark Johnson, Fuels and Transportation Division
Larry Rillera, Fuels and Transportation Division
David Erne, Energy Assessments Division
Michael Ferreira, Energy Research and Development Division
Kevin Uy, Energy Research and Development Division
Reta Ortiz, Energy Research and Development Division
Anthony Ng, Research and Development Division
Ben Wender, Energy Research and Development Division

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a. Pursuant to Government Code Section 11126(e), the CEC may adjourn to closed session with its legal counsel to discuss any of the following matters to which the CEC is a party:	
i. <i>In the Matter of U.S. Department of Energy (High Level Waste Repository) (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); State of California v. United States Department of Energy (9th Cir. Docket No. 09-71014)</i>	
ii. <i>Communities for a Better Environment and Center for Biological Diversity v. Energy Resources Conservation and Development Commission, and California State Controller, (Alameda County Superior Court, Case No. RG13681262, Court of Appeal, First Appellate District, Division Four, Case No. A157299)</i>	

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vii. <i>Southern California Gas Company v. California State Energy Resources Conservation and Development Commission</i> (Sacramento County Superior Court, Case No. 34-2021-80003576-CU-WM-GDS).	
b. Pursuant to Government Code Section 11126, subdivisions (a) and (e), the CEC may also discuss any judicial or administrative proceeding that was formally initiated after this agenda was published; or determine whether facts and circumstances exist that warrant the initiation of litigation, or that constitute a significant exposure to litigation against the CEC, which might include personnel matters.	
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P R O C E E D I N G S

JUNE 9, 2021 10:00 a.m.

CHAIR HOCHSCHILD: Well, good morning friends and welcome to the California Energy Commission's June business meeting.

Let's begin with the Pledge of Allegiance.
Commissioner Gunda, could you please lead us in the pledge.

COMMISSIONER GUNDA: Great. Thank you, Chair.
(Whereupon the Pledge of Allegiance is recited.)

CHAIR HOCHSCHILD: Thank you, Commissioner. We are happy to share the news that our state is on track to reopen fully on June 15th, just around the corner. I want to encourage everyone to get vaccinated, if you're able. The goal is to maximize that as quickly as we can, so we can protect as many of our citizens as possible. And I just got my second shot a few weeks ago and I'm very glad that I did. And I encourage everyone to do so.

The Governor's Office has set up a website called MY Turn where you can schedule your appointments. For more information go to MYTURN.CA.GOV.

And I'd also like to share that, if you recall last year we did the very first California Clean Energy Hall of Fame Awards in December. It was a big success, recognizing the remarkable leaders on the front lines especially for our clean energy future.

1 We are accepting nominations now, again. And
2 those are due by June 25th in the following categories, for
3 a lifetime achievement, clean energy champion, and the
4 youth game-changer awards. So, if you know somebody you
5 think is deserving of a Clean Energy Hall of Fame Award
6 please do submit the nomination. Noemi Gallardo, our
7 Public Advisor, and her team are running this. And you can
8 submit nominations for individuals and entities
9 contributing to advance our clean energy future at the
10 Commission webpage, in the Public Advisor's Office.

11 So, today's Business Meeting is being held
12 remotely without a physical location for any participant
13 consistent with Executive Orders N-25-20 and N-29-20 and
14 the recommendations from the California Department of
15 Public Health to encourage social distancing in order to
16 slow the spread of COVID-19. The public may participate
17 and/or observe the meeting, consistent with the direction
18 of these executive orders. Instructions for remote
19 participation can be found in the notice for this meeting
20 as set forth on the agenda posted on the Commission's
21 website for this business meeting.

22 As of today we'll be taking public comment
23 through Zoom, instead of Verizon. If, however, for any
24 reason Zoom shuts down we'll shift to the Verizon phone
25 line, which is 888-823-5065 and the passcode is business

1 meeting.

2 The Commission values public participation and
3 stakeholder engagement. Pursuant to California Code of
4 Regulations Title 20, Section 1104(e), any person may make
5 oral comment on any agenda item. To ensure the orderly
6 conduct of business such comments will be limited to three
7 minutes or less per person as to each item be voted on
8 today. Any person wishing to comment on a non-voting item,
9 such as an information item or reports, shall reserve their
10 comment for the general public comment portion of the
11 meeting agenda and shall have three minutes or less total
12 to state all remaining comments.

13 To provide public comment during the designated
14 periods, please click on the raise hand icon at the bottom
15 of your screen. If you're on the phone, please *9 to raise
16 your hand and *6 to unmute your line. The Public Advisor
17 will call on you and open your line.

18 Before turning to the agenda items, I'm happy to
19 share that during today's business meeting the Commission
20 is seeking to approve nearly \$23 million in grants and
21 loans, plus nearly \$65 million funding to support
22 entrepreneurs and the workforce. These investments will
23 help accelerate California's economic recovery.

24 And it's just a, you know, remarkable thing.
25 It's becoming a monthly thing where, you know, these

1 numbers 80, 90, 100 million dollars a meeting or more. I'm
2 really proud of the whole Energy Commission staff for all
3 the work to make these investments possible.

4 So, let's move on now to Item 1, the Consent
5 Calendar. We're going to address Item 1B separately from
6 the other consent items.

7 So, let's begin with Items 1A, C, and D. Madam
8 Public Advisor, do we have any public comments on Items 1A,
9 C, and D?

10 MS. GALLARDO: This is Noemi Gallardo, Public
11 Advisor. Just a quick reminder for folks. If anyone has a
12 comment, please raise your hand. You can click on the
13 raise hand icon or dial -- or press, excuse me, *9 to raise
14 your hand by phone.

15 And I am not seeing anyone at the moment.

16 CHAIR HOCHSCHILD: Okay.

17 MS. GALLARDO: So, no public comment.

18 CHAIR HOCHSCHILD: Commissioner McAllister, would
19 you be willing to move the item? And Commissioner Douglas,
20 would you be willing to second?

21 COMMISSIONER MCALLISTER: Yes, I'll move Items
22 1A, C, and D.

23 COMMISSIONER DOUGLAS: Second.

24 CHAIR HOCHSCHILD: Okay, all those in favor say
25 aye.

1 Commissioner McAllister?

2 COMMISSIONER MCALLISTER: Aye.

3 CHAIR HOCHSCHILD: Commissioner Douglas?

4 COMMISSIONER DOUGLAS: Aye.

5 CHAIR HOCHSCHILD: Commissioner Monahan?

6 COMMISSIONER MONAHAN: Aye.

7 CHAIR HOCHSCHILD: Commissioner Gunda?

8 COMMISSIONER GUNDA: Aye.

9 CHAIR HOCHSCHILD: And I vote aye as well. Those

10 items pass unanimously.

11 Now, let's turn to Item 1B. Out of an abundance

12 of caution I'm going to recuse myself from the discussion

13 and vote of Item 1B, which proposes membership dues for

14 CEC's participation in the EV Strike Force. I serve on the

15 Non-Voting Public Policy Advisory Committee to the EV

16 Strike Force, which may present a perceived conflict of

17 interest. There is no economic conflict. I do not accept

18 or receive compensation or reimbursements for my service.

19 However, to avoid any perception of bias I will step away

20 from the dais for this item of business. I will mute, but

21 leave my video on. I will return when the Public Advisor

22 instructs me to do so.

23 And I'll ask Commissioner Douglas to lead Item B.

24 And I'll now turn to Commissioner Monahan for her

25 recusal as well.

1 COMMISSIONER MONAHAN: Thank you, Chair. So, I
2 too serve on the Non-Voting Public Policy Advisory
3 Committee to the EV Charging Infrastructure Strike Force.
4 For the same reasons stated by the Chair, I'm going to
5 recuse myself. I'm going to mute, but leave my video on,
6 and I'll return when the Public Advisor instructs me to do
7 so.

8 CHAIR HOCHSCHILD: Thank you. Okay, I'm going to
9 mute and turn it over to Commissioner Douglas at this time.

10 COMMISSIONER DOUGLAS: All right. Very good, is
11 there any public comment on Item 1B?

12 MS. GALLARDO: This is Noemi Gallardo, Public
13 Advisor. A reminder for folks, please raise your hand, *9
14 if you're on by phone. I'm not seeing any hands,
15 Commissioner Douglas, no public comment.

16 COMMISSIONER DOUGLAS: Okay, thank you.

17 Commissioners, if you have any comments or
18 questions please speak up. Otherwise, Commissioner Gunda
19 would you be willing to make a motion? And Commissioner
20 McAllister, if you'd be willing to second?

21 COMMISSIONER GUNDA: Yes, Commissioner Douglas, I
22 move the Item 1B.

23 COMMISSIONER MCALLISTER: I second.

24 COMMISSIONER DOUGLAS: All right, thank you.
25 We'll now take a vote.

1 Commissioner Gunda?

2 COMMISSIONER GUNDA: Aye.

3 COMMISSIONER DOUGLAS: Commissioner McAllister?

4 COMMISSIONER MCALLISTER: Aye.

5 COMMISSIONER DOUGLAS: And I vote in favor as

6 well. So, the vote count is three to zero, with two

7 Commissioners not voting.

8 So, I think now Noemi is inviting the Chair and

9 Commissioner Monahan to return.

10 MS. GALLARDO: That's correct. I just messaged

11 both of them, so we'll wait for Commissioner Monahan to

12 return.

13 COMMISSIONER DOUGLAS: Got it.

14 CHAIR HOCHSCHILD: Thank you so much for that

15 coffee break. And let's move on. Thank you, Commissioner

16 Douglas.

17 Let's turn now to Item 2, appointment of members

18 to the Disadvantaged Communities Advisory Group.

19 MS. GALLARDO: All right. So, hello there Chair

20 and Commissioners. This is Noemi Gallardo, Public Advisor.

21 For the record, I will be presenting this item. Just a

22 second.

23 So, this is Item 2, the appointments of three

24 candidates to the Disadvantaged Communities Advisory Group,

25 also known as the DACAG.

1 The next slide. The DACAG is a valuable resource
2 to the Energy Commission and to the State of California.
3 It is a diverse group of members who are helping
4 democratize the energy space by applying community
5 perspectives to the policies and technologies we're
6 developing. And, you know, the more voices from different
7 regions, backgrounds, skills, experiences, et cetera that
8 we bring to the table, the more we see more locally driven
9 and beneficial energy solutions. The Commission is really
10 fortunate to have this equity-centered group providing
11 their expertise to us. I'm excited to tell you more about
12 the three new members we're seeking to approve today, but
13 before that I'll quickly review the context for these DACAG
14 appointments.

15 The next slide. The DACAG was established
16 pursuant to Senate Bill 350 and requires the Energy
17 Commission and the California Public Utilities Commission
18 to establish the DACAG. The DACAG's charter says that the
19 DACAG is comprised of 11 members, who service two-year
20 terms. Earlier this year, three members decided not to
21 renew their terms, which left three vacancies running from
22 April 1, 2021 through March 31, 2023. The CPUC approved
23 the three appointments at its June 3rd voting meeting. If
24 approved today by the Energy Commission, the three
25 candidates would be able to join their first DACAG monthly

1 meeting in July.

2 The next slide. Of the many applicants received,
3 Commissioners Douglas and Gunda and CPUC Commissioners
4 Rechtschaffen and Guzman-Aceves selected and recommend Jose
5 Hernandez, Elena Krieger, and Curtis Silvers for
6 appointment.

7 Jose Hernandez is a Community Engagement Manager
8 at the Los Angeles Cleantech Incubator, also known as LACI.
9 He spearheads community engagement efforts for the nation's
10 first Zero Emissions Delivery Zone pilot in Santa Monica,
11 and will help deploy a California Air Resources Board
12 Sustainable Transportation Equity Project in South Los
13 Angeles later this year. Jose also helps recruitment
14 efforts for LACI's workforce development initiative titled
15 the Advanced Prototyping Center Fellowship, where LACI
16 partners with underrepresented residents that meet federal
17 low- and median-income guidelines, and train them to become
18 electric vehicle supply equipment technicians.

19 The next recommendation is Elena Krieger, the
20 Director of Research at Physicians, Scientists, and
21 Engineers for Healthy Energy, also known as PSE. Elena has
22 worked in energy for the past seven years with a focus on
23 how to simultaneously accelerate the transition to clean
24 energy systems and design pathways that prioritize the
25 public health, equity, environmental, and resilience

1 benefits of this transition. She brings many years' worth
2 of experience conducting research and analysis of these
3 various dimensions of California's energy system.

4 Curtis Silvers is the third candidate. He's the
5 Executive Vice President of the Los Angeles Brotherhood
6 Crusade and has led and worked with behavior-impact
7 programs over several years. Some of these programs
8 include the Transformation Climate Communities and the Los
9 Angeles Department of Water and Power Ambassadors Program.
10 He has firsthand knowledge and experience of the needs of
11 the hard-to-reach population in the South Los Angeles
12 region, including his experience leading a team that drove
13 local energy efficiency and water conservation education
14 and outreach.

15 The next slide. The extensive professional and
16 lived experiences of these individuals focused on equity
17 and environmental justice, combined with the geographic
18 diversity and deep energy-related, and other expertise they
19 represent make Jose, Elena, and Curtis excellent candidates
20 for the DACAG.

21 For these reasons I, along with Commissioners
22 Douglas and Gunda, recommend the Commission approve these
23 three candidates to become members of the DACAG.

24 That concludes my presentation. I'm available
25 for questions. And I believe Angela Islas, the current

1 Chair of the DACAG was going to try to join us to make
2 comments. And also, Curtis Silvers, who is taking a break
3 from his vacation wanted to say hello. So, I'm going to
4 check to see if they're on the line. Otherwise, I'm
5 available for questions.

6 CHAIR HOCHSCHILD: Thank you so much, Noemi. And
7 let me congratulate Jose, Elena and Curtis.

8 Let's turn to Commissioner discussion.
9 Commissioner Douglas, would you like to begin?

10 MS. GALLARDO: Let me check for public comment,
11 first.

12 CHAIR HOCHSCHILD: Oh, I apologize. Is there
13 public comment on this?

14 MS. GALLARDO: No problem. Let me check. So, I
15 was told Angela might try to join. Angela, if you're
16 there, please raise your hand. Press *9 if you're on by
17 phone. All right, I think I see her here.

18 All right, Angela, please feel free to begin.

19 MS. ISLAS: Hi. Good morning everybody and good
20 morning to all Commissioners. This is Angela Islas, Chair
21 for the Disadvantaged Communities Advisory Group. My
22 pronouns are she/they.

23 I'm really excited to see, finally, our three
24 candidates for the DACAG and absolutely am a hundred
25 percent like behind all your backs to approve these three

1 candidates. And I'm really looking forward to really
2 working with them and just kind of, you know, having a lot
3 of their expertise amplify a lot of the priorities that we
4 have on the DACAG, or even especially help amplify to
5 shifting a lot of the priorities to align a lot better with
6 your agendas that you have currently for the 2021-2022
7 period. And so, yeah, I definitely am really excited and,
8 you know, I can't wait to hear just a little bit about
9 Curtis, and just hear him comment.

10 So, just wanted to express my absolute gratitude
11 and support on this. And thank you guys so much for
12 inviting me to public comment.

13 CHAIR HOCHSCHILD: Thank you so much.

14 Noemi, is there anyone else wishing to make a
15 public comment?

16 MS. GALLARDO: Let me check again for Curtis. I
17 don't see any other hands raised. So, Curtis, if you're on
18 my phone press *9 to raise your hand. Okay, I don't see
19 him there. He was on vacation at the moment, so he was
20 going to try to get away from there to make a comment. But
21 I don't think he was able to make it.

22 So, we can move forward. Chair, I don't -- I do
23 not see any other hands raised.

24 CHAIR HOCHSCHILD: Thank you. Let's move on to
25 Commissioner discussion. Commissioner Douglas?

1 COMMISSIONER DOUGLAS: Excellent. Well, thank
2 you. And Angela, it's so nice to hear from you and I'm
3 glad you were able to join us today.

4 I'm excited to support the nomination of these
5 three candidates for the DACAG. As Noemi mentioned, we
6 invited applications to fill these seats and we received
7 many applications from very many, you know, well-qualified
8 individuals. We worked with the CPUC, Commissioner Gunda
9 and I did, to review the applications and to select the
10 three candidates who are recommended today.

11 I think that each one of them is going to bring a
12 really unique and helpful perspective, and knowledge, and
13 set of experiences that will help support us and the
14 important work of the DACAG.

15 And so, I just wholeheartedly recommend the
16 candidates and support them. And I'll be happy to make a
17 motion when the time arrives.

18 CHAIR HOCHSCHILD: Thank you so much,
19 Commissioner Douglas.

20 Anyone else wishing to make a comment?
21 Commissioner Gunda?

22 COMMISSIONER GUNDA: Yeah, Chair, thank you.
23 Thank you, Commissioner Douglas for your comments. I also
24 want to just thank, echo my thanks to Chair Islas for being
25 here and making public comment.

1 I really feel to have the three candidates, I
2 think there is an incredible amount of, you know, work that
3 we need to do and we incredibly benefit from the DACAG's
4 perspective on all the work we do. So, looking forward to
5 the expertise and the passion that the three candidates
6 bring, and very much looking forward to working with them.

7 I also just want to note my thanks to Noemi, our
8 staff, as well as CPUC staff for putting in the amount of
9 work helping go through the applications, and helping us
10 with some of the background work that needed to be done.
11 So, just thanks to everybody. I'm looking forward to
12 supporting this motion.

13 CHAIR HOCHSCHILD: Unless there's other comments,
14 I'll just share, you know, my thanks again to Noemi and her
15 team. They've been spectacular on all the engagement here.
16 And just, you know, to reiterate it is a core part of our
17 mission as we advance all these clean energy policies, and
18 clean transportation policies, and efficiency policies
19 across the state to do so in a way that lifts up the
20 communities that have been hit the hardest from pollution,
21 and climate change, et cetera.

22 And so, this Committee is really at the heart of
23 that effort and really, really happy to welcome this new
24 talent to the DACAG.

25 Unless -- oh, yeah, sorry Patty, do you have a

1 comment? Go ahead, Commissioner Monahan.

2 COMMISSIONER MONAHAN: Yeah, just really quick.

3 Well, I wanted to say, yeah, thanks to Noemi, and the team,
4 and to the folks at the CPUC.

5 And I just want to reiterate the importance of
6 this DACAG and how we are listening to them in our decision
7 making. With the Clean Transportation Program they were
8 really instrumental in advocating for a focus more on zero
9 emission transportation. The subcommittee that has focused
10 on transportation has been really helpful.

11 Jose, with his expertise in some of the workforce
12 development aspects of electric transportation is going to
13 be really helpful.

14 So, just excited to have these three new
15 candidates working at the DACAG and looking forward to
16 supporting them.

17 CHAIR HOCHSCHILD: Thank you so much.

18 With that, I'd entertain a motion from
19 Commissioner Douglas.

20 COMMISSIONER MCALLISTER: Can I --

21 CHAIR HOCHSCHILD: Oh, yeah, Commissioner
22 McAllister.

23 COMMISSIONER MCALLISTER: -- just make a couple
24 of comments?

25 Yeah, so I wanted to just highlight the

1 criticality of the DACAG for our decarbonization of our
2 buildings. You know, obviously, I spend a lot of time on
3 that. And we tend to focus, because our authority kind of
4 aligns with new construction, you know, the Building Code,
5 and appliance standards, and that's kind of one of our core
6 competencies, but we have been working on, you know,
7 existing buildings for a good decade plus. And that is --
8 it's more difficult, it's a more difficult question. And
9 it also is one that really to solve it, it has to begin
10 with our under-resourced communities. And our DACAG is
11 going to be -- is already, but it's going to increasingly
12 be a critical resource to help us think critically about
13 how we are going to design programs and bring resources to
14 really attack that problem in our under-resourced
15 communities across the state, and upgrade our existing
16 buildings.

17 And that is a broader effort than just energy.
18 That has to do with general quality of life equity,
19 economic justice, and lots of interlacing themes. And I
20 think the diversity of our DACAG and its varied expertise
21 is really going to be critical to finding solutions there,
22 you know. And it's going to be a real, you know, team
23 effort across the board and across the state.

24 So, I'm really looking forward to further
25 engagement with the DACAG. And thanks for the three new

1 members, really appreciate your service.

2 CHAIR HOCHSCHILD: Thank you, Commissioner.

3 With that, I'd entertain a motion. Commissioner

4 Douglas, would you be willing to move the item?

5 COMMISSIONER DOUGLAS: Absolutely. I move

6 approval of this item.

7 CHAIR HOCHSCHILD: Okay, and Commissioner Gunda

8 would you be willing to second?

9 COMMISSIONER GUNDA: Fully second the item.

10 CHAIR HOCHSCHILD: All right. All in favor say

11 aye.

12 Commissioner Douglas?

13 COMMISSIONER DOUGLAS: Aye.

14 CHAIR HOCHSCHILD: Commissioner Gunda?

15 COMMISSIONER GUNDA: Aye.

16 CHAIR HOCHSCHILD: Commissioner McAllister?

17 Commissioner McAllister? You're on mute there.

18 COMMISSIONER MCALLISTER: Aye.

19 CHAIR HOCHSCHILD: Commissioner Monahan?

20 COMMISSIONER MONAHAN: Aye.

21 CHAIR HOCHSCHILD: And I vote aye as well.

22 That item passes unanimously. Congratulations to

23 our three new members of the DACAG. Welcome aboard.

24 Let's move on now to Item 3, Assembly Bill 2127

25 Revised Staff Report.

1 MR. PRATT: Hello. Are my audio and video coming
2 through?

3 CHAIR HOCHSCHILD: Yeah.

4 MR. PRATT: Great. Good morning Commissioners
5 and everyone.

6 I'm Kiel Pratt. I supervise the Transportation
7 Planning and Analysis Unit within the Energy Commission's
8 Fuels and Transportation Division.

9 This item, the Assembly Bill 2127 Revised Staff
10 Report, is a result of over two years' of work by the team
11 and the division, our leadership, contractors who did the
12 modeling work, other collaborators informing our analysis
13 and providing data, and public stakeholders who
14 participated in our workshops and gave feedback to help
15 shape the report.

16 The next slide, please. Now, to state the bottom
17 line up front, California needs a lot of electric vehicle
18 chargers to support its clean transportation goals.

19 Currently, we have over 73,000 in public and
20 shared-private locations. Our analysis indicates that by
21 2030 we will need over one million chargers to support
22 California's most ambitious policies for electrifying
23 transportation.

24 It's important to talk about charging infrastructure
25 in the context of the energy system to show the benefits

1 transportation electrification promises. Clean Air,
2 independence from petroleum, and the change to expand
3 industries in California are some of the benefits of zero-
4 emission vehicles, or ZEVs for short.

5 And ZEVs include vehicles fueled with hydrogen,
6 so it's important to make clear that this report, per the
7 directive from the Legislature, addresses only
8 infrastructure for plug-in electric vehicles. These
9 include pure battery-electric and plug-in hybrids.

10 Electric vehicles can be valuable for
11 California's power system. They're often plugged in for
12 longer than they need to charge. That gives an opportunity
13 to smart charge, to shape that energy, increase and
14 decrease of power during the time the truck or car is
15 plugged in to get the cheapest electricity. And it's cheap
16 in the first place during times the grid has extra
17 capacity, such as when renewable power is abundant.

18 That smart charging, part of what's called
19 vehicle-grid integration, can really make the grid more
20 economical to operate, cheaper for ratepayers, and more
21 resilient. You say it's one of the keys to unlocking a
22 carbon-neutral future.

23 However, driving an EV has to be convenient for
24 people and industries to adopt them. So, installing enough
25 chargers at the right locations, with the right

1 capabilities is necessary to keep the experience convenient
2 and achieve all these benefits.

3 That's where this report comes in, and future
4 reports like it, every two years. We need to keep a close
5 eye on charging infrastructure and project what and where
6 future needs are going to be, if we want massive
7 transportation electrification.

8 The next slide. Over the coming years, as
9 technology and industries evolve, what is likely to be
10 needed?

11 In 2018, the Legislature passed AB 2127 and
12 called for reports analyzing charging needs for all vehicle
13 types, including heavy-duty and off-road, and other
14 elements of planning, operating, and financing charging
15 infrastructure. Then, in September 2020 an executive order
16 from Governor Newsom expanded California's ZEV goals and
17 called for our reports to encompass them.

18 The next slide, please. We are talking about
19 targets, plural. Our report addresses these two policy
20 goals. The 5 million ZEVs by 2030 goal was enshrined in
21 the 2018 legislation. And after the 2020 executive order,
22 the California Air Resources Board analyzed what is likely
23 needed to achieve its even more aggressive goals. They
24 came up with 8 million ZEVs in 2030, which we take as an
25 input for the report.

1 The next slide, please. We're certainly not
2 talking only about light-duty vehicles. This is a map of
3 the scope of our report. The white boxes have elements
4 called for in the legislation and the others are
5 activities, work products, and models that went into our
6 report and will continue to be worked on for future
7 versions.

8 I want to give credit to our contractors who
9 developed models in coordination with Energy Commission
10 staff.

11 The National Renewable Energy Laboratory
12 continued its work on EVI-Pro and created a model for long-
13 distance road trips.

14 UC Davis developed a model investigating ride-
15 hailing and its unique charging behavior.

16 And Lawrence Berkeley National Laboratory
17 developed a new model projecting charging needs for medium-
18 and heavy-duty vehicles.

19 We've also analyzed the off-road sector and will
20 continue to in greater depth as the market develops.

21 And we'll continue to coordinate with the Air
22 Resources Board for their projections of off-road, heavy-
23 duty, and other vehicle types based on their regulations
24 and analysis.

25 The next slide. I won't go into great detail

1 here, but this spells out some of the methods and
2 considerations for modeling charging infrastructure needs.
3 You can see there are many variables. Charging behavior,
4 where drivers go, the power levels of chargers, even access
5 to charging at home which has a huge impact on when
6 charging happens, and is difficult to pin down, and will
7 change as more people start to drive electric cars. We've
8 even worked on about a dozen scenarios showing the
9 sensitivities to these different factors.

10 It's important to understand their impact and the
11 difficulty of projecting needs into the future as the
12 market and technology change, and as driver behaviors and
13 preferences evolve.

14 We also look at particular applications for
15 charging, such as long-distance road trips. On this slide,
16 the image on the left shows existing fast charging location
17 sin California, and the right shows simulated locations in
18 2030 of fast charging stations to support long-distance
19 travel for pure battery-electric vehicles.

20 The next slide, please. These next two slides
21 show charts from the report illustrating the possible load
22 on the power grid throughout the day in 2030.

23 Here are the light duty results for the most
24 aggressive 2030 goals. You can see the green region for
25 fast charging, which includes those stations I showed in

1 the previous slide for long-distance travel, plus
2 additional fast chargers.

3 But we can see that most charging happens at
4 home, in the yellow and red region. When that charging
5 occurs also matters. If drivers set simple timers to
6 charging when time-of-use rates become cheaper around
7 midnight, we see this phenomenon on the right, which we
8 call a timer spike, that could pose an issue for some local
9 distribution grids.

10 Again, smart charging, vehicle-grid integration
11 could move out that effect and still let the driver access
12 the cheapest electricity.

13 The next slide, please. This shows the modeled
14 charging power through the day of several medium- and
15 heavy-duty vehicle segments. You can see these segments on
16 the right, and the black lines indicating their modeled
17 charging load throughout the day.

18 It's worth mentioning that because of the wide
19 variety of jobs these vehicles serve, their activities,
20 charging behaviors, and locations are very diverse. It was
21 challenging to get data on all of the uses of heavy-duty
22 vehicles. And we're thankful to collaborators who supplied
23 important data and continue to coordinate.

24 The next slide. Let's recap the charger numbers.
25 Again, these are for public and shared-private locations,

1 not counting the chargers in single-family houses.

2 Under the most ambitious goals, it's projected
3 that California will need close to 1.2 million chargers for
4 light-duty vehicles to ensure convenience for drivers and
5 businesses. I should point out that this number has gone
6 down since the January draft version of the report. That's
7 primarily due to improvements in modeling to incorporate
8 stakeholder feedback from our workshops this year, and to
9 better reflect anticipated market conditions.

10 These include more rapidly improving EVs with
11 longer ranges and higher charging power. They won't need
12 to charge as frequently. And as you can guess, it's likely
13 that projections could shift in future versions of the
14 report.

15 The takeaway is that for this continuing analysis
16 we have, and are improving, groundbreaking quantitative
17 tools informed by the best available information and an
18 open public process.

19 The next slide. Beyond the light-duty total, we
20 anticipate that a population of roughly 180,000 medium- and
21 heavy-duty vehicles will need about 157,000 high-power
22 chargers in 2030. We'll continue to refine the modeling
23 and seek more granular data for this sector.

24 And I must emphasize that transforming the heavy-
25 duty and off-road sectors is vital to equity because of how

1 close some priority communities are to seaports and major
2 corridors for freight, and how these communities
3 disproportionately suffer the impacts of toxic diesel air
4 pollution.

5 The next slide. Beginning to wrap up, there's a
6 lot to this report beyond charger numbers and load curves.
7 This slide alone can be five presentations. Remember the
8 scope of the report, the boxes I showed, the elements of
9 planning, operating, and financing charging infrastructure.
10 Our report goes into depth on each of these. And while it
11 is not the final word on any one topic, it takes an
12 inventory of programs, activities, and technologies that
13 will shape the future.

14 Equity. Remember my comments about the heavy-
15 duty sector and the impact of diesel pollution on
16 communities. Additionally, the Energy Commission, under
17 Senate Bill 1000, is analyzing the availability of chargers
18 for all Californians.

19 Vehicle-grid integration. Remember the promise
20 of using renewable energy more effectively and improving
21 grid resilience. That can really go into high gear with
22 bidirectional charging, the ability to discharge energy to
23 the grid to earn revenue, or to buildings and homes in case
24 of an outage, or to power a camping trip or work tools at
25 remote sites.

1 For example, the Ford F-150 Lightning will have
2 this capability. This image from Ford shows its potential
3 to power a house during an outage. It's the first major
4 vehicle ad campaign to promote bidirectional power. And
5 this vehicle has serious energy, over 8 times the capacity
6 of a typical home battery pack, enough to power a house for
7 several days.

8 Connectors. Standardization is a key part of
9 driver convenience and making the best use of our charging
10 network.

11 Technology developments in communications. This
12 was an issue that attracted different opinions from
13 stakeholders on the best path forward. But what is clear,
14 at least, is the need for grid-friendly charging on a
15 massive scale, and a convenient experience for drivers and
16 businesses.

17 and we can't ignore that real estate, space
18 constraints, grid connections, and other factors influence
19 what the best solution is for any site. There are new
20 products in this area, such as battery-supported or off-
21 grid charging solutions.

22 The report takes an inventory of funding programs
23 and shares stakeholder thought son the future of financing,
24 and sustainable and innovative business models for
25 charging.

1 These are all topics we'll keep an eye on for
2 future versions of the report.

3 The next slide, please. We ask for your approval
4 of this inaugural Assembly Bill 2127 report.

5 This concludes my presentation and I'm happy to
6 answer questions. Thank you for your attention.

7 CHAIR HOCHSCHILD: Thank you so much, Kiel,
8 really helpful, great job.

9 Let's go to public comment, first.

10 MS. GALLARDO: This is Noemi Gallardo, Public
11 Advisor, for the record. I do see several hands raised.
12 So, we'll start with Ethan Lipman. Ethan, your line is
13 open. Reminder to please spell your name for the record
14 and indicate if you have an affiliation. You may begin.

15 MR. LIPMAN: Hi everybody. Hello Commissioners
16 Hochschild, McAllister, Monahan, everybody.

17 I grew up -- so, spelling my name. Ethan is E-T-
18 H-A-N. The last name is L-I-P-M-A-N.

19 So, to set the table, I grew up in Silicon
20 Valley. I've been aware of many standards over many years.
21 Back in -- you know, we can go back to 1994, I'm in
22 Cupertino. This is the headquarters of Apple Computer. We
23 have standards from folks like USB that came to this world
24 around 1994 and by 1996 this was in products. Before that
25 we had something called the Apple Desktop Bus. Everybody

33

1 here on this call remembers plugging in a connector. It
2 was a PC keyboard that couldn't be used on a Mac. Then we
3 had something called USB, but it took 15 years before we
4 had the ability to take that connector and rotate it upside
5 down, and plug it into our phone.

6 We do not have 15 years to fuck up this standard
7 in the electric vehicle world. Today we have a vulcanized
8 environment. I have worked in my past at Charge Point, at
9 EVgo, and I am a consultant throughout the industry going
10 forward.

11 We have problems here that can be resolved by
12 strong regulation. If you go across, outside of this
13 country, Tesla does not have the ability to sell their car
14 with anything but a CCS2 connector in Europe. They use a
15 different connector for the Chinese standard across the
16 board in China.

17 In the United States we have a problem with
18 regulation here and we can do better. I am very concerned
19 to see this vulcanization. It is not okay for our parking
20 lots in public, these are public pieces of infrastructure,
21 to have a parking lot carved up into Tesla vehicles over
22 here, Rivian vehicles over here, expectant mother parking
23 over here. It has to be accessible for the entire public
24 and standards are the way to do that.

25 These standards, ISO 15118, plug-in charge,

1 vehicle-to-grid, we're on the right track. It's very
2 important California leads the world. We saw that with
3 things like the Million Solar Roofs Initiative, which I was
4 lucky to be part of for ten years of my career, coming out
5 of UC Davis with a mechanical engineering degree.

6 When I look forward, though, we have an
7 opportunity to make this better for the public. And what I
8 want to ask and look forward to hearing from staff, or from
9 the Commissioners with respect, is that I saw the older
10 version of this report and I saw the newer version, and the
11 language around ISO 15118 seems to be a little bit more
12 vague. It's very important to me, I don't care about the
13 companies, I care about the people. This is a gold rush
14 and we need to get this right for the public. We need to
15 regulate it. There's a time for collaboration and there's
16 a time for competition. On these standards, we need
17 collaboration.

18 CHAIR HOCHSCHILD: Thank you. Your point is very
19 well taken. Very well taken. I just would ask let's not
20 use profanity in public meetings. We do have some young
21 people at this meeting.

22 But your point is very well taken, thank you.

23 MR. LIPMAN: Thank you. And with respect, I did
24 not want to do that and I did want to do that, and for two
25 reasons.

1 CHAIR HOCHSCHILD: I understand that.

2 MR. LIPMAN: But I hear you and I will not do it
3 again.

4 CHAIR HOCHSCHILD: Thank you. Thank you.

5 Who else is next, Noemi?

6 MS. GALLARDO: All right, we have several people
7 with their hands raised. Second is Stephen Davis. A
8 reminder to spell your name, indicate if you have any
9 affiliation. Stephen, you're line is unmuted and you may
10 begin.

11 MR. DAVIS: Thank you very much, Noemi and
12 Commissioners. Thank you for this opportunity. My name is
13 Stephen Davis, S-T-E-P-H-E-N D-A-V-I-S. I'm the founder
14 and CEO of Oxygen Initiative, formerly KN Grid. And have
15 conducted several CEC-funded demonstration projects and
16 development projects for the ISO 15118 standard.

17 One at UC San Diego where we had demonstrated
18 plug-in charge over a three-year period. And one where we
19 did a smart home study, and one where we used EV loads to
20 integrate renewables.

21 So, let me stand on Ethan's shoulders for just a
22 second and thank him for the clarity and I'll excuse the
23 colorful language. I think it was expressed from the right
24 place.

25 What I think we talk about so much is the how of

1 what we're going to -- how we're going to support electric
2 vehicle electrification -- excuse me, the what in terms of
3 the numbers. But it's hard to come up with the how without
4 an interoperability standard. And I think the Commission
5 is really showing support in this study or the assessment
6 that was published.

7 We need a simple-always-wins approach to
8 revolution scale adoption and mass market uptake of these
9 vehicles, otherwise we really do risk some unpleasant
10 events where these loads, which I refer to as apex loads in
11 the home, can really bring down the house. And we saw that
12 in some of the reporting recently from the CEC, showing
13 distribution grid capacity limits already sort of in the
14 redline area.

15 So, Ethan's point about the need for simplicity,
16 I boil it down to this. In the how, we need a simple,
17 safe, and seamless solution everywhere and every brand,
18 every time. We need dispatchable and flexible loads that
19 helps system operators integrate renewables, while at the
20 same time helping to maintain the customer's needs for the
21 vehicle, and improve reliability of the electric system.

22 We need cybersecurity as a must have. And this
23 needs to be cheaper and simpler than refueling of
24 conventional vehicles.

25 The only way you ever get there is to envision a

1 plug-and-play future where customers get the Tesla
2 experience, which is what Tesla has been delivering is why
3 they have 74 percent market share, they get that everywhere
4 and it's every brand.

5 So, sort of dovetailing off of one of Ethan's
6 points, we can't have every time be the first time, or it's
7 this brand you do it this way, it's that brand you do it
8 over there at that station. We need a common, unique,
9 interoperability communication standard that's going to do
10 all of these magical things for firming the grid in the
11 background without the consumer needing to know anything
12 about it, or take any action.

13 And so, I am full-throated in my support for the
14 ISO 15118 standard, which is a global standard. And I did
15 that just in time.

16 MS. GALLARDO: Thank you, Stephen.

17 All right, so next up we have Bonnie. Bonnie, a
18 reminder to please spell your name and indicate an
19 affiliation if any. Your line is open.

20 MS. DATTA: Can you hear me?

21 MS. GALLARDO: Yes, we can.

22 CHAIR HOCHSCHILD: Yes, we can hear you. Go
23 ahead.

24 MS. DATTA: Okay. Good morning Honorable Chair
25 and Commissioners, thank you for the opportunity to

1 comment. My name is Bonnie Datta and I'm Advisor to the
2 Toloache Energy (phonetic), a California-based EV
3 infrastructure startup.

4 Today I'm representing a coalition of 34
5 companies and organizations, over 200 if we add the
6 individual members of CALSTART, and Advanced Energy Economy
7 organizations in the coalition. We (indiscernible) OEM
8 charger manufacturers, EVSPs, and other technology and
9 service providers.

10 While we do not agree with every detail in the AB
11 2127 report, and we look for more definitive directions
12 from the Commission, we support its adoption and its
13 recommendations. We commend the staff's support for open
14 standards and interoperability for EV charging
15 infrastructure as essential elements to protect consumer
16 choice, promote competition, and enhance cost
17 effectiveness.

18 Open standards and interoperability improve the
19 consumer experience, a critical element in achieving
20 California's 2035 EV adoption goals.

21 And the smart chargers recommended by staff need
22 to be incentivized to avoid potentially billions of dollars
23 of grid upgrades that can be relatively easily avoided
24 through VGI, and non wires (indiscernible).

25 A successful example noted in the report is OCPP,

1 open charge point protocol. OCPP has been almost
2 universally adopted by charging software and hardware
3 providers, and allows for virtual plug-and-play between
4 technologies from different companies.

5 Another standard is ISO 15118, which enables
6 plug-and-charge and other functionalities. Plug-and-charge
7 allows EV drivers to simply plug in their chargers at
8 public sites, and the charger will intelligently
9 communicate on payment and charging details, without any
10 driver intervention. Thus, significantly enhancing the
11 consumer experience.

12 ISO 15118 is being widely adopted globally by the
13 industry. Ford Mach-E and F-150 Lightning include the
14 standard.

15 Lucid, Rivian, Arrival, Nikola, and Vonhaus are
16 in our coalition, as is Mercedes, Daimler, Volvo and Lion
17 Electric. The vast majority of charger manufacturers is
18 provisioning it in response to market demand.

19 The adoption of these standards is happening
20 voluntarily, the approach our coalition favors.

21 The importance and value of interoperability,
22 including these specific standards, can be seen in Europe
23 where EV drivers have far greater access to charging
24 infrastructure and can more easily use the available
25 charging.

1 We therefore continue to recommend that any
2 publicly-funded charges be smart, interoperable, and be
3 based on open standards. Advocating and recommending open
4 standards isn't always easy, due partly to the complexity
5 of the subject and partly to priority business interests.
6 We therefore commend staff on recognizing and highlighting
7 their importance in AB 2127 report.

8 Thank you for your time, Commissioners.

9 MS. GALLARDO: Okay, thank you Bonnie.

10 Next up is Kristian Corby. Kristian, a reminder
11 to spell your name, indicate your affiliation if any. Your
12 line is open, you may begin.

13 MR. CORBY: Hello, thank you very much. My name
14 is Kristian Corby. My name is spelled K-R-I-S-T-I-A-N.
15 Corby is C-O-R-B-Y. And I'm the Deputy Executive Director
16 at the California Electric Transportation Coalition.

17 So, I'd like to start off thanking the Energy
18 Commission Fuels and Transportation staff and
19 Commissioners. The 2127 report is very impressive and it
20 provides great insights into the current state of charging
21 infrastructure and the road ahead.

22 We commend the report's findings that California
23 will need 1.5 million chargers to support 8 million
24 electric vehicles by 2030. CalETC's own independent
25 analysis also supports this target. And I'd like to thank

41

1 the staff for working so hard on the VGI sections and being
2 responsive to our recommendations.

3 You know, we really appreciate that the report
4 emphasizes the importance of keeping fueling costs low. As
5 we all know, this will be critical to our transition away
6 from fossil fuels and ensuring that all Californians can
7 participate in electric transportation.

8 CalETC looks forward to continuing our work with
9 the Energy Commission and reaching our infrastructure
10 goals. So, thank you again.

11 MS. GALLARDO: Thanks Kristian.

12 Next is Patrick Kelly. Patrick, reminder to
13 spell your name and indicate your affiliation. Your line
14 is open, you may begin.

15 MR. KELLY: Great, thank you very much. Patrick
16 Kelly, P-A-T-R-I-C-K K-E-L-L-Y. I am head of operations
17 and commercialization for PowerFlex Solutions Systems.
18 This is an EDF renewables company. We've deployed over
19 5,000 chargers throughout California through a lot of the
20 programs, and really appreciate all of the support. And
21 trying to support the real key components of where we need
22 to be 100 percent renewable, full electrification and
23 reliability. And those goals are very important to us.

24 And I am not going to talk about 15118.
25 Actually, I'm just kidding. I love 15118, it's such an

1 important standard. And I really appreciate Kiel and your
2 entire team for putting together such a great report.

3 But I will echo a lot of the comments about being
4 very disappointed in a watered-down version of -- with no
5 teeth on what 15118 could mean. And California's
6 opportunity to be really a leader for the rest of the
7 country. We have ten times more electric vehicles than any
8 other state. We are the ones that are going to be setting
9 the standards for the follow on and plug-and-charge, and
10 the concepts of 15118. Everybody in the market really is
11 asking -- really needs it to happen.

12 And I think the people that have made comments
13 against it I consider the motivations for why. And in
14 reality, everybody will be coming to the party when the
15 standards are set, and said just get in line and follow
16 along.

17 I think one of the great examples to compare it
18 to is, you know, some of the Sun Speck (phonetic) standards
19 that CEC has done a great job of getting their arms around
20 an otherwise vulcanized environment with solar inverters.
21 And it was a really necessary step to be taken. And now,
22 that next step here is with the 15118 standards that we
23 have to promote, we have to make sure that we get ahead of
24 this.

25 We have two very unwilling dance partners right

1 now between -- and maybe three between vehicle OEMs,
2 charger manufacturers and, you know, the utilities kind of
3 pushing back on some of these. But in reality, I don't
4 think it is nearly as hard as the amount of time and oxygen
5 that we've spent on battling this.

6 And in our company we refer to 15118 as the
7 unicorn. And I really believe that it's happening, I don't
8 want it to be imaginary anymore. I really want this to
9 happen. Because right now the market is a bit constipated.
10 And anybody that's driven an electric vehicle knows how
11 terribly painful it is to have 16 different apps in your
12 phone just so that you can be ready to charge, and then you
13 still end up getting frustrated and just quitting after you
14 know, one attempt or two attempts.

15 If we make this standardized and just like OCPP
16 then, you know, this vision of like plug in, pop up on your
17 phone, it's just going to be so much easier. Thank you.

18 MS. GALLARDO: Thank you, Patrick.

19 Next up is Chris King. Chris, reminder to spell
20 your name and to indicate your affiliation if any. Your
21 line is open, you may begin.

22 MR. KING: Thank you. Thank you, Commissioners.
23 I'm Chris King, that's C-H-R-I-S K-I-N-G, SVP of eMobility
24 with Siemens.

25 I'll be brief. I do want to reiterate and

1 support the comments of my colleagues around open
2 standards, and interoperability, and 15118. Specifically,
3 I think Bonnie did a great job presenting all of that.

4 One thing I would like to add from our
5 perspective as a global corporation, working around the
6 world and seeing, particularly in Europe we're seeing a
7 real convergence around these standards which has resulted
8 in a much better consumer experience than prior adoption.
9 Much easier access to chargers and when the chargers --
10 when you get to the chargers actually being able to use the
11 chargers.

12 And interestingly, when we look at California we
13 see a missed -- an opportunity being missed. California
14 could and should be a leader in this space and this
15 interoperability standards is actually the one place,
16 frankly in the world, that we are seeing where there is
17 this huge debate about what the standards should be.

18 It's voluntary adoption in Europe. It's not
19 mandatory, it's not a government thing. It's the market
20 getting together, seeing the benefits, and implementing the
21 technology. And again, we're not seeing the debate that
22 California's having anywhere else. We're seeing widespread
23 adoption because there is huge consensus that we all want
24 the market to move forward and EVs to be adopted, and
25 consumers to have great experiences.

1 So, with that I thank you for the opportunity to
2 comment.

3 MS. GALLARDO: Thanks Chris.

4 So, the next speaker is going to be Erick Karlen.
5 Erick, reminder to spell your name and indicate your
6 affiliation if any. Your line is open, you may begin.

7 MR. KARLEN: Yes, thank you and good morning,
8 Commissioners. I'm Erick Karlen. It's E-R-I-C-K K-A-R-L-
9 EN. And I'm the Senior Policy Market Development Advisor
10 at Greenlots. And Greenlots, we're a leading provider in
11 EV charging software services and infrastructure based in
12 Los Angeles.

13 We submitted comments directly in February in
14 support of the staff report. More recently as part of a
15 30-organization coalition.

16 Greenlots is appreciative of the work of the
17 staff and the Commission that went into this report, and
18 it's various findings. In particular, (indiscernible)
19 goals of the 1.5 million shared chargers will be needed by
20 2030 for electric vehicles. And importantly, and I think
21 community support for charger deployment is needed.

22 Greenlots also values and supports the report's
23 focus on charging management strategy beyond use of having
24 its rate to better align with increasing renewable energy
25 generation, and involving grid needs in particular, and

1 recognizing the need to take steps to prioritize charger
2 and VGI standardization to protect state investments, and
3 to provide a (indiscernible) of the market.

4 However, Greenlots disagrees with recent
5 revisions to the report that seem to mischaracterize the
6 market in the ways of stakeholder perspective. While
7 certainly there is a range of technologies and business
8 models in the electrification market, we have not seen a
9 genuine debate here, or globally, of the revisions
10 characterized regarding the need in the state to maximize
11 the value to (indiscernible) the state and the grid get
12 from network chargers, and the need to push towards VGI
13 communication standardization and broader improbability
14 when networked, which (indiscernible) chargers must be
15 unless their free for requirements from other state
16 agencies.

17 Stakeholders in fact are not as far apart as this
18 framing and these provisions portray. Indeed,
19 acknowledging that phone comments were filed more recently
20 in this docket, but our count some 200 plus organizations
21 have support for these maxims, including specifically for
22 VGI readiness for the charger via 15118. This includes a
23 significant number of automakers.

24 A relatively small number of organizations,
25 including some that later evolved their positioning,

1 expressed a different perspective and they notable seem to
2 conflate advocacy for non-network chargers and VGI pathways
3 to be (indiscernible), whether a reason to not also support
4 VGI readiness in network chargers via the standard the
5 industry has already coalesced around.

6 Unfortunately, the report's revisions repeatedly
7 cite or leverage the single set of comments and more so
8 than any other set of comments, that feature that's
9 conflation of advocacy for additional business models and
10 technologies, with reasons to not pursue (indiscernible)
11 approaches that would ensure that the vast majority of
12 deployed network chargers are capable of delivering VGI
13 value.

14 We believe the market has spoken resoundedly into
15 this market and tangibly for a multitude of product
16 offerings and (indiscernible) and tenets. Maximizing grid
17 integration and supporting EV drivers means putting in
18 place infrastructure that supports VGI value and
19 communications flow through multiple pathways to support
20 competition and innovation, not just saying a single one,
21 and definitely by artificially pitting one approach against
22 another.

23 As the state prepares to support unprecedented
24 investment in EV charging infrastructure necessary to reach
25 state goals, and other parts of the world continue to

1 demonstrate leadership innovation, it's critical that this
2 state do the same to maximize the values of the state, the
3 grid, and most importantly EV drivers.

4 Greenlots and allied organizations look forward
5 to the Commission's continued leadership in recognition of
6 where the market currently is and where it must go. Thank
7 you.

8 MS. GALLARDO: Thank you.

9 The next speaker is Oleg, and I don't want to
10 mispronounce your last name, Oleg. So, let's see here,
11 please restate your name in case I did pronounce it
12 incorrectly, and spell it, and indication affiliation if
13 any. Your line is now open.

14 MR. LOGVINOV: Good morning everyone. Not a
15 problem at all. I know I have a challenging name. Oleg
16 Logvinov. O-L-E-G L-O-G-V-I-N-O-V. I am CEO of IoTecha.

17 IoTecha is a leading provider of components that
18 enable smart charging infrastructure and services that
19 support high quality, high reliability charging experience.

20 IoTecha is also a member of CharIN Alliance,
21 alliance of more than 200 organizations worldwide focused
22 on driving operability and accessibility of charging
23 enabled by combined charging system in 15118.

24 First of all, I would like to thank Commissioners
25 and staff for doing a great job looking into VGI and big

1 picture of integration of vehicles with the grid. We have
2 two very large ecosystems that have been developing largely
3 independently over the last 100 plus years, power grid and
4 transportation. Today, in order to create an organized
5 future, we need to collaborate and come together.

6 That is not possible without strong communication
7 and intelligence that will enable simple, easy, inexpensive
8 charging experience to all of us consumers.

9 I would like to remind you that when we look back
10 at the days when IBM PC became something that essentially
11 got on every single desktop, it was enabled by Microsoft
12 and Intel. Experience was similar to what was enabled by
13 Apple, very good, very seamless experience.

14 But the cost and accessibility were enabled by
15 open standards and the ability of market contenders to come
16 to the market with competing solutions. We must achieve
17 the same in electrified transportation in order to be able
18 to drive mass adoption.

19 I like the report in many points. One point I
20 disagree with. The point related to the debate on
21 (indiscernible) -- there is no debate. The modern industry
22 has worked together for the last ten plus years to achieve
23 interoperability based on ISO 15118 standards.
24 Interoperability is tough. Remember early days of cell
25 phones? How many of us experienced driving across the

1 lines of one service provider to another and not being able
2 to make a phone call. We want to avoid the same experience
3 with charging. It must interoperable. And
4 interoperability takes many organizations, more than 200 of
5 them, working together on a global scale, driving the
6 economy of sale for both products and services to enable
7 low-cost, reliable seamless experience.

8 When 15118 was created, the desire was to enable
9 experience that is just as seamless as experience of making
10 a phone call today on mobile methods. And we're there. If
11 you look at the number of vehicles today supporting 15118
12 in Europe and U.S., we're getting to this point.

13 So, now California has an opportunity to actually
14 lay the foundation to encourage use of interoperable
15 technologies and help to achieve the goal that we have set
16 at a federal government level to become leader in
17 electrified transportation. And that leadership is not
18 going to be possible without strong implementation.

19 Even if somebody says that there is a better
20 standard, which there isn't, it's impossible to adopt a
21 standard on the fly. It takes years and years of hard work
22 on the interoperability and that has been done in 15118.
23 So, let's pay attention to that. Let's embrace it and
24 let's help those who deploy to use them. Thank you.

25 MS. GALLARDO: Thank you, Oleg. And I appreciate

1 you being gracious with me on that pronunciation.

2 MR. LOGVINOV: No problem at all.

3 MS. GALLARDO: Okay, next up is, hold on I see
4 hands, I believe it's Jacqueline Piero. So, Jacqueline if
5 you could please restate your name, spell it, and indicate
6 your affiliation. Your line is open.

7 MS. PIERO: Hi, can you hear me okay?

8 MS. GALLARDO: Yes, we can.

9 MS. PIERO: Great. My name is Jacque Piero.
10 I'm the Vice President of Policy for Nuvve. Was that all
11 the information I'm supposed to give up front?

12 MS. GALLARDO: Yes, thank you. Feel free to
13 begin your comments.

14 MS. PIERO: Thank you very much for taking
15 comment today. We were very excited to see the AB 2127
16 report. It was incredibly well done. The model runs were
17 really exciting to see. We are hoping to see V2G included
18 in the model runs for the next version of this report.
19 That's the kind of forward looking analysis that we're
20 hoping to see from the analytical regulatory agency in the
21 future. But this is definitely a great start for the first
22 version of this report.

23 We do want to comment along the lines of a lot of
24 the previous commenters. But in particular, when it comes
25 to bidirectional functionalities we will be clear that

1 15118 does not currently support bidirectional power flow,
2 even though it supports bidirectional communication.

3 That said, we have been able to actually work
4 with IoTecha and with the school bus companies of Blue Bird
5 and Lion to develop extensions to actually enable
6 bidirectional power flow in advance of 15118 actually
7 including that in the standard. And this kind of freedom
8 has been really nice to be able to push forward with the
9 industry while the standard is continuing to develop.

10 To be clear, we were able to do this because the
11 CEC gave a Spec to the school bus companies to actually
12 develop production models of V2G school buses. That
13 decision launched a national race to actually put out V2G
14 school buses. You launched an industry by making this one
15 choice in your funding arrangements.

16 There are 300 Blue Bird buses with the CECS
17 connector that will allow V2G functionality in California
18 that have been sold already.

19 If you're wondering where they are, we're working
20 through the existing utility regulatory structures to
21 actually figure out how to make those useful as V2G
22 resources, but they are out there. So, I wouldn't under
23 estimate the significance of this kind of standardization.

24 That said, we want to make sure that 15118 is
25 considered as a potential solution, along with everyone

1 else, but we also think that other standards will arise
2 from industry as we identify a need. The J3068 standard is
3 in development. It is going to be an MDHD AC charging,
4 three-phase bidirectional standard that will be a com
5 standard and an associated connector.

6 I'm not saying that that is going to be the
7 standard, just that we need to remain open to others while
8 choosing a general path that we can see with 15118. Thank
9 you.

10 MS. GALLARDO: Thank you.

11 The next speaker is Matthew Forrest. Matthew, a
12 reminder to please spell your name and indicate your
13 affiliation, if any. Your line is now open, you may begin.

14 MR. FORREST: Can you hear me?

15 MS. GALLARDO: Barely.

16 CHAIR HOCHSCHILD: We can hear you, just speak
17 up.

18 MR. FORREST: All right, all right, let me try.
19 This is Matthew Forrest with Mercedes Benz. Thank you for
20 the opportunity to make a comment today. I would like to
21 say that we at Mercedes Benz would like to express our
22 appreciation to the staff for all of the work that went
23 into this AB 2127 report. It's a very impressive report.

24 In particular, we appreciate their engagement on
25 the ISO 15118 topic and their openness to helping support

1 the implementation and deployment of this standard in the
2 future.

3 We think this international standard will help
4 ensure substantial value and customer satisfaction for ZEV
5 customers in the future, which will be key to helping the
6 state meet its ZEV adoption goals. So, thank you.

7 MS. GALLARDO: All right, that was the last hand
8 I see raised. Let me do one last call. Anyone else have a
9 public comment on this item, Number 3?

10 All right, Chair, I do not see any other hands,
11 we can move forward.

12 CHAIR HOCHSCHILD: Thank you so much to everyone
13 for those comments. I really appreciated the comments on
14 standardization and some of the risks and costs that we
15 avoid if we can get that right. And to me, before I turn
16 it over to Commissioner Monahan, you know, I do think the
17 goal here is to build a charging infrastructure system in
18 our state that's really ubiquitous, standardized, and
19 affordable.

20 And I want just to highlight for everybody how
21 extraordinary the May revise budget that the Governor has
22 proposed is for this. So, for us at the Energy Commission
23 it's \$2.1 billion of additional resources. We're putting
24 half of that into transportation electrification new
25 infrastructure. And we really hope to see that deployed.

1 And also, the Governor has proposed extending for
2 the next decade AB 8, which is \$100 million a year. And,
3 you know, that's going to all of this stuff as well. And
4 so, we support fully the Governor's proposals and look
5 forward to working with the Legislature on all this, if
6 that can get over the finish line.

7 But let's turn it over now to Commissioner
8 Monahan to begin the Commissioner discussion.

9 COMMISSIONER MONAHAN: Thanks Chair. Well, I
10 want to thank Kiel. I thought he did a great job
11 presenting the 2127 report, and a great job just checkering
12 the project. He was project manager for this report and it
13 really was complicated with all the different consultants,
14 as Kiel elaborated with NREL, with UC Davis, and with my
15 former organization I think also Commissioner McAllister,
16 at Lawrence Berkeley National Laboratory.

17 There's a big team of folks. I just want to
18 thank the team that managed this project, or that wrote the
19 analysis and managed all the contracts. That's Matt
20 Alexander, Mel Cristophemo (phonetic), Wendell Crell
21 (phonetic), Jeffrey Lieu, Roger Ramesh. You know, they all
22 worked really hard on this, as did the supervisors.
23 Charles was involved, Charles Smith, and Hannon of course
24 was involved in this project as well.

25 And the report really highlights, as the Chair

1 said that, you know, we need a big ramp up in charging
2 infrastructure. You know, with the funding that we have
3 available, we're going to have about 200,000 -- we'll try
4 for 200,000 chargers. You know, we need a six fold
5 increase by 2030. And, you know, that is just going to
6 take a very close public/private partnership, and
7 especially to make sure that this is an equitable -- that
8 there's equitable access to zero emission vehicle
9 infrastructure.

10 You know, we know now that most of the people who
11 buy these new cars, these new EVs, live in single-family
12 homes and they can charge overnight in their driveway. But
13 to reach all Californians, we need to make sure that when
14 you live in an apartment building or a multifamily dwelling
15 that you can also refuel your zero emission vehicle. And
16 that's the challenge. That is our challenge. And it is
17 not easy.

18 So, you know, as the Chair said the Governor's
19 budget really doubles down on the infrastructure and we're
20 excited to support that. This 2127 report reinforces the
21 need for deep investments.

22 I do want to thank all the folks that came and
23 testified about the importance of standardization, and
24 especially with issues around 15118. I'm guessing they're
25 not too sure like what is this you want to make?

1 So, if you'd like to talk about it further, I'm
2 sure the team can tell you all about it. I will say that
3 it has been extremely controversial. Many of the folks
4 that came out today were highlighting the benefits of it in
5 terms of this plug-in charge capability, and the fact that
6 it is common place in the EU.

7 I will say, you know, there are stakeholders who
8 disagree with that. They would include major car companies
9 like GM, Ford, Nissan, Toyota, the California utilities
10 like PG&E and SoCal Edison, consumer groups like Plug-In
11 America, and charging companies like EVgo. So, this has
12 been a very controversial issue. And, you know, we're
13 committed to listening to stakeholders and having a process
14 of engagement to be able to flesh out some of the, you
15 know, whether 15118 is something for the light-duty vehicle
16 market we should really be promoting more actively. So, we
17 want to have a stakeholder engagement process.

18 I think many of you also know that Air Resources
19 Board passed regulations that require chargers to have the
20 capability down the road to be able to just use a credit
21 card to make it easy for consumers to charge their
22 vehicles. But, you know, this idea that right now we have
23 three different plugs, which is not so great on the light-
24 duty vehicle market. We're trying to avoid that in the
25 medium- and heavy-duty vehicle space, and have some

1 investments to see if we can get a more standardized
2 approach in that arena.

3 But we strongly agree the more we can
4 standardize, the easier it is to make -- to drive down
5 prices and for consumers to have a very positive
6 experience.

7 But anyway, the bottom line really is this report
8 really demonstrates how we have to scale up. And we have
9 to do it smartly and we have to do it equitably. And so,
10 I'm very excited to support this and looking forward to
11 working with the team on continuing to refine the analysis
12 and improve it over time.

13 CHAIR HOCHSCHILD: Thank you, Commissioner.

14 Let's go to Commissioner discussion. Any other
15 Commissioners wishing to make a comment? Commissioner
16 Gunda?

17 COMMISSIONER GUNDA: Oh, Commissioner McAllister,
18 I don't know if you want to go first. Happy to defer.

19 So, yeah, I just wanted to I think note
20 Commissioner Monahan's thanks to the entire team. Reports
21 like this are not easy, so Kiel thank you for your
22 wonderful presentation and the detail that you looked at.

23 I do have a couple of comments, I think of focus
24 as we think through this for the future. And I'm looking
25 through specifically the lens of SB 100 and kind of the

1 long-term electricity grid planning, and the intersection
2 of how we think about the locationality of the chargers,
3 and more broadly the grid reliability.

4 So, you know, a couple of observations I think,
5 you know, we recently had under Commissioner McAllister's
6 leadership the building decarbonization efforts at a couple
7 of workshops. And we're beginning to see the movement in
8 the peak load when it happens, both seasonally and on the
9 hourly basis.

10 And similarly in this report, I know in some of
11 the preliminary findings you showed, really kind of pushed
12 that load into the early evening hours and in the late
13 hours, you know.

14 So, as we think through the future of the grid
15 and as we put it in the context of the western, more
16 western outlook, and we think about the shaping of the
17 imports, and the kind of doubling peaking that we might
18 see, the seasonality, it's really important to highlight
19 your specific comments on load flexibility, and thinking
20 about how do we optimize the resources to a broader kind of
21 a grid asset, right.

22 So, I'm really glad that we're looking at it and
23 I just encourage you to think about locationality and
24 seasonality more broadly as we continue this research.

25 Also, really appreciate the comments from

1 different commenters on the need for ensuring that we have
2 a large number of chargers, but also kind of some way of
3 standardizing in an (indiscernible) fashion and being a
4 leader in this arena.

5 And I just want to thank Commissioner Monahan's
6 perspective and leadership, generally the way she
7 approaches things in balancing the different points of
8 view. And I just want to note that I hear the importance
9 of that and I'm hoping that we resolve that as we move
10 forward, as Commissioner Monahan continues to lead this
11 effort. So, thank you everybody.

12 CHAIR HOCHSCHILD: Thank you.

13 Commissioner McAllister.

14 COMMISSIONER MCALLISTER: Yeah, great. Thanks a
15 lot. So, great job Kiel, I really appreciated that
16 presentation, comprehensive and very just focused on the
17 really important stuff. So, I really appreciate that and
18 the whole team behind this report.

19 And I want to reiterate thanks to Commissioner
20 Monahan for this leadership on this. Just your depth of
21 knowledge really helps I think frame these issues in a way
22 that's incredibly productive.

23 And, you know, I guess I'm going to assume that
24 we get this ramp up in charging structure, and kind of
25 really focus on a comment to complement what Commissioner

1 Gunda just said. You know, the huge opportunity we have
2 here is to understand how the loads are changing and where
3 they are, so that we can help target investment in the
4 distribution grid. You know, largely the distribution
5 grid. I mean, really, all the way up to the whole western,
6 you know, the western interconnect.

7 But I think the investment that's going to be
8 driven by the scale up in both transportation
9 electrification and in building electrification it's a
10 challenge to kind of get our heads around, and we really
11 need the data, and kind of good situational awareness as
12 that unfolds and develops. But it's a huge opportunity to
13 get our grid optimized and really bring average cost of
14 energy down over time.

15 And as we shift to, you know, a decarbonized
16 electric future, in great measure that is -- just has so
17 many upsides. And so, we really, at the Commission are in
18 a position to shape that conversation and really actively
19 pursue this optimization that Commissioner Gunda mentioned.
20 So, I'm really excited about that.

21 You know, where are these loads? Because we're
22 going to have a lot of chargers everywhere, but I think
23 we're going to see where the -- you know, not all chargers
24 are going to be used equally, and the locationality of
25 where the energy itself, and the capacity is actually

1 needed is something we really need to keep an eye on. So,
2 anyway, the VGI opportunity is just immense in that regard.

3 And then just implicitly we're talking about load
4 flexibility. So, you know, buildings and transportation,
5 buildings as a platform perhaps. You know, I'm trying to
6 think about, you know, sort of how we can integrate
7 investments. When we invest in buildings, how we also
8 complement that with the transportation piece so that just
9 as a matter of public policy we can be smart about this.

10 So, and then finally just wanted to acknowledge
11 all the comments about standardization. That's a -- you
12 know, we the agency that is positioned and has
13 responsibility across many areas to look for opportunities
14 to standardize and, you know, impose regulations. And we
15 don't do that lightly. So, I think the process to really
16 listen to everybody and see what is the best path forward
17 for California is really where we should go. And I have a
18 lot of faith, obviously, in Commissioner Monahan's
19 leadership in that regard. So, process is really important
20 here. So, it's important everybody gets listened to.

21 So, again thanks to Kiel, and the team, and
22 Commissioner Monahan.

23 CHAIR HOCHSCHILD: Thank you.

24 Commissioner Douglas, did you wish to make any
25 comments?

1 COMMISSIONER DOUGLAS: No, not -- you know, maybe
2 just to reiterate the appreciation for the presentation and
3 the comments. And I know these are hard issues that we are
4 working through. And I certainly support this item and
5 thank Commissioner Monahan for her efforts here.

6 CHAIR HOCHSCHILD: Yeah, thank you.

7 I second the thanks to Commissioner Monahan, who
8 just has brought so much depth in relationships, and
9 stakeholder outreach to get us to this point. I know this
10 report's been eagerly anticipated by many stakeholders and
11 the Legislature, and others.

12 I did want to ask, Commissioner Monahan, if you
13 could kind of look out ahead just from a process
14 perspective about how you see us tackling the
15 standardization question? Because I think there is a lot
16 of, you know, opportunity to avoid stranded assets and make
17 sure customers have a better experience. It's a very
18 thorny thing to work through that and just would love your
19 thoughts on how you see that unfolding.

20 COMMISSIONER MONAHAN: Yeah, I mean I think this
21 is a workshop process that's specific to this question. I
22 mean it's so important in terms of -- and it goes across
23 agency aspects of this. So, the CPUC and the Air Resources
24 Board need to be involved in that conversation, especially
25 with CARB having the regulation on the books around using a

1 credit card. Which I think 15118 is plug-and-play, so you
2 don't actually need a credit card for this. There's a lot
3 of investments that the CPUC is making or that the CPUC is
4 authorizing by the utilities. There's just a lot of cross-
5 agency in play here, so it has to be a cross-agency
6 workshop conversation.

7 And I do envision bringing the stakeholders
8 together, and especially I mean we want diverse interests
9 represented. We want car companies, charging providers, we
10 want some of the, you know, Nuvve and some of these
11 companies that are doing really interesting things in terms
12 of vehicle-grid integration. We want consumer voices. I'm
13 particularly interested in Plug-In America, and Consumers
14 Union as some of the lead consumer voices in this.

15 And I think we need to hear all these diverse
16 stakeholders and also see if there's any movement among
17 these diverse stakeholders. As they hear what others are
18 saying, does that change their position? And, yeah, we
19 need a public process just to vet the positions, to
20 evaluate the -- you know, how do we get to a point where it
21 is extremely easy for anybody to charge their vehicle, and
22 where there is the opportunity to be able to use vehicles
23 either as, you know, a grid asset, but at most we'd love to
24 be able to facilitate that through our infrastructure
25 investments.

1 CHAIR HOCHSCHILD: Okay, very helpful. Well, I
2 look forward to supporting you and working with you on
3 solutions there.

4 And with that, I would entertain a motion,
5 Commissioner Monahan, if you'd like to move the item.

6 COMMISSIONER MONAHAN: I move Item 3.

7 CHAIR HOCHSCHILD: Commissioner McAllister, would
8 you be willing to second?

9 COMMISSIONER MCALLISTER: I second.

10 CHAIR HOCHSCHILD: All right, all in favor say
11 aye.

12 Commissioner Monahan?

13 COMMISSIONER MONAHAN: Aye.

14 CHAIR HOCHSCHILD: Commissioner McAllister?

15 COMMISSIONER MCALLISTER: Aye.

16 CHAIR HOCHSCHILD: Commissioner Douglas?

17 COMMISSIONER DOUGLAS: Aye.

18 CHAIR HOCHSCHILD: Commissioner Gunda?

19 COMMISSIONER GUNDA: Aye.

20 CHAIR HOCHSCHILD: And I vote aye as well.

21 That item passes unanimously.

22 Let's turn now to Item 4, Solar Energy Generating
23 Systems.

24 MS. HUBER: Good morning Chair and Commissioners.
25 My name is Elizabeth Huber and I work in the Siting

1 Transportation and Environmental Protection Division. I
2 manage the Compliance, Monitoring and Enforcement Office,
3 overseeing staffs' analysis of the Final Decommissioning
4 Plan for the Solar Energy Generating System, SEGS, III-VII
5 facility.

6 With me today also includes from my staff, lead
7 Compliance Project Manager John Heiser, my colleagues from
8 staff's Engineering, and Siting, and Environmental Offices,
9 Geoff Lesh and Eric Knight, and Legal Counsel, Kerry
10 Willis.

11 Also available this morning, representing the
12 project owner, NextEra Energy Resources and Luz Solar
13 Partners are Dexter Liu, Kenneth Stein, and Scott Galati.

14 The next slide, please. The decommissioning of
15 this solar, thermal and natural gas-fired power plant
16 illustrates another "cradle-to-cradle" opportunity in which
17 a former power plant site is being repurposed to a facility
18 using photovoltaics, PV, and battery energy storage that
19 will help meet peak power needs and support California's
20 goals of a clean energy future.

21 The next slide, please. Located within the
22 Mojave Desert, near the town of Kramer Junction, in
23 unincorporated San Bernardino County, SEGS III - VII began
24 operating in the beginning of 1989 providing 150 megawatts
25 of electricity through a power purchase agreement from

1 Southern California Edison.

2 The next slide, please. For more than 30 years,
3 the SEGS III-VII units were part of nine solar farms
4 representing one of the longest operating commercial solar
5 facilities. The units supplied electricity to the
6 California Independent System Operator on a merchant basis,
7 having sold both local and system resource adequacy and
8 bidding daily into the merchant energy markets until it
9 ceased operations in the fall of 2019.

10 The next slide, please. In April of this year,
11 the project owner submitted a Final Decommissioning Plan
12 detailing their demolition and closure activities. They
13 filed in compliance with their Condition of Certification,
14 Requirement 1, in the Decommissioning section of the Final
15 Commission Decision. In the staff analysis, it was
16 identified that within the existing conditions of
17 certification for SEGS III-VII remains applicable to
18 decommissioning today.

19 As identified in the staff analysis, staff also
20 reviewed the project owner's proposed decommissioning
21 conditions, referred to as Conditions of Decommissioning,
22 and recommended these new decommissioning conditions for
23 approval subject to modifications and additions, which are
24 incorporated into the proposed order before you today.

25 The next slide, please. Staff also reviewed and

1 concluded that with the CEC's adoption of all proposed
2 decommissioning conditions, the implementation of SEGS III-
3 VII Final Decommissioning Plan would result in no
4 significant adverse environmental impacts, and would comply
5 with all applicable laws, ordinances, regulations, and
6 standards.

7 In addition, the activities described in the
8 Decommissioning Plan would not impact any population,
9 including disadvantaged and environmental justice
10 communities.

11 Once decommissioning and demolition of certain
12 plant facilities and operational equipment is complete, the
13 project owner does intend to request a termination of its
14 CEC license so that they can move forward on repurposing
15 for both a PV facility and a battery energy storage system.
16 The new clean energy facility will be constructed and
17 operated under the jurisdiction of San Bernardino County.

18 The next slide, please. The decommissioning of
19 SEGS III-VII is a result of economic considerations,
20 maintenance costs and evolving California energy markets.

21 Staff requests your approval of SEGS III-VII
22 Final Decommissioning Plan, including the newly proposed
23 decommissioning conditions throughout the closure process.

24 The next slide, please. This concludes the
25 presentation. Thank you. We'd be happy to answer any

1 questions you may have for the entire team here today.

2 CHAIR HOCHSCHILD: Thank you. Let's move on to
3 public comment.

4 MS. GALLARDO: This is Noemi, the Public Advisor.
5 A reminder again to click on the raise hand icon if you
6 would like to make a public comment. If you're on by
7 phone, press *9 so that we can see your hand raised.

8 All right, we do have one hand raised, Scott
9 Galati. You may begin.

10 MR. GALATI: Thank you Commissioners. My name is
11 Scott Galati. I represent NextEra Energy Resources. Proud
12 to represent that company for quite some time.

13 This Decommissioning Plan is an important part of
14 reuse of the site, as staff went through in its
15 presentation. It's important to understand that this
16 project has been fully contracted out and has some very
17 tight timelines that we're meeting.

18 Staff has been very, very good in working with us
19 to get to decommissioning and get to be able to start work
20 out there as soon as possible. We were currently working
21 to be able to do that by Monday.

22 We'd like to thank members and staff that have
23 been particularly helpful in communicating with us, in
24 hearing our issues, in helping for us to draft -- go from a
25 draft Decommissioning Plan to a final Decommissioning Plan

1 very quickly. And specifically, I'd like to call Kerry
2 Willis, Elizabeth Huber who you've heard from Eric Knight,
3 and Geoff Lesh, Project Manager John Heiser, and finally
4 Shawn Pittard, who we believe did the review over the
5 holiday weekend.

6 We really appreciate that work. We've been
7 working clearly with staff very hard in submitting all of
8 our compliance plans. We received many comments back and
9 were turning around those as quick as we can.

10 Again, we hope that we'll be able to get the
11 final notice to proceed on the first part of
12 decommissioning early next week. We would like to just ask
13 for your approval on this Decommissioning Plan.

14 And there's one thing on a personal level I'd
15 like to make sure that I say is I know some of the
16 Commissioners know one of the persons on the phone has
17 worked for NextEra Energy for a long time, and has
18 represented all of the projects that I have worked on with
19 them in from the Commission. He is retiring. His name is
20 Kenneth Stein. It's important I think for Commissioners to
21 sometimes hear that there's people on the other side in the
22 private world that make these projects happen and Mr. Stein
23 is one of them. And I'd just like to wish him a happy
24 retirement. It's a pleasure working with him. And I know
25 the Commission will miss him as well. Thank you.

1 CHAIR HOCHSCHILD: Thank you.

2 MS. GALLARDO: And this is Noemi again. Chair, I
3 do not see any other hands at the moment. And wanted to
4 clarify that we brought on Scott, given his relationship
5 and with approval of staff. So, he can stay on if you have
6 additional questions.

7 CHAIR HOCHSCHILD: Thank you. Well, before I
8 turn it over to Commissioner Douglas I'll just say, you
9 know, this is a big milestone. The SEGS project was an
10 incredibly significant project in the history of renewable
11 energy in this country. You know, the largest of its kind
12 in the solar thermal arena. And really, I think was one of
13 the things that helped cause people to start to think big
14 about renewables. And so, I just want to give a tribute to
15 all of the team, you know, that did the original project.
16 I look at how hard, at that time when this facility was
17 built, you know, it was to kind of build something of that
18 scale, and I'm just amazed, and inspired. And, you know,
19 that was kind of -- sort of opened the door to this
20 incredible growth that we've seen now around the state,
21 around the country, around the world on renewables, and a
22 big milestone. So, this is a significant chapter in the
23 history of renewables and I just wanted to make note of
24 that.

25 But with that, let me turn it over to

1 Commissioner discussion, starting with Commissioner
2 Douglas.

3 COMMISSIONER DOUGLAS: Well, great and thank you,
4 Chair Hochschild for those comments. I do know that the
5 chapter of the SEGS projects, and getting those off the
6 ground was a really big achievement, and a big challenge,
7 and a really impactful event for us as we look at the
8 trajectory of renewables in California and in the world,
9 really, when you look, as you say, at people thinking big
10 on solar.

11 And thank you to Scott for mentioning Kenny
12 Stein's retirement. Congratulations Kenny, if you're there
13 and listening.

14 I want to say that, you know, I also appreciate
15 the hard work, and quick and effective work, and outreach
16 that was done by staff for this plan, and support the
17 approval of the facility Decommissioning Plan. Staff not
18 only did a thorough written analysis and assessment of
19 potential impacts, as they always do, they also worked hard
20 in the area of public engagement including holding a
21 workshop earlier this year to ensure that nearby property
22 owners and other interest members of the party had an
23 opportunity to understand the decommissioning process.

24 I wanted to note as well the project owner's
25 responsiveness in making changes to the plan in response to

1 some of staff's feedback.

2 And so, you know, I'm delighted that this site
3 after decommissioning will, or is intended to be repurposed
4 as a solar PV facility. And I look forward to making a
5 motion on this item once we finish comments.

6 CHAIR HOCHSCHILD: Thank you. Other
7 Commissioners wishing to make a comment on this item?

8 COMMISSIONER MCALLISTER: Yeah, I'd like to just
9 very briefly.

10 CHAIR HOCHSCHILD: Great.

11 COMMISSIONER MCALLISTER: So, yeah, so I totally
12 agree with your comments, Chair Hochschild, about just the
13 fundamental vision shift that this plant caused. I
14 remember early on in grad school, you know, doing a visit
15 and then it took -- actually, international visits, there's
16 like road trips, you know, down to see this facility
17 because it really made a global splash. And so, folks were
18 paying attention from all over the world. And so, when
19 they'd come to California it was sort of like, you know, a
20 trip to Mecca to go down and see this big solar plant. And
21 yeah, a really, really huge milestone. So, it's
22 interesting to see, you know, where we are today and how
23 the maturation of the solar industry has just accelerated.
24 And closing this, this is a relatively I think, you know,
25 early chapter in a very long and thick book that we're

1 closing here. So, that's great.

2 Congratulations to Scott and everyone involved.

3 And, you know, it's changed over the years, you know, a
4 number of times and, you know, had some ups and downs over
5 the years. But it really performed and was a stalwart part
6 of the grid. So, yeah, really, really gratifying to see
7 this project reach its conclusion.

8 CHAIR HOCHSCHILD: Well said, Commissioner.

9 Any other comments? You know, if not, the only
10 other point I'd make, you know, when you think about the
11 evolution of renewables is that each sequential step, you
12 know it's not like when you do a big solar thermal project
13 that the failure as it, you know, gets decommissioned 30
14 some years later actually it's really a success. It helped
15 unlock a lot of investment.

16 And then, you know, technology moves forward.
17 But, you know, I don't think that solar photovoltaics would
18 be where they were if not for some of the early solar
19 thermal investments. And you just get people's minds
20 thinking more expansively when you build anything big at
21 scale. And so, there is this kind of beautiful technology
22 evolution over time as we bring down costs, and mature the
23 technology, and the efficiency and so forth. And I would
24 just again mark this as a very significant milestone on
25 that journey.

1 And a tribute to, you know, doing something
2 first. Being the first big project of its kind, it's
3 always much, much harder. And, you know, just what you
4 have to go through with any new technology. So, a real
5 tribute to those early pioneers. And congratulations.
6 With that, I would entertain a motion from
7 Commissioner Douglas, if you wanted to move the item.
8 COMMISSIONER DOUGLAS: Yes, I move the item.
9 CHAIR HOCHSCHILD: Thank you.
10 Commissioner McAllister, would you be willing to
11 second?
12 COMMISSIONER MCALLISTER: I second the item.
13 CHAIR HOCHSCHILD: Okay, all in favor say aye.
14 Commissioner Douglas?
15 COMMISSIONER DOUGLAS: Aye.
16 CHAIR HOCHSCHILD: Commissioner McAllister?
17 COMMISSIONER MCALLISTER: Aye.
18 CHAIR HOCHSCHILD: Commissioner Gunda?
19 COMMISSIONER GUNDA: Aye.
20 CHAIR HOCHSCHILD: Commissioner Monahan?
21 COMMISSIONER MONAHAN: Aye.
22 CHAIR HOCHSCHILD: And I vote aye as well.
23 That item passes unanimously thanks to Scott, and
24 staff, and everyone else.
25 Let's move on now to Item 5, 2022 Title 20 Data

1 Collection Regulation Modifications.

2 MR. EGGERS: Good morning Chair, Commissioners,
3 I'm Ryan Eggers of the Energy Assessments Division. I'm
4 here today to provide you an informational brief on the
5 Energy Commission's upcoming Phase 2 Data Rulemaking, as
6 well as to inform you of staff's intentions of opening
7 formal rulemaking proceedings on June 18th, which is 9 days
8 from now.

9 The next slide, please. While some of you have
10 been directly involved in this work, to take a step and
11 answer the question of why is staff doing this and what
12 does California get out of this, it's to improve the Energy
13 Commission's forecast and assessments. Specifically, to
14 improve our work in ensuring energy reliability for all of
15 California and helping advance our state energy goals.

16 With more detailed and complicated analysis being
17 performed and required of the Energy Commission every year,
18 staff additionally requires new and exceedingly granular
19 information in order to provide the Energy Commission with
20 the best analysis possible. Thus, Energy Commission data
21 regulations need to change and evolve as well to meet the
22 analytical requirements of the people of California.

23 The next slide, please. For this phase of data
24 regulation changes, this rulemaking package can be broken
25 down into two types of changes. Collecting and tracking

1 new data, which there are three new asks, and cleanup of
2 general language.

3 For new data items, staff is proposing collection
4 of hydrogen, biodiesel, and renewable diesel production
5 data, which includes inventory and feedstock data as well.
6 This information is needed for fuel supply energy knowledge
7 accounting which relates to energy state or state energy
8 goal tracking, and fuel availability assessments for
9 reliability assessment work.

10 The second ask is property-assessed clean energy
11 data, also known as PACE data, will give information on
12 clean energy retrofit projects allowing for more precise
13 tracking of energy-efficient improvements throughout the
14 state.

15 The third, and finally, natural gas storage
16 system data will give information on operational activities
17 of natural gas storage facilities. This will further the
18 work of the Energy Commission's Natural Gas Team in their
19 efforts in hydraulic modeling that is being undertaken for
20 contingency planning activities, and analysis of natural
21 gas systems vulnerability.

22 For general regulations cleanup, for which there
23 are numerous changes, they can be broken into the first
24 category, being data submission procedural changes.
25 Changes here are being made to make it easier to submit

1 inland filings by data reporters.

2 The next category is general language
3 modernization. Here we're moving wind reporting
4 requirements to the code sections that contain all other
5 generation reporting requirements, as well as standardizing
6 water usage data requirements for generators.

7 Additionally, changes here are being made to
8 update other data elements as increased understanding of
9 the required information has been obtained.

10 The third and final category is confidentiality
11 process changes. For this work, changes are being made to
12 undertake to streamline the confidentiality processes and
13 to make code sections consistent with the Public Request
14 Act requirements.

15 The next slide, please. This has been a project
16 long in making, but to cover some key timeline highlights
17 staff has already held a prerulemaking workshop to gather
18 stakeholder comments. That was held October 27th of last
19 year.

20 As mentioned, our filing and posting date for
21 this rulemaking will be June 18th of this year.

22 A public rulemaking hearing for this proceeding
23 is scheduled for August 6th of this year for additional
24 stakeholder comment.

25 Staff's plan is to then get these regulations

1 enacted by January 1st of next year to begin data
2 reporting.

3 The next slide, please. Our next big step is
4 opening this rulemaking proceeding. If successful, I do
5 hope to be once again presenting in front of you in
6 September, for a vote on this regulation package.

7 That concludes my presentation and I'm available
8 to answer any questions you may have. Thank you.

9 CHAIR HOCHSCHILD: Thank you, Ryan. We'll go
10 straight to Commission discussion since this is a non-
11 voting item, beginning with Commissioner Gunda.

12 COMMISSIONER GUNDA: Yeah, Chair, thank you. I
13 just have a couple of notes of thanks and highlight the
14 importance of this data, as Ryan mentioned. Just really
15 want to commend Ryan Eggers for his persistence and
16 continued efforts on this. It's been, as he mildly put, a
17 long, long work here for over 18 months or so. So, thanks
18 to Ryan for all his work.

19 Also want to highlight the collaborative effort
20 between the different divisions in coming up with these
21 different data requests, as well as the CCO for data ports,
22 specifically Karen Holmes in the Chief Counsel's Office for
23 all the help she provided in moving this forward.

24 The data is very, very key on our expanding
25 analytical work. We have a lot of assessments that we are

1 finding both on the electricity system, as well as the gas
2 system, but also overall reliability including fuels, as
3 well as the emergency systems that we're planning to do.

4 So, it's an important step and I thank Ryan for
5 his work and wish him luck as we go to the next phase.

6 CHAIR HOCHSCHILD: Thank you. Any other
7 Commissioners wishing to make a comment on this item?
8 Okay, yeah, Commissioner McAllister.

9 COMMISSIONER MCALLISTER: Yeah, so thank you,
10 Ryan, thanks Chair, thanks Commissioner Gunda. I just
11 wanted to highlight, build on what Commissioner Gunda said.
12 You know, it's gratifying to see this move forward. You
13 know, these -- we have very deep authority in data
14 collection at the Energy Commission and it's really part of
15 our core responsibility and has been ever since the
16 founding of the Energy Commission.

17 And, you know, that was an analog era and that
18 was when the utilities really did much more data collection
19 and, you know, it cost a lot more. You know, you had to
20 generate more data sort of really proactively out in the
21 field, and it was very laborious, and we had very limited,
22 you know, many fewer data points, you know.

23 And so now that we're in the digital age, you
24 know, the Energy Commission is moving into that age at full
25 speed. And I think, you know, we have these challenges

1 that we talk about every business meeting and have already
2 today, but huge opportunity to leverage all this data
3 that's out. In particular, you know, phase one established
4 kind of our plan for getting AMI data, and a number of
5 other things. And this phase two rulemaking is going to
6 really push that further into some specific areas, increase
7 our ability to do detailed gas system analysis which is
8 going to be critical going forward.

9 And the PACE data, you know, PACE is having a
10 little bit of hard times these days, but it's an area that
11 has financed a lot of existing building upgrades. And as
12 we try to get our heads around what happens there and how
13 we approach that sector, it's critical to understand what's
14 happening, what the costs are, and kind of understand,
15 really, what the energy implications of that, of those
16 efforts actually are. And so, collecting that data is
17 really key for good policymaking.

18 So, really, I just wanted to frame this as
19 underpinning the Energy Commission's increasing sort of
20 seriousness and incredible competence in these analytical
21 arenas so we can advise the Governor, advise the
22 Legislature on what policy directions they may want to
23 take.

24 So, thanks Ryan for that, really appreciate it.

25 CHAIR HOCHSCHILD: Thank you, Commissioners.

1 Unless there's other comments on Item 5, we'll move on.
2 What I'd like to do, colleagues, with your permission, is
3 take up Item 6, complete that in its entirety and then
4 break for lunch.

5 So with that let's move ahead to Item 6,
6 California Schools Healthy Air, Plumbing and Efficiency
7 Program.

8 MR. FONG: Thank you. Good morning Chair and
9 Commissioners. I'm Jonathan Fong, Manager of the School
10 Stimulus Office in the Renewable Energy Division. With me
11 today from the Chief Counsel's Office is Matthew Pinkerton
12 and Allan Ward.

13 Today, staff is recommending adoption of program
14 guidelines for the two California Schools Healthy Air,
15 Plumbing and Efficiency, or CalSHAPE grant funding
16 programs. Both programs established under Assembly Bill
17 841.

18 Next slide, please. CalSHAPE is comprised of two
19 programs that provide much needed support to California
20 schools, providing grants to improve indoor air quality and
21 energy efficiency by ensuring HVAC systems are assessed,
22 maintained, and operated correctly. Additionally,
23 replacing aging plumbing fixtures and appliances will help
24 schools conserve water.

25 These programs include scopes of work that

1 require the use of qualified testing personnel, and skilled
2 and trained workforces to implement these programs. This
3 will result in quality jobs across the state and assist in
4 contributing to California's economic recovery.

5 The next slide, please. Assembly Bill 841 was
6 signed into law in September of 2020 and directed the CEC
7 to form and administer the School Energy Efficiency
8 Stimulus, or SEES Program.

9 Moving forward, staff will refer to the SEES
10 program as the CalSHAPE Program. The new program name is
11 more succinct, easier to remember and, hopefully, will be
12 easier to pronounce.

13 The CalSHAPE Program consists of two programs.
14 The ventilation program that provides grants to assess,
15 maintain, and repair or replace ventilation systems. And
16 the plumbing program that provides grants to replace aging
17 and inefficient plumbing fixtures and appliances. These
18 programs will provide assistance to schools to assess and
19 maintain their system, and reduce water usage through the
20 replacement of fixtures with water saving and Energy Star
21 appliances.

22 Next slide, please. Program funding comes from
23 the large gas and electric utilities' energy efficiency
24 rolling portfolio funds and is based on the utilities'
25 annual budget advice letters, which are submitted to and

1 approved by the California Public Utilities Commission.

2 The CEC receives funds from these utilities on a
3 quarterly basis for three years, from 2021 through 2023.

4 The quarterly receipt of payment is important to highlight
5 because unlike other grant programs, CalSHAPE does not
6 receive all of the funding up front and the full amount of
7 annual funding may not be available on the year it's
8 collected, nor are the funds always accrued on the same
9 schedule.

10 For program year 2021, the funds available for
11 the program is estimated to be about \$266 million.

12 For the entire program, the overall budget is
13 estimated to be \$500 million, with the potential to be
14 higher. We say potential because the utility budgets are
15 approved annually, so the budgets for 2022 and 2023 are
16 only an estimate at this point.

17 Additionally, although the funds are collected
18 for three years, the statute does allow for the CEC to
19 administer the program through December of 2026.

20 As required by the statute, 75 percent of the
21 program funds are allocated to the ventilation program and
22 25 percent of the funds are allocated to the plumbing
23 program.

24 The CEC is required to ensure that funds from
25 each utility must be spent on projects located in the

1 utility service territory from which they were received.
2 What this means is that the CEC cannot use funds derived
3 from one utility territory to grant a project outside of
4 that territory.

5 The next slide, please. For the initial phase of
6 the program, grants will be awarded to local education
7 agencies, or LEAs for short. LEAs are school districts as
8 defined in the Education Code, which includes county boards
9 of education, county superintendents of schools, and direct
10 instructional services by the state, and charter schools.

11 The initial phase of CalSHAPE awards will be
12 limited to schools that are located in an area that meets
13 at least one of the five criteria for designation as an
14 underserved community as defined in the statute, which is a
15 community with a median household income of less than 80
16 percent of the state average, within an area identified as
17 among the most disadvantaged 25 percent in the state.

18 According to the California Environmental Protection
19 Agency's CalEnviroScreen tool, a community in which at
20 least 75 percent of the public schools in the project area
21 are eligible to receive free or reduced price meals under
22 the National School Lunch Program, or a community located
23 on lands belonging to a federally recognized California
24 Indian tribe.

25 With such a broad definition of underserved

1 schools, staff estimates that nearly 60 percent of the
2 schools in the state will meet at least one of these five
3 criteria. By prioritizing schools in this initial phase,
4 we're able to provide grants to schools that are in the
5 most need of support.

6 The next slide, please. As discussed, the
7 CalSHAPE Program has specific criteria for LEAs located in
8 underserved communities. To assist in screening for
9 program eligibility, staff has developed a web tool that
10 can be access from our program webpage. This tool
11 incorporates data layers, such as IOU service territory,
12 EnviroScreen data, Census data, and other pertinent data
13 from the Department of Education.

14 As we're showing in this short video, anyone is
15 able to use this web tool to search for a school or LEA,
16 view the underserved community filters, and determine if
17 the school may be eligible to participate in our initial
18 phase of programs.

19 Additionally, for ease of reference, all of this
20 information can also be exported from this web too in an
21 Excel format and downloaded for future reference.

22 The next slide, please. The program guidelines
23 before you today are the result of staff's efforts to
24 engage with stakeholders to better understand the
25 challenges LEAs face and how program guidelines can be

1 developed to meet our needs to successfully implement the
2 CalSHAPE Programs.

3 Staff posted draft guidelines for both programs
4 in January of this year, and held a public workshop on
5 January 22nd to solicit feedback from stakeholders.
6 Additionally, we posted revised staff guidelines at the end
7 of March and hosted a second workshop in April.

8 Both workshops were very well attended, with over
9 500 attendees at each of the workshops.

10 Throughout the development of these guidelines
11 staff has also worked with stakeholders from the HVAC and
12 plumbing industry, directly with LEAs, and other interested
13 stakeholders.

14 Staff has considered all public input received in
15 the development of the final guidelines presented today for
16 adoption.

17 Staff would also like to point out that a letter
18 was filed to the CalSHAPE docket on Monday, June 7th, on
19 behalf of the Joint Committee on Energy and Environmental
20 Policy, the Western States Council of Sheet Metal Workers,
21 and the California Association of Sheet Metal and Air
22 Conditioning Contractors.

23 The joint letter, specific to the CalSHAPE
24 ventilation program guidelines submitted, provided an
25 alternative method of calculating the HVAC assessment and

1 maintenance maximum awards. And additionally, staff
2 believe that representatives from those commenters are here
3 today as well.

4 The next slide, please. For the CalSHAPE
5 ventilation program, the initial phase of program awards is
6 limited to HVAC assessment and maintenance grants and is
7 available for planned projects or reimbursement for
8 projects that were contracted for and performed after
9 August 1, 2020, as consistent with the statute.

10 Grant awards will be equal to the amount requested by
11 an LEA and verified by a contractor's estimate for the
12 reasonable cost to perform the work.

13 Applicants for the HVAC assessment and
14 maintenance pathway will also receive 20 percent of the
15 requested amount for repairs, upgrades, or replacements to
16 make the system functional or more energy efficient. The
17 initial grant awards will not include additional funding
18 for repairs, upgrades or replacements above the 20 percent
19 contingency threshold.

20 Those grants for larger system repair or
21 replacement project may be available in a future phase of
22 program awards.

23 The next slide, please. The CalSHAPE plumbing
24 program will provide grants to replace aging, and
25 inefficient plumbing fixtures and appliances with water-

1 conserving units. The items eligible for replacement for
2 the plumbing program are listed on this slide.

3 Program grant awards will be equal to the amount
4 request by an LEA and verified by contractor assessments
5 for the costs directly related to the replacement of
6 eligible plumbing fixtures and appliances.

7 We've discussed here today guidelines for both
8 the ventilation and plumbing programs. And just to be
9 clear, each program is separate and an LEA can apply for
10 either program.

11 The next slide. As part of implementation of the
12 CalSHAPE programs, staff have developed an online
13 application and reporting system. The online system was
14 designed with a focus of ease of use and a simplified
15 process for applications to support participation from all
16 LEAs regardless of size. And here for reference is a
17 screen shot of the proposed online system.

18 Staff anticipates that registration of the
19 portion of the tool will be available this month, which
20 would allow for LEAs and authorized representatives to
21 begin creating accounts. We will post notices to the
22 CalSHAPE list serve announcing the opening of the
23 registration. And additionally, staff will prepare user
24 instructions and informational videos which we will also
25 post to our program website.

1 There are limitations on when CEC can begin to
2 accept and approve applications, and we're not able to
3 enter into agreements for program grants until after the
4 2021-2022 budget is enacted.

5 Staff anticipates opening the application period
6 for the first funding round of applications shortly after
7 that. And staff will issue a notice with all necessary
8 information for initial grant applications well before the
9 funding round opens.

10 The next slide, please. To wrap up, I'd like to
11 first thank all Renewable Energy Division staff, staff from
12 the Chief Counsel's Office, and advisors from both
13 Commissioners Douglas and McAllister's offices who have all
14 worked incredibly hard behind the scenes to implement the
15 CalSHAPE programs and prepare the guidelines that you see
16 before you today.

17 I would also like to thank our IT Division in
18 helping to develop the online tool, and Siting Division
19 staff for developing the GIS web tool.

20 Finally, I'd like to recognize and thank all of
21 our stakeholders who have participated in this process.
22 Without direct engagement, we could not have developed
23 these guidelines presented here today.

24 With that, staff is recommending that the CEC
25 approve the CalSHAPE ventilation program guidelines and the

1 CalSHAPE plumbing program guidelines. Additionally, staff
2 is recommending that the CEC approve the determination that
3 adoption of these guidelines is exempt from CEQA.

4 And this concludes staff's presentation and I'm
5 available to answer any questions you may have.

6 CHAIR HOCHSCHILD: Thank you, Jonathan, that's a
7 terrific presentation.

8 Before we move to public comment, I just want to
9 ask really quickly, am I understanding it correctly we
10 expect to move \$261 million this year?

11 MR. FONG: Correct, Chair. I mean that is the
12 program available funding and we will be releasing that
13 funding for both the ventilation and plumbing programs.

14 CHAIR HOCHSCHILD: Great. Okay, thank you.

15 Let's move first to public comment on Item 6.

16 MS. GALLARDO: This is Noemi Gallardo, Public
17 Advisor. We do have a few hands raised. So, we'll start
18 with Chris Walker. Chris, a reminder to please spell your
19 name, indicate your affiliation if any. Your line is open,
20 you may begin. Chris, your line --

21 MR. WALKER: Excuse me. I'm sorry. Chris Walker
22 on behalf of CAL SMACNA. That is C-H-R-I-S W-A-L-K-E-R, on
23 behalf of the California Association of Sheet Metal and the
24 Air Conditioning Contractors, otherwise known as CAL
25 SMACNA.

1 CalSHAPE is an important program. It's important
2 for the long term health of our students and teachers. We
3 support all the work that staff has put into it and,
4 specifically, the work of Commissioners Douglas and
5 McAllister through the public outreach process.

6 Unfortunately, the final guidelines that were
7 provided do have one concern to us. And this was as
8 outlined in the comment letter submitted to the docket on
9 Monday. The primary concern is that the guidelines include
10 current grant caps that will only address a small portion
11 of the schools in need.

12 Our contractors have been increasingly bidding
13 this work for school districts across the state. The
14 experience has accumulated to the point where we are now
15 getting good data on what those costs will be. It is clear
16 that these systems are complex and each school is different
17 when looking at elementary, middle and high schools. And
18 there is even variation between these when accounting for
19 age, design, and climate zone where they have been built.

20 We support and understand that cost containment
21 is necessary, but the current strategy using a \$40,000 cap
22 on assessment and a \$500 for installation for a CO2 device
23 will not work. For what we assume to be almost 85 percent
24 of the schools, it will fall above that threshold.

25 As referenced in the comment letter to the

1 docket, we do see some general patterns based upon the
2 number of units per school. Our proposal would provide a
3 \$20,000 base, plus \$1,500 per unit, and would increase the
4 cost for CO2 to \$750 from the \$500 limit.

5 We would also include an appeal process to
6 address the unique school systems that would fall outside
7 this formula.

8 Based upon this, if the Commission is unable to
9 change or alter the price caps in today's hearing, we
10 respectfully request a short delay for the Commission to
11 consider these price caps and perhaps adopt, at a future
12 meeting, a revised proposal.

13 Thank you for your time and attention today.

14 MS. GALLARDO: Thank you. The next comment is --
15 let's see our commenter is Christopher Ruch. And
16 Christopher, apologize if I mispronounced your name.
17 Please restate your name, spell it, and indicate your
18 affiliation if any. Your line is open and you may begin.

19 MR. RUCH: Yes. Thank you to the Chair,
20 Commissioners and CEC staff for your work on this matter
21 and the opportunity to speak today. My name is Christopher
22 Ruch. That's C-H-R-I-S-T-O-P-H-E-R, Ruch, R-U-C-H, and I
23 represent the National Energy Management Institute,
24 otherwise known as NEMI.

25 The ventilation verification process as outlined

1 in AB 841 is designed to verify the operation of existing
2 heating, ventilation, and air conditioning for HVAC
3 infrastructure. The goal is to get the maximum value out
4 of taxpayer-funded HVAC infrastructure.

5 AB 841 assessment procedure was based on ASHRE
6 recommendations, a UC Davis Western Cooling Efficiency
7 Center white paper, and the research of previous HVAC grant
8 projects.

9 It is important to note here that the assessment
10 is not just a checklist of problems. Initially, the
11 assessment includes a physical verification of current
12 operation. If not meeting the minimum required operation,
13 the assessment provides a 20 percent contingency fund for
14 immediate repairs and adjustments that could be made to
15 bring the system into compliance.

16 As a technician, which is where I spent most of
17 my career, I'd commonly find examples of the following.
18 Outside air dampers that had been closed completely off on
19 a particularly hot or cold day and left that way, that just
20 needed to be adjusted back to the minimum requirements.
21 Gaps where air was bypassing filters. Inadequate air flow
22 due to faulty ductwork configurations, or excessive
23 leakage. Broken or clogged condensate drains which result
24 in not only water damage, but poor indoor air quality.

25 And a big one was over time occupants may block

1 off ceiling registers because they are uncomfortable. And
2 once we all get back into the office, hopefully after June
3 15th, I encourage you to look around and you'll notice that
4 there are several registers that are now covered by
5 furniture, or people have taped or blocked closed. And
6 this is likely because the system was never properly
7 balanced from the beginning or, commonly, because the room
8 use changed which is common for educational facilities.

9 But fundamentally, this is an indication of
10 inadequate air distribution. Meaning that you could have a
11 perfectly functioning unit on the roof, providing great
12 outside air, but if air is not being distributed correctly
13 the occupant you have a problem and they're not getting the
14 benefits.

15 As funds allow, these example issues would be
16 repaired and adjusted during the assessment process, with
17 the contingency funds.

18 Now, clearly if a unit is immediately scheduled
19 for a replacement, the scheduled-for-replacement pathway
20 should be used. However, if the HVAC unit is going to be
21 depended on for adequate filtration by our teachers and our
22 students, which includes my daughter, all steps of the
23 assessment should be followed which includes immediate
24 repairs and adjustments to the units can provide the
25 minimum indoor air quality requirements.

1 Once again, I thank you for your time and your
2 consideration of this matter.

3 MS. GALLARDO: Thank you.

4 Next speaker is Thomas Enslow. Thomas, reminder
5 to spell your name and state your affiliation if any. Your
6 line is open and you may begin.

7 MR. ENSLOW: Thank you. Tom Enslow, T-O-M E-N-S-
8 L-O-W, testifying today on behalf of the Western States
9 Council of Sheet Metal Workers and the California State
10 Pipe Trades Council.

11 First, we'd like to thank staff and Commissioners
12 for the great job they've done in putting together these
13 guidelines. It was a hard task with a very short time
14 period, and limited information.

15 However, we echo SMACNA's concerns and request
16 the Commission delay approval of the ventilation program
17 guidelines until the next meeting to allow adjustment to
18 the maximum award threshold.

19 Inadequate ventilation in schools is not only a
20 health issue, studies have also shown that it's a barrier
21 to student performance. The high CO2 levels that we
22 regularly seen in classrooms, and the studies have been
23 shown to actually impair performance by up to 15 percent.
24 And poorly maintained HVAC systems are also less efficient
25 and waste energy. This program will address all these

1 issues.

2 Unfortunately, the thresholds proposed in the
3 latest version of the guidelines are inadequate to allow
4 all but the smallest schools to adequately assess and
5 adjust their ventilation systems.

6 This too-low-of-a-threshold, with the function of
7 staff not having access to hard data on this cost of this
8 work until after the draft is (indiscernible) --

9 In the last couple of weeks, however, contractors
10 have begun bidding these projects with schools to do this
11 work during the summer recess, and we have been able to
12 review almost 30 of these bids which have -- but they show
13 that the current \$40,000 assessment maximum would only be
14 sufficient for the very smallest of elementary schools and
15 specialty schools.

16 Over 85 percent of the schools, including all
17 middle schools and high schools for the bids that we looked
18 at would not be able to participate in this program at that
19 level.

20 Yeah, so it is the largest of schools, with the
21 highest student population, who are most likely to have
22 ventilation issues and large numbers of students in
23 classrooms where indoor air quality is really a concern.
24 The current threshold would inequitably exclude these
25 schools.

1 There is a solution, though, as SMACNA has stated
2 in their comments. As bids have become available for
3 review, we've been able to establish a more equitable
4 formula based on the number of HVAC units in a school.
5 SMACNA's proposal, which we have reviewed, confirms that an
6 assessment maximum of \$20,000, plus \$1,500 per unit would
7 create a maximum that quite accurately reflects the broader
8 range of school sizes that need to be addressed.

9 There will still be schools with more complex
10 systems, such as variable air line systems that may not fit
11 this formula. And for that reason, we recommend an appeal
12 process being established for those few unusual
13 circumstances.

14 We also ask that the maximum award for a CO2
15 monitor be raised from \$500 to \$750 per monitor, which
16 would reflect the average cost of equipment, plus
17 installation in the bids.

18 Finally, the Pipe Trades Council supports the
19 ventilation program as well as needed to address this
20 issue. We ask that the plumbing program be approved today.
21 The plumbing program needs to get off the ground so that
22 schools can replace old fixtures during the summer recess.
23 We want to get going on this while the schools, you know,
24 aren't in session and we can get this work done. Thank you
25 for your time.

1 MS. GALLARDO: This is Noemi, the Public Advisor
2 again. That was the last hand raise, but let me make one
3 last call for commenters. And those on the phone please
4 press *9 to indicate you would like to make a comment, *6
5 to unmute. This is the last call for comments.

6 Chair, I do not see any other hands, we can move
7 forward.

8 CHAIR HOCHSCHILD: Thank you, Noemi. Thank you
9 to all the stakeholders for sharing their perspectives.

10 Let's move on to Commissioner discussion,
11 starting with Commissioner Douglas.

12 COMMISSIONER DOUGLAS: It took me a while to find
13 my unmute button. So, yeah, a couple thoughts. You know,
14 I wanted to say I appreciate the excellent presentation by
15 staff, let me start with that. And the entire Renewable
16 Energy Division and CCO team has put a tremendous amount of
17 work and effort into it -- into this, as have my entire
18 office, and Commissioner McAllister's as well. The ITT
19 team has worked fast and hard to develop supporting program
20 technology. And the CPUC has been deeply involved with the
21 Energy Commission in helping us move this forward.

22 With its focus on upgrades to heating, air
23 conditioning, ventilation and water efficiency systems in
24 public schools, AB 841 created important and compelling
25 programs that will help improve quality of life for

1 students and school site personnel, and increase efficiency
2 as well.

3 And there are very aggressive statutory timelines
4 for the Energy Commission to implement this program. The
5 Energy Commission has worked hard and fast to meet these
6 timelines, while also ensuring transparency in the work
7 process, and conducting very extensive stakeholder outreach
8 such as what we heard today, which came in recent comments
9 from some of the commenters.

10 And so, we wanted to have a conversation at the
11 business meeting just to have an overall check in on where
12 we are, and when and how we hope and plan to get this done.

13 As you heard from our commenters, particularly
14 representatives from SMACNA, the Energy Commission received
15 new financial data and information from stakeholders
16 regarding the project maximum amounts that we proposed,
17 just this week regarding the ventilation program.

18 As I understand it, staff had asked for this data
19 some time ago to help the Energy Commission make fully
20 informed funding allocations in the guidelines and SMACNA
21 has been working for some time to obtain it and provide it.
22 And it just so happened that they weren't able to obtain it
23 themselves in a format that they were prepared to provide
24 until very, very recently.

25 So, you know, so we received the data after the

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1 agenda posted. I think we were both -- I'll let
2 Commissioner McAllister speak for himself. We were both
3 expecting and prepared to take action, and propose action
4 on this today. But the new information, while it came in
5 later than we would like, it is significant and I think it
6 is important for us to take a little bit of time to assess
7 it before we move forward to approve the guidelines.

8 So, I'd like to pause and let Commissioner
9 McAllister speak, but I do want to say that our
10 recommendation is going to be that we don't act on this
11 item today and that we instead direct staff to evaluate
12 this new information, and to make corresponding guideline
13 changes if warranted, and bring the ventilation and
14 plumbing program guidelines back for our consideration at
15 the next business meeting with the discussion of staff's
16 assessment of the new information.

17 So, that's where I think we want to go on this,
18 but I think Commissioner McAllister should speak as well.

19 COMMISSIONER MCALLISTER: Thanks Commissioner
20 Douglas. And thanks Jonathan and the whole team, Natalie,
21 and the whole crew in the Efficiency Division -- or sorry,
22 Renewable Division, and both of our staff and advisors for
23 their diligence, and acknowledging the PUC as well.

24 I'd point out actually -- so, thanks to Chris,
25 and Tom, and the other commenter. I wanted to just

1 highlight that actually this data collection is still
2 ongoing. We don't actually have the full complement of
3 data with specific project information.

4 And I wanted to just ask staff to describe, you
5 know, the process by which we did receive data that did
6 make it into the proposed guidelines just to sort of, you
7 know, get a bit of a broader view of like what the
8 landscape looks like from our perspective at the Commission
9 building up to the guidelines. So, that's one question.

10 You know, there's still a few details -- so, we
11 still have some details to work out. And I agree with
12 Commissioner Douglas' assessment that a short delay is
13 warranted. Hopefully, we can get this back to the next,
14 the June business meeting so we can take action in June.
15 But, you know, a lot of work behind the scenes. The IT,
16 you saw the beautiful GIS tool.

17 And there's just a lot of interest in this
18 program. This has been an (indiscernible) program, it's
19 complex, the slicing and dicing by geography presents
20 challenges in terms of the ability to fund significant
21 projects, assessments and then projects in the various
22 parts of the state.

23 So, I just want to acknowledge those complexities
24 and as sort of a context for understanding how it took a
25 bit of time to get some of this information in.

1 But maybe, Jonathan, you could sort of talk about
2 the broader landscape of the cost information that we did
3 have for the development of the proposed guidelines.

4 MR. FONG: Oh, definitely Commissioner. You
5 know, when staff paused in the end of April to host the
6 second workshop, the idea of the maximum grant awards was
7 one of the topics that we wanted to highlight. So, we had
8 initiated that, reached out to different LEAs. Because as
9 we mentioned, there's a provision in these guidelines for
10 reimbursement. So, we wanted to find as many LEAs who had
11 either already started the process or even some that had
12 completed it. So, we had a small universe of cost
13 estimates, actual data, the physical HVAC reports from a
14 small snippet. And that's where we kind of developed the
15 guideline proposal that we have before you today.

16 But, you know, as the commenters mentioned, the
17 landscaping is so complex, you know, what we had available
18 to us was probably a small sample size. So, you know,
19 knowing 10,000 schools across the state, you know, the more
20 information we have the better. So, you know, the new
21 information, albeit late, is really going to help, you
22 know, refine the information that we were able to receive
23 already.

24 COMMISSIONER MCALLISTER: Great. Thanks very
25 much for that.

1 So, yeah, I guess I don't really feel the need to
2 add much, other than just asking, you know, whether it's
3 feasible for us to carve off the water side and approve
4 that separately at this meeting, and then take the HVAC
5 program and push it to the next meeting? So, in terms of
6 just logistics and feasibility, how does staff feel about
7 that? And perhaps counsel as well, if we could get you to
8 weigh in.

9 MR. FONG: So, sure Commissioner. Given that the
10 guidelines are separate, you know, and stand alone, posted
11 separately, I mean the two programs, the ventilation and
12 plumbing are separate. So, I would also defer to the
13 Counsel's Office. But I think the way we posted them and
14 are presenting them, they are separate.

15 COMMISSIONER MCALLISTER: Great.

16 CHAIR HOCHSCHILD: Does Chief Counsel have a
17 position on that, as to whether there's any problem with --

18 MS. BARRERA: Hi Chair. This is Linda Barrera,
19 Chief Counsel of the Energy Commission. That's correct,
20 the Commission can choose to separate both items and move
21 to address Item 6A at a future business meeting and vote on
22 Item B, you know, during the business meeting -- at this
23 business meeting.

24 CHAIR HOCHSCHILD: Okay. I just had a question,
25 Jonathan, if you wanted to respond to any of the specific

1 points raised by any of the stakeholders during public
2 comment at all, anything that came up that you wanted to
3 address directly?

4 MR. FONG: Oh, thanks Chair. No, I mean both
5 Chris, Chris and Tom have been really huge participants
6 along the way. You know, as they mentioned this was
7 information we had asked since -- you know, for many
8 months. And unfortunately, because of the complexity of
9 the landscape that's the late filing. But, you know, in
10 response to their proposal, the dollar per unit, you know,
11 as a metric for the maximum was one of the items we did
12 highlight in our April 28th workshop. You know, we
13 received other recommendations on like either a dollar per
14 student, or dollar per school.

15 So, there were a number of different methods that
16 were coming about in terms of how do we ensure those
17 reasonable costs. So, you know, we welcomed the filing
18 that we saw using that dollar per unit metric.

19 And, you know, as Commissioner McAllister said,
20 some other data is forthcoming so that we can provide, you
21 know, in short order back to the Commission, you know, our
22 full analysis, and recommendation, and revised guidelines.

23 CHAIR HOCHSCHILD: Okay. Any other comments?
24 I'm sorry, Commissioner McAllister?

25 COMMISSIONER MCALLISTER: No, I was just ready to

1 make a motion if nobody has any comments, or Commissioner
2 Douglas.

3 CHAIR HOCHSCHILD: Okay. Commissioner Gunda or
4 Commissioner Monahan, any other comments on this program?

5 COMMISSIONER GUNDA: Yeah, this is Siva Gunda. I
6 just wanted to add quickly I'm glad that we landed on
7 moving a part of the guidelines forward.

8 I just wanted to ask Jonathan, in terms of the
9 delayed guidelines what is the -- I mean obviously there's
10 a huge upside in ensuring that we have the right numbers
11 and moving forward with a good program. And I'm thankful
12 to the commentators for providing that information.

13 Just what are the downsides in terms of actually
14 kind of seeing the benefits to the schools? I mean does
15 the delayed adoption -- you know, what are the impacts of
16 that on our goals?

17 MR. FONG: Sure. You know, since the delay will
18 be very short and we hope to get the data we need, and
19 provide back to the Commission on the revised set of
20 guidelines.

21 You know, as we mentioned in the short
22 presentation, because of the timing with adoption of the
23 budget, you know, the proposal to revise the guidelines
24 should fall in line where we can still open these, the
25 application period, you know, shortly thereafter. So, the

1 delay will be minor.

2 But I think, you know, as we're saying we're
3 finding that method should have, you know, wide range
4 benefits.

5 COMMISSIONER GUNDA: Yeah, thank you so much
6 Jonathan. Thanks for all the work of all the divisions. I
7 think I will just encourage our commentators and the
8 broader stakeholders to help us with the data as you see
9 fit, the sooner the better to help move these guidelines
10 forward. Thank you.

11 CHAIR HOCHSCHILD: Okay. Just one final comment
12 and then I'll turn it back to Commissioner Douglas and
13 Commissioner McAllister for their recommendation. And I'll
14 defer to your recommendation of you two on this.

15 But my view is given the urgency of the need
16 here, if there is an opportunity to move a portion of the
17 program forward today where we have agreement, I'm all for
18 that.

19 I did want to say we'll also -- we can schedule a
20 special Commission meeting just to deal with this, once
21 Jonathan and his team have resolved it.

22 And I also wanted to just give thanks again to
23 our former Vice Chair, Janea Scott, who had helped launch
24 this process back in the fall, and just our appreciation to
25 her as well.

1 So, Commissioner Douglas and Commissioner
2 McAllister, open to hearing your suggestions for how to
3 move forward.

4 COMMISSIONER DOUGLAS: Okay. Well, if we're
5 going to split this out and it sounds like we can, which is
6 really good news, then we could -- you know, maybe we could
7 ask the Chief Counsel's Office to just help us, or our
8 Chief Counsel to just help us with the motion.

9 But I think we can move to postpone the vote on
10 the CalSHAPE ventilation program and just move to adopt the
11 plumbing program.

12 MS. BARRERA: Yes, and this is Linda Barrera. If
13 I may, we can first take a vote to postpone the vote on
14 action 6A first, and then separately vote on action 6B.

15 CHAIR HOCHSCHILD: Okay. Why don't, Commissioner
16 Douglas, would you make the motion to postpone Item 6A?

17 COMMISSIONER DOUGLAS: Yes. I move to postpone
18 our vote on Item 6A.

19 CHAIR HOCHSCHILD: And Commissioner McAllister,
20 would you be willing to second that?

21 COMMISSIONER MCALLISTER: I second.

22 CHAIR HOCHSCHILD: Okay. All in favor say aye.
23 Commissioner Douglas?

24 COMMISSIONER DOUGLAS: Aye.

25 CHAIR HOCHSCHILD: Commissioner McAllister?

1 COMMISSIONER MCALLISTER: Aye.

2 CHAIR HOCHSCHILD: Commissioner Monahan?

3 COMMISSIONER MONAHAN: Aye.

4 CHAIR HOCHSCHILD: And Commissioner Gunda?

5 COMMISSIONER GUNDA: Aye.

6 CHAIR HOCHSCHILD: And then, Commissioner Douglas

7 -- and I vote aye as well.

8 That item passes unanimously.

9 And then, Commissioner Douglas would you be

10 willing to move Item 6B for adoption today?

11 COMMISSIONER DOUGLAS: Yes, so moved.

12 CHAIR HOCHSCHILD: Okay, Commissioner McAllister,

13 would you be willing to second?

14 COMMISSIONER MCALLISTER: Second.

15 CHAIR HOCHSCHILD: Okay. All in favor say aye.

16 Commissioner Douglas?

17 COMMISSIONER DOUGLAS: Aye.

18 CHAIR HOCHSCHILD: Commissioner McAllister?

19 COMMISSIONER MCALLISTER: Aye.

20 CHAIR HOCHSCHILD: Commissioner Monahan?

21 COMMISSIONER MONAHAN: Aye.

22 CHAIR HOCHSCHILD: And Commissioner Gunda?

23 COMMISSIONER GUNDA: Aye.

24 CHAIR HOCHSCHILD: And I vote aye as well.

25 That item passes unanimously.

1 Thank you to all the stakeholders. And again,
2 just given the size of this program we will schedule, if we
3 need, a special Commission meeting just to take this second
4 item once staff has worked with stakeholders and we have a
5 proposal to talk through.

6 With that, thank you to everyone and let's break
7 for lunch, and reconvene why don't we say 1:30 back on
8 line, and we'll take up Item 7.

9 Thanks everybody.

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

11 (On the record at 1:30 p.m.)

12 CHAIR HOCHSCHILD: Thank you. Just before we
13 move on to Item 7, I just again wanted to thank
14 Commissioner Douglas and Commissioner McAllister, as well
15 as Natalie Lee, and Jonathan Fong, and everyone else who
16 worked on the program that we adopted, started to adopt,
17 Item 6.

18 And to reiterate, we do have a meeting, another
19 Commission meeting on June 25th, so my hope is we'll be
20 able to take up the item at that meeting.

21 So, with that, let's move on to Item 7, Air
22 Resources Board.

23 MR. JOHNSON: All right. Good afternoon Chair
24 and Commissioners. My name is Mark Johnson and I'm with
25 the Fuels and Transportation Division. I am here to

1 present an \$850,000 proposed agreement with the California
2 Air Resources Board to build, commission, transport, and
3 deploy a hydrogen station testing device, also known as
4 HyStEP 2.0.

5 The next slide, please. The demand for hydrogen
6 as a transportation fuel in California is expected to
7 increase based on auto manufacturers' projections of
8 vehicles with increased planned investments on medium- and
9 heavy-duty vehicles as a response to Governor Newsom's
10 Executive Order N-79-20 that sets goals that all new
11 passenger cars and trucks sold in California to be zero
12 emission by 2035. All medium- and heavy-duty trucks and
13 buses operated in California to be zero emission by 2045
14 everywhere feasible. And all drayage trucks to be zero
15 emission by 2035.

16 The California Energy Commissioner is
17 kickstarting the market for fuel-cell electric vehicles by
18 funding hydrogen refueling stations. Currently, there are
19 51 hydrogen stations operating and selling retail hydrogen
20 in California. Based on the timelines provided to the CEC
21 by station developers, staff expects an additional 128
22 stations to be open within the next 5 years.

23 This proposed agreement with the California Air
24 Resources Board will provide a hydrogen station testing
25 device that collects data which confirms that stations meet

1 industry performance and safety standards before opening to
2 the public. This proposed testing device will be an
3 upgrade and a second generation to the current hydrogen
4 station testing devices that operates in California. And
5 the photo on the left is of the current testing device.

6 The second generation device will have a higher
7 capacity that allows it to simulate back-to-back fuelings
8 and in the future may allow for testing of medium- and
9 heavy-duty hydrogen stations. These additional
10 capabilities will help strengthen consumer protection when
11 fueling their fuel cell electric vehicles.

12 The next slide, please. For this agreement, the
13 California Air Resources Board will develop and release a
14 competitive solicitation to build the proposed hydrogen
15 station testing device. CARB will award a subcontractor
16 who will then build the hydrogen station testing device,
17 and have its performance verified at the National Renewable
18 Energy Laboratory. It will be deployed, operated, and
19 maintained by the California Air Resources Board. As part
20 of this agreement, CARB will provide the CEC the testing
21 data obtained from each hydrogen station fueling protocol
22 testing.

23 The next slide, please. Staff recommends
24 approval of this item and to adopt staff's recommendation
25 that this action is exempt from CEQA.

1 Staff is available to answer any questions you
2 may have. And Andrew Martinez from CARB is on the phone to
3 discuss as well. Thank you.

4 CHAIR HOCHSCHILD: Thank you. Let's move on to
5 public comment. Unless Mr. Martinez would like to make a
6 few comments at this time.

7 MS. GALLARDO: This is Noemi, the Public Advisor.
8 Andrew does have his hand up, so I will open up his line.
9 Andrew, your line is open, you may begin.

10 MR. MARTINEZ: Thank you, Noemi. Thank you,
11 everybody. CARB would like to thank the Commissioners for
12 inviting us to provide these brief comments today in
13 support of the proposed interagency agreement. We'd also
14 like to thank the staff of the CEC for their collaboration
15 with CARB on developing this agreement.

16 CARB has operated the current HyStEP device since
17 2016, testing new hydrogen fueling stations' ability to
18 follow industry standard fueling protocols that ensure
19 customers receive a fast, safe, and reliable fill at
20 California's hydrogen fueling stations.

21 Development of a new HyStEP device will allow
22 CARB to continue this testing and meet the needs of the
23 large number of stations under development and funded for
24 future builds.

25 The HyStEP Testing Program has played a

1 significant role in ensuring that today's open retail
2 stations can quickly complete station testing and
3 commissioning based on reliable, trusted station testing
4 data, continuing to reinforce positive consumer experiences
5 as a key component to ensure future fuel cell vehicle
6 market growth and deployment.

7 The recent awards for new hydrogen fueling
8 stations that the Energy Commission made under GFO-19-602
9 put California on a path for unprecedented network growth
10 over the next several years. CARB's recent estimates
11 project the network could grow to over 170 stations as soon
12 as 2026. By current estimates, 20 to 30 stations could
13 open each year between 2023 and 2026.

14 This swift pace of network growth over the coming
15 years will require additional resources for station
16 testing. In addition to the stations funded by the Energy
17 Commission through GFO-19-602, private industry has made
18 significant advancement in station developed backed by
19 fully private financing. These privately-funded stations
20 will also need station testing like HyStEP provides.

21 The first of these opened just last month in
22 Placentia and at least 14 more are expected to open in the
23 next few years. As development accelerates, private
24 interest in building new stations may continue to expand
25 the network even beyond CARB's most recent projections.

1 With such a large expansion of the network in the
2 years ahead, and the proven value of the HyStEP program, it
3 is clear to CARB staff that the need for station testing
4 will only increase in the coming years. Additional tools
5 and resources are required to ensure that the HyStEP
6 program continues to support station development timelines.
7 As vehicles and stations continue to innovate, this new
8 HyStEP device will also be more capable of testing advanced
9 station design.

10 Because of these recent developments in the
11 hydrogen fueling industry and anticipating future need,
12 CARB staff strongly support the approval of this
13 interagency agreement and look forward to collaborating
14 with the CEC to bring the new HyStEP device to California.

15 I want to thank you again for the opportunity to
16 provide these comments. CARB staff value our
17 collaborations with the CEC and being a trusted partner in
18 our shared pursuit of clean transportation for all
19 Californians.

20 MS. GALLARDO: Thank you, Andrew. This is Noemi,
21 the Public Advisor, again. Chair, I'm going to check for
22 hands, unless you wanted to make any responses to Andrew.

23 CHAIR HOCHSCHILD: No, no questions from me.

24 MS. GALLARDO: Sure.

25 CHAIR HOCHSCHILD: If we don't have any

1 additional members of the public wishing to comment, we'll
2 turn it to Commissioner Monahan. Is there anyone else
3 wanting to make --

4 MS. GALLARDO: Yes, let me make another call for
5 comments. So, just a reminder, please use the raise hand
6 icon. If you're on by phone and would like to make a
7 comment, press *9 to indicate you'd like to make a comment,
8 and *6 to unmute. This is the last call for comments on
9 Item 7 from the public.

10 I'm not seeing any hands, Chair, I think we can
11 move forward.

12 CHAIR HOCHSCHILD: Okay, thank you. Commissioner
13 Monahan?

14 COMMISSIONER MONAHAN: Well, I want to thank Mark
15 and the Hydrogen Team for this. And also thank Andrew
16 Martinez from CARB. I mean this is definitely, as you
17 heard, a collaboration between the agencies.

18 I will say, you know, this is -- we're really
19 groundbreakers, California, when it comes to hydrogen
20 station deployment. There's only one country, I think,
21 that has more stations open than we do, which is Japan.
22 And, you know, the safety aspects are really important.

23 And I do view this, and I'd be curious Mark, and
24 I guess Andrew can't speak anymore, but this is more of a
25 early market investment. And eventually, you know, when

1 the market is sustainable and the hydrogen industry is
2 sustainable of course these kinds of technologies, you
3 know, we won't be necessarily the ones investing in these
4 types of technologies, but it will migrate to the market,
5 to the broader market.

6 But in these early days of hydrogen and
7 especially as we are expanding to medium- and heavy-duty in
8 our investments we want to make sure that we're doing all
9 we can to enhance the safety of the system.

10 So, I strongly support this. I think it's a
11 great interagency collaboration, really important as we
12 expand out to medium- and heavy-duty, as well as light-duty
13 infrastructure.

14 CHAIR HOCHSCHILD: Thank you, Commissioner.

15 Any other Commissioners wishing to make a
16 comment?

17 Seeing none, Commissioner Monahan would you be
18 willing to move the item?

19 COMMISSIONER MONAHAN: I move this item.

20 CHAIR HOCHSCHILD: And Commissioner Gunda, would
21 you be willing to second?

22 COMMISSIONER GUNDA: Yes, actually second it.

23 CHAIR HOCHSCHILD: All right, all in favor say
24 aye.

25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner Gunda?

3 COMMISSIONER GUNDA: Aye.

4 CHAIR HOCHSCHILD: Commissioner Douglas?

5 COMMISSIONER DOUGLAS: Aye.

6 CHAIR HOCHSCHILD: Commissioner McAllister?

7 COMMISSIONER MCALLISTER: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well.

9 That item passes unanimously.

10 Let's turn now to Item 8, also the Air Resources

11 Board.

12 MR. RILLERA: Good afternoon Chair and

13 Commissioners. My name is Larry Rillera. I am staff with

14 the Fuels and Transportation Division. I am here to

15 present on Item Number 8.

16 I am also joined by Ashley Georgiou, my

17 counterpart from the California Air Resources Board, who is

18 here to provide on this effort and this partnership.

19 This item is a proposed \$1 million reimbursement

20 agreement with the California Air Resources Board for the

21 Energy Commission's IDEAL ZEV Workforce Pilot Project.

22 The next slide, please. This project has been

23 designed to provide critical benefits to California

24 communities, including training for incumbent and new

25 entrants in ZEV and ZEV related markets and industries,

1 embedding equity, access to good jobs and career pathway
2 opportunities, transitioning to a clean transportation,
3 more resilient economy, and addressing critical workforce
4 training and development needs identified by community
5 members through the Senate Bill 350 Low-Income Barriers
6 report equity process.

7 The next slide, please. Specifically, this
8 agreement will transfer \$1 million from CARB to the CEC for
9 a workforce training project. It identifies tasks such as
10 project administration, the development of a solicitation,
11 reimbursement of grant recipients, project meetings, and
12 conducting a forum to share lessons learned and
13 recommendations for future workforce collaboration.

14 One hundred percent of CARB's transferred funds
15 will be used for the sole purpose of project work by grant
16 recipients. None of the funds will be used by the CEC for
17 agreement administration in order to maximize project reach
18 and impact.

19 The CEC and CARB have been deeply engaged in this
20 collaborative venture for over a year now. Capacity
21 building and staff sharing in this equity in workforce
22 training and development space has been nothing short of
23 stellar as each agency has blended fiscal priorities,
24 policy objectives, and a strong desire to effectuate and
25 respond to community needs in the ZEV space.

1 Lastly, CEC and CARB will speak and advocate from
2 one voice, supporting the IDEAL ZEV Workforce Pilot
3 Training and Development solicitation.

4 The next slide, please. In closing, staff
5 recommends the approval of this agreement with the
6 California Air Resources Board for \$1 million in
7 reimbursement, and approval of staff's determination that
8 the project is exempt from CEQA.

9 This concludes my presentation. I would again
10 note that Ashley Georgiou of CARB is here to provide
11 remarks. Thank you.

12 CHAIR HOCHSCHILD: Thank you. Let's go to public
13 comment.

14 MS. GALLARDO: This is Noemi, Public Advisor.
15 Let me check real quick.

16 Ashley, I see that you have joined us. Would you
17 like to make any comments? Just want to make sure I carve
18 out that space for you.

19 MS. GEORGIOU: Thank you so much Noemi and Larry.
20 Good afternoon Commissioners. As mentioned, my name is
21 Ashley Georgiou from the Air Resources Board, Larry's
22 counterpart in development of the IDEAL ZEV Workforce Pilot
23 and the agreement discussed today.

24 This is really an exciting time as this project
25 and our work together have been years in the making. I can

1 still remember very clearly the days of developing our
2 partner Senate Bill 350 Low Income Barriers report, which
3 really highlighted the need and the desire to expand
4 workforce development investments in projects, just like
5 we're discussing now, to meet the most critical needs as a
6 community.

7 This project can really be seen as the fruit of
8 collective understanding and action towards mutual clean
9 transportation equity, climate, as well as air quality
10 goals.

11 So, I just want to say and take this opportunity
12 to say thank you, particularly to Commissioner Monahan for
13 your leadership, but also the support for this incredible
14 endeavor and partnership. In addition, of course, to the
15 staff and the management team in the Fuels and
16 Transportation Division, as well as others at the Energy
17 Commission, of course.

18 This project is one of many examples of where
19 CARB and the Energy Commission have really been working to
20 lay the foundation for deeper synergy, ongoing
21 collaboration, as well as mutual learning. We're committed
22 to working with the Energy Commission, as well as our other
23 state and local partners, in lockstep throughout this
24 process to ensure that the zero emission vehicle workforce
25 training and development investments that we're making in

1 California's most impacted communities support economic
2 recovery, but also resilience.

3 Thank you so much for your time and having me
4 here today.

5 MS. GALLARDO: Thank you, Ashley.

6 This is Noemi, again. So, another reminder to
7 attendees, if you'd like to make a public comment please
8 use the raise hand feature. If you're on by phone press *9
9 and then *6 to unmute.

10 Chair, I am not seeing any other hands. I think
11 we can move forward.

12 CHAIR HOCHSCHILD: Let's move to Commissioner
13 discussion. Commissioner Monahan.

14 COMMISSIONER MONAHAN: Well, I want to
15 congratulate Ashley and Larry, and the legal teams that
16 were involved in this. Neither of them mentioned that
17 there was a lot of legal work that had to go into this
18 because as we all know, the ARB processes and the CEC
19 processes don't necessarily correspond. And so, it just
20 takes a lot of work to make sure that this looks seamless
21 to the outside world.

22 And that's our goal, right, we want to make it
23 really easy for our grantees to view the California
24 government as one. This is an example of that
25 collaboration and I hope it continues as we fund projects

1 that CARB is working on, and CARB funds projects that we're
2 working on where we see a lot of synergies and
3 opportunities. And it really is just about accelerating
4 the ZEV market.

5 So, I just want to say thank you. I know there's
6 like a pound of flesh that went into this by a number of
7 different interests, including one of my advisors. And I
8 want to say that it has to be worth it, because it really
9 is about making it easy for our grantees. And, hopefully,
10 the first step is the hardest one and that we've overcome a
11 lot of the legal quagmire issues and it will be easier the
12 next time around. So, just thanks to everybody who was
13 involved in this.

14 CHAIR HOCHSCHILD: Great. Thank you,
15 Commissioner.

16 Unless other Commissioners wish to chime in or
17 ask questions, I think we can move to a motion Commissioner
18 Monahan.

19 COMMISSIONER MONAHAN: I move to approve this
20 item.

21 CHAIR HOCHSCHILD: Okay, Commissioner Douglas
22 would you be willing to second?

23 COMMISSIONER DOUGLAS: Yes, I second this.

24 CHAIR HOCHSCHILD: Okay, all in favor?

25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner Douglas?

3 COMMISSIONER DOUGLAS: Aye.

4 CHAIR HOCHSCHILD: Commissioner McAllister?

5 COMMISSIONER MCALLISTER: Aye.

6 CHAIR HOCHSCHILD: Commissioner Gunda?

7 COMMISSIONER GUNDA: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well.

9 I think that's the fastest million dollars we've

10 ever approved. So, thank you and congratulations

11 everybody. Appreciate very much the collaboration with

12 CARB. I just want to say, you know, I'm really pleased

13 with the collaboration generally and, you know, the

14 transition from Chair Nichols to Chair Randolph and just

15 keeping that relationship, you know, fully engaged and

16 healthy is a priority for us. And just this is another

17 example of that successful collaboration. So, thanks to

18 all the staff on both sides.

19 COMMISSIONER MONAHAN: Oh, and can I just say

20 also, another example of a good acronym is IDEAL,

21 inclusion, diversity, equity, access and local. That's a

22 good one.

23 CHAIR HOCHSCHILD: Yeah.

24 COMMISSIONER MONAHAN: So, kudos to the team.

25 CHAIR HOCHSCHILD: We have had some terrible

1 acronyms here. ARFVTP and all the others, so we celebrated
2 it when we get a good one. Thank you as well, good point.
3 Thank you, everybody.

4 So, let's turn now to Item 9, California
5 Conservation Corps.

6 MR. RILLERA: Great. Thank you and good
7 afternoon again Chair and Commissioners. My name is Larry
8 Rillera, Fuels and Transportation Division. I will also be
9 presenting on this one, on Item Number 9 with the
10 California Conservation Corps.

11 This item is a proposed \$1 million agreement with
12 the California Conservation Corps for a brand-new IDEAL
13 Transportation Electrification Training Project.

14 The next slide, please. This project has been
15 designed to provide critical benefits to California
16 communities, including training for transportation
17 electrification including electric vehicle charging. It
18 will also provide ZEV-career pathways that can lead to good
19 jobs, including pre-apprenticeship training with potential
20 employers. It intentionally embeds equity in participation
21 for all. It will expand the state's investments of
22 Greenhouse Gas Reduction Funding for energy purposes.

23 And lastly, I would also like to note that as an
24 additional benefit of the project this continues
25 partnerships in investments in the workforce component of

1 the AB 2127 report, as discussed earlier today.

2 The next slide, please. The proposed item before
3 you today is rooted in decades long success by the
4 California Conservation Corps to develop men and women
5 between the ages of 18 and 25.

6 In 2019, the Corps was funded with Greenhouse Gas
7 Reduction Fund money and established the Energy Corps
8 program with the majority of funds used to benefit
9 disadvantaged communities. The Energy Corps provides
10 trained labor for public agency and non-profit energy
11 efficiency and renewables projects. Energy Corps members
12 receive energy industry level training while working on
13 lighting retrofits, energy surveys, and solar panel
14 installations.

15 For this proposed IDEAL Transportation
16 Electrification Training Project, the Energy Commission,
17 with the California Conservation Corps, will build on the
18 Energy Corps Program by adding a zero-emission vehicle
19 infrastructure-related component.

20 Specifically, the project will provide \$1 million
21 to the Corps to develop curriculum, classroom instructional
22 materials, and secure project partners. It will develop
23 and implement the Transportation Electrification Training
24 Plan. And lastly, it will teach training on how to replace
25 non-working chargers, construct and install new EV

1 chargers, and commission, maintain, and service new
2 chargers as well.

3 The training project is designed to initially
4 roll out at the Norwalk Energy Corps Center. And during
5 the term of the agreement will expand to the three other
6 locations in the state, including Vista, Fresno, and
7 Sacramento. Participation in the program is expected to
8 triple in size over the course of the project.

9 The next slide, please. In closing, staff
10 recommends approval of this agreement with the California
11 Conservation Corps for \$1 million and approval of staff's
12 determination that the project is exempt from CEQA.

13 This concludes my presentation.

14 I will also note that Juan Mercado from the
15 Conservation Corps is here to provide supporting comments.

16 Thank you.

17 CHAIR HOCHSCHILD: Thank you. Any public comment
18 on this item?

19 MS. GALLARDO: This is Noemi. Yes, we do have a
20 hand raised. That's Juan Mercado, as Larry just pointed
21 out they do have comments. Juan, I am opening your line,
22 please feel free to speak.

23 MR. MERCADO: Thank you, Noemi. Thank you very
24 much. My name is Juan Mercado and I'm the District
25 Director for the Energy Corps in Southern California, with

1 the California Conservation Corps.

2 I first want to thank all the Commissioners for
3 moving forward and approving this project. It's very
4 exciting for us moving on to other different types of
5 technology. You know, everyone knows the California
6 Conservation Corps is a resource, we do trail work and
7 other emergencies, but we also have a CCC Energy Corps.

8 Like Larry said, it was established with the --
9 not officially, but then it went into under GGRF, and
10 that's where it funded under the Air Resources Board.

11 We are very excited to, you know, move this
12 project forward. It's something that especially with the
13 Governor's mandate that's building the infrastructure, and
14 most important training the next generation of Corps
15 members is very important.

16 These funds will also let us work with other
17 partners, like Cerritos College and other colleges across
18 the state. It also expands our program in different areas.
19 Like Larry mentioned, our Vista location, our Norwalk, and
20 then our Fresno, and our Sacramento location.

21 Our growth in scale of our program can -- you
22 know, we can train more folks, Corps members into our
23 program and our participants. This will be a very big job
24 creation for us. It will create more jobs in the industry.
25 It will create career pathways to transportation

1 electrification and get our Corps members ready for the
2 upcoming technologies that EV charging stations will bring.

3 And I really, myself, I've got to say I really
4 like the IDEAL, which is the inclusive, diverse, equity,
5 accessible and local. That's something for us that is very
6 important. A lot of our work needs to be in the low-income
7 and disadvantaged areas. Also, our Corps members that we
8 serve are in low-income and disadvantaged areas.

9 So, we're really excited to move this project
10 forward. And I want to thank all the Commissioners today
11 for letting me speak, and we're very excited about this.
12 Thank you very much.

13 CHAIR HOCHSCHILD: Thank you.

14 Noemi, any additional members of the public
15 wishing to make a comment?

16 MS. GALLARDO: Yes, we do have another hand
17 raised and that's Larry Notheis. And Larry, I apologize, I
18 most likely mispronounced your name. I am going to open
19 your line. A reminder to please restate your name, spell
20 it, and indicate your affiliation, if any. Your line is
21 open.

22 MR. NOTHEIS: Great, thank you. My name is Larry
23 Notheis and that's okay with the name pronunciation. L-A-
24 R-R-Y N-O-T-H-E-I-S.

25 I am one of the Deputy Directors for the

1 California Conservation Corps and I just wanted to take a
2 moment to say thank you to the Chair and to all the
3 Commissioners for looking at this proposal and, hopefully,
4 supporting it.

5 A special thanks to Commissioner Monahan because
6 I hear a rumor that you would like to visit one of our
7 projects and thank you very much for that.

8 And then lastly, just thank you for supporting
9 the youth and the young adults of California who are going
10 to become the future conservationists and energy workers
11 through this program, and also supporting the diversity,
12 equity and inclusion that is part of our program to help
13 those underserved communities, like Larry and Juan said.

14 And then lastly, just to thank Larry for his
15 support, his dedication, all his hard work in making this
16 come to fruition, and being able to be in front of all of
17 you today. So, thank you.

18 CHAIR HOCHSCHILD: Thank you so much.

19 Any further public comments, Noemi?

20 MS. GALLARDO: I do not see any other hands.

21 CHAIR HOCHSCHILD: Okay, let's turn to Commission
22 discussion, Commissioner Monahan.

23 COMMISSIONER MONAHAN: Well, I mean I think this
24 is following a theme, collaboration with the Air Resources
25 Board kind of building off their initial investments to

1 expand the California Conservation Corps to include energy,
2 and then building on that to help train workers in the
3 build out of zero emission vehicle infrastructure.

4 So, it really brings everything together. I mean
5 what we're trying to do is foster a holistic system where
6 we create good jobs here in California, building out the
7 infrastructure that we're going to need to meet our climate
8 goals, clean the air and also, you know, expand access to
9 transportation electrification broadly. So, this really
10 bring sit all together.

11 I just want to thank Larry. He's been such a
12 champ in so many areas with the Clean Transportation
13 Program, really trying to think outside the box of how do
14 we really, truly invest in communities as we are
15 accelerating clean transportation. I just have looked upon
16 Larry as a partner in so many ways. He stepped up even
17 with the ZEV Infrastructure Strike Force to help think
18 through equity around ZEV infrastructure investments and
19 has just been a great partner.

20 And, you know, I want to thank Juan and Larry
21 from the California Conservation Corps for coming and
22 speaking. I've got to say, I'm sure I'm not the only
23 Commissioner that would like to visit a site. So, I think
24 all of his feel, you know, our hearts expand when we see
25 the youth, especially ones who come from poor backgrounds

1 and are struggling to find a good job. You know, we want
2 to create a more equitable system broadly and these
3 investments are just sort of the ones that I think we need
4 to make as a state. We need to expand those investments
5 and ensure that everyone benefits from the clean energy
6 economy that we're trying to foster.

7 So, looking forward to supporting this
8 investment.

9 CHAIR HOCHSCHILD: Thank you, Commissioner.

10 You know, the only thing I would add is, as I
11 mentioned earlier, we have this once-in-a-generation May
12 revise budget, which for the Energy Commission means over a
13 billion dollars we're going to be putting into electric
14 vehicle-related investments and infrastructure.

15 But on top of that there's a very real prospect,
16 fingers crossed, of a massive federal infrastructure
17 package which would include additional funds for these
18 areas. So, I think this kind of training investment's
19 really well timed and necessary.

20 Unless there are any additional comments from my
21 colleagues, I would entertain a motion from Commissioner
22 Monahan.

23 COMMISSIONER GUNDA: Commissioner -- Chair, can I
24 --

25 CHAIR HOCHSCHILD: Yes, go ahead.

1 COMMISSIONER GUNDA: Sorry, just wanted to add,
2 you know, CCC is very close to heart. So, I had the
3 opportunity to work with CCC when they were just about
4 launching the Energy Corps, with Director Bill Mubarak
5 (phonetic). In May 2000s I had the opportunity to
6 firsthand experience training the Corps members. I,
7 myself, taught a number of t hose Corps members on energy
8 surveys. I am just incredibly gratified to see this
9 proposal. I just completely believe in the mission of CCC
10 and it's kind of an important role in being a second chance
11 program for a number of our youth. And so, I'm just really
12 grateful to see this.

13 And thanks Larry, and Juan, and Larry from CCC
14 for making your comments.

15 CHAIR HOCHSCHILD: Well said. Thank you so much,
16 Commissioner.

17 Unless there's any additional comments,
18 Commissioner Monahan are you willing to make the motion for
19 Item 9?

20 COMMISSIONER MONAHAN: Yes, I move to approve
21 Item 9.

22 CHAIR HOCHSCHILD: Okay, Commissioner Gunda,
23 would you be willing to second?

24 COMMISSIONER GUNDA: Absolutely second it.

25 CHAIR HOCHSCHILD: All in favor say aye.

1 Commissioner Monahan?

2 COMMISSIONER MONAHAN: Aye.

3 CHAIR HOCHSCHILD: Commissioner Gunda?

4 COMMISSIONER GUNDA: Aye.

5 CHAIR HOCHSCHILD: Commissioner Douglas?

6 COMMISSIONER DOUGLAS: Aye.

7 CHAIR HOCHSCHILD: Commissioner McAllister?

8 COMMISSIONER MCALLISTER: Aye.

9 CHAIR HOCHSCHILD: And I vote aye as well.

10 That item passes unanimously.

11 Let's turn now to Item 10, Aspen Environmental

12 Group.

13 MR. ERNE: Good afternoon Chair and

14 Commissioners. I'm Dave Erne with the Energy Assessments

15 Division, here to request approval of a contract with Aspen

16 Environmental Group to provide technical support to the

17 Assessments Division.

18 The next slide. This technical support contract

19 has been very valuable to the Assessments Division,

20 particularly in allowing us to get access to specialized

21 expertise. The contract is being awarded to Aspen. Aspen

22 was the prior winner. Aspen provided a substantial amount

23 of benefit to us in the recent past.

24 I have some examples of how this contract was

25 used in the past. So, when Aliso Canyon leak occurred,

1 Aspen helped to do some seasonal gas reliability analysis
2 and price assessments for us, to help us understand the
3 impact of the Aliso Canyon leak.

4 As you know, earlier this year we published the
5 SB 100 Joint Report. The Aspen team was helpful in
6 bringing modeling capability to look at scenarios for the
7 future of California's electric system and the integration
8 of additional renewables, and what that means to the state.
9 And that's very critical analysis that we had to be able to
10 create that report.

11 And they've also been helping with improving our
12 electricity demand forecast and are working on, now, our
13 natural gas demand forecast and improving those as well.

14 So, this kind of vehicle is important in bringing
15 that specialized expertise.

16 The next slide. The scope of work of this
17 contract is very broad and we specifically made it that way
18 so that we can continue to have access as we expand our
19 analysis. Some things that we anticipate that we could be
20 utilizing this contract for moving forward would be things
21 like expanding our SB 100 reliability analysis, looking at
22 transmission and additional renewables in the state.

23 For natural gas assessments to better understand
24 the system, ways to transition the system moving forward
25 such as understanding the reliability implications and its

1 connection with the electricity system as we move towards a
2 more -- reduced greenhouse gas emissions.

3 And lastly, as we get more information where data
4 comes is, as was brought up earlier today, you know, large
5 amounts of data coming in we have the ability to extract a
6 tremendous amount of value from that data that we've never
7 had before. And so, we anticipate looking at strategies
8 that we can extract greater insights from that data as it
9 comes in. So, all ways that we anticipate this contract
10 can give us value.

11 The next slide. And so, staff recommends
12 approval of the contract and I'm here to answer any
13 questions you may have.

14 CHAIR HOCHSCHILD: Thank you, David.

15 Any public comment on this item, Noemi?

16 MS. GALLARDO: This is Noemi, the Public Advisor.
17 I don't see any hands at the moment. Let me just remind
18 folks, especially those on the phone, you can press *9 to
19 raise your hand, *6 to unmute.

20 I do not see any hands, Chair.

21 CHAIR HOCHSCHILD: Okay. Well, thank you, David
22 for that presentation and for all your professionalism in
23 this role, and your previous role, of course coming from
24 ERDD. Great to have you on this.

25 Let's go to Commissioner discussion now,

1 Commissioner Gunda.

2 COMMISSIONER GUNDA: Yes, thank you, Chair. Just
3 wanted to reiterate what David mentioned and then what you
4 mentioned about David. David has been an excellent
5 colleague in EAD and bringing his fresh thinking and
6 perspectives from ERDD, and so it's been great.

7 So, I think I just want to highlight the
8 importance of the Aspen contract. As David mentioned, we
9 have a bunch of things coming to have this year, including
10 the device modeling we're thinking for SB 100, modeling of
11 the natural gas system, and ensuring that the DER analysis
12 is really baked into our long-term protections both on the
13 demand, but also the supply side. I think it's vital we
14 have tech support.

15 Aspen in the past -- as Deputy Director for the
16 Division in the past, I had a chance to work with the Aspen
17 team. Personally had a lot of success with ensuring the
18 products were rigorous and we got the analysis that we
19 needed.

20 And so, I'm looking forward to supporting this
21 and thank you, David, for your presentation.

22 CHAIR HOCHSCHILD: Are you looking forward to
23 supporting it enough to make a motion?

24 COMMISSIONER GUNDA: Absolutely, yes. Yeah, I
25 would move Item 10.

1 CHAIR HOCHSCHILD: Thank you.

2 Commissioner McAllister, are you willing to

3 second that?

4 COMMISSIONER MCALLISTER: I second the item.

5 CHAIR HOCHSCHILD: All right, all in favor say

6 aye.

7 Commissioner Gunda?

8 COMMISSIONER GUNDA: Aye.

9 CHAIR HOCHSCHILD: Commissioner McAllister?

10 COMMISSIONER MCALLISTER: Aye.

11 CHAIR HOCHSCHILD: Commissioner Douglas?

12 COMMISSIONER DOUGLAS: Aye.

13 CHAIR HOCHSCHILD: Commissioner Monahan?

14 COMMISSIONER MONAHAN: Aye.

15 CHAIR HOCHSCHILD: And I vote aye as well.

16 That item passes unanimously.

17 Let's turn now to Item 11, California Clean

18 Energy Fund, CalCEF Ventures.

19 MR. FERREIRA: Hello everyone, and good afternoon

20 Chair and Commissioners. My name is Michael Ferreira and I

21 work in the Energy Research and Development Division.

22 I'm here today seeing approval of a sole source

23 agreement with the California Energy Fund for \$10 million

24 to establish and manage the CalSEED Low Carbon Gas Program

25 which will provide Cleantech entrepreneurs with small

1 grants for technologies that can decarbonize the natural
2 gas sector.

3 The next slide, please. One overall benefit of
4 the CalSEED LCG program is advancing the clean energy
5 economy by funding promising Cleantech startups in the
6 early state of development.

7 Additionally, by decarbonizing the natural gas
8 sector, this program will lead to improved health from
9 reduced greenhouse gas emissions and criteria air
10 pollutants, as well as greater safety from technologies
11 that can improve natural gas infrastructure.

12 The next slide, please. This small grants
13 program will be modeled after the successful CalSEED
14 program funded under EPIC, which provides entrepreneurs
15 starting capital in the form of \$150,000 grants to develop
16 their ideas into proof-of-concepts, as well as mentoring,
17 technical consulting and business development services.

18 Entrepreneurs selected for CalSEED are also
19 eligible to compete for \$450,000 in follow-on funding
20 through a business plan competition to scale their concepts
21 to the prototype stage.

22 Since the program's start in 2018, the EIC
23 CalSEED program has funded 91 startups that have gone on to
24 receive over \$37 million in public funding and \$28 million
25 in private investment, with two of the companies having

1 since been acquired through mergers.

2 The next slide, please. This small grant program
3 will fill a critical gap in cleantech finance, providing
4 proof-of-concept funding for technologies that can
5 decarbonize hard-to-electrify end uses such as industrial
6 process heating, and medium- and heavy-duty transportation.

7 Looking at the figure on the right, this small
8 grant program will help decarbonize end users in two
9 sectors, representing over 60 percent of the state's carbon
10 emissions.

11 In order to successfully decarbonize these end-
12 uses, significant innovation and entrepreneurship is needed
13 to introduce new technology solutions to the market.

14 At the same California is transitioning away from
15 natural gas, the state is focused on improving the safety
16 of the aging natural gas infrastructure.

17 New technology solutions are needed that can
18 predict, detect, and repair infrastructure vulnerabilities
19 with greater speed and precision, thereby protecting
20 community safety.

21 The next slide, please. Staff recommends
22 approval of this contract and staff's findings that this
23 contract is exempt from CEQA.

24 This concludes my presentation. Staff is
25 available for questions. Thank you.

1 CHAIR HOCHSCHILD: Thank you.

2 Let's go to public comment on this item.

3 MS. GALLARDO: This is Noemi, the Public Advisor.

4 I do see at least one hand raised. So, that is Joy Larson.

5 And Joy, reminder to please spell your name and indicate
6 your affiliation if any. Your line is open, you may begin.

7 MS. LARSON: Hi, good afternoon, Commissioners.

8 My name is Joy Larson, J-O-Y L-A-R-S-O-N. I'm the Program
9 Director for CalSEED, at California Clean Energy Fund, New
10 Energy Nexus. And thank you for this opportunity to make
11 comments in support of this proposed resolution.

12 In the first four cohorts of CalSEED that is
13 funded through EPIC we've seen some notable commercial
14 successes, as Michael talked about. We've funded 97
15 companies and after just four years, three of those
16 companies have been acquired, 12 have seen
17 commercialization or reported some product sales. And
18 taken together, the CalSEED companies have raised an
19 additional \$78 million in follow-on funding.

20 So, we're grateful for this opportunity to
21 continue a small grants program with low carbon gas
22 technologies. Low carbon gas has had its place in the
23 energy transition and there are a lot of new ideas out
24 there.

25 For example, every year we see a lot of

1 applications for new green hydrogen technologies and we've
2 seen investors show increased interest in green
3 technologies after they've been di-risked. So, we have
4 definitely seen the need for government funding for early
5 stage technologies in this space.

6 We share the CEC's goals to accelerate
7 electrification and rapid decarbonization by funding
8 scientific and technological breakthroughs that early stage
9 higher risk and higher reward.

10 Additionally, we will continue the equity in and
11 equity out framework of the CalSEED program where we
12 actively promote the grant opportunity to diverse
13 entrepreneurs and ensure that projects that are funded have
14 the potential to bring benefits, like increased safety, to
15 all of California.

16 We're grateful to Michael Ferreira and the ERDD
17 team at the CEC for their continued partnership in
18 strategically accelerating the energy transition. And if
19 approved, we're excited to see the projects that will be
20 funded through this opportunity. Thank you very much.

21 CHAIR HOCHSCHILD: Thank you.

22 Any additional public comments on this item,
23 Noemi?

24 MS. GALLARDO: Let me make one last call. Folks
25 on the phone, if you'd like to make a public comment

1 please press *9 to raise your hand, *6 to unmute. Others,
2 if you could raise your hand using the feature on the
3 screen.

4 Chair, I see no hands.

5 CHAIR HOCHSCHILD: Okay. Well, thank you. Let
6 me thank everybody and the team at CalSEED for all of this
7 work. I do think CalSEED is the right analogy, it really
8 is a garden. And, you know, these startups that we're
9 trying to support I mean, you know, they are going to be
10 better positioned to succeed with some good care, and
11 feeding, and water, and nutrient-rich soil, and sunlight,
12 and all the things that this grant will help accomplish.
13 That additional support and de-risking really helps get
14 them in a better position for follow-on funding, and
15 acquisition, and growth.

16 So, just a phenomenal job so far and I'm very
17 pleased to support this.

18 Let me turn to my colleagues, next starting with
19 Commissioner McAllister.

20 COMMISSIONER MCALLISTER: Yeah, thank you, Chair.
21 I'm great support of this. It's really good to see us on
22 multiple fronts actually, including this one, moving
23 forward on the decarbonization of our gas system and our
24 more difficult sectors that account -- as the electricity
25 sector shrinks in its emissions, it accounts for a higher,

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1 and higher percentage of our emissions. And so, I think we
2 need all of the innovation we can get. I think your
3 gardening analogy is great.

4 And really excited to see what comes out of this
5 grant and the broader innovation efforts.

6 CHAIR HOCHSCHILD: Thank you.

7 Unless there's other Commissioners wishing to
8 comment, Commissioner McAllister would you be willing to
9 make the motion?

10 COMMISSIONER MCALLISTER: Yes, I'll move Item 11.

11 CHAIR HOCHSCHILD: And Commissioner Gunda, would
12 you be willing to second?

13 COMMISSIONER GUNDA: Second the motion.

14 CHAIR HOCHSCHILD: All in favor say aye.
15 Commissioner McAllister?

16 COMMISSIONER MCALLISTER: Aye.

17 CHAIR HOCHSCHILD: Commissioner Gunda?

18 COMMISSIONER GUNDA: Aye.

19 CHAIR HOCHSCHILD: Commissioner Monahan?

20 COMMISSIONER MONAHAN: Aye.

21 CHAIR HOCHSCHILD: And Commissioner Douglas?

22 COMMISSIONER DOUGLAS: Aye.

23 CHAIR HOCHSCHILD: And I vote aye as well.

24 That item passes unanimously.

25 Let's turn now to Item 12, Guidehouse.

1 MR. UY: Greetings Chair and Commissioners. My
2 name is Kevin Uy with the Energy Research and Development
3 Division. Staff is seeking approval of this agreement to
4 develop a long-term natural gas research strategy.

5 Next slide, please. This study will benefit
6 Californians by informing future natural gas
7 decarbonization research at the CEC. This research aims to
8 advance the state of natural gas decarbonization
9 technologies, and ultimately contribute to achieving the
10 state's aggressive carbon neutrality goals.

11 The next slide, please. This study, requested by
12 the CPUC as part of its approval of the CEC's 2019 Natural
13 Gas Budget Plan, will produce a long-term natural gas
14 research strategy, including assessment of decarbonization
15 technologies and research needs. The study will leverage
16 the scenarios established in the SB 100 joint agency
17 report, such as high electrification, high hydrogen, and
18 zero combustion, and provide comprehensive research
19 recommendations based on those scenarios. These
20 recommendations will inform future research on technology
21 development, demonstration, and deployment in the CEC's
22 Natural Gas Research Program and help the state transition
23 to a net-zero carbon natural gas system.

24 Next slide, please. Staff recommends approval of
25 this award, as well as staff's determination that this

1 action is exempt from CEQA. I am available to answer any
2 questions you may have. In addition, Guidehouse has
3 prepared a written response which they would like read into
4 record. Thank you.

5 CHAIR HOCHSCHILD: Thank you.

6 Any public comment on this item?

7 MS. GALLARDO: This is Noemi, the Public Advisor.
8 I do have the public comment from Guidehouse, so I'll read
9 that now. This is specifically from Amul Sathe, the
10 Director. His last name is spelled S-A-T-H-E, first name
11 is A-M-U-L.

12 "Guidehouse is a leading global provider of
13 consulting services to the public and commercial markets.
14 We are at the forefront of R&D planning, and management,
15 and decarbonization working with major public sector R&D
16 organizations in North America and Europe, and assisting
17 global utilities in developing and implementing deep
18 carbonization strategies.

19 Guidehouse has supported the Commission on
20 multiple contracts for more than two decades, including
21 technical support for the PIER, Electric and Natural Gas,
22 and EPIC programs, the Demand Analysis Office, and studies
23 on electric generation, transmission, and distribution
24 systems.

25 Governor Brown's Executive Order B-55-18 set a

1 goal for the California economy to achieve carbon
2 neutrality by 2045. Critical to achieving the 2045 goal
3 will be decarbonizing the state's natural gas system using
4 a variety of technologies and strategies for all aspects of
5 the supply chain. This project will help achieve this goal
6 by providing independent analysis to develop a long-term
7 natural gas research strategy. This plan is vital to
8 prioritizing the most impactful ways the Energy Commission
9 should spend its Natural Gas Research Fund.

10 Development of the long-term natural gas research
11 strategy will further send a strong signal to technology
12 innovators that California is serious about its
13 decarbonization journey. It will also show leadership to
14 other public agencies across the globe, who are similarly
15 putting forth decarbonization goals.

16 We thank the Commission for funding this
17 important work and proposing to award this to Guidehouse.
18 We look forward to this project and continuing our two
19 decades plus partnership with the Commission."

20 MS. GALLARDO: That concludes the Guidehouse
21 comments.

22 And I do not see hands raised at the moment.
23 Reminder to folks on the phone to raise your hand by
24 pressing *9 and to unmute using *6.

25 No other hands, Chair.

1 CHAIR HOCHSCHILD: Okay, thank you.

2 Let's move to a discussion. This is, you know, I

3 think another terrific step in our efforts to decarbonize.

4 I just wonder if, Commissioner McAllister, if you have any

5 thing you'd like to add on this one?

6 COMMISSIONER MCALLISTER: Just quickly, yeah, we

7 need this work to help chart the path ahead. And there are

8 lots of different things that need to be accomplished. And

9 I think having a clear idea of that and pro organization is

10 really worthwhile, so support this effort.

11 CHAIR HOCHSCHILD: Great, thank you.

12 COMMISSIONER MCALLISTER: So, with that --

13 CHAIR HOCHSCHILD: Unless there's other comments

14 --

15 COMMISSIONER MCALLISTER: -- happy to move the

16 item if there's not.

17 CHAIR HOCHSCHILD: Yeah, that would be great,

18 thank you. If you'd move the item, thank you.

19 COMMISSIONER MCALLISTER: Okay, I will move Item

20 12.

21 CHAIR HOCHSCHILD: Commissioner Gunda, would you

22 be willing to second?

23 COMMISSIONER GUNDA: Second the item.

24 CHAIR HOCHSCHILD: All right, all in favor say

25 aye.

1 Commissioner McAllister?

2 COMMISSIONER MCALLISTER: Aye.

3 CHAIR HOCHSCHILD: Commissioner Gunda?

4 COMMISSIONER GUNDA: Aye.

5 CHAIR HOCHSCHILD: Commissioner Douglas?

6 COMMISSIONER DOUGLAS: Sorry. Aye.

7 CHAIR HOCHSCHILD: Commissioner Monahan?

8 COMMISSIONER MONAHAN: Aye.

9 CHAIR HOCHSCHILD: And I vote aye as well.

10 That item passes unanimously.

11 Let's move on to Item 13, Strategic Pathways and

12 Analytics for Tactical Decommissioning of Portions of

13 Natural Gas Infrastructure.

14 MS. ORTIZ: Good afternoon Chair and

15 Commissioners. My name is Reta Ortiz. I'm an Energy

16 Commission Specialist in the Energy Research and

17 Development Division.

18 Today, I'm presenting two recommended awards from

19 our Tactical Decommissioning solicitation. This

20 solicitation required applicants to collaborate with

21 stakeholders to determine where natural gas infrastructure

22 retreat is plausible, economically viable, an customer

23 supported.

24 The next slide, please. These projects will

25 support stakeholder engagement and long-term planning of

1 the gas system and foster collaboration with utilities,
2 researchers, and communities to develop strategies for a
3 more equitable and cost-effective transition of the
4 distribution system. Assessments of different
5 decommissioning strategies under a wide range of variables
6 will ensure gas transition includes health, environmental,
7 and economic benefits to ratepayers.

8 The next slide, please. According to the U.S.
9 Pipeline and Hazardous Materials Safety Administration, the
10 average age of California's natural gas system is more than
11 40 years old, reaching the end of its service life. It is
12 estimated that replacing the distribution system would cost
13 between \$1 to \$5 million per mile. Before utilities invest
14 in replacing the current infrastructure, it is important to
15 investigate opportunities for strategic electrification and
16 decommissioning. Applicants will develop replicable site
17 selection criteria and decision-making frameworks for
18 electrification and decommissioning projects. Using the
19 developed framework, awardees will conduct a feasibility
20 study and provide plans for three candidate pilot sites,
21 with at least one being in a disadvantaged or low-income
22 community.

23 The next slide, please. The first proposed
24 project is with the RAND Corporation. They will develop a
25 multi-disciplinary analytical framework to identify

1 candidate decommissioning locations in Southern California.
2 Unique to this project, RAND will collaborate with two
3 single-use utilities, SoCalGas and Southern California
4 Edison. SoCalGas will provide the required gas
5 infrastructure and customer data, and conduct the macro-
6 economic modeling. Southern California Edison will provide
7 necessary electric infrastructure data and subject matter
8 experts. RAND will also work with the cities of Long Beach
9 and Santa Monica, and elicit community engagement and
10 customer support of candidate sites.

11 The next slide, please. The second project is
12 led by Energy and Environmental Economics, Inc., E3, with
13 support from Gridworks, PG&E, East Bay Community Energy,
14 and will engage local community-based organizations. They
15 will develop a data-driven analytical framework that will
16 include electrification opportunities across PG&E's service
17 territory in the East Bay. PG&E will work with E3 and
18 provide important customer and infrastructure data, as well
19 as provide subject matter experts. The E3 team will engage
20 the cities of Fremont, West Oakland, Berkeley, and Tracy
21 and gain customer feedback and support for candidate sites.
22 The project will engage -- this project will engage with
23 communities to develop a deep understanding of their
24 priorities on GHG reductions, energy costs and reliability,
25 comfort and health, and the role of natural gas.

1 The next slide, please. Staff recommends
2 approval of these two grant awards and adoption of staff's
3 determination that these projects are exempt from CEQA.
4 The RAND Corporation has provided a written statement that
5 they would like read into the record.

6 Thank you, and I'm available to answer any
7 questions.

8 CHAIR HOCHSCHILD: Thank you.

9 Let's go to public comment, now.

10 MS. GALLARDO: All right, this is Noemi, the
11 Public Advisor. I do have that comment from RAND, which
12 I'll read now. Specifically, this is from Kelly Klima, K-
13 E-L-L-Y K-L-I-M-A.

14 "On behalf of our team, we would like to thank
15 the CEC for supporting our effort on strategic pathways and
16 analytics for technical decommissioning of portions of
17 natural gas. California's policies for reducing emissions
18 associated with natural gas will induce transformational
19 changes to our fuel system. This has the potential for
20 resulting in severe inequities both in areas with single-
21 fuel utilities, as well as in disadvantaged or vulnerable
22 communities.

23 The RAND team looks forward to conducting this
24 policy research to both help inform decommissioning policy,
25 and also to help identify pilot sites for decommissioning.

1 We feel very fortunate that the CEC is supporting this work
2 and look forward to next steps as California continues to
3 lead in climate change policy."

4 MS. GALLARDO: That concludes the comment. And
5 Chair, I do see a hand raised. Let me see here. So, just
6 a reminder to folks to please spell your name and to
7 indicate your affiliation, if any.

8 Tim Carmichael, you are up and I am opening your
9 line. You may begin.

10 MR. CARMICHAEL: Good afternoon. Can you hear
11 me?

12 MS. GALLARDO: Yes.

13 MR. CARMICHAEL: Good afternoon Commissioner
14 Hochschild, members of the Commission. I'm Tim Carmichael,
15 T-I-M C-A-R-M-I-C-H-A-E-L, speaking on behalf of Southern
16 California Gas Company.

17 Appreciate the opportunity to provide some brief
18 public comments in support of the RAND Corporation's grant
19 proposal, or CEC's grant to the RAND Corporation to fund
20 research to develop a community-level, multidisciplinary,
21 and objective analytical effort that assesses the
22 practicalities of building electrification and identifying
23 locations in Southern California where decommissioning can
24 potentially occur in a just, equitable, and cost-effective
25 manner.

1 Ms. Ortiz covered the project team and the in-
2 kind matching, so I'll just cover just a couple other
3 points. The proposed project will pull together detailed
4 data of the gas system, along with socioeconomic data for
5 candidate communities to evaluate different decommissioning
6 sites and approaches.

7 Functionally, the proposed project will put the
8 SoCalGas system, with our data and hydraulic system data,
9 under the microscope and will allow researchers to focus on
10 requirements, as well as understanding both from a
11 feasibility cost and rate of penetration stand point on
12 what electrification may mean to our system.

13 This, and similar proposed analysis is critically
14 important to provide a deeper sectoral view of greenhouse
15 gas mitigation strategies applicable to the building
16 sector, offering a more holistic perspective that accounts
17 for technical and engineering considerations, as well as a
18 more granular and informed data around customer conversion
19 challenges.

20 To advance the public interest in the provision
21 of essential utility services an examination of the
22 interaction between strategic electrification of the
23 distribution system and decommissioning is imperative to
24 inform and implement key policy tools as California updates
25 legal and regulatory frameworks to support a 2045 net zero

1 transition.

2 Thank you again for the opportunity to provide
3 comments and we urge your support for this grant.

4 CHAIR HOCHSCHILD: Thank you.

5 Any further public comments on Item 13?

6 MS. GALLARDO: This is Noemi, Public Advisor. I
7 do not see any hands. But just real quick, folks on the
8 phone press *9 to raise your hand, *6 to unmute. Others
9 use the raised hand icon.

10 No more hands, Chair.

11 CHAIR HOCHSCHILD: Okay, thank you.

12 Yeah, I'll just say I think this area is really
13 ripe for this kind of investment, and the analysis
14 assessments, and engagements with the key stakeholders are
15 going to bear a lot of fruit. So, very happy to support
16 both of these grants.

17 Commissioner McAllister, did you want to chime
18 in?

19 COMMISSIONER MCALLISTER: Just briefly, yeah. I
20 think, I agree with you the time is perfect for this. And
21 both of these proposals, both of these awardees I think are
22 going to produce really critical work for our planning
23 going forward. Also, they both complement the skills that
24 we're building here at the Commission on the gas side.
25 And, you know, as we sort of build the bridges between the

1 gas conversation and the electric conversation under SB
2 100, I think that filling in all these informational and
3 analytical gaps is really just helping. It's going to help
4 to propel the conversation forward in a very, I think,
5 objective and participatory way, which is really how we're
6 going to get to yes on all this stuff. So, really
7 appreciate both of these and the broader effort.

8 CHAIR HOCHSCHILD: Okay. Any further comments?
9 Commissioner Monahan, yeah.

10 COMMISSIONER MONAHAN: Just a quick one because I
11 just want to complement, well, for both this item and the
12 previous one just the thoughtfulness that went into this
13 with the staff. I agree with everything you've said, Chair
14 and Commissioner McAllister has said around the importance
15 of these investments and really trying to understand this,
16 you know, what does it mean to fully decarbonize our -- or,
17 you know, zero out carbons from our overall economy. And
18 these kinds of grants help understand the pros and cons,
19 and the costs, and having so many different project
20 partners. It was really just very impressive the range of
21 stakeholders that are engaged in these analytical projects.
22 I mean, kind of mind-blowing, actually.

23 So, I want to just thank everyone. And thank
24 Jim, and Michael, and you know, just the whole diverse
25 ecosystem of folks that are involved in these grants,

1 really impressive.

2 CHAIR HOCHSCHILD: Well, well said, thank you.
3 Commissioner Gunda.

4 COMMISSIONER GUNDA: Yeah, Chair, thank you. I
5 think I just want to start off by thanking Kevin and Reta
6 for their presentations. And specifically want to note
7 Reta's kind of comments on some of the, you know, things
8 that we discussed yesterday she already incorporated. So,
9 just thank you, Reta, for your responsiveness there.

10 I agree with Commissioner McAllister and I think
11 CEC has an important function of ensuring that, you know,
12 the dialogue is robust, comprehensive, and inclusive that's
13 really underpinned with objective and transparent, you
14 know, information.

15 So, I feel like these two projects really will
16 provide us some important data point son the opportunities,
17 the complexities, the challenges of how we evolve the gas
18 system, the infrastructure and assets in the policy
19 framework of high electrification that we all see as an
20 important strategy of decarbonization.

21 So, I'm just grateful that we're beginning the
22 conversation and funding these studies. I'm grateful and
23 thankful to the Assessments Division for developing
24 complementary skills, as Commissioner McAllister noted, and
25 working closely with the PR R&D. And thank R&D staff for

1 including Commission staff from across the Commission and
2 all the divisions in these important conversations.

3 I also want to thank the stakeholder
4 participation in the Gas Working Group that we currently
5 have at the Commission. Appreciate the participation of
6 the utilities, the gas utilities in that important
7 conversation, shaping these important policy questions and
8 developing understanding into this data.

9 I think the best path for California, as we
10 pursue our goals, is data driven that is holistic and
11 complete in the way we understand the system. So, I just
12 am thankful that we are beginning this conversation and
13 doing that in partnership. So, thank you.

14 CHAIR HOCHSCHILD: Thank you.

15 Commissioner Douglas, did you want to add
16 anything?

17 COMMISSIONER DOUGLAS: You know, just briefly. I
18 had a chance to get a briefing on this item and I
19 appreciated that. It was a nice exchange, good
20 presentation here. And I do appreciate the strategic focus
21 here on what it takes to achieve physical decommissioning,
22 while also prioritizing community perspectives.

23 So, you know, I'm supportive of this and looking
24 forward to seeing the results.

25 CHAIR HOCHSCHILD: Yeah. Well, I think sort of

1 the take home point is this kind of thing is much better
2 done when it's planned, rather than unplanned.

3 COMMISSIONER DOUGLAS: Yeah.

4 CHAIR HOCHSCHILD: And I think it's, you know,
5 also a tribute to your terrific work, Commissioner Douglas,
6 on planning for renewables, and transmission, and so forth.
7 That bears a lot of fruit. And I just really look forward
8 to the results of these two grants and I'm happy to
9 support.

10 Let's see, Commissioner McAllister are you
11 willing to make the motion?

12 COMMISSIONER MCALLISTER: Yes, I'm happy to move
13 Item 13.

14 CHAIR HOCHSCHILD: Commissioner Gunda, would you
15 be willing to second?

16 COMMISSIONER GUNDA: Happy to second.

17 CHAIR HOCHSCHILD: Okay, all in favor say aye.
18 Commissioner McAllister?

19 COMMISSIONER MCALLISTER: Aye.

20 CHAIR HOCHSCHILD: Commissioner Gunda?

21 COMMISSIONER GUNDA: Aye.

22 CHAIR HOCHSCHILD: Commissioner Monahan?

23 COMMISSIONER MONAHAN: Aye.

24 CHAIR HOCHSCHILD: And Commissioner Douglas?

25 COMMISSIONER DOUGLAS: Aye.

1 CHAIR HOCHSCHILD: And I vote aye as well.

2 That item passes unanimously.

3 Let's turn now to Item 14, Entrepreneurial
4 Ecosystems.

5 MR. NG: Okay, good afternoon Chair and
6 Commissioners. My name is Anthony Ng, with the Research
7 and Development Division. And today I am here to request
8 approval of five awards totaling just under \$53 million.

9 These five projects comprise the foundational
10 elements of the EPIC program's Entrepreneurial Ecosystem
11 which collectively provide support for early stage clean
12 energy companies by connecting them with the funding,
13 training, resources, and expertise needed to help turn
14 technologies and concepts into businesses and products that
15 can benefit ratepayers, consumers, and companies.

16 The next slide, please. These projects were
17 initially approved by the CEC in 2016 and the impact these
18 programs have had so far have been encouraging. Over 200
19 companies have been supported by these five programs and
20 they have gone on to attract over \$1.6 billion in follow-on
21 public and private investments. These companies employ
22 over 1,000 people throughout the state, they hold over 400
23 patents, and 4 companies have had successful exist in
24 either acquisitions or initial public offering.

25 The next slide, please. Taking a step back just

1 to add a little bit of context, these projects were started
2 in response to feedback we had been hearing from
3 stakeholders that there was a growing gap in private sector
4 support for clean energy technologies. The venture capital
5 and investor model that had worked so well for software
6 startups was not translating well over to clean energy
7 startups. Compared to software, clean energy innovations
8 took far too much time and capital to reach market. The
9 Entrepreneurial Ecosystem was the CEC's effort to fill that
10 gap.

11 The next slide, please. The result were these
12 five interconnected projects, four regional energy
13 innovation clusters, and the California Sustainable Energy
14 Entrepreneur Development Initiative.

15 Approval of this item today will provide the
16 additional time and funding for these five projects to
17 continue providing critical support for California's clean
18 energy entrepreneurs.

19 While the five projects collectively represent
20 one effort, I'll spend a little bit of time talking about
21 each one individually.

22 The next slide, please. First is Cleantech San
23 Diego, who runs the Southern California Energy Innovation
24 Network. Covering the San Diego, Inland Empire and
25 Imperial Valley regions, Cleantech San Diego provides

1 customized service plans to fit entrepreneurs' technology
2 and business needs.

3 Examples of services include connections with
4 investors and industrial partners, opportunities for pilot
5 demonstrations, as well as consulting on business model
6 development and customer discovery.

7 The next slide, please. Next is Activate Global.
8 Activate operates the Cyclotron Road program in conjunction
9 with Lawrence Berkeley National Lab, a two-year fellowship
10 program focused on helping scientists bring their research
11 to market. With a focus on hard tech, fellows can leverage
12 the facilities at LBNL, while also going through a rigorous
13 curriculum to turn ideas into businesses.

14 The next slide, please. Next is California State
15 University Fresno who manages the Blue Tech Valley program.
16 Covering the central valley, north state, and central
17 coast, Blue Tech Valley covers the largest geography out of
18 the innovation clusters. Blue Tech Valley partners with
19 other CSU's across the state such as Bakersfield, Monterey,
20 and Chico to form a hub-and-spoke model to cover the large
21 area. Blue Tech Valley specializes in agricultural and
22 water-related energy technologies and provides unique
23 resources such as irrigation testing laboratories, as well
24 as farm demonstration sites.

25 The next slide. Our last innovation cluster is

1 the Los Angeles Cleantech Incubator. LACI operates several
2 programs that provide one- to two-year support for
3 companies ranging from precommercial products all the way
4 to those seeking Series B investments. With a focus on
5 technologies related to clean energy, zero emission
6 mobility, and circular economy, LACI provides entrepreneurs
7 with advisory services, business development support, and
8 pilot opportunities.

9 The next slide. Our final project is the CalSEED
10 Initiative. As you heard earlier from my colleague Mike,
11 this is our small grants program focused on funding early
12 stage concepts. Awardees receive initially \$150,000 to
13 develop promising concepts, with a chance to compete for an
14 additional \$450,000 to further develop prototypes.
15 Additionally, CalSEED awardees are put through a business
16 development curriculum through cleantech open, and gain
17 access to an extensive network of potential partners and
18 investors.

19 The next slide, please. That concludes my
20 presentation. Staff recommends approval of this item and
21 adopting staff determination that projects are exempt from
22 CEQA.

23 I'm happy to answer any questions you may have.

24 CHAIR HOCHSCHILD: Thank you, Anthony.

25 Let's move on to public comment.

1 MS. GALLARDO: This is Noemi, the Public Advisor.
2 We do have several hands raised. The first one is Danny
3 Kennedy. Danny, a reminder to please spell your name for
4 the record, indicate your affiliation if any. I will open
5 your line and you may begin.

6 MR. KENNEDY: Hello, thank you. This is Danny
7 Kennedy, D-A-N-N-Y K-E-N-N-E-D-Y. And I am the CEO of New
8 Energy Nexus and the California Clean Energy Fund is the
9 organization I manage in California. And I'm so excited
10 and pleased to speak to you and thank you for this
11 opportunity to continue to grow this garden, as the
12 Commissioner was talking about earlier, of entrepreneurs
13 and this entire ecosystem that you've built since 2015 very
14 intentionally, but also allowing some sort of wild edges
15 and new ideas to pop up, and spring up from the fertile
16 ground you've created.

17 So, I wanted to start by thanking particularly
18 the team that Anthony works with, Eric, and Josh, and
19 Laurie and the whole gang that help make all of these
20 activities in the ecosystem possible. And also thanks to
21 our team at the California Clean Energy Fund that
22 administers CalSEED, Joy Larson, who you heard from
23 earlier, Sara Chester, Dawn Maser, Kelly Soria, Christina
24 Bolsom (phonetic), all incredible people that have
25 supported these dozens and dozens of startups each year for

165

1 the last several years.

2 As well as the partners that we have with the
3 CalSEED Program. The Cleantech Oakland that you've heard
4 runs the accelerator for them. The Greenlining Institute
5 that has really helped build our social equity in/social
6 equity out outcomes. The Center for Sustainable Energy,
7 Momentum, Lawrence Berkeley National Lab. All of them have
8 been great. As well as the cluster organizations in the
9 ecosystem to create this.

10 But most of all I want to thank the entrepreneurs
11 and really encourage the Commission to continue to support
12 it with this decision today.

13 You know, as mentioned we've had 90 some so far
14 in the CalSEED Program. Most are, you know, these
15 fantastic, ambitious young people looking to change the
16 world, and stop the climate problem we have on earth. But
17 also a lot of older people, and people from all walks off
18 life on that same journey and with that struggle.

19 Real great successes. You know, just want to
20 call out again the fact that we have had actual exists in
21 sort of less than four years. When we talk about
22 accelerating innovation, stories like Cuberg should really
23 be highlighted. This is a team that came out of Stanford
24 University in 2017, when we just started CalSEED, they were
25 in the first cohort. They also wen through the CalTestBed

1 program which the CEC funds. They were acquired earlier
2 this year by Northvolt. They're a lithium metal battery
3 component. You know, a fairly hardware, hardtech solution
4 to sort of an industrial component that normally would not
5 see an exit in a decade. So, we're really seeing the
6 fruits of this garden growing faster and getting products
7 to market sooner.

8 There's a bunch of battery startups with
9 supported seshion (phonetic) core shell. You heard earlier
10 from Power Flicks (phonetic) in the EV charging arena that
11 has actually had an exit as well. And that obviously is
12 leading to the lithium valley garden in the corner of the
13 state, in Imperial County, which is growing with CEC
14 support, and the startup ecosystem is overlapping strongly
15 with that.

16 So, I'd really, you know, compel you to support
17 this and continue to get behind it. I wanted to highlight
18 the underrepresented on the teams that have been supported
19 through CalSEED so far. Some quick numbers, 17 percent of
20 the fund, 3 and a half million or more, have been awarded
21 to companies located strictly in low-income, disadvantaged
22 area communities. And over 38 percent, or \$8.1 million
23 have been awarded to entrepreneurs from underrepresented
24 groups. So, we sort of beat our diversity inclusion
25 numbers that we committed to at the start of the program,

1 but we want to do better yet in the next go-round, in the
2 next 3 to 5 years with this support.

3 And we're also collaborating very highly with all
4 the other ecosystem organizations. I used to call CalSEED
5 the brakes on the skids, but I think the garden analogy is
6 a much better one. But 30 percent of our companies have
7 been funded with companies that are also supported by
8 Activate, or LACI, or Blue Tech Valley, and Cleantech San
9 Diego. So, 21 percent of our companies in CalSEED are
10 already going into the CalTestBed Program, which is a
11 statewide with the University of California, Office of the
12 President.

13 In other words, the synergies are happening, the
14 systems working, the ecosystem is rich and diverse. I want
15 to thank the CEC for the opportunity to build it and really
16 excited to get on with this next five years. Shine on,
17 thank you.

18 CHAIR HOCHSCHILD: Thank you, Danny.

19 Noemi, do we have any additional public comment
20 on this item?

21 MS. GALLARDO: Yes, we do. The next person is
22 Marty Turock. Marty, apologies if I mispronounce your
23 name. Please restate it and spell it, and then indicate
24 your affiliation if any. Your line is open now.

25 MR. TUROCK: Good afternoon Chair Hochschild,

1 Commissioners, and Deputy Director Laurie ten Hope. My
2 name is Marty Turock, you got it right on. M-A-R-T-Y T-U-
3 R-O-C-K. And I'm calling in today on behalf of Cleantech
4 San Diego and the Southern California Energy Innovation
5 Network.

6 First and foremost, I would like to thank each of
7 you in the California Energy Commission for its visionary
8 leadership in establishing this California Entrepreneurial
9 Ecosystem that Cleantech San Diego is so honored to be a
10 part of.

11 For the past five years I've had the privilege of
12 managing the state's southernmost cluster. That's the
13 Southern California Energy Innovation Network, which
14 supports breakthrough clean energy technologies being
15 developed in Imperial, Riverside, San Bernardino, and San
16 Diego Counties.

17 The impact we've seen this program make on our
18 region's cleantech innovation industry is truly remarkable,
19 and Cleantech San Diego is beyond grateful to the
20 California Energy Commission for your investment in its
21 success.

22 Since it's launch in 2016, I'm proud to report
23 that 50 energy startups have been served by our innovation
24 cluster, 37 of which are currently active in the program.
25 74 percent of these companies have diverse representation

1 of women, minorities, and Veterans in their leadership
2 teams. Together they employ over 320 people and have
3 raised more than \$160 million in follow-on capital
4 investments from public and private sources since being
5 accepted into the program. It's worth noting that that
6 represents a more than 30-fold return on investment, all
7 with direct benefits to California electric ratepayers.

8 Over the last five years we've seen our
9 entrepreneurs not only raise capital, but they've won
10 highly competitive technology competitions, deployed their
11 technologies around the world, and helped further
12 California's leadership in transitioning to a clean energy
13 economy.

14 Clearly, the commercial successes of eMotorWerks,
15 who was acquired by Enel X, and Nuvve, have accelerated
16 market transformation in vehicle-grid integrated smart EV
17 charging not only in California, but around the world.

18 Similarly, the fastest and most sophisticated
19 Durham software platforms available from CleanSpark and
20 XENDEE can guarantee the bankability of DER and microgrid
21 projects, which is contributing to their accelerated
22 adoption.

23 And this is because of your support of our
24 program and in turn the dedicated commitment of the
25 entrepreneurs that we're working with.

1 So, in closing Mr. Chairman and Commissioners,
2 thank you again for your leadership and now supporting the
3 state's Entrepreneurial Ecosystem for another five years.
4 you've really created an exciting and promising path to
5 market for entrepreneurs through the state.

6 I'd also like to take this opportunity to thank
7 Eric Stokes, Anthony Ng, and Oliver. Our success is tied
8 to the support that they provide and we're so fortunate to
9 have them as strong partners on our team.

10 It's an absolute honor to steward this program
11 and to see the positive impact it's having on the state's
12 clean energy economy and climate action goals. Along with
13 our current member companies, we have a solid pipeline of
14 new startups that we look forward to supporting over the
15 next five years in commercializing new clean energy
16 technologies for the benefit of all Californians.

17 So, thank you so much.

18 CHAIR HOCHSCHILD: Thank you.

19 MS. GALLARDO: All right, so this Noemi, the
20 Public Advisor. We do have one more public comment. That
21 is Lauren Harper. Lauren, a reminder to please spell your
22 name, indicate your affiliation if any. Your line is open,
23 you may begin.

24 MS. HARPER: Good afternoon. My name is Lauren
25 Harper, L-A-U-R-E-N H-A-R-P-E-R. And I am the Energy Team

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1 Program Manager at the Los Angeles Cleantech Incubator.
2 I'm delighted to be here today and on behalf of LACI
3 provide supportive comments for Item 14.

4 As a recipient of the Commission's EPIC program
5 since 2016, LACI has provided direct incubation services
6 support to 54 startup companies through its Innovators
7 Program alone. Collectively, these companies have raised
8 over \$834 million in venture capital and \$46 million in
9 follow-on funding during that time span.

10 With the proposed increased funding, LACI will
11 build upon its success by serving approximately 57 startups
12 within one year, culminating into 234 startups over the
13 next five years, with the objective of increasing our
14 diversity in our founders.

15 We appreciate the CEC's opportunity to support
16 and -- the CEC's support and partnership, and we look
17 forward to continuing to work together to help the state
18 unlock clean energy technology break throughs, as well as
19 build an inclusive green economy. Thank you for your
20 consideration and opportunity to provide public comments
21 today. And it's a pleasure and a delight to work with your
22 teammates and your staff every single day. Thank you.

23 CHAIR HOCHSCHILD: Thank you.

24 Noemi, is that all the public comment?

25 MS. GALLARDO: Yes, that's all the public

1 comment, I see no more hands.

2 CHAIR HOCHSCHILD: Okay. Well, thank you to all
3 of the stakeholders for providing those comments.
4 Thunderous agreement from me and I think from my colleagues
5 on all that.

6 A few points I want to make. First of all, I
7 ju8st really want to thank again Anthony NG, Eric Stokes,
8 the whole team, Laurie ten Hope, incredible work on this.
9 I love the geographic distribution of these hubs. I love
10 the comprehensive approach, the big thinking. You know,
11 couldn't be more proud of the strategy and approach here.

12 You know, I would just say we are here at the
13 Energy Commission to serve these entrepreneurs. You know,
14 our goal is really to set the policy direction, work with
15 the Legislature and the Governor on the overall goals.
16 And, you know, we're really here then, once those are set,
17 to support the success of this whole ecosystem and all the
18 entrepreneurs.

19 And if you think about where we're at today,
20 right, 1.2 million solar roofs, we're adding 400 solar
21 roofs a day in California, almost 900,000 electric vehicles
22 sold in the state. We're adding 650 a day. Then you go
23 back to 15 years ago when those felt like pipe dreams, and
24 it was a bunch of entrepreneurs working out of their
25 garages to build those industries, and not they're building

1 it.

2 And the same is going to happen, I think, with
3 battery storage. We've got 40,000 systems in and adding a
4 bout 40 a day. But that's, you k now, growing rapidly.

5 And there's so much else that all these
6 entrepreneurs in these various hubs are engaging in, and
7 have huge potential for growth. And they're better off for
8 being part of an ecosystem that is really tending to all
9 the needs, and sticking them together, and helping really
10 to make use of all of the resources we have in the state.
11 I think this program does a terrific job of that.

12 I especially wanted to thank Jen Martin Gallardo
13 for filling a position which I created right after I came
14 here, of really being our advocate and ombudsman for grant
15 recipients to help the process go better when people are
16 applying for grants. And they get a friction-free, and
17 simple, and as accessible as it possibly can be. She's
18 done a phenomenal job working not just in this program, but
19 across all of our programs on that to better serve
20 applications for grants, and entrepreneurs and I'm very
21 pleased with that progress.

22 So, I just wanted to say that. And I also,
23 again, wanted to stress how many of the climate solutions
24 that are really emerging in California run through the
25 electric grid in one fashion or another. And as we now,

1 you know, approach a hundred percent clean energy, we need
2 everything that connects to the grid to be a good citizen
3 of the grid. And there's so much happening in this space,
4 as well, in terms of making all these great new solutions
5 help support grid reliability and renewables integration.
6 I'm really excited by that prospect as well.

7 With that, let me turn it to my colleague
8 Commissioner McAllister for any comment.

9 COMMISSIONER MCALLISTER: Great.

10 CHAIR HOCHSCHILD: Go ahead.

11 COMMISSIONER MCALLISTER: Great, thank you Chair
12 Hochschild. I just -- I won't repeat what you said, I
13 agree wholeheartedly. And, you know, this is \$53 million
14 injected straight into the Entrepreneurial Ecosystem here
15 for decarbonization and that's a big deal. So, I want to -
16 - so, thanks Danny for your really visionary comments. And
17 Marty, good to hear your voice as well. And just it's nice
18 to be able to leverage the diversity across our big,
19 beautiful state, and really get fertilizer all over the
20 garden, you know, it's a big garden. So, really want to --
21 it's a big, organic garden let's say.

22 But yeah, so anyway wholeheartedly support this
23 item, clearly.

24 CHAIR HOCHSCHILD: Thank you.

25 Anyone else wishing to make a comment?

1 Commissioner Douglas? Okay.

2 All right, then I'd welcome a motion,

3 Commissioner McAllister, on this item.

4 COMMISSIONER MCALLISTER: Indeed, I'll move Item

5 14.

6 CHAIR HOCHSCHILD: Okay. Commissioner Douglas,

7 would you be willing to second that?

8 COMMISSIONER DOUGLAS: Yes, I second that.

9 CHAIR HOCHSCHILD: All right. All in favor say

10 aye.

11 Commissioner McAllister?

12 COMMISSIONER MCALLISTER: Aye.

13 CHAIR HOCHSCHILD: Commissioner Douglas?

14 COMMISSIONER DOUGLAS: Aye.

15 CHAIR HOCHSCHILD: Commissioner Monahan?

16 COMMISSIONER MONAHAN: Aye.

17 CHAIR HOCHSCHILD: Commissioner Gunda?

18 COMMISSIONER GUNDA: Aye.

19 CHAIR HOCHSCHILD: And I vote aye as well.

20 That item passes unanimously.

21 And that's the biggest item we've approved in a

22 while. So, congratulations to all, thanks for all the hard

23 work to get us here.

24 All right, let's move on to Item 15, Evaluation

25 of Bi-Directional Energy Transfers and Distributed Energy

1 Resource Integration for Medium- and Heavy-Duty Fleet
2 Electrification.

3 MR. WENDER: Good afternoon Chair and
4 Commissioners. My name is Ben Wender. I'm an electric
5 generation system specialist in the Energy Research and
6 Development Division.

7 Today I'm presenting two recommended awards from
8 the EPIC solicitation of that long title you just
9 mentioned. Two other projects from this solicitation were
10 approved at the May business meeting and two additional
11 projects will be brought to a future business meeting.

12 The next slide, please. The proposed awards will
13 bring multiple benefits to Californians. The technologies
14 developed through these awards will facilitate charging of
15 large electric vehicles, like heavy-duty trucks, in ways
16 that reduce stress on the electric grid, increase use of
17 distributed energy resources, and reduce the cost of
18 charging for fleets transitioning to electric vehicles.
19 These technologies can also provide resilience benefits for
20 sites and communities where they are deployed, while
21 maximizing emission reductions from both the electric and
22 transportation sectors.

23 The next slide. The objective of the
24 solicitation and the projects recommended today is to
25 develop integrated distributed energy resource packages to

1 help charge fleets of medium- and heavy-duty electric
2 vehicles. Transportation electrification will contribute
3 to growing requirements on California's electricity system
4 with three example scenarios of electric demand growth
5 shown here. The projects will demonstrate distributed
6 energy and high-power charging technologies to reduce the
7 cost of charging, increase utilization of renewable
8 electricity, and provide on-site back-up power to increase
9 resilience.

10 The next slide, please. In the first project, TA
11 Operating will deploy 200 kilowatts of solar PV, 500
12 kilowatts of battery storage, and a 100 kilowatt hydrogen
13 fuel cell to power multiple 500 kilowatt fast chargers, as
14 well as battery integrated 150 kilowatt DC fast chargers at
15 a public access truck stop in Ontario, California. The
16 hydrogen fuel cell, battery storage, and PV will operate
17 together to provide long-duration backup in the event of
18 power outages. As shown here, the site is adjacent to
19 Interstate 10 and serves more than 15,000 medium- and
20 heavy-duty vehicles per month, providing a highly visible
21 and highly trafficked demonstration site.

22 The next slide, please. The second project, with
23 Sysco, will deploy 1.5 megawatts of rooftop solar PV, 4
24 megawatt hours of stationary storage, and 1.2 megawatts of
25 high-power chargers to charge a fleet of 40 new electric

1 semi-trucks operating at a food distribution warehouse
2 located in Riverside. The project will demonstrate
3 integrated fleet scheduling, charger management, and
4 distributed energy resource management to provide low-cost,
5 high reliability, resilient charging solutions. The image
6 on the right shows the CalEnviroScreen 3.0 scores for the
7 demonstration site, which locates in the 95th percentile of
8 pollution vulnerability and burden. The Inland Empire
9 Community Foundation will facilitate engagement with local
10 residents with an emphasis on workforce development, local
11 employment opportunities, and local health benefits.

12 The next slide. Staff recommends approval of
13 these two grant awards and adoption of staff's
14 determination that these projects are exempt from CEQA.
15 I'm available for any questions, as are representatives
16 from both of the proposed recipients.

17 Thank you all very much and that concludes my
18 presentation.

19 CHAIR HOCHSCHILD: Thank you so much, Ben.

20 Let's move on to public comment.

21 MS. GALLARDO: This is Noemi, the Public Advisor.

22 I do not see any hands at the moment. So, let me give a
23 reminder to attendees. Please raise your hand using the
24 raise hand icon. If you're on by phone, press *9 to raise
25 your hand, *6 to unmute.

1 And now, it does look like we have a hand raised.
2 So, this is Brett. Brett, reminder to please restate your
3 name, spell it, and indicate your affiliation if any. Your
4 line is open, you may begin.

5 MR. HECKER: Good afternoon. My name is Brett
6 Hecker, B-R-E-T-T H-E-C-K-E-R. I am currently Vice
7 President of Gasoline Renewable Fuels and Pricing for
8 TravelCenters of America, and have been with the
9 organization for just over 17 years.

10 I am deeply humbled to be here today and want to
11 thank you personally, and on behalf of Travel Centers of
12 America for considering our project.

13 Under new leadership, our company is deeply
14 committed to helping in the fight against climate change
15 and becoming a part of the solution. This is evidenced by
16 the fact that we have recently developed a new department
17 within TA, called ETA, which will be led by our new Senior
18 Vice President of Alternative Energy and Sustainability.
19 He has years of experience and a wealth of knowledge in
20 this space.

21 I will also be transferring to this new
22 department, along with several others to show our
23 dedication to this transformation.

24 This project is the first of many that we plan to
25 deploy in the coming months and years. Our goal is to

1 design, deploy, and demonstrate new technologies for public
2 access with the goal of making them scalable, cost
3 effective, and reliable. This is extremely important for
4 our customers as they convert their fleets to be recharged
5 or refueled by various alternative energy sources.

6 Our network of sites is ideal for this initiative
7 and others as our sites are strategically positioned along
8 most, if not all, major interstates in both the State of
9 California and the entire United States. We hope this
10 project is the first of many that makes EV infrastructure
11 more readily available, which will in turn provide
12 confidence to fleets and others considering the necessary
13 shift to alternative energy vehicles.

14 In closing, we look forward to working with you
15 and I'm confident we will be successful partners. I just
16 want to say thank you again, both personally and on behalf
17 of TravelCenters of America. Thank you.

18 CHAIR HOCHSCHILD: Thank you.

19 Noemi, are there any additional public comments
20 on Item 15?

21 MS. GALLARDO: Let me check. A reminder to
22 folks, please use the raised hand feature, or press *9 if
23 you're on by phone to indicate you'd like to make a
24 comment, and then *6 to unmute.

25 Chair, I do not see any hands, we can move

1 forward.

2 CHAIR HOCHSCHILD: Thank you. Well, let me just
3 thank the team for putting this together. I'm really
4 excited to support this.

5 As I've mentioned before, I think the envelope of
6 possibilities for electrification, particularly in the
7 transportation sector, is expanding every year. And things
8 like medium- and heavy-duty fleet electrification even a
9 few years ago were not seen as realistic, and now very much
10 is going that way. And this is an important step in that
11 direction. So, really glad to see this coming through.
12 It's particularly important for low-income and
13 disadvantaged communities that have to bear the burden of
14 pollution from medium- and heavy-duty. So, I'm really
15 excited to support this.

16 I will see any of my colleagues would like to
17 make a comment. Commissioner Monahan.

18 COMMISSIONER MONAHAN: Thanks Chair. And thanks,
19 Ben, really great set of projects that have been -- you
20 know, the ones that have been made, and now this set, and
21 we'll have some more coming forward.

22 I've got to say I just love that TravelCenters of
23 America is investing in electric transportation, both for
24 fuel cells and battery electric. I mean I just think it's
25 the future and the fact that we have great partners here

1 that are really trying to think through how do we make this
2 good for customers. How do we really create this ecosystem
3 where when you're refueling your zero emission vehicle you
4 can get some food, and you can do some other things, and
5 you can rest. So, this idea of like charging your vehicle
6 isn't the same as filling your gas vehicle. You know, it's
7 you've got to wait a little bit longer.

8 And as we try to think through the best ideas for
9 vehicle-grid integration it just takes a more flexible
10 model for refueling.

11 So, I'm excited about this set of investment and
12 really give kudos to the team and to the grantees for
13 applying for this and being willing to take on this
14 challenge of developing an entirely new system for
15 refueling our vehicles.

16 CHAIR HOCHSCHILD: Thank you, Commissioner.

17 Unless there are other Commissioners wishing to
18 comment on this, let's see, Commissioner Monahan would you
19 be willing to move Item 15?

20 COMMISSIONER MONAHAN: I move Item 15.

21 CHAIR HOCHSCHILD: Okay, and Commissioner
22 McAllister would you be willing to second?

23 COMMISSIONER MCALLISTER: I'll second it.

24 CHAIR HOCHSCHILD: All right.

25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner McAllister?

3 COMMISSIONER MCALLISTER: Aye.

4 CHAIR HOCHSCHILD: Commissioner Douglas?

5 COMMISSIONER DOUGLAS: Aye.

6 CHAIR HOCHSCHILD: And Commissioner Gunda?

7 COMMISSIONER GUNDA: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well.

9 Item 15 passes unanimously.

10 We'll go now to Item 16, the ACEE Program:

11 Advancing and Commercializing Energy Efficiency in

12 California's Industrial, Agricultural, and Water Sectors.

13 MR. LOZANO: Good afternoon Chair and

14 Commissioners. My name is Michael Lozano, with the Energy

15 Efficiency Research Office, and I am Co-Solicitation

16 Manager for this grant funding opportunity.

17 I'm here today to present the GFO titled

18 advancing and commercializing energy efficiency in

19 California's Industrial, Ag, and Water Sectors, and what

20 we're calling the ACEE program.

21 The next slide, please. This GFO has two groups,

22 dairy and dairy-related operations, and wastewater

23 treatment. The first group, California is home to 1.7

24 million dairy cows who produce the milk that is the

25 foundation of a \$6 billion dairy industry. This is also an

1 industry that can benefit from innovative ways to keep the
2 cows happy to produce high quality milk, and also for
3 digitations of its operations to allow plant operators to
4 optimize process operations for energy efficiency, and
5 increased productivity.

6 For dairies, the project goals are to use
7 artificial intelligence and machine learning, with sensors
8 of hardware for low-cost, but impactful solutions for
9 California dairies.

10 Group two is wastewater treatment. On average,
11 California treats 4 billion gallons of wastewater per day,
12 with an annual energy consumption of 1,700 gigawatt hours.
13 Most of these facilities are reaching the end of their
14 design life and can benefit from technologies that can
15 increase capacity, reduced overall footprint, and lower
16 energy and operational costs.

17 The next slide, please. The first project is
18 with UC Davis, group one. As part of this project UCD
19 will combine an existing model of spray-cooling of cows,
20 but with a model on cow core body temperature and related
21 physiological responses, including such things as increased
22 respiration, sweating. And that's to get accurate real-
23 time cooling needs based on outdoor air temperature,
24 humidity, airspeed, roof temperature and climate zone.

25 Overall, the new control algorithm will account

1 for the cow's heat gains and losses due to metabolism,
2 respiration, water intake, all to adjust spray cooling to
3 minimize heat stress while reducing electricity and water
4 usage. UCD will demonstrate the technology at five
5 dairies, three of which are listed on this slide. The
6 project anticipates 2 percent market adoption per year, and
7 by year 10 to save 50 gigawatt hours and 12 billion gallons
8 of water.

9 The next slide, please. The second project is
10 with the Zira Group. Zira will deploy a more advanced
11 version of Zira's artificial intelligence and machine
12 learning platform that will promote comprehensive
13 operational digitization, and generate insights and drive
14 action based primarily on data acquired from electricity
15 meters.

16 As part of this, preliminary technology will be
17 enhanced to include installation and monitoring of
18 electricity meters on such things as cooling systems,
19 compressed air and major pumps at the dairy processing
20 plants. These three areas comprise about 50 percent of
21 electricity usage at the sites under consideration. And
22 Zira will start with 5 dairies, 3 of which are already
23 identified, and expand to 30 total to fully train the
24 artificial intelligence and machine learning algorithms to
25 reliably perform the real-time analytics, and it will

1 develop9ed recommended actions on energy savings and
2 preventative maintenance. The goal is 1-year payback with
3 20 percent electricity reduction.

4 The next slide, please. The third project and
5 the final for Group 1 is with Enpowered Solutions.
6 Enpowered Solutions will deploy their dairy AI and machine
7 learning, artificial intelligence technology at 5 dairy
8 facilities. This platform of hardware, software and
9 sensors will measure and intelligently optimize the energy
10 used by 3 key processes within the dairy. Namely,
11 pasteurization, cleaning in place, and storage. These
12 processes consume more than 80 percent of the energy used
13 in a typical dairy.

14 The artificial intelligence component of DairyAI
15 will use predictive analytics to turn raw data from their
16 processes and control variables into actual decisions about
17 the operations of the plant utility systems. The goal of
18 this project is a 2-year payback, with 10 percent
19 electricity reduction.

20 The next slide, please. The fourth project and
21 the first of Group 2, is with Caliskaner Water
22 Technologies. This project includes the design,
23 installation, demonstration, and evaluation of three
24 advanced primary treatment systems and three advanced
25 secondary treatment systems.

1 This project will conduct baseline testing
2 individually of the three primary treatment and the three
3 secondary treatment technologies, and then conduct combined
4 primary and secondary treatment combinations.

5 So, basically this is three primary treatment
6 technologies in parallel and in series with that will be
7 three secondary treatment technologies, and you can mix and
8 match.

9 This is a comprehensive project that will
10 showcase next gen wastewater treatment technologies, with
11 the three primary and three secondary treatment
12 technologies, and they will be evaluated individually and
13 in combined flow.

14 The wastewater community will benefit from seeing
15 such diverse methods and can choose the best fit for their
16 application. In addition, ancillary benefits include
17 things such as odor reduction and other quality-of-life
18 benefits for the surrounding communities that isn't usually
19 included with, you know, electricity savings and water
20 savings.

21 At 25 percent adoption of these primary and
22 secondary treatment processes, and 25 percent estimated
23 energy efficiency gain, these combined technologies are
24 estimated to save 125 gigawatt hours per year.

25 The next slide, please. The last project is with

1 Gate 5 Energy Partners. This project will demonstrate the
2 Gate 5 system, which is the modular advanced primary and
3 secondary treatment system that can also turn biosolids
4 into biofuels for on-site energy production.

5 We're doing a partial funding of this project
6 with the available solicitation funds, so we'll only be
7 doing the advanced primary and secondary treatment portion.

8 The Gate 5 system filters and diverts as much
9 solids as possible to reduce the energy required for
10 aeration during secondary treatment. And that's basically
11 what you see in this diagram here.

12 The project anticipates 60 percent reduction in
13 aeration energy and 25 percent increase of treatment
14 capacity. The work to be undertaken for this is covered in
15 the CEQA documents prepared by the lead agency at Santa
16 Margarita Water District in 2014, including a Mitigated Neg
17 Dec.

18 The next slide, please. Staff recommendation.
19 Staff recommends approval of all five projects in this
20 item, as well as staff determination that Item 16a through
21 16b are exempt from CEQA.

22 I'm going to read the next part. "With respect
23 to 16e, Gate 5 Energy Partners, they find that based on the
24 lead agency Santa Margarita Water District's December 20,
25 2013 Final Initial Study, as revised on February 5, 2014,

1 their Mitigated Neg Dec, Mitigated Monitoring and Reporting
2 Plan, and their Resolution No. 2014-02-02 approving and
3 adopting the Mitigated Neg Dec and the Mitigating
4 Monitoring and Reporting Plan, the proposed project
5 presents no significant or substantially more severe
6 environmental impacts beyond those already considered."

7 This concludes my presentation. Thank you for
8 your time. I am available to answer any questions.

9 CHAIR HOCHSCHILD: Thank you so much.
10 Let's go first to public comment.

11 MS. GALLARDO: And this is Noemi, the Public
12 Advisor. Reminder to folks to use the raised hand feature
13 if you'd like to make a public comment. For those on the
14 phone that would be *9 and then *6 to unmute.

15 Chair, I do not see any hands.

16 CHAIR HOCHSCHILD: Okay, thank you.

17 Well, these look terrific. I obviously am
18 especially mindful of the fact that we're in drought
19 conditions and there's some water savings here as well. So,
20 really thanks to you, Michael, and the rest of the staff
21 for putting these projects together.

22 Would welcome any comments, starting with
23 Commissioner McAllister on this item.

24 COMMISSIONER MCALLISTER: Yes, I got a nice
25 briefing on this and am very supportive of both of the

1 tranches, the dairy projects and the wastewater treatment
2 projects. I do think both of these items, while we're
3 doing a lot of them, they -- you know, particularly water,
4 you know, it weights a lot and it uses a huge amount of the
5 energy in our state. And I think there's just a lot of
6 potential to dig in. I'm really happy to see these
7 projects and this learning is really going to lead to great
8 things, I think, with -- there are lots of wedges of
9 opportunity in both of these sectors I think going forward.

10 So, I'm glad to see us taking advantage of that
11 and really moving on to these sectors that are more
12 difficult, but are a big part of the solution. So, I'm
13 happy to support this.

14 CHAIR HOCHSCHILD: Thank you.

15 Unless there's other comments from my colleagues
16 -- yeah, Commissioner Monahan.

17 COMMISSIONER MONAHAN: Yeah, just really briefly.
18 I, too, got a briefing from staff, so thank you for that.
19 And I'm really interested in how we use our grants to
20 demonstrate to others in that sector how they could save
21 money by reducing their energy use. And so, that idea of
22 how we use our limited grant funds to be able to scale up
23 and to evaluate the migration of technologies to other
24 facilities is, I think, a really important one. And one
25 that I give, you know, credit to the EPIC program for

1 really trying to track, well when we make these
2 investments, what kinds of other investments flow as a
3 result of them.

4 CHAIR HOCHSCHILD: Agreed.

5 Commissioner Gunda, were you going to make a --

6 COMMISSIONER GUNDA: Yeah, Chair, thank you.
7 Just quickly, I just wanted to take this opportunity to
8 thank the entire team for all the tranches and investment,
9 you know, projects that we just heard. And specifically,
10 thanks to Michael for the thoughtful he provided. And
11 thanks to all the questions and feedbacks. So, thank you
12 so much Michael and the team.

13 CHAIR HOCHSCHILD: Great. And, you know, it is
14 my hope going forward that we continue to focus on water.
15 I think we may be in for a long drought cycle. And I
16 visited Australia to give a talk a few years ago, and they
17 went through this 13-year drought that really, really
18 pushed hard on a bunch of different technologies and
19 approaches, and they've ended up with some permanent
20 improved practices on water. And I hope, really, in
21 everything we're doing that we're mindful of the new era
22 that we're in and continue to push on all of these water
23 conservation strategies, as well as energy.

24 So, with that, unless there's any other comments,
25 I'd entertain a motion from Commissioner McAllister on Item

1 16.

2 COMMISSIONER MCALLISTER: Yes, for sure I wanted
3 to just take the opportunity to congratulate the EPIC team
4 on a huge set of projects today at the business meeting,
5 including this one. So, lots of great stuff moving
6 forward.

7 So, I will move Item 16.

8 CHAIR HOCHSCHILD: I thought you were going to
9 say it's an EPIC achievement but --

10 (Laughter)

11 COMMISSIONER MCALLISTER: I knew you would.

12 CHAIR HOCHSCHILD: We're getting a little loopy
13 here after five and a half hours of the meeting. Well
14 said.

15 So, motion by Commissioner McAllister.
16 Commissioner Gunda, would you be willing to second.

17 COMMISSIONER GUNDA: I second the motion.

18 CHAIR HOCHSCHILD: All in favor say aye.

19 Commissioner McAllister?

20 COMMISSIONER MCALLISTER: Aye.

21 CHAIR HOCHSCHILD: Commissioner Gunda?

22 COMMISSIONER GUNDA: Aye.

23 CHAIR HOCHSCHILD: Commissioner Douglas?

24 COMMISSIONER DOUGLAS: Aye.

25 CHAIR HOCHSCHILD: And Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: And I vote aye as well.

3 That item passes unanimously.

4 All right, congratulations guys. Thanks

5 everybody.

6 Let's move on to Item 17, approval of the

7 Business Meeting Minutes.

8 Are there any public comments on that, Noemi?

9 MS. GALLARDO: This is Noemi, the Public Advisor.

10 I'm not seeing any hands at the moment. Let me just make

11 one more call out for that. Anyone interested in making

12 public comment on Item 17, please use the raised hand

13 feature or press *9 if you're on by phone.

14 And I do not see any hands, Chair.

15 CHAIR HOCHSCHILD: Okay. Unless there's

16 Commissioner discussion, Commissioner Douglas would you be

17 willing to move Item 17.

18 COMMISSIONER DOUGLAS: So, yes I move Item 17.

19 CHAIR HOCHSCHILD: And Commissioner Monahan,

20 would you be willing to second that.

21 COMMISSIONER MONAHAN: I second that.

22 CHAIR HOCHSCHILD: All in favor say aye.

23 Commissioner Douglas?

24 COMMISSIONER DOUGLAS: Aye.

25 CHAIR HOCHSCHILD: Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner McAllister?

3 COMMISSIONER MCALLISTER: Aye.

4 CHAIR HOCHSCHILD: And Commissioner Gunda?

5 COMMISSIONER GUNDA: Aye.

6 CHAIR HOCHSCHILD: And I vote aye as well.

7 That passes unanimously.

8 Let's move on to Lead Commissioner or Presiding

9 Member Reports, starting with Commissioner Gunda.

10 COMMISSIONER GUNDA: Thank you, Chair. A lot of

11 things happening and I wanted to just take a moment to

12 highlight some, but maybe not all of it. But just want to

13 first of all thanking the staff in EAD, Siting, and

14 Transportation for answering a number of queries over the

15 last, you know, month trying to help support reliability

16 questions for the summer, as well as understanding the

17 drought conditions, and just kind of figuring out, you

18 know, how we're looking for the summer and how well

19 prepared we are. So, just wanted to extend my thanks to

20 all the staff in all the divisions, and the management.

21 A few high level pieces. I want to highlight

22 that I was part of the CPUC's AAPI event earlier this

23 month. You know, I wanted to thank Chair Hochschild, you

24 again for bringing the dialogue of social justice into the

25 Energy Commission and keeping it as a focus. And I'm just

1 really happy to see those discussions happening at our
2 sister agencies and having the opportunity to speak to
3 that, and being able to be vulnerable and talk about, you
4 know, all the things we need to be talking about to help
5 address, you know, the future of our great state.

6 So, the second one I just wanted to highlight is
7 the SB 100 workshop. I'm sure Commissioner Douglas is
8 going to talk about it. I'm really thankful for her
9 leadership on kicking off this interagency work.
10 Specifically for me, I kind of took away a number of
11 opportunities for modeling that came out of that workshop
12 and will continue to think through, Commissioner Douglas
13 and I, on how best to respond to those and make it a work
14 plan for the CEC, and engage our sister agencies.

15 We also have been talking to UC Riverside and
16 other educational institutions on the opportunity for them
17 to participate in voluntary load reduction and load
18 flexibility, as a part of our reliability strategy for the
19 state. In light of that, you know, Le-Quyen, you know is
20 helping pull together a roundtable where we can think
21 through the opportunities for educational institutions
22 helping us be a part of the solution for this summer and
23 beyond.

24 I also had an opportunity to participate in a DAP
25 hosted natural gas discussion earlier this week, or last

1 week. Last week, sorry. And it really kind of informed me
2 that, you know, a lot of the states are kind of thinking
3 about the same questions and grappling with the same
4 issues. And it was just kind of good to have a network of
5 peers to think through some of the questions we're dealing
6 with here.

7 And Commissioner McAllister and I had
8 opportunities to talk through some gas decommissioning
9 tools and just appreciate the work that the state, the
10 IOUs, our partners in CCS, everybody's doing on moving the
11 state towards decarbonization goals.

12 I want to just take a minute to note that I had
13 the opportunity of having the company of Liz Gill, in the
14 office of my advisor, second advisor. She started last
15 week. Thanks to Liz, she will make me look better than I'm
16 supposed to look. So, thank you, Liz. And I also have
17 Sudhakar Konala joining the office next week. And they
18 will be focusing on demand and supply sides.

19 In the interim, thank you Chair for loaning Le-
20 Quyen and she's continuing to be fabulous. And Nina, thank
21 you so much for keeping us moving forward.

22 With all that, you know, I'm just moving along.
23 There seems to be a lot of work and I just feel very
24 blessed to have all four of you as colleagues and mentors
25 to me. Thanks.

1 CHAIR HOCHSCHILD: Well, thank you and
2 congratulations to Liz and Sudhakar. And I would stress
3 that Le-Quyen, it is a loan. I would be helpless without
4 her. So, great.

5 Let's move on to Commissioner Douglas.

6 COMMISSIONER DOUGLAS: Thank you very much, Chair
7 Hochschild. I had, it was probably an eventful period
8 since the last business meeting, so I'll keep this update
9 brief.

10 But we, you know, after years of work and a lot
11 of effort, we were able to participate with the Biden
12 administration in an announcement that really opens up
13 offshore wind in California on both the Central Coast, and
14 also the North Coast. There's going to be a quite a bit of
15 work now going forward to get to the next stages of that.
16 And in fact, we're already coming up with a plan for the
17 Energy Commission to help support the outreach effort by
18 pulling together a quick webinar, giving stakeholders a
19 picture of what to expect going forward, and helping tee up
20 a task force meeting which will follow shortly thereafter.

21 So, I'm excited about that. I'm very excited
22 about that.

23 And we also had -- we held our Tribal Energy
24 Resiliency Conference. We try to do a conference involving
25 California Native American Tribes just about every year to

1 every other year. And of course we didn't do it last year
2 because of the pandemic. This one was virtual. But the
3 attendance was fantastic. And we had participation from
4 multiple state agencies. We had federal participation. We
5 reached a very large number of tribes and we were really --
6 it was really a great event. And the Governor actually
7 joined us for part of the opening and joined the discussion
8 with the Chair. It was really fantastic and an exciting
9 event.

10 And finally, as Commissioner Gunda mentioned, we
11 had the inaugural SB 100 build out or implementation
12 workshop. And that was the culmination of a lot of agency
13 discussions and a lot of stakeholder meetings, where we are
14 really working to come to terms with what will it look like
15 on the ground to achieve our SB 100 goals. What do we need
16 to do to achieve the level of build out that we need, and
17 what are the choices in front of us, and the opportunities,
18 and the appropriate timing and sequencing of those
19 opportunities so that we take the steps that need to be
20 taken, and in a timely fashion.

21 It's going to be a significant effort, but I
22 think it's always valuable to look down the road and to
23 just assure that you're taking the steps you need to take
24 to get to the goals that you have. And we're building on a
25 tremendous amount of experience in this area that the

1 Energy Commission and our partner agencies have developed
2 over, really at this point, decades. But we have a lot of
3 work to do in this space.

4 So, those are my updates. I kept it to probably
5 the big three. And thank you for letting me go a bit out
6 of order here.

7 CHAIR HOCHSCHILD: No, thank you Commissioner.
8 And also the Tribal Conference, which I had the opportunity
9 to join was just phenomenal. I'm so glad we do that and it
10 was a great chance to highlight all of the investments
11 we've made, including these seven tribal microgrids. And
12 just a magnificent thing.

13 So, congratulations to you, to Tom and everyone
14 else who helped pull that together. And our colleague
15 Commissioner help at PUC. So, terrific job.

16 COMMISSIONER DOUGLAS: Thank you. Absolutely.

17 CHAIR HOCHSCHILD: Let's move on to Commissioner
18 Monahan.

19 And Commissioner Douglas, you're excused, I know
20 you have to drop out a little early.

21 COMMISSIONER DOUGLAS: Thank you. Perfect.

22 CHAIR HOCHSCHILD: Thank you.

23 Let's move on to Commissioner Monahan.

24 COMMISSIONER MONAHAN: Yeah, well, I'll be brief.

25 A lot of my work has really focused on the Governor's

1 request, the May revise. And, you know, just engaging
2 stakeholders around support for the Governor's proposal.
3 And I was the representative for the CEC in front of the
4 Senate Budget Subcommittee on the broad suite of proposed
5 investments for the Energy Commission and not just
6 Transportation. Originally, I was tasked because we
7 thought the focus was going to be transportation, but then
8 the transportation focus there was a separate conversation
9 around that, and the Chair was doing things on reliability.
10 There was a lot of moving parts, things happening
11 simultaneously. So, that was a fun experience. And Tannan
12 (phonetic) did a bang up job on the ZEV piece of that
13 proposal. So, looking forward to see what happens on June
14 15th.

15 Did a number of public presentations I don't want
16 to go into, but there's a lot of interest in transportation
17 electrification, and a lot of cross-agency dialogue, and
18 even international dialogue with World Bank on this. So,
19 just interest everywhere on transportation electrification,
20 how do we do it right to support our clean grid goals.

21 I'm helping pull together the Asilomar
22 Transportation Conference that happens biannually with Dan
23 Sperling. It also is what's shaping up to be a really,
24 really good one this year. So much happening on the
25 transportation space, especially in the zero emission

1 vehicle arena. So, if any of you are interested, just
2 reach out to me around that.

3 I was thinking, I was touched by what
4 Commissioner Gunda said about blessed to have you as
5 colleagues and mentors and I thought, oh, I feel the same
6 way. So, I think and, you know, not just -- you know, with
7 you all I feel that way and actually with the team, the
8 broader team at the CEC we just have a lot of hardworking,
9 dedicated people. And just appreciate learning from you,
10 learning from them, and this experience in general. That's
11 all.

12 CHAIR HOCHSCHILD: Well said. Well said, thank
13 you.

14 Commissioner McAllister.

15 COMMISSIONER MCALLISTER: All right. Well,
16 thanks Chair Hochschild. I'll try to be brief here. I
17 would be remiss without leaving -- if I did not leave with
18 the updates kind of to acknowledge all of the progress
19 that's been made on the Building Code update and all the
20 various pieces of that. I will not -- I'm not going to
21 acknowledge everybody. I'm not going to read out the list
22 because it was basically the whole Commission, almost.

23 But we've made a lot of progress on the Part 6,
24 which is the mandatory Building Energy Efficiency Starts,
25 and the EIR that goes along with that. And then also Part

1 11 is moving forward, CalGREEN, the energy piece of
2 CalGREEN. So, all three of those really key pieces of the
3 Building Code update are moving forward.

4 And I just have to say, you know, I mean really
5 amplifying what Commissioners Gunda and Monahan have said
6 about just the blessings we all have to be here. I mean
7 this is a huge village effort to impact every building that
8 gets built in California in a positive way.

9 So, and I know that our staff really internalizes
10 that and feels that every day when they engage on this
11 work.

12 So, thanks to all the divisions and all of the
13 staff that are involved in that. And we're not across the
14 finish line, it's all in process. But it's really looking
15 great and the quality of work has been excellent.

16 Also in the IEPR we did have a couple of -- well,
17 we had a workshop on building decarbonization. We also had
18 a building decarbonization workshop for staff to present
19 the AB 3232 Building Decarbonization Report. So, both of
20 those are really, I think seminal efforts as well, or the
21 3232 is a real seminal effort to push the envelope on our
22 planning for decarbonization, particularly of our existing
23 building stock.

24 So, we've gotten a lot of really positive
25 feedback on that report and kudos to staff for that.

1 On the IEPR generally, and including the building
2 decarb workshop we're trying to -- or I'm trying, really,
3 to make sure that we incorporate other state perspectives
4 and the national perspective. So, just any ideas that any
5 of you have for how to go about doing that? I mean, I know
6 many of you talked about that today, just how wonderful it
7 is to have colleagues that are looking at things from
8 different perspectives. And so, I want to just reiterate
9 we want to build -- given the fact that we have alignment
10 with the federal government and many states, it would be
11 great to just always keep that in mind about how we can
12 collaborate and learn from one another to meet these big
13 challenges.

14 I wanted to just highlight the fact it's not just
15 in this country that people are looking at California. We
16 have a lot of, obviously, international work and all of us
17 do a fair amount of that. But just to highlight, I gave a
18 couple of talks to the three Yucatan States in Mexico about
19 electricity planning and renewables integration. And it
20 was sponsored by the U.S. State Department.

21 But in that realm and in many, many others the SB
22 100 work is just invaluable. It's an incredibly powerful
23 --

24 CHAIR HOCHSCHILD: Are you presenting in Spanish
25 when you're doing that?

1 COMMISSIONER MCALLISTER: Oh, yeah. Oh yeah, oh
2 yeah. So, those are full on Spanish. You know, it's
3 almost like being there.

4 But people are so grateful. You know, one of
5 these talks was to the private sector, you know the
6 renewable developers, and all the third parties that want
7 to be engaged. And, you know, Mexico has a state-owned
8 electric sector. And the next was to the government
9 officials and some of the electric folks in that sector.

10 So, you know they are just thirsty to learn from
11 what we're doing. And this message that we have that it's
12 possible, you have to kind of get the antennas aligned, and
13 just you have anybody who's just starting this has to be a
14 manager of incredibly cheap renewables that, you know,
15 we've sort of seen the progression of. So, it's very
16 exciting.

17 And also want to just call out the EU Building
18 Efficiency event and thank Fritz and Alanna for all their
19 work putting that together. But the governments of
20 Belgium, and Denmark, and the EU all worked together with
21 California to put together a really nice day of
22 presentations and dialogue.

23 And then finally, the Chile-California Council,
24 we're doing increasingly work there. You know, the
25 hemispheric twins that are Chile and California have a lot

1 of similar challenges. And so, it's really productive I
2 think to get together periodically, which we're doing
3 increasingly. But again, the SB 100 work is just really
4 great for that.

5 And then on the demand side, you know, all the
6 things we're doing with load flexibility, and building
7 decarb that also resonates very widely. So, the two ends
8 of the spectrum, you know, on the supply side and the
9 demand side, really the pieces are coming together and this
10 integration is really happening. It's exciting to see how
11 all these dots are being connected across the globe,
12 really.

13 And then I want to just thank Noemi, finally, for
14 your facilitating the discussion with the EJ community on
15 all the fronts, and all the issues that we deal with. Most
16 recently for me, building decarbonization. But I know that
17 you work with all the Commissioner offices on that. And
18 it's just invaluable to have someone kind of take the lead,
19 and organize, and just sort of make it happen. So, thanks
20 for that. Thanks to you, Noemi.

21 And then, I think Commissioner Gunda's going to
22 leave us, so thank you.

23 And then, also just to point out that this
24 meeting actually, every time we do a business meeting every
25 month it seems to get better, and more smooth, and the

1 tools get better, and just the orchestration. So, Noemi
2 and the team, thanks for helping that happen as well.

3 So, anyway, that's my comments for this month.
4 Thanks.

5 CHAIR HOCHSCHILD: Well, great. Thank you so
6 much, Commissioner.

7 And I'll be really be brief, but I'll just say,
8 you know, the June meeting is a (indiscernible) -- always
9 it's the end of the fiscal year, and it's the halfway point
10 of the year. And I just like to take stock a little bit.

11 And I just will say I am absolutely thrilled with
12 the progress we're making really across the board with the
13 Biden administration and offshore wind, the progress we've
14 done in Lithium Valley, getting the Lithium Valley
15 Commission going, making the Lithium recovery grants. And
16 incredible moment among transportation electrification, the
17 May revise budget, the executive order, the renewed focus
18 on that.

19 You know, the Energy Code has landed, I think, in
20 a terrific place, just incredible work by the whole
21 Efficiency team, Commissioner McAllister, Part 11 as well
22 as Part 6.

23 And just across the board. I mean, having EPIC
24 extended another ten years is amazing. This set of grants
25 that we're getting, you know, out the door today. And just

1 more generally I would say just the culture at the Energy
2 Commission feels like we're in a really healthy place. I
3 just see an incredible amount of dedication, and focus, and
4 collaboration, and talent across the board and it's just
5 amazing to see how many top shelf candidates we're getting
6 in for senior positions, now. People want to be a part of
7 this and I feel so blessed to be able to work with this
8 amazing team. And it's getting stronger over time, it's
9 very clear.

10 So, just real quickly, I'll be super brief here,
11 but I guess just two highlights. I did a hearing on
12 reliability before the Legislature and took a bunch of
13 questions, along with President Batjer, and Elliot Mainzer.
14 Commissioner Gunda joined me for that as well. It went
15 really well. We relayed a bunch of our efforts, and
16 strategy, and investments, and focus on supporting
17 reliability through the summer.

18 And then, also had one recently before the
19 Legislature on Lithium recovery, led on Assemblyman Eduardo
20 Garcia. And I think I'll just leave it at that.

21 So, let's move on to Item 19, the Executive
22 Director report.

23 MR. BOHAN: Thank you. Good afternoon Chair and
24 Commissioners, I have nothing to report for June.

25 CHAIR HOCHSCHILD: Okay, thank you.

1 And Item 20, Public Advisor? Noemi, can you hear
2 me?

3 MS. GALLARDO: Hello there. Yeah, apologies for
4 that I was struggling.

5 So, just want to say I don't have a report. Just
6 want to say thank you, especially to Commissioner
7 McAllister for that acknowledgement of the work we're
8 putting in to do more extensive, robust collaboration with
9 environmental justice, and equity, and community leaders
10 throughout the state. And, you know, I want to thank all
11 of you for being willing to do that.

12 You know, your teams, your staff has invested a
13 lot of time into it, and I think it's really worthwhile,
14 and will deliver even better results for us.

15 And I also look at all of you as mentors, and
16 friends, and I'm grateful to be a part of this family that
17 we have here at the Energy Commission, so thank you so much
18 for that.

19 And to the audience, really appreciate your
20 participation and want to remind you to nominate leaders
21 for the Clean Energy Hall of Fame. This is your last
22 chance. The deadline is June 25th, which is fast
23 approaching. So, thank you.

24 And that's it for me.

25 CHAIR HOCHSCHILD: Thank you, Noemi.

1 All right, Item 21, public comment.

2 MS. GALLARDO: Yes, so that's me again. Let me
3 review the instructions real quick. So, this is the period
4 for any person wishing to comment on information items or
5 reports of the meeting agenda, or any other item. Each
6 person has up to three minutes to comment, and comments are
7 limited to one representative per organization. We may
8 reduce the comment time, depending on the number of
9 commenters.

10 Reminder that we are now accepting public comment
11 through Zoom. Please use the raised hand icon to indicate
12 if you have comments. If you're on the phone, press *9 to
13 raise your hand, and then *6 to unmute.

14 After I announce that your line is open, please
15 spell your first and last name, state your affiliation if
16 you're representing an organization. Do not use the
17 speakerphone when talking because we won't hear you
18 clearly.

19 All right, so I will now look for hands. And we
20 do have one. That first person will be Matt Drinker.
21 Matt, reminder to please restate your name, spell it, and
22 indicate your affiliation if any. Your line is open, you
23 may begin. Matt, your line is open, you may begin.

24 MR. DRINKER: Sorry, I was on mute. This is Matt
25 Drinker, M-A-T-T D-R-I-N-K-E-R. I'm with a company called

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1 Aranet, A-R-A-N-E-T. We product wireless CO2 sensors and
2 we're used in dozens of major universities, school
3 districts throughout the world.

4 The verbiage in AB 81 prohibits wireless sensors
5 and we've been trying to get that changed to include our
6 product. We sent probably, at least half-a-dozen formal
7 letters to this effect and haven't heard anything back as
8 to yet. Curious as to know if that verbiage will be
9 changed in the near future.

10 MS. GALLARDO: This is Noemi, the Public Advisor.
11 So, Matt, we do not engage in dialogue during the public
12 comment. This is your opportunity to use these three
13 minutes to speak. Do you have anything else that you want
14 to comment on?

15 MR. DRINKER: No, that's all. Like I said, you
16 know, we are in some of the most large and prestigious
17 universities all over the world, major school districts in
18 California. And we've had a lot of questions about if our
19 sensors will be applicable for this grant. We don't know
20 how to answer those except for the letters that we've sent
21 to the Commission that haven't been answered yet. And I
22 just wanted to state that fact. Thank you.

23 MS. GALLARDO: Thank you, Matt.

24 I don't see any other raised hands. Let me make
25 one last call. Folks on the phone, press *9 if you'd like

1 to make a comment, *6 to unmute.

2 All right, Chair, I do not see any other hands.

3 CHAIR HOCHSCHILD: Okay, thanks. And Noemi, I'd
4 appreciate if you could follow up with that commenter
5 offline and see what the issue is.

6 I think that concludes public comment. And our
7 final item is Chief Counsel's Report. Linda.

8 MS. BARRERA: Good afternoon Chair and
9 Commissioners. I do not have a report today.

10 CHAIR HOCHSCHILD: That's very merciful of you.
11 Thanks everybody for a long day and we'll see you soon.

12 (The Business Meeting Adjourned at 3:42 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 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 25th day of
June, 2021.



Jacqueline Denlinger
AAERT CERT # 747

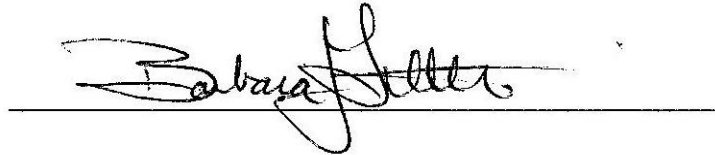
213

TRANSCRIBER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber.

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

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of June, 2021.

A handwritten signature in black ink, appearing to read "Barbara Little", is written over a horizontal line.

Barbara Little
Certified Transcriber
AAERT No. CET**D-520