

**DOCKETED**

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APPEARANCES

Commissioners

David Hochschild, Chair  
Janea Scott, Vice Chair  
Karen Douglas  
Andrew McAllister  
Patricia Monahan

Staff Present: (\* Via WebEx)

Drew Bohan, Executive Director  
Alan Ward, Acting Chief Counsel  
Jennifer Martin-Gallardo, Interim Public Adviser  
Cody Goldthrite, Secretariat  
Carousel Gore, EEOC Officer  
Lisa DeCarlo, Staff Attorney

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Larry Rillera	5
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Ron Yasny	7
Scott McCarthy	8
Rizaldo Aldas	9
Katharina Gerber	10
Taiying Zhang	13

Interns Present:

Claes Baillot

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Others Present (\* Via WebEx)

Interested Parties

Scott Galati, Attorney, DayZen, LLC representing CyrusOne	3
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## 22. Chief Counsel's Report 108

a. Pursuant to Government Code Section 11126(e), the Energy Commission may adjourn to closed session with its legal counsel to discuss any of the following matters to which the Energy Commission is a party:

- 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)*
- ii. *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)*
- iii. *State Energy Resources Conservation and Development Commission v. Electricore, Inc. and ZeroTruck (Sacramento County Superior Court (34-2016-00204586)*
- iv. *Natural Resources Defense Council, Inc., et al. v. United States Department of Energy (Federal District Court, Northern District of California, (17-cv03404)*
- v. *City of Los Angeles, acting by and through, its Department of Water and Power v. Energy Commission (Los Angeles Superior Court, Case No. BS171477).*
- vi. *Helping Hand Tools v. California Energy Commission, and Vantage Data Centers LLC. (Sacramento Superior Court, Case No. 34-2018-80003026).*
- vii. *In re: PG&E Corporation and In re: Pacific Gas and Electric Company (United States Bankruptcy Court, Northern District of California, San Francisco Division, Case No. 19-30088)*

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viii. *Chukwuemeka (Emeka) Okemiri v. California Energy Commission, et al.* (Sacramento Superior Court, Case No. 34-2018-00246019)

ix. *State Energy Resources Conservation and Development Commission v. HyGen Industries, Inc.* (Sacramento County Superior Court, Case No. 34-2019-00252543)

b. Pursuant to Government Code section 11126(e), the Energy Commission 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 Commission, which might include.

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

2 SEPTEMBER 11, 2019

10:03 a.m.

3 CHAIR HOCHSCHILD: Let's begin with the Pledge of  
4 Allegiance.

5 (Whereupon the Pledge of Allegiance is recited)

6 CHAIR HOCHSCHILD: Well, good morning everyone.  
7 Before we start our regular agenda I wanted to take a  
8 moment to introduce our new Equal Employment Opportunity  
9 Officer who just started with us, Carousel Gore. You want  
10 to come say a few words? And welcome to the Energy  
11 Commission.

12 MS. GORE: Thank you so much. Hello, everybody.  
13 I'm really glad to be here with the Energy Commission.  
14 This is a new role for the Energy Commission and I think  
15 it's really exciting.

16 The Energy Commission, as a Department and a  
17 Commission, has such an important role here in California  
18 in promoting clean energy. And while I can't do anything  
19 to do that other than get solar on my house and maybe drive  
20 a cleaner energy car, I think my role is really important  
21 in promoting a positive, healthy, comfortable work  
22 environment for all of the members of the Energy Commission  
23 and their staff. So that we can, as a Department, focus  
24 more on our mission of promoting clean energy throughout  
25 the State of California.

1           So I am very excited to be here. I really look  
2 forward to being a positive part of the Department and  
3 adding to the positive work environment that we are already  
4 in the process of creating here. So thank you.

5           CHAIR HOCHSCHILD: All right, well welcome to the  
6 Commission, Carousel. It's great to have you on the team.  
7 I've asked Crystal (phonetic) to set up an intro meeting  
8 with all the Commissioners in the next week or two.

9           I also wanted to say over the next few weeks  
10 we'll be adding some very senior positions that we've  
11 previously announced, including our new Public Adviser,  
12 Noemi Gallardo, who begins on September 23rd. And our new  
13 Chief Counsel, Darcie Houck, who starts on October 14th.  
14 And I'm really excited to welcome both of them.

15           One other introduction I wanted to make, we had  
16 great success with our Summer Fellows. I've heard great  
17 feedback from all of my colleagues and elsewhere in the  
18 Commission about the summer internships. And we have one  
19 new summer intern who is volunteering for us the next two  
20 months who is my cousin, Claes Baillot. Where's Claes?  
21 Come stand up here, Claes.

22           So Claes is 17 and is a cyber-security wizard,  
23 just finished high school taking a gap year before college.  
24 And you can tell us a little bit about your project, Claes.

25           MR. BAILLOT: Yeah. Good morning, Commissioners.

1 Good morning everyone. My name is Claes. I'm 17, just  
2 graduated high school. I am currently working on a project  
3 for recommendations that state level actors can take in  
4 terms of securing the grid and the cyber security involving  
5 the grid, because that is not so great right now. So I  
6 look forward to working with everyone and I hope to meet  
7 you all soon. Thank you.

8 CHAIR HOCHSCHILD: Thank you, Claes, and welcome.

9 All right, we'll let's on to the agenda. Is  
10 there a motion? Oh, you did a recusal. Yeah.

11 COMMISSIONER MCALLISTER: All right. So I'm  
12 going to -- so do you want to do 1a first?

13 CHAIR HOCHSCHILD: 1a, yeah. Is there a motion  
14 for Consent Calendar Item 1a?

15 COMMISSIONER MCALLISTER: I'll move 1a.

16 CHAIR HOCHSCHILD: Is there a second?

17 VICE CHAIR SCOTT: Second.

18 CHAIR HOCHSCHILD: Second by Vice Chair Scott.

19 All in favor say aye.

20 (Ayes.)

21 CHAIR HOCHSCHILD: And now Commissioner  
22 McAllister will --

23 COMMISSIONER MCALLISTER: So, being Chair of the  
24 Board of NASEO, and this item is having to do with funding  
25 some work at NASEO, I'm going to recuse myself from item

10

1 1b.

2 CHAIR HOCHSCHILD: Is there a motion for Item 1b?

3 COMMISSIONER DOUGLAS: Move Item 1b.

4 CHAIR HOCHSCHILD: Moved by Commissioner Douglas.

5 Is there a second?

6 VICE CHAIR SCOTT: Second.

7 CHAIR HOCHSCHILD: All right, Vice Chair Scott.

8 All in favor say aye.

9 (Ayes.)

10 CHAIR HOCHSCHILD: That motion passes unanimously  
11 with the exception of Commissioner McAllister who has  
12 recused.

13 Let's move on to Item 2, Discussion of Energy  
14 Commission Progress on the Joint Agency Report, Charting a  
15 Path to a 100 Percent Clean Electricity Future. Terra  
16 Weeks?

17 MS. WEEKS: Hello Chair and Commissioners. As  
18 you know, I am Terra Weeks, Senior Advisor to Chair  
19 Hochschild and Project Manager for SB 100 on the Energy  
20 Commission side.

21 So my main update is that we held our kickoff  
22 workshop that we held last Thursday, September 5, which  
23 Chair Hochschild, Commissioner McAllister and Commissioner  
24 Douglas were all able to attend. The workshop was co-  
25 hosted by the Energy Commission, the

1 PUC and CARB, who are the three agencies tasked  
2 with writing the interagency report.

3 The workshop was really intended to serve as a  
4 first point of engagement with stakeholders and the public  
5 as we launched this effort and the report development  
6 process.

7 Just to recap the agenda quickly, we had opening  
8 remarks from Alice Reynolds, who is the Senior Energy  
9 Advisor to Governor Newsom, and Secretary Crowfoot of the  
10 California Natural Resources Agency. Both speakers  
11 emphasized the importance of state agencies collaborating  
12 on implementation of the policy and emphasized that this is  
13 truly a statewide effort.

14 The SB 100 principals and other Commissioners in  
15 attendance also provided opening comments. And these were  
16 followed by staff presentations on our current clean energy  
17 policies and programs, as well as the report development  
18 process and timeline.

19 One major theme throughout the presentations was  
20 that successful implementation of SB 100 requires thorough  
21 integration with our current clean energy programs and  
22 planning processes across agencies.

23 Following the presentations, we opened to public  
24 comment both in person and on the phone. And I just wanted  
25 to highlight a couple of the key messages that we heard

1 from stakeholders.

2 One was the importance of managing electricity  
3 costs as we move toward 100 percent clean and renewable  
4 sources, primarily for low-income customers.

5 Secretary Crowfoot and others highlighted the  
6 need to address both land use planning and system  
7 resilience in the face of climate change.

8 A number of stakeholders commented that we need  
9 to move much more quickly on project development to not  
10 only meet our clean energy targets, but also to ensure  
11 adequate system capacity in the short term. And  
12 additionally, actions we take in the next 5-to-10 years  
13 will be critical in ensuring we meet our long-term goals.

14 Stakeholders' spoken support of portfolio  
15 resources including technologies that are not yet  
16 commercialized, and discussed various stances on particular  
17 technologies that may fall under the definition of zero-  
18 carbon resources including nuclear, hydro, and carbon  
19 capture technologies.

20 State balancing authorities voiced their support  
21 of the effort and willingness to partner on SB 100  
22 implementation including working to ensure a balance  
23 between reliability, affordability and carbon neutrality.

24 And lastly there was a recommendation to  
25 coordinate with the state's water agencies in SB 100

1 implementation.

2 Overall, I think the workshop went really  
3 smoothly. We had about 600 participants both in person and  
4 by phone, which I really hope indicates a robust public  
5 engagement as we move forward with the process.

6 As a next step, we will be holding three regional  
7 scoping workshops where we will solicit more detailed  
8 public feedback to inform the outline of the report. The  
9 first two will be on September 30th in Fresno and October  
10 8th in Diamond Bar. And the third one is tentatively  
11 scheduled for mid-October in Northern California. We're  
12 still finalizing the location. And we will have more  
13 details on those workshops shortly.

14 And before we open to discussion I'm hoping we  
15 can play the video. I think it should be queued up. And  
16 this is something that our media team put together to just  
17 launch this effort.

18 (Video playback begins: music and narrator)

19 NARRATOR: "For decades, California has been a  
20 world leader on environmental protection, putting solar  
21 panels on a million homes and businesses and 600,000  
22 electric cars on the road saving energy as population  
23 boomed, greenhouse gas emissions dropped and air quality  
24 improved. All while the state's economy thrived, growing  
25 half a million green jobs and driving \$22 billion in clean

14

1 tech investments. Today, a third of California's  
2 electricity is generated by renewable energy.

3 "Under Governor Gavin Newsom's leadership, the  
4 state is charting the path to 100 percent clean energy by  
5 2045. We will continue to invest in safety. And we will  
6 never waiver on achieving the nation's most ambitious clean  
7 energy goals, modernizing the grid to power new uses in  
8 clean electricity from homes and buildings to buses, trucks  
9 and more. Protecting public health and the environment and  
10 ensuring a reliable, affordable, equitable clean energy  
11 future for all Californians."

12 (Video playback ends.)

13 MS. WEEKS: Great. And with that I'd like to  
14 open it up to discussion.

15 CHAIR HOCHSCHILD: Thank you, Terra. And let's  
16 also thank all the staff who worked so effectively on that  
17 SB 100 workshop last week. It was just really well put  
18 together. And I really especially wanted to call out the  
19 collaboration with the other agencies, which was just  
20 spectacular. That's really what we want to see going  
21 forward is breaking down those silos. I was just really  
22 pleased.

23 So let's open it up. Any questions, comments or  
24 reflections? You were there as well, Commissioner  
25 McAllister.

1                   COMMISSIONER MCALLISTER:  Yeah, I'll just  
2 reiterate I think it was a good level actually, because it  
3 kept sort of high level.  And really like Terra, the main  
4 message was this is really happening?  This is a true joint  
5 agency effort that we're serious about that and the Energy  
6 Commission is kind of holding the pan on assembling the  
7 thing, but the report truly will be joint.  And the  
8 agencies will be doing different pieces.

9                   Also I think it's important to recognize that  
10 reliability is really job one.  And the ISO was there and  
11 is very supportive and kind of ready to engage as needed in  
12 terms of funding some quick turnaround studies and things  
13 like that.  So I think all the pieces are there to really  
14 have success.  And the engagement by the Governor's Office  
15 and the agency and just all of the who's who really that  
16 was there commenting and putting their hopes and dreams and  
17 aspirations on this process, I think is really positive.  
18 Because that means they're going to be engaged for the long  
19 term and this is a long-term multi-decadal kind of effort.

20                   So it's really I think gotten off to a great  
21 start, so thanks to staff.  I'll just reiterate the thanks  
22 to you and staff and everybody who put it all together.  It  
23 really went well.

24                   CHAIR HOCHSCHILD:  Commissioner Douglas?

25                   COMMISSIONER DOUGLAS:  Yes, I'll just join in

1 those comments. I really enjoyed being there. It was  
2 great to see the hard work put in on the event by the staff  
3 and the great attendance and commitment and the public  
4 comments. I think that we've got a good framework for  
5 moving this forward and obviously it is a long-term  
6 commitment and a long-term effort and we're off to a good  
7 start.

8 CHAIR HOCHSCHILD: Any other comments? No, okay.  
9 Well I'll just reiterate one point I made at the workshop,  
10 which is that two years ago this vision was considered by  
11 many to be mythology. So yesterday was the one-year  
12 anniversary of the signing of SB 100. So Hawaii was the  
13 first state to do it in 2015. Then one year California,  
14 Governor Brown signed the law.

15 What has happened since then is nothing less than  
16 extraordinary. So 100 percent policies have been adopted  
17 in Washington, Nevada, New Mexico, Wisconsin, Connecticut,  
18 New York, Maine, District of Columbia and Puerto Rico and  
19 there's a bunch of others underway. So we have almost 30  
20 percent of the population of the United States today living  
21 in communities that have committed to go to 100 percent.

22 And looking at the trends, they are very much in  
23 our favor. Storage is coming down, solar is coming down,  
24 wind is coming down, efficiency etcetera. And really the  
25 role of California as an incubator of these kind of

1 policies and these industries is having an incredible  
2 effect, something we should all be really proud of. And  
3 bear in mind the birth of the solar industry globally,  
4 began here in California. The wind industry globally began  
5 here. The electric vehicle industry and the first energy  
6 efficiency codes and standards began here.

7           And so what we're doing is incubating policies  
8 and industries that can take clean energy global. And it's  
9 something again we should be very proud of and be very  
10 mindful of as we're crafting this, because we have to make  
11 this thing successful. And there's many, many -- it's a  
12 silver buckshot solution. It's not a silver bullet.  
13 There's many things that are needed in terms of  
14 manipulating demand and electric vehicle charging  
15 algorithms and all the rest that fit together. But that's  
16 the work that's going to be heads up.

17           So thank you again, Terra, for --

18           MS. WEEKS: Thank you.

19           CHAIR HOCHSCHILD: -- assembling all the team.

20           With that, let's move on to Item 3, Sequoia Data  
21 Center.

22           MR. PAYNE: Good morning Chair, Commissioners.  
23 My name's Lon Payne. I am a Project Manager in the CEQA  
24 Review Unit in the Environmental Office of STEP. With me  
25 is Staff Attorney Lisa DeCarlo.

1           We're here to present a proposed order appointing  
2 a Committee to oversee a Small Power Plant Exemption, or  
3 SPPE proceeding, for the Sequoia Data Center.

4           The SPPE option is only -- I'm going to start  
5 saying the Exemption Option, because this acronym is  
6 horrific. It's only available for thermal power plants  
7 between 50 and 100 megawatts. And pursuant to Public  
8 Resources Code Section 25541 the exemption can only be  
9 granted if, and I quote, "No substantial adverse impact on  
10 the environment or energy resources will result from the  
11 construction or operation of the proposed facility."

12           The applicant, C1-Santa Clara, LLC, filed its  
13 SPPE application on August 12th, 2019, seeking the  
14 exemption from the Commission's power plant certification  
15 process. And they are here today.

16           The application materials were docketed on August  
17 14, 2019.

18           The Sequoia Data Center consists of a building  
19 housing data servers up to 96.5 megawatts of associated  
20 diesel-fueled backup generators and associated equipment  
21 and connections proposed for construction in Santa Clara,  
22 California.

23           Staff's job will be to conduct a CEQA review of  
24 the exemption application and to produce an Initial Study.

25           In addition to the Sequoia Data Center, staff is

1 currently working on the Laurelwood and Walsh Data Center  
2 projects. Staff anticipates five additional exemption  
3 applications for data centers in the Santa Clara and San  
4 Jose area prior to the end of the calendar year, which  
5 means that at some point staff, not to mention the Hearing  
6 Office and assigned Committee members, may be processing  
7 eight data center exemption applications concurrently. We  
8 just wanted to give you a heads up about that.

9 Thank you. We'd be happy to answer any questions  
10 you may have.

11 CHAIR HOCHSCHILD: Unless there's questions,  
12 let's go to the Applicant.

13 MR. GALATI: Good morning, Commissioners, Scott  
14 Galati representing CyrusOne on the Sequoia Data Center.

15 MR. DEVINE: Good morning. My name is Jeff  
16 Devine. I'm the Director of Design and Construction for  
17 CyrusOne.

18 CHAIR HOCHSCHILD: I don't have any public  
19 comment cards in the hearing. If there's no other public  
20 comment, we'll move to Commissioner discussion. We'd like  
21 to do Commissioner Douglas as Lead and Commissioner Monahan  
22 as Associate for this. Do you have any other comments to  
23 add?

24 COMMISSIONER DOUGLAS: No, does the Applicant  
25 have any other comments to add or?

1 MR. GALATI: I just wanted to remind the  
2 Commission that this is a project where the emergency  
3 generators are only going to operate once in a while for  
4 maintenance and testing. And only operate if there's a  
5 loss of power to the facility.

6 The project has already started its work through  
7 the City of Santa Clara, working through what they all the  
8 PCC process. And it had already obtained a demolition  
9 permit and the site has been demolished. And they're ready  
10 to go when the Commission is finished with its process.

11 COMMISSIONER DOUGLAS: All right, so I'll move  
12 approval of the Committee was suggested by the Chair.

13 COMMISSIONER MONAHAN: I'll second.

14 CHAIR HOCHSCHILD: All in favor?

15 (Ayes.)

16 CHAIR HOCHSCHILD: That motion passes  
17 unanimously. Let's move on to Item 4 of the 2019-2020  
18 Investment Plan Update for the Clean Transportation  
19 Program.

20 MR. BRECHT: Good morning Chair, and  
21 Commissioners, my name is Patrick Brecht. I'm the Project  
22 Manager for the 2019-2020 Investment Plan Update for the  
23 Clean Transportation Program.

24 Today, we are seeking your approval of this  
25 Investment Plan Update. If approved the current Second

1 Revised Lead Commissioner Report will be reissued as the  
2 Final Commission Report. And this document will serve as a  
3 guide for the program's funding solicitations and awards  
4 for the fiscal year 2019-2020.

5 The Clean Transportation Program was established  
6 by California Assembly Bill 118 in the year 2007. The  
7 Program is funded through a small surcharge on California  
8 vehicle registrations, which gives us a budget of up to  
9 \$100 million per year, depending on how much is collected  
10 from the surcharge. And Assembly Bill 8 extended the  
11 program to January 1, 2024.

12 The Program provides funding support for projects  
13 that reduce greenhouse gas emissions within the  
14 transportation sector, which accounts for roughly 50  
15 percent of state greenhouse gas emissions.

16 The projects we fund also contribute to other  
17 complementary state goals including improved air quality,  
18 providing investments in low-income and disadvantaged  
19 communities, promote economic development, increase  
20 alternative fuel use, and reduce petroleum dependence

21 The annual Investment Plan Update serves as the  
22 basis for the program's funding opportunities for each  
23 fiscal year. This year's plan included four prior versions  
24 of the report, three Advisory Committee meetings, one  
25 presentation to the Disadvantaged Communities Advisory

1 Group and over 80 comments to our Docket.

2 As a reminder, the Investment Plan sets  
3 allocations for various funding categories and not for  
4 individual projects.

5 To demonstrate its commitment to diversity, the  
6 CEC adopted a resolution during the April 2015 Business  
7 Meeting to firmly commit to increasing the following: The  
8 participation of women, minority, disabled veteran and LGBT  
9 business enterprises in program funding opportunities;  
10 outreach to and participation by disadvantaged communities;  
11 diversity in geographic regions; diversity in participation  
12 at CEC proceedings and diversity in employment and  
13 promotional opportunities.

14 This slide shows that roughly 40 percent of  
15 program funds have been awarded to projects located within  
16 disadvantaged and/or low-income communities. That  
17 percentage actually increases to 50 percent when you take  
18 out statewide funding projects. However, we are determined  
19 to explore new methods for advancing and measuring equity  
20 within the Clean Transportation Program beyond just funding  
21 amounts by location.

22 Staff solicited input on the Investment Plan from  
23 members of the Disadvantaged Communities Advisory Group or  
24 DACAG, established pursuant to SB 350, to help advise the  
25 CEC and the Public Utilities Commission on their programs.

23

1 The DACAG's mission is to review and provide advice on  
2 proposed clean energy and pollution reduction programs and  
3 determine whether these proposed programs will be effective  
4 and useful in disadvantaged communities. DACAG made a  
5 series of recommendations on the Investment Plan. These  
6 included moving 100 percent of program funding toward zero-  
7 emission vehicles among others.

8 Looking further ahead, we expect to continue  
9 outreach and coordination with DACAG in developing future  
10 investment plan updates.

11 Here are a few key changes from the Lead  
12 Commissioner Report published in March, to the Second Lead  
13 Commissioner Report published on August 28th. There, of  
14 course, was program rebranding to the Clean Transportation  
15 Program; incorporated recommendations from the DACAG; and a  
16 third Advisory Committee Meeting and workshop; a funding  
17 shift toward zero-emission transportation technologies and  
18 we added a new emphasis on Equity and Outreach.

19 As captured in this table, our proposed fiscal  
20 year 2019-2020 allocations emphasize zero-emission  
21 technologies in the light, medium and heavy-duty sectors.  
22 We believe these allocations reflect the state's goals for  
23 zero-emission vehicles or ZEVs, near and long-term carbon  
24 reduction, and improved air quality, with a focus on  
25 providing benefits for disadvantaged communities.

1 Combining the first three rows, you can see that  
2 the allocations for ZEV infrastructure and medium and  
3 heavy-duty vehicles total 82.7 million.

4 Additionally, there is a 2.5 proposed allocation  
5 for Workforce Development with a priority to disadvantaged  
6 communities as well as ZEVs and ZEV infrastructure.

7 The CEC has provided nearly 830 million in  
8 funding through the Clean Transportation Program and has  
9 supported a broad portfolio of fuel types. This chart  
10 captures the total amount of funding allocations to various  
11 fuel types including a quarter into biofuels, biofuel  
12 production and distribution shown in shades of blue; 15  
13 percent toward natural gas technologies shown in green; and  
14 a third in yellow toward electric vehicle charging  
15 infrastructure, vehicle demonstrations, incentives, and  
16 manufacturing; a fifth shown in orange for hydrogen  
17 refueling infrastructure and vehicle demonstrations; and  
18 the remainder to projects that incorporate multiple fuel  
19 types or do not address specific fuel types shown in red.

20 I'll now give a brief overview of each funding  
21 allocation, starting with the Light-Duty Electric Vehicle  
22 Charging Infrastructure.

23 With the exception of last year, when the Energy  
24 Commission received a special one-time appropriation to  
25 expand ZEV infrastructure, our proposed 32.7 million

1 allocation is our largest to date in this category. In  
2 fact, it's almost double our allocation in a previous  
3 normal year.

4 This slide highlights the charging infrastructure  
5 needs that we are trying to address with our program's  
6 incentives.

7 The Electric Vehicle Infrastructure Projections  
8 or EVI-Pro model analyzes regional demand and quantifies  
9 the types, locations, and quantities of chargers needed to  
10 support the state's goal of 1.5 million ZEVs by 2025.

11 Results from this model helped the Executive  
12 Order B-48-18, which set targets of 250,000 shared charging  
13 connectors, including 10,000 DC fast chargers, and 200  
14 hydrogen stations by 2025.

15 The dark green wedges on the bottom of this chart  
16 depict the estimated number of existing shared charging  
17 connectors, not including single-family residential  
18 chargers. The light green wedges depict the estimated  
19 number of connectors that will result from identified  
20 funding streams around the state including our program, the  
21 state's electric utilities, and settlements with Volkswagen  
22 and NRG.

23 Despite these investments, we estimate that the  
24 sum of existing and expected future charging ports will not  
25 be sufficient to meet the state's goals.

1           The currently identified investments still leave  
2 a gap, shown in red, of nearly 80,000 Level 2 charging  
3 connectors and 3,600 DC fast charging connectors, by 2025.  
4 In recognition of this need, our proposed funding  
5 allocation for charging infrastructure is notably higher  
6 than in most previous investment plans, both to meet the  
7 growing needs of plug-in electric vehicles and to  
8 demonstrate the state's long-term commitment to ZEV mass  
9 market adoption. Also, notably, this doesn't include the  
10 charging infrastructure that we will need to satisfy the  
11 needs of medium and heavy-duty plug-in vehicles.

12           With this proposed allocation, we will be looking  
13 at a number of potential opportunities for Clean  
14 Transportation Program investments. First and foremost,  
15 the increased funding will help the state close the gap in  
16 needed chargers. The ultimate goal of expanding electric  
17 vehicle infrastructure is to create ubiquitous charging or  
18 no-time charging, that transitions drivers away from the  
19 typical gas-station mentality.

20           Our California Electric Vehicle Infrastructure  
21 Project or CALeVIP provides a simplified process for  
22 providing charging incentives in high priority regions with  
23 dedicated funding amounts and/or higher incentive amounts  
24 for sites in disadvantaged communities.

25           We will also be looking to support innovative

1 charging technologies and business models. These can make  
2 charging stations more appealing to potential users,  
3 accelerate the development of self-sustaining business  
4 models, and increase the utility of each charging  
5 connection.

6 We also have funded a small number of e-Mobility  
7 projects in the past, to test and demonstrate the ability  
8 of ZEVs to provide innovative transportation services to  
9 low-income and/or disadvantaged communities.

10 Finally, we have also provided funding to  
11 projects that can indirectly support our program's goals  
12 such as regional alternative fuel readiness plans. These  
13 investments provide education, outreach, and implementation  
14 funding directly to local governments and municipalities,  
15 which know their communities best.

16 The Medium and Heavy-Duty Zero-Emission category  
17 focuses on the needs of medium and heavy-duty vehicles,  
18 typically found in freight and fleet applications. These  
19 vehicles represent a small share of California registered  
20 vehicle stock, but also emit an outsized share of  
21 greenhouse gas, NOx, and PM 2.5 emissions.

22 For fiscal year 2019-2020, CEC staff proposes a  
23 30 million allocation for this category dedicated to medium  
24 and heavy-duty ZEVs and ZEV infrastructure. This is a  
25 significant increase from previous fiscal years.

1           To meet the greenhouse gas and air quality goals,  
2 this sector will need to transition to ZEV technologies,  
3 and the resources required for this transition far exceed  
4 our program's funding alone. We expect an increased demand  
5 for ZEV infrastructure in our program, in response to  
6 vehicle incentives or regulations from other agencies.

7           As the state's lead agency for fueling  
8 infrastructure deployment the CEC focuses on the  
9 infrastructure needs of medium and heavy-duty ZEVs.  
10 However, we also remain open to funding medium and heavy-  
11 duty ZEV demonstrations.

12           In addition to vehicle and infrastructure  
13 investments, the CEC will seek ways to include grid  
14 integration, integrated storage solutions, and charging  
15 management as complementary technologies.

16           The Clean Transportation Program is the primary  
17 source of funding for hydrogen refueling stations in the  
18 state. Assembly Bill 8 directs the CEC to allocate 20  
19 million annually to fund the initial network of 100  
20 hydrogen refueling stations. Looking further out,  
21 Executive Order B-48-18 set a target of 200 stations by  
22 2025.

23           The CEC is also interested in the co-location of  
24 refueling for commercial vehicles and buses with light-duty  
25 vehicle refueling. This approach could aid in the

1 transition of California's commercial vehicle and bus  
2 fleets to ZEV alternatives while simultaneously  
3 strengthening the business case for light-duty hydrogen  
4 refueling

5           To date, the CEC has provided funding to install  
6 or upgrade 64 publicly available hydrogen stations capable  
7 of light-duty vehicle refueling. There are 40 open retail  
8 stations, 39 funded by our program. Another 24 stations  
9 are under construction, 13 of these are or will be located  
10 in disadvantaged communities. Together, these 64 stations  
11 will have the capacity dispense up to 17,000 kilograms per  
12 day, the equivalent of 24,000 fuel cell electric vehicles.  
13 Industry reports there are over 7,000 fuel cell electric  
14 vehicles currently on the road.

15           The Investment Plan also includes funding for  
16 Zero and Near-Zero Carbon Fuel Production. This can  
17 include a broad range of alternative fuels. Biofuels  
18 defined as nonpetroleum diesel substitutes, gasoline  
19 substitutes, and biomethane, represent the largest existing  
20 stock of alternative fuel in California. In addition,  
21 demand for renewable hydrogen will increase in the coming  
22 years as more fuel cell electric vehicles are sold.

23           Investments in this area have the potential to  
24 produce high volumes of low-carbon alternative fuels to  
25 demonstrate new, more efficient production technologies.

1           For fiscal year 2019-2020 staff proposes a 10  
2 million allocation for zero and near zero-carbon fuel  
3 production. This funding will be used for conversions of  
4 waste streams projects and for renewable hydrogen  
5 production. Other state regulations and programs also  
6 provide key support for zero and near-zero carbon fuel  
7 production projects including credits under the Low Carbon  
8 Fuel Standard, the CalRecycle Organics Grant Program, the  
9 California Department of Food and Agriculture Dairy  
10 Digester Research and Development Program, and the dairy  
11 bio-methane pilot projects approved by the CPUC for natural  
12 gas utilities.

13           The CEC has made significant investments for the  
14 training and development of California's alternative fuel  
15 workforce, which has shown growth in size and scope.

16           Our program has partnered with a number of state  
17 agencies, excuse me, other agencies or other entities such  
18 as the California Employment Training Panel. This  
19 partnership provides training to incumbent workers in  
20 companies. Our program has partnered with entities such as  
21 California Employment Training Panel. This partnership  
22 provides training incumbent workers in companies,  
23 organizations, and other public agencies that advance the  
24 state's development and use of clean transportation  
25 technologies.

1           As another example, Cerritos Community College  
2 District recently received funding to train electric school  
3 bus operators and maintenance staff.

4           For fiscal year 2019-2020, we are proposing a 2.5  
5 million allocation for workforce training projects, and  
6 will continue to work with partner agencies to determine  
7 how to maximize benefits for our investments.

8           This slide once again summarizes the proposed  
9 allocations for the 2019-2020 for our Investment Update.

10           Thank you and I am happy to answer any questions  
11 you may have. I also will mention that we have three  
12 representatives from three public organizations that would  
13 like to speak about the Plan, and they are Stan Greschner,  
14 Chair of the Disadvantaged Communities Advisory Group;  
15 Richard Corey, Executive Officer of the California Air  
16 Resources Board; and Tyson Eckerle, Deputy Director of  
17 Zero-Emission Vehicle Infrastructure with the Governor's  
18 Office of Business and Economic Development.

19           Thanks.

20           CHAIR HOCHSCHILD: Great, thank you. Did you  
21 want to make your remarks now, Tyson?

22           MR. ECKERLE: (Indiscernible.)

23           MR. GRESCHNER: I can. This is Stan Greschner  
24 with Grid Alternatives, which is the country's largest non-  
25 profit clean energy provider serving low-income families

1 and disadvantaged communities around the country and  
2 certainly throughout California.

3 I also serve as the Chair of the Disadvantaged  
4 Community Advisory Group and I just want to thank again  
5 Commissioner Monahan and the CEC staff for inviting the  
6 Advisory Group into the development of this plan. And  
7 today I'm representing the DACAG's comments.

8 And Patrick already noted the recommendations  
9 that we had submitted to the Commission. I won't go  
10 through them all here. And this slide just reflects the  
11 recommendations that were incorporated directly into the  
12 Updated Plan. And these are very significant and  
13 substantive inclusions into the Plan including moving  
14 prioritizing community engagement and outreach in  
15 disadvantaged communities and identifying opportunities for  
16 community groups to directly engage in support and possibly  
17 be funded to help communities participate in these  
18 programs.

19 Certainly, we were supportive of the move to 100  
20 percent zero-emissions fuels. We're supportive of the no  
21 investments going towards natural gas and then changes to  
22 medium and heavy-duty and the carbon fuel production to 100  
23 percent clean. So we appreciate those being included.

24 The other was there's a need as we meet these  
25 moves in to clean transportation to have a trained

1 workforce. And we supported and advocated for additional  
2 funding for workforce training opportunities. And Patrick  
3 noted that there was additional funding put towards those.  
4 And certainly we supported the partnership with ETP and the  
5 great work that they do to train folks up.

6           And one of the recommendations that we discussed  
7 at the last Advisory Committee meeting was how do we update  
8 that committee and who makes up that committee. And how do  
9 we have more participation from community members and  
10 community groups in that, which there's very little right  
11 now. And the Commissioner and staff and the Advisory  
12 Committee Members I think were very supportive of  
13 reexamining how the makeup of that committee is made up in  
14 the future, hopefully add more representation from  
15 community groups.

16           A few items were not included in the Update.  
17 I'll just focus on one, which I think can be addressed and  
18 be an ongoing conversation that we as a DACAG has with the  
19 Commission. But that's \$100 million is a lot of money.  
20 We're not going to say that it's not. But in a scope of  
21 what we're trying to do in California and the  
22 transformative kind of market we're trying to have here,  
23 \$100 million doesn't go a long -- isn't that large, right?  
24 And on the solar side we have \$100 million a year going  
25 towards multifamily affordable housing, for example.

1           So we -- there's a lot of opportunities in making  
2 investments in different types of technologies. But we  
3 will continue to advocate for low-income communities and  
4 disadvantaged communities being the places where those  
5 investments are made.

6           And I think as pilots are being -- and programs  
7 are being identified and rolled out, we will want to  
8 continue to work with the Commissioner and her staff, and  
9 the Commission staff, on ensuring equity is part of those  
10 solicitations, part of those RFPs, and ensure disadvantaged  
11 communities continue to have investments from the clean  
12 transportation side.

13           And now these other items certainly will -- I  
14 think as well can be addressed in solicitations as they  
15 come up. But again we just appreciate the inclusion of so  
16 many of our ideas into the Plan and look forward to  
17 continuing to work with the Commission on this. Thank you.

18           CHAIR HOCHSCHILD: Great. Thank you.

19           Let's go to Richard.

20           MR. COREY: All right, thank you Chair and  
21 Commissioners. I'm Richard Corey, Executive Officer of the  
22 California Air Resources Board. I'm here to extend our  
23 strong support for the Investment Plan. I think it focuses  
24 on what we all know to be true. We can't get to our  
25 health-based air quality standards, our GHG reduction

1 targets, in SB 32, our carbon neutrality, or protect  
2 communities without a significant transformation of the  
3 transportation sector substantially focuses on zero-  
4 emission technologies. The Plan really does that.

5 And I want to acknowledge both the staff, the  
6 Commission staff, as well as the process they've going  
7 through for the last many, many months with stakeholders  
8 and in collaboration with us, which we think has been  
9 really a hallmark of an effective game plan for moving the  
10 state forward in concert with a number of other activities.  
11 We think it's critical.

12 We think the work and focus on zero-emission  
13 technologies, including battery electric vehicles as well  
14 as fuel cell electric vehicles. They both have a role in  
15 the mix. The focus on the multi-year hydrogen funding, we  
16 think in terms of the signal that'll send to the market we  
17 think is equally important, as is the focus on medium and  
18 heavy-duty as well as light-duty technologies. There's no  
19 silver bullet, as the Chair indicated. All these  
20 technologies have a role, and clearly the significant role  
21 and focus of the investments in the infrastructure are a  
22 key, key element to move us forward. And that  
23 collaboration with you all will clearly continue and it  
24 needs to as we move forward with the challenge in front of  
25 us.

1           As well as the last point, which is critical, is  
2 the opportunities that this transition is going to afford  
3 with respect to the economy and employment opportunities.  
4 So the workforce development and the preparedness in terms  
5 of next generation of PhDs, scientists, technicians,  
6 engineers that are critical to prepare us as we work  
7 through this transition. The Plan recognizes this and  
8 holistically, and as a package portfolio, we are supportive  
9 of it. So thank you.

10           CHAIR HOCHSCHILD: Well thank you, Richard, for  
11 those comments. And let me also thank you for the  
12 incredible work you and your team are doing. I've been,  
13 along with all my colleagues, just incredibly proud of the  
14 ARB, particularly this year with the nonsense that's going  
15 on with the Fuel Economy Standards nationally. And just  
16 having ARB play the role that you have, it's extraordinary.  
17 We're lucky to have your leadership and Mary's and the rest  
18 of your team. So thank you.

19           Tyson?

20           MR. ECKERLE: Well thank you very much Chair and  
21 Commissioners. I totally agree with what Richard just  
22 said, so I'll just add a little bit there. But my role on  
23 a daily basis is to focus on implementation of zero-  
24 emission vehicle infrastructure. And really it's a ground  
25 game at this point. And I think the Clean Transportation

1 Funding Program makes a huge difference. It opens the eyes  
2 of communities to the potential for scale and how they can  
3 focus attention on development. It opens doors for  
4 businesses, so it's right in the right place as has been  
5 laid out very well.

6 As you know, we have really aggressive zero-  
7 emission vehicle targets for both the infrastructure and  
8 deployment. I think this plan rightly prioritizes meeting  
9 them. It's clear we need light-duty infrastructure, both  
10 plug-in charging and hydrogen fueling; medium and heavy-  
11 duty infrastructure. And medium and heavy-duty presents  
12 really unique opportunities now, just as the market there's  
13 a lot of stuff that's really starting to crest. And I  
14 think the Energy Commission is in a great spot to help  
15 really facilitate that growth and open doors.

16 Also, we need the workforce to support this  
17 growth. And I think the most important we probably need  
18 access into that workforce. And I think I really  
19 appreciate the Energy Commission's prioritization of that.

20 So just really, in summary, just a strong support  
21 for the Plan and thank you for the work you're doing. I'm  
22 really excited about where this is going and I think  
23 there's some big opportunities here. So thank you.

24 CHAIR HOCHSCHILD: Okay. Before we get to  
25 Commissioner comments, and Commissioner Monahan can say

1 some words, we have quite a bit of public comment, so bear  
2 with us as I go through the list here. Let's begin if we  
3 could with Will Barrett from the American Lung Association.

4 MR. BARRETT: Thank you very much. I'm Will  
5 Barrett with the American Lung Association. First of all,  
6 I'd like to really thank the staff for their work across  
7 this whole process. I think they've run a really open  
8 dialogue across the way. And the process has really been  
9 improved because of it, so I do appreciate that.

10 The Lung Association strongly supports moving  
11 forward with the Plan. We appreciate that it really does  
12 help to move forward with California's clean air climate  
13 change and public health goals. We support the emphasis in  
14 the Plan on zero-emission transportation. We think that  
15 this transition, as has been discussed, is critical to  
16 meeting our clean air and climate goals to protect public  
17 health in California.

18 We also support the real focus on disadvantaged  
19 communities, really making sure that that voice is heard,  
20 the voice of the DACAG was really important to this  
21 process. And we do look forward to, as a member of the  
22 committee, having more of that voice on the Advisory  
23 Committee going forward. We think it's critically  
24 important and applaud the attention there.

25 We do think that the Plan really does a good job

1 of focusing on filling the gaps in zero-emission  
2 infrastructure on the light-duty side, continuing the  
3 investment in hydrogen infrastructure as outlined in AB 8,  
4 and then really the focus on zero-emission technologies in  
5 the heavy-duty sector. We think that that is a critical  
6 need to protect our air and our communities' health.

7 We know that the funding sources across the board have  
8 not kept up with the demand there. So we do think that as  
9 this Plan moves forward, which we fully support, that the  
10 Commission and the ARB and our transportation agencies  
11 should really be focusing on what we can do to develop a  
12 really strong consistent funding source to clean up the  
13 heavy-duty sector.

14 We know that this is a growing need. We know  
15 that the funding has not kept pace with that need. And we  
16 know that the longer we wait to invest in these zero-  
17 emission technologies the further our goals are going to be  
18 out of reach.

19 So we really do appreciate all the work. We do  
20 encourage that continued focus on zero-emission  
21 technologies and on making sure that incentive funding and  
22 other resources are available on a consistent basis, so  
23 that we don't have a sort of feast or famine  
24 food fight every year. It's really critical, I think, and  
25 all of us as stakeholders should be working on that

1 together.

2           So thank you very much. I really do appreciate  
3 it. And again, I think this plan makes for healthy air in  
4 California and a healthier population. Thank you very  
5 much.

6           CHAIR HOCHSCHILD: Thank you so much. Let's move  
7 on to Meredith Alexander from CALSTART. And if I could ask  
8 everyone just to say one sentence about your organization  
9 just for the benefit of the audience, so we know who you  
10 are.

11           MS. ALEXANDER: Thanks. Thank you. Good morning  
12 Chair Hochschild and Commissioners, Meredith Alexander with  
13 CALSTART. We are a member-based nonprofit with over 210  
14 members from all across the transportation sector and  
15 especially with a focus on medium and heavy-duty vehicles  
16 here in California.

17           So we just wanted to commend this Commission on  
18 your leadership position in infrastructure necessary to  
19 support ZEVs. And we wanted to state our support for the  
20 proposed \$30 million allocation for medium and heavy-duty  
21 vehicle infrastructure. And we appreciate the significant  
22 increase over last year's funding.

23           We also support the inclusion of medium and  
24 heavy-duty fueling and the \$20 million for hydrogen and the  
25 clarification in the revised version of the Plan. And we

41

1 also wanted to emphasize the importance of coordination  
2 with ARB and other state wide incentive programs for ZEVs  
3 that are trying to transform this industry, which is a  
4 really challenging task.

5           And just some more specific comments, we wanted  
6 to support the proposal to consider a block grant structure  
7 for the allocation of funding as we think this would allow  
8 the funds to be distributed most efficiently. And keeping  
9 pace with the really fast pace that we see with the  
10 vouchers going out via HFIP, and also some really ambitious  
11 regulatory deadlines being set for transit buses and  
12 airport shuttles at CARB.

13           And also we see an immediate need for technical  
14 assistance grants particularly for large public fleets,  
15 like transit agencies, to help them understand their  
16 infrastructure needs and craft a comprehensive plan. We  
17 think this would also help avoid throwaway infrastructure,  
18 which is a real concern as fleets grow rapidly.

19           And we think this would be a great use of last  
20 year's funds, the 18 million designated for medium and  
21 heavy duty, at least a part of those to get the money out  
22 the door as quickly as possible.

23           And we also, in addition to technical assistance,  
24 we urge the Commission to consider what we're labeling  
25 "fleet infrastructure deployment subsidies," for site

1 design and hardware costs. For those fleets that are ready  
2 to deploy their infrastructure now and are taking delivery  
3 of zero-emission vehicles in the next year or two.

4 And we also suggest that vehicles subsidized  
5 through HFIP or other statewide programs be given priority  
6 for funding. And we think giving away smaller amounts of  
7 money, using the \$30 million and the 18 million from last  
8 year could allow you to assist over 200 fleets which would  
9 really make an impact.

10 So we thank you for your consideration of our  
11 comments. And again commend you on this significant  
12 milestone. Thank you very much.

13 CHAIR HOCHSCHILD: Thank you. Let's move on to  
14 Eileen Tutt from the Electric Transportation Community  
15 Development Corporation.

16 MS. TUTT: Thank you Chair and Members of the  
17 commission. My name is Eileen Tutt. I'm representing  
18 today the Electric Transportation Community Development  
19 Corporation. We are a newly formed nonprofit that was  
20 created to expand on CalETC's, California Electric  
21 Transportation Coalition, very successful Prove It!  
22 Campaign.

23 We are looking at building access to  
24 transportation electrification in the communities most  
25 impacted by pollution and economic disparity. The mission

1 is to increase clean transportation in communities while  
2 creating economic opportunity derived from the shift from  
3 petroleum to electricity and other clean fuels.

4           First, I want to really thank the Energy  
5 Commission staff and Commissioner Monahan and Commissioner  
6 Scott and all the commissioners for creating the Clean  
7 Transportation Plan that you have before you. It  
8 recognizes the imperative of investment in zero-emission  
9 vehicle technologies. And we really are at a pivotal  
10 point, not just from the light-duty side but as you  
11 referenced in the Plan on the medium and heavy-duty side.  
12 These vehicles are coming to market very, very quickly, but  
13 if we want to expand the market we need a significant  
14 investment, particularly in the vehicles and the  
15 infrastructure.

16           So as you shift from -- staff and the Commission  
17 from the development of a plan to the implementation of a  
18 plan, I just have three requests I'd like to make.

19           And the first, first of all I really want to  
20 emphasize and support this inclusion of the disadvantaged  
21 communities' representatives. I think that's really  
22 important. But as you consider programs to fund I think  
23 it's important to look at synergies between these three  
24 investment pots or four investment pots. They don't always  
25 -- projects don't necessarily always fall into one. It

1 might not just be a medium and heavy-duty program, it may  
2 also be an infrastructure, so there's going to be some  
3 crossover. So I would appreciate some consideration of  
4 synergies between the different pots of money.

5           And then in terms of the disadvantaged community  
6 benefits, we would like to emphasize that it really needs  
7 to go beyond the CalEnviroScreen's "most disadvantaged  
8 communities". There are a lot of communities impacted by  
9 pollution, rural and urban. And it's really important to  
10 look at not just what's identified as the worst by CalEPA's  
11 EnviroScreen, which we support, but all communities that  
12 are heavily impacted by pollution or very substantial  
13 economic disparity.

14           And the finally, I think that it's important as  
15 you fund these programs to think about new entrants into  
16 the programs. So sometimes there's preference given to  
17 people who have previously implemented successful programs  
18 and I think that's important. But I just want to say that  
19 you don't want to stifle new entrants and new innovation  
20 and new ideas. So I would like that to be considered.

21           So with that, I do want to say I really urge your  
22 approval today and thank you so much for this plan.

23           CHAIR HOCHSCHILD: Well, thank you for those  
24 comments.

25           Let's move on to Jessica Melton from PG&E.

1 MS. MELTON: Good morning, Commissioners and  
2 staff. Thank you for the opportunity to comment today.  
3 PG&E strongly supports California's greenhouse gas  
4 reduction and air quality goals. The state has made a lot  
5 of progress, but significant work is still required in  
6 order to meet the deep reductions needed to limit the  
7 impacts of climate change.

8 The transportation sector remains the largest  
9 source of both GHG emissions and air pollutants. State  
10 incentives have and will continue to play a critical role  
11 in fostering the necessary changes in the market and  
12 technology needed in this sector.

13 The CEC's Clean Transportation Program has done  
14 an admirable job over the past 10 years in helping to  
15 foster innovation in alternative fuels and technologies.  
16 The variety of technology types and projects funded by this  
17 program is crucial.

18 PG&E urges the CEC to continue to support as many  
19 alternative technologies as possible. Rather than  
20 excluding categories like nature gas vehicles from the  
21 funding plan.

22 A recent Air Resources Board panel on  
23 decarbonization pathways emphasized the need for  
24 flexibility, optionality and keeping all tools and  
25 technologies on the table, because reaching carbon

1 neutrality by mid-century will be very challenging.

2           In the funding plan report, CEC staff suggests  
3 that funding for NGVs would be redundant because  
4 significant incentives for NGVs are available through  
5 CARB's Clean Truck And Bus Voucher Program. However, in a  
6 recent ARB HFIP workshop, ARB staff acknowledged that their  
7 funding program is over-subscribed and cuts are needed to  
8 meet their budget.

9           One staff proposal is cutting out all near-zero  
10 funding. ARB staff at that meeting pointed out that NGVs  
11 can still get funding from other programs. PG&E urges the  
12 CEC and ARB to better coordinate their funding programs to  
13 avoid a situation in which funding for NGVs gets eliminated  
14 from both agencies due to assumptions of funding being  
15 available elsewhere.

16           Low NOx natural gas charts are a critical tool in  
17 helping to achieve near-term reductions where zero-emission  
18 truck technologies are not yet readily available in the  
19 medium and heavy-duty sectors. It is important to reduce  
20 air pollutant emissions as quickly as possible, given their  
21 negative health impacts and the rapidly approaching Clean  
22 Air Act attainment targets.

23           PG&E believes that increased use of all  
24 alternative fuels and technologies will be necessary to  
25 achieve our state's goals and that they can complement,

1 rather than compete, with each other.

2 We therefore request that the CEC reconsider the  
3 funding plan to include incentives for NGV trucks and  
4 infrastructure. Thank you again for your consideration of  
5 these comments.

6 CHAIR HOCHSCHILD: Thank you.

7 Let's go to Sara Rafalson from EVgo. I hope I'm  
8 not mispronouncing your last name, Sara.

9 MS. RAFALSON: Hi, good morning. Sara Rafalson,  
10 you were very close, from EVgo. I'm our Director of Market  
11 Development. And our one sentence about EVgo, so we are  
12 the largest provider of public fast charging  
13 infrastructure, which is really critical for fleets, for  
14 people who don't have access to charging at home or the  
15 work place like apartment dwellers and also of course for  
16 long distance trucks.

17 And I'm here today to thank Energy Commission  
18 staff, the Chair and Commissioners for their increased  
19 focus on ZEV with today's plan. And we recommend for the  
20 Plan to be approved as is. We believe that the Plan has  
21 been strengthened by the focus on UNDEV (phonetic) and  
22 notably we thank the Energy Commission for their focus on  
23 infrastructure, both in the light duty but also as CalSTART  
24 mentioned in the medium and heavy-duty space.

25 In the light-duty space, in particular, we really

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1 think that the program will continue to build upon CALeVIP,  
2 which has been a really successful program run through the  
3 Energy Commission.

4 One last kind of clerical issue in the Investment  
5 Plan, just the Plan uses 2017 data on EVgo and energy use  
6 infrastructure investments. So in our comment letter we  
7 included the updated plans that we must submit quarterly to  
8 the CPUC, and hope that upon passage that it could be  
9 amended to reflect the 562 fast chargers that have been  
10 deployed by settlement.

11 So in conclusion, we support the Plan and thank  
12 you again.

13 CHAIR HOCHSCHILD: Thank you.

14 Let's move on to Charles Watson from Proterra.

15 MR. WATSON: Good morning Chair and  
16 Commissioners, Charles Watson on behalf of Proterra. Thank  
17 you for the opportunity to provide comments on the  
18 Investment Plan.

19 Proterra is a leading US manufacturer of zero-  
20 emission batter electric transit buses. Previous  
21 investment plans have helped make it possible to move  
22 Proterra's headquarters to California, manufacturer  
23 electric busses in the City of Industry and assemble long-  
24 range batteries in Burlingame. Thank you again.

25 Proterra supports the proposed Investment Plan

1 Update, including the focus of investments in zero-emission  
2 technologies and a specific allocation of \$30 million for  
3 medium and heavy-duty zero-emission vehicles and  
4 infrastructure. Thank you.

5 CHAIR HOCHSCHILD: Thank you.

6 Let's move on to Hannah Goldsmith, California  
7 Electric Transportation Coalition. Following that will be  
8 Ryan Kenny from Clean Energy.

9 MS. GOLDSMITH: Good morning Chair and  
10 Commissioners. My name is Hanna Goldsmith. I'm the Deputy  
11 Executive Director for the California Electric  
12 Transportation Coalition or CalETC. We're a nonprofit  
13 trade association that seeks to expand and accelerate  
14 transportation electrification. And our members include  
15 utilities, auto makers, charging station providers and  
16 others that are supportive of transportation  
17 electrification.

18 So CalETC is a member of the Advisory Committee  
19 for the Clean Transportation Program. And we're pleased to  
20 support the 2019-2020  
21 Investment Plan for the program today.

22 We recognize that the funding need for advanced  
23 technology vehicles and infrastructure to realize  
24 California's aggressive ZEV, air quality, climate change,  
25 public health and economic goals is much higher than the

1 available funding for programs like this one and the  
2 California Air Resources Board's Low Carbon Transportation  
3 Program. Given limited public funding and CARBs planned  
4 suite of regulations requiring the state's transportation  
5 system to transition to zero-emissions, we find the  
6 prioritization of zero-emission vehicles and ZEV fueling  
7 infrastructure in the Plan appropriate and necessary.

8 We look forward to providing additional input as  
9 the funding for these categories is further divided into  
10 programs and as solicitations are developed, but wanted to  
11 provide some initial recommendations today.

12 We believe that the scoring criteria should look  
13 positively on synergy among funding goals as Eileen  
14 previously mentioned. For example, projects that achieves  
15 advancement for multiple goals like increasing ZEV  
16 infrastructure, accomplishing workforce training and  
17 deploying ZEVs should be scored positively and broadly and  
18 not too narrowly, based on one component at the  
19 disadvantage of others.

20 We also urge the Commission to consider  
21 emphasizing benefits for disadvantaged communities beyond  
22 only the top communities identified by CalEnviroScreen to  
23 allow for more disadvantaged communities to experience  
24 benefits firsthand.

25 Thank you.

1 CHAIR HOCHSCHILD: Thank you.

2 Let's move on to Ryan Kenny, from Clean Energy to  
3 be followed by Jon Costantino from Trillium.

4 MR. KENNY: Hi. Good morning, Commissioners. My  
5 name is Ryan Kenny with Clean Energy. I have a couple of  
6 significant points I'd like to make. We are very concerned  
7 about the reduction of low NOx trucks out of the program,  
8 along with a reduction in alternative fuel production  
9 dollars.

10 The program Investment Plan Draft mentions that  
11 in November of 2018, the Advisory Committee was told by ARB  
12 representative that there is "considerable funding"  
13 available for low NOx engine incentives through the Clean  
14 Truck, Bus and Voucher Program, which incorporates HFIP and  
15 low NOx incentives. And we are part of a 45 member  
16 coalition that is opposed to ARB removing low NOx truck  
17 funding from HFIP in the 2019-2020 fiscal year.

18 We have asked ARB over the last three months  
19 numerous times are they going to eliminate the funding?  
20 They have not said no, so we are very concerned that the  
21 CEC will also eliminate funding for low NOx trucks along  
22 with ARB. And we're a little concerned that why this was  
23 included in the Draft Investment Plan and that we're  
24 wondering if the agencies are actually talking, because  
25 this is a major point and who's minding the store. Who's

1 going to fund low NOx trucks?

2 I believe Mr. Corey has left, but maybe there's  
3 another representative from ARB who could confirm that HFIP  
4 will indeed fund low NOx trucks next year in that one  
5 amount and if not, why?

6 I also would like to mention that the program  
7 actually is not a zero-emission program as defined in AB  
8 118. It does mention -- the statute mentions that the  
9 program "shall," not "may," "shall," be to develop and  
10 deploy technology and alternative and renewable fuels in  
11 the marketplace, without adopting any one preferred fuel or  
12 technology. The statute also mentions that to displace  
13 petroleum fuels there needs to be a diverse portfolio of  
14 viable alternative fuels that meet petroleum reduction in  
15 alternative fuel use goals.

16 And it goes on to mention in the statute, "All  
17 the following shall be eligible for funding, demonstration  
18 and deployment projects that optimize alternative and  
19 renewable fuels for existing and developing engine  
20 technologies."

21 So we do believe that there is room for low NOx  
22 trucks in this program. The \$10 million that it would  
23 normally receive is just a drop in the bucket for what ZEVs  
24 would need to EV charging, for example. And there are  
25 federal attainment deadlines that need to be met by 2023

1 and 2031. And we believe that not funding low NOx trucks  
2 is going to be a major barrier to doing so.

3 Also, I'd like to mention that there aren't any  
4 major commercial readiness Class 7 and 8 ZEVs on the market  
5 any time soon. So with that we ask you to fund low NOx  
6 trucks in this program. Thank you.

7 CHAIR HOCHSCHILD: Thank you.

8 Let's move on to Jon Constantino from Trillium.

9 MR. CONSTANTINO: Hi. Good morning Chairman and  
10 Commissioners, Jon Constantino on behalf of Trillium. They  
11 are the alternative fuels brand for Love's Family of  
12 Companies. And they produce heavy-duty infrastructure for  
13 hydrogen electric vehicles, heavy-duty renewable diesel and  
14 renewable natural gas.

15 So they have a different perspective that they're  
16 sort of broad based. And the focus of the Plan on only EV  
17 is where the concern is, all right? We support EV. We  
18 support hydrogen. It's the fact that renewable natural gas  
19 is being cut out here. And I doubt anybody from ARB can  
20 mention the HFIP Plan, because it comes out publicly next  
21 week. But every indication we've gotten is that there's no  
22 more renewable natural gas funding in that program either.

23 And so there's been a lot of discussion about  
24 there's no silver bullet, but what we've heard today is  
25 light-duty ZEV, medium-duty ZEV, heavy-duty ZEV, hydrogen

1 ZEV -- that's sounds like the same bullet, just different  
2 calibers. And if you really want to have a diverse  
3 portfolio you need to keep focusing on near-term air  
4 quality, near-term commercialization of heavy-duty  
5 equipment. And that includes low NOx and renewable natural  
6 gas.

7 PG&E did mention the Decarbonization Panel that  
8 was at ARB. And one of the pillars of that panel was  
9 renewable fuels. And they described how difficult it will  
10 be to meet the carbon neutrality goals of the state. And  
11 you need renewable fuels, not just battery electric  
12 technology.

13 So with that, we urge you to reconsider the  
14 funding for renewable natural gas vehicles in this program.  
15 Thank you.

16 CHAIR HOCHSCHILD: Thank you.

17 Let's move on to Rebecca Baskins, from the  
18 California Advanced Biofuels Alliance to be followed by Tim  
19 Carmichael, from SoCalGas.

20 MS. BASKINS: Good morning, Rebecca Baskins on  
21 behalf of the California Advanced Biofuels Alliance. We're  
22 the state's not-for-profit trade association for biodiesel  
23 and renewable diesel.

24 We also would like to echo the comments of our  
25 concerns of funding being cut out for low NOx trucks. The

1 AB 118 funds are meant to be technology neutral and we  
2 believe this funding plan is not.

3 We appreciate the hard work of the Clean  
4 Transportation Program and look forward to working with you  
5 in the future to see more balance. Thanks.

6 CHAIR HOCHSCHILD: Thank you.

7 Next, we have Cory Bullis from CR&R. Oh, sorry,  
8 Tim go ahead. Sorry, my mistake, and then followed by Cory  
9 Bullis if he's here.

10 MR. CARMICHAEL: I won't take that personally.

11 (Laughter.) Good morning, Commissioners. Tim Carmichael,  
12 Southern California Gas Company.

13 While we're supportive of continued significant  
14 investments in hydrogen we are opposed to the Plan that is  
15 before you today, primarily because it does not reflect a  
16 reasonable balance in investments in technology development  
17 and deployment of technologies that are ready to go today,  
18 to reduce emissions today.

19 The staff did a good job of highlighting the  
20 emissions from trucks, but what was not mentioned is the  
21 numbers. And the numbers matter. Today, there are about a  
22 million trucks on the roads in California. Your staff  
23 estimated this summer or released an estimate this summer  
24 that they expect that number to grow to 1.2 million in  
25 2030. ARB's 2019 estimate of where we'll be with EV heavy-

1 duty trucks, medium and heavy-duty trucks in 2030, is  
2 40,000, so 40,000 out of 1.2 million. That is not going to  
3 have a meaningful impact on either smog forming emissions  
4 or GHG emissions.

5 On the other sector that this Plan is proposing  
6 to reduce funding for is the renewable fuels pot. Mary  
7 Nichols has been quoted a few times in the last year or 18  
8 months, noting that without a short-lived climate pollutant  
9 plan California does not have a climate strategy. The  
10 renewable fuels part of your funding is significant to the  
11 development of renewable fuels projects to the short-lived  
12 climate pollutant plan and that synergy that has been  
13 highlighted between heavy-duty trucks, near-zero heavy-duty  
14 trucks that can run on renewable fuels.

15 Mr. Greschner made the point very well about the  
16 fact that the CEC should be investing a billion a year.  
17 Unfortunately, you don't have a billion. You've got a  
18 hundred million. And we've got to work with what you've  
19 got and you've got to make the most of that funding. Your  
20 own staff evaluated the near-zero emission funding and  
21 found that it was one of, if not the most effective,  
22 programs that this pot of money has funded over the years.  
23 I encourage you to review that. It's an important  
24 analysis. Look at what's working and continue to invest in  
25 it.

1           So today, we cannot support this plan. While we  
2 support continued investment in hydrogen, we need to be  
3 putting more money into reductions today and in the near-  
4 term for near-zero heavy-duty trucks and for renewable  
5 fuels. Thank you.

6           CHAIR HOCHSCHILD: Thank you.

7           Let's move on to Corey Bullis from CR&R.

8           MR. BULLIS: Thank you. Good morning, Corey  
9 Bullis on behalf of CR&R Environmental Services. We are a  
10 waste hauler, based down in Southern California. We serve  
11 about 3 million residents in multiple counties. But we  
12 also operate a large anaerobic digester in Riverside County  
13 that has been previously funded with Energy Commission  
14 funding from this program, which we are grateful for.

15           I just wanted to take a minute to say thank you  
16 for the inclusion or the continued inclusion of near zero-  
17 emission in the fuel production category of the Funding  
18 Plan.

19           One thing though that I wanted to reemphasize  
20 from our comment letter is just the nexus with this and  
21 short-lived climate pollutants and SB 1383, of course. We  
22 are making a significant investment in recycling organic  
23 waste and using that to fuel up our low NOx natural gas  
24 vehicles. So it's all in-state renewable natural gas  
25 that's being produced, consistent with the goals of SB

1 1383.

2           And by 2025, CalRecycle is going to be requiring  
3 local governments and their haulers to be diverting an  
4 additional 7.5 million tons of organic waste. As far as we  
5 can tell, we're going to need an all-of-the-above strategy  
6 to recycle that organic waste. That means composting,  
7 anaerobic digestion, and wastewater treatment plants. So  
8 we just wanted to make sure that we continue to emphasize  
9 that and keep SB 1383 and short-lived climate pollutants  
10 top-of-mind in our funding programs. Thank you.

11           CHAIR HOCHSCHILD: Thank you.

12           We have three members of the public wishing to  
13 comment by phone. Before I turn to them is there anyone  
14 else in the room who has not yet had a chance?

15           Okay, with that let's go to David Wooley at the  
16 UC Berkeley Goldman School.

17           MR. WOOLEY: Hello, this is David Wooley,  
18 Executive Director of the Environmental Center at the UC  
19 Berkley Goldman School of Public Policy. I just want to  
20 state support for the increase in funding for heavy-duty  
21 zero-emission vehicle infrastructure. And I just want to  
22 point out that from the experience we've had in Oakland and  
23 the Oakland Port, that a lot of times the main constraint  
24 is the absence of electric supply infrastructure to support  
25 charging equipment.

1           So I'm very glad to see this increase in support.  
2 That part of the Plan and the rest of the Plan as well.  
3 Thank you.

4           CHAIR HOCHSCHILD: Thank you. Let's move on to  
5 Morgan Caswell, Port of Long Beach.

6           MS. CASWELL: My name is Morgan Caswell. And I  
7 am Environmental Specialist at the Port of Long Beach. We  
8 are the second busiest seaport in the Unites States.

9           I want to commend the CEC on the Clean  
10 Transportation Plan, as proposed. As you know the Ports of  
11 Los Angeles and Long Beach updated the Clean Air Action  
12 Plan in 2017, setting targets for zero-emission terminal  
13 equipment by 2030 and zero-emission heavy-duty trucks by  
14 2035. We are working hard to improve air quality and  
15 public health in disadvantaged communities that surround  
16 the ports.           And through our planning process we  
17 identified that ZEV infrastructure costs for the Port of  
18 Long Beach alone will total approximately \$800 million.  
19 While the utilities are offering funding for  
20 infrastructure, there's still a need for funding above and  
21 beyond what has been committed. And we strongly support  
22 the increased allocation to medium and heavy-duty zero-  
23 emission infrastructure.

24           We also want to applaud the investment in  
25 hydrogen refueling infrastructure and workforce

1 development.

2           And on behalf of the Board of Harbor  
3 Commissioners, thank you once again for your partnership  
4 and support of Port of Long Beach projects to date. And we  
5 support this Plan.

6           CHAIR HOCHSCHILD: Thank you.

7           Let's move on to Todd Campbell, Clean Energy.

8           MR. CAMPBELL: Mr. Chairman, my name is Todd  
9 Campbell. I represent Clean Energy as their Vice President  
10 of both Policy and Regulatory Affairs, but I also serve as  
11 the Chair of the California Natural Gas Vehicle Coalition.

12           I want to thank the Commission and staff for  
13 their hard work. Unfortunately, as was previously stated,  
14 we do not support the Clean Transportation Plan as written,  
15 as its original intent. I just wanted to emphasize that we  
16 were one of the founding supporters of this program back in  
17 2007 with then Fabian Nunez, who was the Speaker of the  
18 Assembly. And the intent of the program was originally to  
19 support the Low Carbon Fuel Standard both in fuel  
20 production and alternative fuel vehicles.

21           And given the need to reduce greenhouse gas  
22 emissions on a significant scale, as well as ambient air  
23 pollution, which I thought slide 14 really presented well.  
24 You look at 3 percent of the vehicles are medium and heavy-  
25 duty trucks yet they're responsible for 23 percent of the

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1 greenhouse gas emissions, 60 percent of the NOx emissions,  
2 and 52 percent of the PM 2.5 emissions. It clearly is a  
3 huge issue for California. It's something that we really  
4 need to get a hold of. And it's already challenging to  
5 penetrate these markets with zero-emission and near-zero  
6 emission technologies. It's overwhelming.

7           And I agree with the statements that we just  
8 don't simply have enough money to do what we need to be  
9 doing to protect public health. At the same time, near-  
10 zero has been removed from the program and near-zero  
11 strategies are a substantial significant tool to reduce  
12 emissions, not just in terms of NOx emissions, not in just  
13 terms of PM emissions, but also for greenhouse gas  
14 emissions.

15           And I agree with the prior speaker that  
16 (indiscernible) Mary Nichols called. And if we're not  
17 focusing on short-lived climate pollutants we are not going  
18 to meet our goals. And the Low Carbon Fuel Standard, which  
19 the program originally was to support, is far from a  
20 success. It's we have a long way to go. We're barely  
21 meeting our 2020 goals. And I hope we meet our 2030 goals.

22           But in order to do that, we need a very strong  
23 supportive program here at the Energy Commission that will  
24 continue to make sure that renewable fuels are being  
25 produced across the market. And that also there are

1 vehicles that will actually exist to take those fuels.

2           There have been comments. I appreciate Richard  
3 Corey's statement about there's no one silver bullet. I  
4 agree. We agree wholeheartedly with that statement. We  
5 think we need to, like PG&E mentioned, make zero or near  
6 zero complement, not compete. And I would also argue that  
7 --

8           CHAIR HOCHSCHILD: Can you wrap up, sir?

9           MR. CAMPBELL: -- to electrify transportation  
10 across the state is not going to happen overnight. And we  
11 need to really learn from our mistakes. But putting every  
12 dollar into electrification or the hydrogen industry is a  
13 mistake at this point in time. A specific example in Metro  
14 --

15           CHAIR HOCHSCHILD: Sir, I'm sorry. You're out of  
16 time. It's been three minutes.

17           MR. CAMPBELL: I'm out of time. Okay.

18           CHAIR HOCHSCHILD: Thank you.

19           MR. CAMPBELL: Well let me just say thank you  
20 very much for your consideration. We consider ourselves a  
21 very strong --

22           CHAIR HOCHSCHILD: Thank you, thank you.

23           Well, let me thank all the stakeholders for  
24 engaging in the process and for sharing their comments and  
25 the staff for working so diligently as well as the

1 Disadvantaged Community Advisory Council. I really  
2 appreciate, Stan, you being here on behalf of the whole  
3 Committee. And also my colleague and friend, Vice Chair  
4 Scott, who's work the last six years really got the  
5 division to a good place. And when Commissioner Monahan  
6 arrived and took on the topic we were very grateful for her  
7 diligence and expertise.

8           And thank you for preparing the Plan, so let's  
9 hear from you.

10           COMMISSIONER MONAHAN: Well I too want to thank  
11 staff. This is quite a laborious process. And so in  
12 particular, Patrick, who gave the talk; Charles Smith,  
13 Kevin Barker, John Butler, the whole team, this has really  
14 been quite a list on the staff part and they did a great  
15 job.

16           And I want to thank Stan and the DACAG for  
17 engaging. We kind of came to them at the eleventh hour  
18 saying, "We really want your advice. Can you help us?"  
19 And they really stepped up, so just thank you for that. We  
20 look forward to continuing to work with you and the DACAG  
21 as we implement this Investment Plan and as we try to  
22 figure out how better to be attentive to equity and how to  
23 do community outreach in a way that really brings new  
24 partners to the table and new participants to our program.

25           Thanks to the Advisory Committee. Again, this

1 has been an unusual process. And they really have stepped  
2 up. We got a lot of comments, what was it, 80-ish comments  
3 into the -- on the Plan? So really we had a lot of public  
4 participation. In the way I think that was somewhat  
5 unprecedented.

6 And thanks to Vice Chair Scott for all she's done  
7 to cultivate this program and bring it to what it is today.  
8 I also want to note that she did have a cameo in the  
9 PowerPoint presentation. (Laughter.) I know if anybody  
10 noticed, but the driver of that fuel cell vehicle and her  
11 smiling face? That was Vice Chair Scott.

12 So we had to make hard choices in this Investment  
13 Plan. And we recognize that. And we heard some of the  
14 concerns around a shift towards more emphasis on zero-  
15 emission. I will say we did this with a lot of public  
16 input and a lot of consideration around California's goals,  
17 what we're seeing as barriers to achieving some of  
18 California's aggressive goals on decarbonization, and  
19 electrification of the transportation sector and made that  
20 conscientious decision to increase our emphasis on zero-  
21 emission.

22 What we're seeing, globally, is that sales of  
23 internal combustion engines in the light-duty vehicle  
24 sector have peaked. Sales of EVs are on the rise.  
25 Bloomberg New Energy Finance projects that by 2037 more

1 than half of global sales, global sales, will be electric  
2 by 2037. And California, we should be ahead of that in  
3 terms of reaching a point, a tipping point where electric  
4 vehicles, especially in the light-duty vehicle sector out-  
5 compete internal combustion vehicles.

6 So we're mindful that this tremendous potential  
7 exists and yet what we're facing is a big barrier in terms  
8 of access to charging infrastructure. There's barrier in  
9 terms of vehicle cost as well. But the near-term barrier  
10 we're seeing is we need to have more infrastructure on the  
11 ground serving diverse communities. Not just people who  
12 can afford to have a Tesla in their garage, but people who  
13 maybe are care sharing and are living in an apartment  
14 building and need alternatives.

15 We've also prioritized zero-emission heavy-duty  
16 vehicles and infrastructure. I would say that is a little  
17 behind the market, compared to battery electric passenger  
18 vehicles. But there's a lot of progress happening both on  
19 batteries and fuel cells. And we want to be able to again  
20 have California just be the leader on showing how we're  
21 going to reduce diesel pollution, protect communities and  
22 accelerate zero-emission drive.

23 Let's see, I also want to emphasize that this  
24 Plan recognizes that we need to integrate EVs in the grid  
25 carefully, so that they provide a grid benefit. If we do

1 it wrong, it's going to be bad for the grid. It's going to  
2 be more difficult to integrate renewables, so the Plan is  
3 very attentive. Especially when we're talking about heavy-  
4 duty transportation electrification, which on the one hand  
5 offers a big load, so a big opportunity to integrate  
6 renewables, soak up that daytime solar, use it for  
7 transportation electrification. But if we do it wrong, we  
8 create extreme stress on the grid. And that's going to  
9 increase cost. And it's going to increase costs to  
10 ratepayers. So we just have to make sure that we are doing  
11 transportation right to be able to capitalize on its  
12 benefits. And this Plan was very attentive to that.

13 I am really excited to figure out how we do a  
14 better job on community outreach. And I think that is  
15 something we are going to work hard on this year, is to  
16 figure out how do we make it so that you don't necessarily  
17 have to hire a consultant and be a really like big company  
18 to be able to get access to our funds. We want to make  
19 sure that we create processes that allow diverse  
20 stakeholders to be able to engage in our grant programs.

21 So I heartily endorse this plan. I'm looking  
22 forward to your comments and questions and your thoughts  
23 about it.

24 CHAIR HOCHSCHILD: Great, are there other  
25 Commissioner comments?

1           VICE CHAIR SCOTT: Sure. I just want to also  
2 echo the Clean Transportation Program. It has been such an  
3 influential program, I think, across California. We have  
4 brought manufacturing, like Proterra and ChargePoint to the  
5 state. The program has had a ton of flexibility and  
6 creativity including car share programs, bringing electric  
7 vehicles and e-mobility to communities across California.

8           We've had an opportunity really to do a lot of  
9 partnerships and collaborations, especially those with our  
10 friends at the Department of Defense and also at the sea  
11 ports across California. The ports have been fantastic  
12 partners in really helping us kick the tires and test out  
13 the different technologies.

14           It's no secret to any of you all that I am a fan  
15 of the low NOx natural gas engine. The Energy Commission  
16 helped put the investment in to fund the development of  
17 those engines. But I also worry very much about how we  
18 make our transition to the near-zero and zero-emission  
19 technology future that we need to be in by 2030-2040 to  
20 achieve our climate change goals. And I worry a lot that  
21 the infrastructure is going to be the limiting factor.  
22 Because the amount of investment overall that has gone into  
23 infrastructure is quite a bit less than the amount of  
24 investment overall that's gone into vehicles.

25           So anyway, as the program goes forward I just

1 hope that that kind of flexibility and the innovation, the  
2 creativity, the influential-ness -- if that's a word -- of  
3 it will continue. So thank you for your leadership.

4 CHAIR HOCHSCHILD: Thank you.

5 Commissioner McAllister?

6 COMMISSIONER MCALLISTER: Yeah, just quickly. I  
7 appreciate all the hard work that's gone into this,  
8 certainly staff and all of the stakeholders. I mean it's  
9 really -- our life blood is our process, so when I can  
10 contribute to a good outcome like this it makes life  
11 better for the long term, really, for California.

12 I just wanted to express gratitude and optimism  
13 about the attention to the grid issues around  
14 transportation. It's going to be massive new loads coming  
15 out of the grid, not only from EVs but also from  
16 electrification of different loads. And we're sort of  
17 navigating the policy trajectory forward for that is to see  
18 and, you know, define the details of how much, when and  
19 where.

20 But it's very clear that the big dog in  
21 electrification is going to be EVs. And the technology and  
22 issues that we have, the abilities that we have, the  
23 technology that we have now makes a lot of things possible  
24 that make me optimistic. And yet reliability, we can't  
25 lose sight. We heard about that and we emphasized that

1 heavily at the SB 100 workshop the other day. And  
2 reliability just has to be job one. Maybe that's the Ford  
3 tag line. I'm not sure if it's still -- maybe it seems  
4 appropriate to say that's job one.

5 But in terms of participation in the SB 100 sort  
6 of technical work and forecasting and planning going  
7 forward, this is critical, and then also in load management  
8 standards that anticipate kicking off here in the next few  
9 months in a pre-rulemaking. The EV side of things is going  
10 to be interesting to talk about in terms of how we take  
11 advantage of the load side to really stabilize the grid and  
12 actually be a positive force on the grid. And I think EVs  
13 will be front and center there.

14 So anyway, I like the Plan and am in full  
15 support.

16 CHAIR HOCHSCHILD: Commissioner Douglas,  
17 comments?

18 Okay. Well, in closing I just want to thank  
19 Commissioner Monahan for her terrific leadership on this.  
20 And to point out we're voting today on the Plan for the  
21 Energy Commission's piece of this. But this is part of a  
22 larger mosaic that includes other things like public  
23 outreach. Vice Chair Scott was instrumental along with  
24 Mary Nichols and starting Veloz. We share that video that  
25 was produced with Governor Schwarzenegger this summer

1 that's gotten 11 million views. The negotiations now with  
2 the auto companies on fuel economy standards, I mean,  
3 California is playing an incredible leadership role here.

4 The piece I wanted to -- and I am a strong  
5 supporter of this Plan and part of the reason why is I want  
6 to connect that to what we talked about earlier in the  
7 agenda is getting to 100 percent. So we're at 55 percent  
8 carbon-free electricity on the grid today. We're going to  
9 100 percent.

10 And one of the reasons why the California  
11 Independent System Operator, so strongly supports electric  
12 vehicles is because it also benefits grid reliability. It  
13 is another tool. And there's many things you can do with  
14 charging algorithms to support the grid. We have to  
15 connect these dots. And I think this is one of the key  
16 things that we're meant to be doing here every year is  
17 market attunement and attuned as well to policy  
18 developments. And that's what I think the Plan achieves.

19 So I do want to thank all the stakeholders again  
20 for their support. And I think this is going to produce  
21 some important progress for the state on many levels. And  
22 with that, is there a motion to move the Investment Plan?

23 COMMISSIONER MONAHAN: I move to approve Item 4.

24 CHAIR HOCHSCHILD: Is there a second?

25 COMMISSIONER MCALLISTER: (Indiscernible.)

1 CHAIR HOCHSCHILD: Okay, a second by, is that --  
2 second by Commissioner McAllister?

3 COMMISSIONER MCALLISTER: Yeah, I'll second.

4 CHAIR HOCHSCHILD: Okay. All in favor say aye.  
5 (Ayes.)

6 CHAIR HOCHSCHILD: That motion passes  
7 unanimously. Thank you everybody.

8 Let's move on to Item 5, FreeWire Technologies.

9 MR. RILLERA: Good morning Chair and  
10 Commissioners. My name is Larry Rillera. I'm staff with  
11 the Fuels and Transportation Division here to present Item  
12 Number 5. This agreement is funded through the Clean  
13 Transportation Program.

14 In December of 2018, the Energy Commission  
15 released a nearly \$10 million solicitation for manufacture  
16 of zero-emission vehicles and zero-emission vehicle  
17 infrastructure. The intent of the solicitation was to  
18 develop and expand ZEV supply chains in California.

19 FreeWire Technologies is proposed for \$1.9  
20 million in funding. FreeWire manufactures innovative  
21 electric vehicle charging products into the market. Their  
22 novel technologies, business approach, and strategic  
23 innovations provide options for customers that would like  
24 to offer charging. These are customers that do not want to  
25 invest in stationary EV infrastructure or in dedicating

1 limited parking real estate for charging. A result of this  
2 innovation is effective mobile charging technology. This  
3 method eliminates the issue of electric vehicle squatters  
4 overstaying their allotted time in dedicated charging  
5 parking spots, blocking the charger for the next user.

6

7 Consistent with the presentation we heard in Item  
8 number 4 a few moments ago, the Clean Transportation  
9 Program continues to deploy innovative and transformative  
10 technologies.

11 The agreement with FreeWire proposes to acquire  
12 and install manufacturing equipment and tools. This  
13 equipment will be used to manufacture electric vehicle  
14 charging products with integrated energy storage in the  
15 City of San Leandro. The project will leverage over \$2.1  
16 million in private investment that will create jobs in  
17 disadvantaged communities while also increasing the scale  
18 of electric vehicle charger production.

19 Staff is also recommending approval of staff's  
20 determination that this project is exempt from CEQA.

21 Staff would note that a representative from  
22 FreeWire is here to present remarks and provide any  
23 responses to questions. Thank you.

24 CHAIR HOCHSCHILD: Thank you.

25 MR. LYNCH: Hello, good morning. My name is

1 Martin Lynch. I'm the Chief Operating Officer of FreeWire,  
2 so thank you today for having me here today to present.  
3 I'll keep my remarks brief. We are an electrical vehicle  
4 supply equipment as well as electrical generation equipment  
5 company, five years old, based in San Leandro. We  
6 currently produce a mobile electrical vehicle level two  
7 charger as well as a generator based on lithium-ion  
8 batteries. This is 100 percent, 80 kilowatt hours in a  
9 mobile product.

10 We are currently getting ready to launch our fast  
11 charger product that saves 160 kilowatt hours of built in  
12 lithium-ion that is quick on deployment, low cost, zero  
13 emission. And is unique in that the burden on the grid  
14 with respect to power -- and I've heard a number of  
15 presenters as well as the Commission today discussing the  
16 infrastructure issues on electrical vehicles, electrical  
17 vehicle supply equipment -- we require virtually no  
18 infrastructure. It's simply a 20 kilowatt, 208 three-phase  
19 or 240 single-phase line that connects to our product and  
20 you're off and running. You've got a fast charger that's  
21 putting out 120 kilowatts of power.

22 We're agnostic to any type of electrical vehicle.  
23 That means we'll take Nissan, Nissan Leafs and Tesla and  
24 anybody else that'll come up to our station.

25 Our product is going to be manufactured and is

1 currently, the mobile product being manufactured in San  
2 Leandro. And we're asking for approval of the grant today  
3 to support the expansion of our manufacturing lines to  
4 three manufacturing lines that will be capable of producing  
5 up to 40 megawatt hours of electrical vehicle supply  
6 equipment as well as electrical generation equipment,  
7 producing zero emissions, creating jobs both technology and  
8 direct manufacturing jobs. It will support the test, the  
9 manufacturing, the tooling and all output of the product in  
10 the manufacturing area that we've set aside in San Leandro.  
11 It'll also double the space that we utilize today for  
12 manufacturing.

13 I also want to note that as we launch our fast  
14 charger at the end of this year we've already sold half the  
15 product that we can produce this year. We expect to sell  
16 out all of our first quarter 2020 production line by  
17 January. So getting this manufacturing support is urgent,  
18 as any young company needs enormous amounts of capital to  
19 support producing their product.

20 So the advantages obviously are that we're  
21 creating jobs and technology. We're supporting public  
22 charging. We're supporting lower infrastructure, low power  
23 load on the grid and support of zero emissions.

24 So with that, I'll answer any questions or  
25 comments.

1 CHAIR HOCHSCHILD: Great, thank you. Any other  
2 comments from the public? Okay. Commissioner Monahan?

3 MR. LYNCH: Thank you

4 COMMISSIONER MONAHAN: Yeah, I think this is a  
5 great example of innovative solutions emerging from the  
6 marketplace around how to deal with the fact that we have a  
7 problem in terms of refueling electric vehicles, especially  
8 in multi-family dwellings, in certain locations where it  
9 can just be hard to access a charger. This is like an out  
10 of the box solution, like a mobile solution for charging  
11 vehicles. So I think it's a really interesting project.  
12 And I'm hoping that it's California orders that are coming  
13 in for the FreeWire technology. I'm actually curious about  
14 who's ordering it and who's using it and how are they using  
15 it?

16 CHAIR HOCHSCHILD: Any other comments. If not,  
17 is there a motion for Item 5?

18 COMMISSIONER MONAHAN: I move to approve Item 5.

19 CHAIR HOCHSCHILD: Is there a second?

20 VICE CHAIR SCOTT: Second.

21 CHAIR HOCHSCHILD: Second by Vice Chair Scott.

22 All in favor say aye.

23 (Ayes.)

24 CHAIR HOCHSCHILD: That motion passes  
25 unanimously. Let's move on to Item 6, EnergyPro Version

1 8.0 Residential Compliance Software.

2 MR. FROESS: Good morning Chair and  
3 Commissioners. My name is Larry Froess. I'm a Senior  
4 Mechanical Engineer in the Building Standards Office and  
5 Project Manager of the compliance software.

6 I'm here to ask for your approval of EnergySoft's  
7 EnergyPro Version 8.0 Software as an alternative  
8 calculation method for showing compliance with the 2019  
9 Energy Code for newly constructed low-rise residential  
10 buildings, additions, and alterations to existing  
11 buildings.

12 Staff has confirmed that the Applicant is in  
13 compliance with the requirements of the adopted Alternative  
14 Calculation Method Approval Manual.

15 CBECC-Res 2019 was approved in May of 2019 as the  
16 CEC's version of compliance software. And by approving  
17 EnergyPro Version 8.0 the building industry will have  
18 another choice of software with an alternative user  
19 interface to demonstrate compliance with the 2019 Energy  
20 Code before the effective date of January 1st, 2020.

21 Thank you and I'm here to answer any questions  
22 you may have.

23 CHAIR HOCHSCHILD: Did you want to speak to that?

24 COMMISSIONER MCALLISTER: Yeah. So thanks Larry.  
25 I really appreciate all the diligent work. I had a

1 briefing on this. And we're now in a paradigm where the  
2 back end is the same for all these tools and the front end  
3 is really what changes. And it's really a matter of sort  
4 of consumer preference in terms of what you're used to and  
5 what you like to look at on the screen, and why you do a  
6 lot of the compliance work.

7           So the professionals out there, a lot of them  
8 rely on this tool. But the substance behind the scenes is  
9 the same as any other tool or if you already use CBECC-Res  
10 directly. So it facilitates the marketplace. It's a good  
11 thing. And we're lucky to have good vendors building tools  
12 that people use.

13           So obviously I'm in full support. So I'll move  
14 Item 6

15           CHAIR HOCHSCHILD: Is there a second for Item 6?

16           COMMISSIONER DOUGLAS: Second.

17           CHAIR HOCHSCHILD: Second by Commissioner  
18 Douglas. All in favor say aye.

19           (Ayes.)

20           CHAIR HOCHSCHILD: That motion passes 4-0 with  
21 Commissioner Monahan absent.

22           Let's move on to Item 7, City of Lynwood.

23           COMMISSIONER MCALLISTER: Thanks Larry.

24           MR. YASNY: Good Morning Chair Hochschild and  
25 Commissioners, Ron Yasny with the Efficiency Division. I'm

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1 with LAFO, which is the Local Assistance and Financing  
2 Office.

3           This item is a ECCA loan at 1 percent. ECCA  
4 stands for the Energy Conservation Assistance Act. The  
5 loan is for the City of Lynwood in Los Angeles County.  
6 It's for 1,734,000 plus. And the City will be leveraging  
7 our loan with its own funds of a little over \$453,000. The  
8 total project cost would be just under 2.2 Million.

9           The loan will fund energy efficiency projects  
10 throughout the city. They will include exterior lighting,  
11 street lighting, pool pumps, transformers, and HVAC  
12 systems.

13           The benefits include savings of over 1,314,000  
14 kilowatts of electricity and over 400 therms of natural  
15 gas.

16           The estimated annual savings of over \$140,000 in  
17 utility costs and that creates a simple payback of 12.4  
18 years.

19           Staff has determined that this loan complies with  
20 all ECAA Program requirements. And staff is seeking  
21 approval of a resolution approving this loan agreement and  
22 adopting staff's determination that the action is  
23 categorically exempt from CEQA.

24           Staff Counsel and I are here to answer any  
25 questions you may have.

1 CHAIR HOCHSCHILD: Thank you. Any comments from  
2 the public? Okay, hearing none, let's move on to  
3 Commissioner McAllister again.

4 COMMISSIONER MCALLISTER: Thank you, Ron.

5 I would just point out -- I mean we all know ECAA  
6 and what a great program it is -- I would just point out  
7 that this particular project has a real diversity of items  
8 that it's funding. And it highlights the fact that this  
9 program really avoids the low-hanging fruit problem where  
10 you're always looking for the quickest simple payback and  
11 oh we can do this one but not that one. Well, with a  
12 portfolio like this you can do pool pumps and HVAC, and so  
13 the longer payback kinds of measures, and roll it all up in  
14 a nice bow and do something that's financially sound and  
15 still creates enough cash flow to pay back the loan over  
16 time.

17 So the really the best of what ECAA was created  
18 to achieve. So if there are no other comments, I'll move  
19 Item 7.

20 CHAIR HOCHSCHILD: Is there a second?

21 VICE CHAIR SCOTT: Second.

22 CHAIR HOCHSCHILD: Second by Vice Chair Scott.

23 All in favor say aye.

24 (Ayes.)

25 CHAIR HOCHSCHILD: That motion passes

1 unanimously. Let's move on to Item 8, the Regents of  
2 University California on behalf of Davis.

3 MR. MCCARTHY: Good Morning, Chair and  
4 Commissioners, my name is Scott McCarthy from the Office of  
5 Compliance Assistance and Enforcement. The Title 20  
6 Appliance Efficiency Regulations require that appliances  
7 sold or offered for sale in California be periodically  
8 inspected and tested to determine conformity with the  
9 applicable standards. This proposed contract with UC  
10 Davis, California Lighting Technology Center, or CLTC, will  
11 enable testing of appliances to support compliance,  
12 enforcement, and data collection efforts.

13 The CLTC employs experienced professors and  
14 trained technicians to perform the testing work and  
15 provides valuable educational opportunities for students.

16 Staff recommends approval of this agreement with  
17 CLTC. The funding for this contract is from the Appliance  
18 Efficiency Enforcement Subaccount. Thank you for your  
19 consideration. Are there any questions I can answer for  
20 you?

21 CHAIR HOCHSCHILD: Any public comments? Any  
22 questions?

23 COMMISSIONER MCALLISTER: Okay. All right, so  
24 thanks Scott. I appreciate that.

25 And just I'm not how much my colleagues know

1 about the enforcement activity, but it's really where the  
2 rubber hits to road on appliance standards. And the  
3 Legislature gave us this authority to fine folks for being  
4 out of compliance, to really to out there and find places  
5 where there might be issues in the marketplace where  
6 manufacturers, really the whole supply chain might be out  
7 of compliance with our Title 20 Appliance Efficiency  
8 Regulations. And this kind of effort, where we're actually  
9 taking stuff off the shelves and testing it, and making  
10 sure that it complies with the letter of our regulations.

11           And in lightening in particular, there's a fair  
12 amount of technical detail there and some expertise  
13 required. And so the CLTC is really the preeminent, I  
14 would argue, facility for this certainly the public sector  
15 in the nation. So and we've played an instrumental role in  
16 getting it started way back in the day. And it's great to  
17 see them flourishing and getting industry partnerships and  
18 really getting a global reputation. They're working in  
19 Mexico now. It's really a success story.

20           And so having them be the sort of accountability  
21 pathway for the marketplace in California, in accordance  
22 with our regulations in Title 20, it's really appropriate.  
23 So I fully support it. And I'll move this item.

24           CHAIR HOCHSCHILD: Is there a second?

25           VICE CHAIR SCOTT: Second.

1 CHAIR HOCHSCHILD: Second by Vice Chair Scott.

2 All in favor say aye.

3 (Ayes.)

4 CHAIR HOCHSCHILD: The motion passes unanimously.

5 Let's move on to Item 9 ICF, Incorporated.

6 MR. RIZALDO: Good morning Chair and  
7 Commissioners. My name is Rizaldo Aldas. I'm with the  
8 Energy Generation Research Office, Energy Research and  
9 Development Division.

10 And I'm here to request adoption of CEQA findings  
11 and your approval of the revised project with ICF  
12 Incorporated, called the Camptonville Biomass Energy  
13 Project, also known as the Forest Biomass Business Center  
14 Bioenergy Facility - Gellerman Site.

15 The California Energy Commission approved a grant  
16 for an earlier version of this project at its October 3,  
17 2018 Business Meeting. However, the grant agreement was  
18 not executed, because the team found out that the high-  
19 interconnection cost and unknown environmental remediation  
20 costs would put the project at a very high financial risk.  
21 And so project team set out and evaluated alternative  
22 sites, conducted due diligence to a new site called the  
23 Gellerman site.

24 So in addition to changing the site the project  
25 is also increasing its generating capacity from 3 megawatts

1 to 5 megawatts. Those revisions will not change the  
2 purpose of the scope of work as previously approved.

3 Energy Commission staff has reviewed the lead  
4 agency, County of Yuba Planning Commission's Initial Study  
5 and Mitigated Negative Declaration and Conditional Use  
6 Permit 2019-0002 for the Forest Biomass Business Center  
7 Bioenergy Facility - Gellerman site. And has determined  
8 that the proposed project presents no new significant or  
9 substantially more severe environmental impacts beyond  
10 those already considered and mitigated.

11 This project will design, construct and  
12 demonstrate an innovative biomass power plant that will use  
13 a robust biomass-to-electricity technology, integrated with  
14 an advanced emissions control and state-of-the-art low  
15 water consumption technology. And the project will help  
16 reduce wildfire threats by consuming an approximately  
17 50,000 bone dry tons of woody biomass annually. And this  
18 biomass will be collected from public and private lands  
19 near Camptonville.

20 So I request your approval and I'm ready to  
21 answer any questions. I also would like to acknowledge  
22 that representatives from the project team are also  
23 available to answer any questions you may have. Thank you.

24 CHAIR HOCHSCHILD: Thank you. We have two public  
25 comments on this item. Let's begin with Cathy LeBlanc, the

1 Executive Director of Camptonville Community Partnership.

2 MS. LEBLANC: Hello. My name is Cathy LeBlanc.

3 I am the Executive Director of Camptonville Community

4 Partnership. We're a small community-driven non-profit.

5 Our tag line is rural people working together for a safe,

6 sustainable and healthy community.

7 I just really want to thank you for awarding this

8 project in March of 2017 and then approving it in October

9 of 2018. This has been a collaborative wide effort with

10 the passage of Senate Bill 1122. We have many supportive

11 partners at the local, state and federal level, including

12 our State Senator Nielsen and also our Assemblyman

13 Gallagher.

14 This project will revitalize the work force and

15 economy of the disadvantaged community of the Yuba County

16 Foothills. The benefits of this project not only include

17 job creation, but a reduction in forest fires by reducing a

18 fuel, as stated 50 bone dry tons a year. And it will also

19 increase the health of the watershed and the environment in

20 our area.

21 Once again, I'd like to thank you for your

22 consideration of our comments and hope you approve our EPIC

23 grant funding to allow us to get under contract and build

24 this thing. Thank you very much.

25 CHAIR HOCHSCHILD: Thank you. Let's move on to

85

1 Gregory Stangl, Phoenix Energy.

2 MR. STANGL: Good morning. Greg Stangl, Phoenix  
3 Energy. I like the lager agenda items. It opens up in  
4 here a little bit. (Laughter.)

5 I just wanted to come up here today to again say  
6 one, thank you, thank you, thank you to the Commission for  
7 the diligent work you have done to support forest  
8 bioenergy. It has been an amazing slog and we appreciate  
9 you sticking with it. It has been tough. And the  
10 bankruptcy of our great friends at Pacific Gas and Electric  
11 has not made it particularly easier.

12 But this project aims to be one of the solutions,  
13 one of the tools in the tool kit to address this critical  
14 issue.

15 I also wanted to again salute your choice in  
16 backing the town of Camptonville. If we have learned one  
17 thing in this business since 2006 is that you have to have  
18 a team of fighters to get this stuff done. And the town of  
19 Camptonville is exactly that. And so with that, I again  
20 just wanted to come here today to say thank you very much.

21 CHAIR HOCHSCHILD: Great. Thank you.

22 Vice Chair Scott?

23 VICE CHAIR SCOTT: All right. Well, thank you  
24 both for taking time to come to the meeting today. It's  
25 great to see you and great to know we've got a team of

1 fighters working on this project.

2 I know for sure that we do. There's a lot of  
3 perseverance that has to take place in this space.  
4 Building these kinds of projects is pretty tricky and has  
5 taken a lot of diligence, great work by the staff, great  
6 work by the project team to really pull this and put it  
7 together. And it's an important component. As you heard  
8 in some of the comments in order to take some of this  
9 forest waste that we have and figure out how to make use of  
10 it.

11 So if there are no questions or other comments, I  
12 will move approval of Item 9.

13 CHAIR HOCHSCHILD: Thank you. Is there a second?

14 COMMISSIONER DOUGLAS: Second.

15 CHAIR HOCHSCHILD: Second by Commissioner  
16 Douglas. All in favor say aye.

17 (Ayes.)

18 CHAIR HOCHSCHILD: That motion passes  
19 unanimously.

20 Let's move on to Item 10, Cost reductions,  
21 Advanced Technology for Solar Modules.

22 MS. GERBER: Good morning Chair and  
23 Commissioners. I'm Katharina Gerber. And I'm here today  
24 with the Energy Generation Research Office of the Energy  
25 Research and Development Division. And today we're seeking

1 approval for three proposed grant agreements from a  
2 competitive EPIC solicitation titled CREATE SOLAR.

3 This funding opportunity is to increase  
4 penetration of solar energy in California for technological  
5 advancement in thin-film photovoltaics technologies and  
6 development of unique markets and obligations in the solar  
7 sector, which aren't achievable for conventional silicon-  
8 based PVs.

9 The proposed grant agreement with UCLA will fund  
10 research, advancing the properties of transparent organic  
11 photovoltaic materials. The power conversion efficiency  
12 target for these organic PVs is 15 percent and the  
13 transparency target is at 30 percent.

14 This proposal is innovative, because it will  
15 integrate, develop solar modules into small smart  
16 greenhouses, and test their performance and effects at  
17 planned growth.

18 The proposed agreement with Tandem PV,  
19 Incorporated will fund research developing tools for a low-  
20 cost scalable fabrication of perovskite-on-silicon tandem  
21 photovoltaic modules; fabricated perovskite-on-silicon  
22 tandem devices that have a power conversion efficiency of  
23 at least 25 percent. And their efficiency will be  
24 certified by an independent laboratory.

25 The innovative manufacturing process will allow

1 rapid (indiscernible) upgrading of existing silicon panels  
2 and enable much higher efficiency due to the added layer of  
3 perovskite (indecipherable) materials.

4           And last, but not least the proposed agreement  
5 with the University of California at San Diego will develop  
6 all cost manufacturing approaches for high-volume  
7 manufacturing of perovskite-on-silicon tandem photovoltaic  
8 modules. And this proposal is innovative, because the  
9 developed position method will allow to fabricate and  
10 (indiscernible) solar devices with a uniquely textured  
11 surface, which will allow power harnessing under cloudy  
12 conditions or in the late afternoon. And the projected  
13 power efficiency conversion will be at least 32 percent.

14           Staff recommends approval of all proposed  
15 agreements and I am happy to answer your questions.

16           CHAIR HOCHSCHILD: Great, thank you.

17           I will say I did ask for and get a briefing on  
18 this item this morning. My concern was that thin-film not  
19 be competing directly with where crystal has gone, because  
20 there was heavy investment in film earlier on. And silicon  
21 basically has -- film was 20 percent of the market, now  
22 it's 4 percent. And so I'm satisfied though, because this  
23 really is designed in a way that complements what's the  
24 role that silicon's playing and can do some things that  
25 silicon can't. And so that really makes sense to me, so I

1 wanted to thank the staff for the briefing.

2 Vice Chair Scott, did you want to speak to this?

3 VICE CHAIR SCOTT: Yeah. I might just add I do  
4 think this is a really smart, thoughtful set of projects  
5 that we have here. I think the increasing the cell  
6 efficiency will be really great to see, increasing the  
7 power conversion efficiency that we will see. And also the  
8 light transparency component I think, as Kat highlighted,  
9 makes these really quite innovative and also the places  
10 where these technologies have the potential to be able to  
11 be used, especially on greenhouses.

12 So if there are no other comments or questions, I  
13 will --

14 MR. WARD: Oh, Excuse me. Before the vote, I  
15 just want to make sure there was a call for public comment?

16 VICE CHAIR SCOTT: Oh, I'm sorry.

17 MR. WARD: Just to make sure.

18 CHAIR HOCHSCHILD: Yeah. Is there anyone who  
19 would like to make a public comment?

20 Okay. Thank you for that, Alan.

21 Okay, were you in the middle of making a motion?

22 VICE CHAIR SCOTT: All right. I will move  
23 approval of Item 10.

24 CHAIR HOCHSCHILD: There's a motion for Item 10.  
25 Is there a second?

1 COMMISSIONER DOUGLAS: Second.

2 CHAIR HOCHSCHILD: From Commissioner Douglas.

3 All in favor say aye.

4 (Ayes.)

5 CHAIR HOCHSCHILD: All right, that motion passes  
6 unanimously. Let's move on to the minutes.

7 Thank you.

8 MS. GERBER: Thank you.

9 VICE CHAIR SCOTT: Move approval of the minutes.

10 COMMISSIONER MCALLISTER: Second.

11 CHAIR HOCHSCHILD: And seconded by Commissioner  
12 McAllister. All in favor say aye.

13 (Ayes.)

14 CHAIR HOCHSCHILD: That passes unanimously. Lead  
15 Commissioner Reports starting with Commissioner Monahan.

16 COMMISSIONER MONAHAN: Well really it's been All  
17 Clean Transportation Program all the time. So I'm excited  
18 now to turn attention to next year's investment plan, which  
19 actually the planning must start -- should have started  
20 yesterday.

21 But I wanted to just talk a little bit more about  
22 this piece around community engagement. And just say I  
23 think maybe with that, that maybe they're the closest with  
24 EPIC Program, but we should just be thinking about as we're  
25 learning sort of what works and what doesn't work. How do

1 we share that across to make sure that we can all learn  
2 from each other in terms of what does it mean to do  
3 effective community outreach? And how do we do it in a way  
4 that is, you know, we need to make sure that we don't  
5 broach any -- we want to make sure that we have a fair  
6 process. And so outreach is always challenged by this well  
7 how do we make it fair outreach when you're doing outreach  
8 to community organizations?

9           And I think we're willing to try to take that on,  
10 but it's not very easy, I would say. So I'm looking  
11 forward to kind of continued conversations about this, so  
12 that we can all figure out well as we're doing these  
13 programs what are the best strategies for engaging  
14 communities in authentic ways and really trying to  
15 diversify the mix of candidates who apply for our grants.

16           COMMISSIONER MCALLISTER: Yeah, so just a few  
17 things. I did spend a week on vacation between the last  
18 meeting and this meeting, so I only have three weeks of  
19 stuff to go over. But I wanted to -- well, first of all  
20 I'll just mention Chair Hochschild, you made the point at  
21 the beginning that California really is an incubator and  
22 really sort of leading the charge on a lot of these things.  
23 And that just has not been more evident to me than in the  
24 last week or so with the federal backsliding on the  
25 lighting standards. And a lot of people are looking to us

1 and our partner states to hold the line on that.

2           And I think it's lamentable. It's a bad decision  
3 that's been made at the federal government and really death  
4 to the vast, vast overwhelming majority of public comments.  
5 Clearly there was just a decision that was just going to be  
6 implemented whether or not -- whatever stakeholders said,  
7 really. And it's rolling back lighting standards and sort  
8 of sitting on your hands and not updating lighting  
9 standards, which is also announced as intent from the  
10 Department of Energy.

11           It's anti-competitive. It's anti-environment.  
12 It's bad for consumers. Luckily for Californians it's  
13 probably illegal, so I think we're going to everything we  
14 can to hold the line on that. I have to say "probably,"  
15 because I'm not the lawyer. And we'll leave that to the  
16 Chief Counsel's Office to figure out and work with the  
17 Attorney General to figure out what the path forward is.  
18 But really just a horrible signal, and California I think  
19 sort of in relief, in high contrast sort of now in the lead  
20 even more than we have been. So that's relish that fight  
21 for sure, but wish we didn't have to fight it.

22           So a couple of really great workshops together in  
23 the IEPR process, I wanted to just highlight together with  
24 Commissioner Scott. One was on Building De-Carb, a really  
25 great workshop. Commissioner Monahan was there with us and

1 Liane Randolph from the PUC and Edie Chang from ARB and  
2 Mark Rothleder from the ISO. And so you can just tell how  
3 much congealing there is going around on the need to  
4 decarbonize our buildings really as a chief building block  
5 of getting to our carbon goals.

6 A really terrific job by staff putting it  
7 together and I think laying in a good foundation for that  
8 conversation going forward. Not an easy lift. In new  
9 construction we're sort of getting a handle on it. But in  
10 existing buildings it's going to be a big lift and we need  
11 solutions. So we've got a lot of good people working on  
12 that together.

13 I wanted to say actually or let people know that  
14 the AB 802 Benchmarking Dashboard just went live, I believe  
15 early this morning. And I'm looking at Mike and Kristine  
16 over there and that's a big thumbs up on that. And it's  
17 been a long time coming. And really just a singular --  
18 just a very consistent effort in this Commission to get our  
19 data tools in order, to kind of create the analytical  
20 foundation, to really implement the letter of the law, AB  
21 802, which started out with commercial benchmarking and now  
22 is also collecting information for our multi-family  
23 buildings across the state.

24 And the disclosure piece of that for commercial  
25 buildings has just kicked in earlier this year. And the

1 Dashboard now that shows all that information is actually  
2 up. And so you can slice and dice and get a really visual,  
3 visceral sort of understanding of the landscape of the  
4 commercial buildings across the state above 50,000 square  
5 feet.

6           So it opens up all sorts of potentials to  
7 understand, to learn, to understand the building -- that  
8 sector -- the commercial building sector and now the multi-  
9 family sector. And it opens up possibilities for targeting  
10 programs, for channeling resources, for expanding the range  
11 of covered buildings. So I think it's really happening  
12 exactly the way we had wanted from the outset when we  
13 worked with Das Williams on that bill. And so it's really  
14 playing out nicely and I just encourage everyone to look at  
15 it.

16           I do want to thank a few people. Jennifer  
17 Nelson, Troy Dorai, Eugene Lee, Erik Jensen and Ronnie  
18 Raxter who have been really kind of on the front lines of  
19 this working with stakeholders and then Brent Kelsey, as  
20 well and then Eric Lyon actually also. He worked on this  
21 as an intern about a year ago doing a lot of the backend  
22 data stuff. And now just this week has re-joined the  
23 Energy Commission as staff, so it's a really good success  
24 story there as well.

25           So anyway, really I look for great things to

1 come. I think we'll have a press release about that  
2 probably tomorrow, or a blog post or something along those  
3 lines, but really looking forward to having that out there  
4 for the world to use.

5           And then finally just wanted to -- all of my  
6 colleagues know about this -- but I wanted to just remind  
7 everyone that next week is the National Association of  
8 State Energy Officials annual meeting in Manhattan Beach.  
9 All of my colleagues, unfortunately with the exception of  
10 Commissioner Scott, who would be there if she could, are  
11 going to play a role in that and Commissioner Douglas on  
12 offshore wind. And there's a Transportation Panel that  
13 Commissioner Monahan will be on. And hopefully we're going  
14 to get Mayor Garcetti and that'll be a nice entrée to talk  
15 about all the wonderful things that are happening in LA.  
16 And Commissioner Hochschild will welcome you that day.

17           So anyway it's a good opportunity to have  
18 California shine and to really work with all of our  
19 colleagues and state energy offices across the state,  
20 across the nation rather and six territories, who will all  
21 be in Manhattan Beach with a whole bunch of stakeholders  
22 talking about all the great stuff they're doing at the  
23 state level.

24           And really I think the theme is emerging clearly  
25 that the states is where the action is. And we all have

1 different solutions that work and that we can share and we  
2 can really build momentum. And that's both on the just  
3 sort of extreme end of the clean energy revolution, but  
4 also just on the nuts and bolts stuff like weatherization  
5 and the state energy program funds and just getting the  
6 work a day policies implemented to do right by the citizens  
7 of all of our respective states. And NASEO does a really  
8 great job of facilitating that conversation and lobbying on  
9 behalf of the state energy offices in DC, working with all  
10 of our electeds there.

11           So anyway it's going to be a good agenda, very  
12 substantive, some nice field trips, people will be able to  
13 get to see LACI and some of the other, the Edison Center  
14 out Irwindale. DWP is going to show some of the Board  
15 Members Castaic and some of their battery storage projects.  
16 So it's a good sort of leadership position for California.  
17 And hopefully we'll be locking arms on some of these  
18 policies and moving forward even more than we already are.  
19 So it'll be fun.

20           And there is still space, so if you want to go  
21 down and avail yourselves you can still do it. I don't  
22 know if there are hotel rooms, but there's definitely is  
23 space at the conference.

24           Okay. So that's it for me. Thanks a lot.

25           VICE CHAIR SCOTT: Okay, great. So not too much

1 to update on. I also had a little bit of time off, so that  
2 was fantastic. It's pretty much all IEPR all the time and  
3 the Grid Energy Policy Report, (phonetic) so that's been  
4 fun. We have had a chance to -- one of the things I really  
5 like about it is we pull together experts kind of from  
6 around the country, around the world, and hear from them on  
7 these critical energy topics. So I will be looking forward  
8 to the next few that are coming up as well.

9 I did want to give a couple of personnel updates.  
10 One of my summer interns, Maryam Ashgari, has gone back to  
11 UC Irvine for the school year, so goodbye to her. We will  
12 miss having her here. This summer, she did some great  
13 work.

14 My intern, Claire Sugihara, who's sitting over  
15 there, she's kind of waving shyly at you. She has been  
16 here a little bit over 18 months now. And she has done  
17 fantastic work. She's from UC Davis, during the school  
18 year and also during the summer helping pull together all  
19 kinds of information that's been incredibly useful to my  
20 office: technology readiness levels, manufacturing  
21 readiness levels, all kinds of information on BioMat and  
22 ports. And if you name it she's probably looked into it  
23 for us. So I just want to wish you the best of luck back  
24 at school. It's been fantastic to have you here.

25 Alejandra Hormaza who's sitting right next to

1 her, is going to be here for a few more weeks and then she  
2 will also be returning to UC Irvine. But since she's here,  
3 I'd like to just take a minute to acknowledge her. It's  
4 always fantastic to have the enthusiasm and engagement of  
5 the interns and they do fantastic work for us.

6           And I also really wanted to acknowledge Monica  
7 Shelley who was my Administrative Assistant. She is  
8 fantastic and my heart is a little broken, but she has  
9 gotten promoted and gone on to bigger and better things.  
10 And so I really want to wish her well. She's already  
11 started her new job. I'm very excited for her, very sad  
12 for me and my office. But she just was fantastic,  
13 dedicated, committed. Every day came in very friendly,  
14 very capable, always had a smile, always making the office  
15 just a wonderful place and then just incredibly competent  
16 all of the time. And so she will be missed. And I also  
17 wish her the very best of luck in her new role.

18           And for the meantime, I have Victoria Sandoval  
19 Moreno who is helping out while we are looking to hire a  
20 new admin for my office. So those are my announcements.

21           CHAIR HOCHSCHILD: Great.

22           COMMISSIONER DOUGLAS: All right, and I also  
23 don't have too much to report in the past month. I was  
24 looking back at my calendar to see what I might want to  
25 talk about and I saw all these vacation days. And I

1 thought, "Oh, my God. What did I do?" when I looked at  
2 them and there were about 12 days. And then it came back  
3 to me that I had a really wonderful time with my family  
4 camping and road tripping in Utah and going to Colorado.  
5 And how I could not remember that just shows what the days  
6 were like when I got back.

7 But nevertheless, nothing to report this time,  
8 I've been enjoying the IEPR workshops, the SB 100 workshop  
9 and just really digging in and getting ready for a busy  
10 fall. So thank you.

11 CHAIR HOCHSCHILD: Well, thank you.

12 First of all, I'm glad people are taking  
13 vacations. This is good. And we're in a marathon and not  
14 100-yard dash. And I really do want for all of us to have  
15 a balanced, healthy life. And I think we'll be a lot more  
16 productive and happier as a result. So I'm glad to hear a  
17 good break and maybe jealous. Utah sounded gorgeous.

18 COMMISSIONER MCALLISTER: I won't talk about  
19 Copenhagen.

20 CHAIR HOCHSCHILD: Yeah, don't. I will be  
21 definitely jealous. (Laughter.)

22 I also just wanted to thank Commissioner  
23 McAllister for the NASEO Chair role you're playing. I  
24 think it's so valuable, that position. We haven't talked a  
25 lot about it as a group, but this forum is a terrific one

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1 and you're absolutely right that's where the action is.

2           There's been what I call sort of a trifecta of  
3 energy disasters from the Trump Administration in the last  
4 few months. It's the undoing of the methane rules, the  
5 undoing of the lighting standards and the attempted  
6 unwinding of fuel economy. And all three of those I hope  
7 will ultimately be successful and I actually believe we  
8 will be successful in prevailing long term. But the action  
9 and leadership and communication, collaboration at the  
10 state level is where those battles are ultimately won and  
11 where the foundations are laid for success. So thanks for  
12 that. I look forward to joining you on Tuesday.

13           I've been speaking regularly to the incoming  
14 employee gatherings when we do these. I don't know, it's  
15 every month or two and I really hope other Commissioners,  
16 as you're able to do this and we're trying to get that, my  
17 commitment to Drew is to try to have one of us give a  
18 welcoming run to every single group. But just the group I  
19 spoke to yesterday there were two PhDs, incredibly diverse  
20 from all over the world. And enthusiastic and it's just  
21 great to see the talent coming in to the Commission.

22           Probably my highlight of the last two weeks was  
23 the offshore wind negotiation with the Navy, so we've been  
24 working closely with them. Spent the whole afternoon with  
25 the Assistant Secretary of Defense Robert McMahon, really

1 appreciate his openness and flexibility. And we ended up  
2 spending much longer together. We were on the same flight  
3 home that got cancelled, so we had the whole evening with  
4 him and his staff to visit.

5 He's in charge of many other projects including  
6 building the wall, so we had a lot to talk about. But he  
7 and his team were terrific. In this meeting we had  
8 Congressman Carbajal, Congressman Panetta, Assemblyman  
9 Jordan Cunningham was there, a number of the other  
10 agencies. And again my extreme gratitude to Commissioner  
11 Douglas for her leadership on that and we're looking  
12 forward to a successful outcome long term.

13 I wanted to say just the two things that I think,  
14 from my perspective have been the highest profile events  
15 that I've been involved with at the Energy Commission since  
16 I started as Chair have been our Electrification Symposium,  
17 which we did in concert with EPRI and CAISO and Silicon  
18 Valley Leadership Group and UC Berkeley this summer, and  
19 almost 500 people, a great discussion and momentum. And  
20 the staff did a fantastic job pulling that off.

21 And the SB 100 workshop was also a home run;  
22 really, really well organized. The details were  
23 (indiscernible) and after that actually Commissioner  
24 Douglas and her team on the Native American Summit, also an  
25 incredible home run.

1           So not everything that we do is going to be a  
2 home run, because we sometimes foul out, but I feel like  
3 we're on a roll. And I just want to compliment that with  
4 all of those, one thing that strikes me as what works is  
5 when we collaborate well with other agencies. And you  
6 could really feel it in the room, most notably in the SB  
7 100 where we're required by statute to do this with the  
8 CARB and PUC. But the rapport between the staff, between  
9 the agencies is just really healthy. And that's what we  
10 want going forward, so I just want to thank all of the  
11 staff for that.

12           Going forward the next big thing I have coming up  
13 that we're pulling together in terms of a symposium is  
14 going to be on lithium and this vision of creating a  
15 lithium valley in California. So we're going to attach it  
16 on one side of the Bay Area Battery Summit, which is in  
17 November in Silicon Valley. And bring in the stakeholders  
18 who are involved in lithium development, investment and the  
19 end uses of lithium together.

20           I've been sharing this with the Governor and the  
21 Governor's Office on this can be a huge new industry for  
22 California long term, because we have 40 percent of the  
23 annual global demand of lithium. We have the ability to  
24 produce that in our state right and there's these new  
25 discoveries. It's very significant. And we have the end

1 use market is here with energy storage, electric vehicles.  
2 And the potential is there certainly to attract back the  
3 intermediate industries like cathode manufacturing and so  
4 on. So really excited about that and we'll be sharing more  
5 as we get closer to that.

6           The last thing I wanted to share. I've been  
7 doing monthly open office hours once a month now for staff  
8 who want to talk about any issue of concern. And one issue  
9 that came out of those is the suggestion that we do -- and  
10 I think it's a magnificent idea -- an internal Energy  
11 Commission staff conference. Actually just for staff to  
12 kind of exchange what they're all working on, because we  
13 have so many disparate programs and divisions. And people  
14 want to get to know each other better and want to better  
15 understand what they're doing. So I'm going to be working  
16 with Drew on this and Terra is going to take the first  
17 crack on an agenda and we'll get input from all the  
18 Commissioners and staff on that. But I'm hoping to do that  
19 sometime in the next six months of something.

20           And then I guess the other highlight is we had  
21 probably resolved with Karen Ross very successfully on --  
22 Commissioner Monahan and I -- just on a transportation-  
23 related function. I just really appreciated your team's  
24 diligence on that. And that worked exactly how I think we  
25 should. The issue bubbles up, we talk about it internally

1 and get on the same page, have a collaborative dialogue and  
2 we fix the problem. And so thanks again to your team for  
3 that. That's it for me.

4 CHAIR HOCHSCHILD: Let's move on to Executive  
5 Director's Report.

6 MR. BOHAN: Thank you, just a couple of quick  
7 things first. As you probably all know the Legislature  
8 Session ends this Friday. And we are in the process of  
9 collecting legislative proposals for next term and so we  
10 have a due date of mid-October. So we have collected some  
11 and we're going to reach out to you to discuss those, but  
12 wanted to let you know that that deadline is coming up.

13 Second, I want to thank you Chair for  
14 acknowledging Carousel Gore. This is the first time we've  
15 got a fully dedicated EEO Officer. And I joked with her  
16 this morning that my goal is for her job to be very boring.  
17 But the fact is with 700 people together there's tensions  
18 and frictions and it's just really critical that our staff  
19 feel like they've got a place that they can go. There's a  
20 person that's going to hear them out and keep the  
21 information that they learned confidential. And then deal  
22 with it as appropriate.

23 And then finally in our unsung heroes series, I  
24 want to ask, from the Fuels and Transportation Divison,

1 Taiying Zhang to please come up to the podium and just tell  
2 you a little bit about her.

3           You know, we have an awards ceremony, but this is  
4 for the folks that just stay under the radar and Taiying is  
5 a classic person in that regards. She's quiet, but she's  
6 got a brilliant mind. And she's got an intellectually  
7 powerful voice. She's a PhD in Chemistry, which itself  
8 tells you she's got to be pretty bright. And she helps in  
9 a lot of areas, but particularly in cutting edge biofuels  
10 and hydrogen, where we're looking for renewable feedstock.  
11 And she just brings a level of creativity to trying to  
12 crack these sorts of nuts. So we wanted to provide an  
13 opportunity to just have you meet her and see her and give  
14 her a hand. (Applause.)

15           MS. ZHANG: Thank you. Thank you.

16           COMMISSIONER MONAHAN: Hey, Drew, can I add to  
17 this? Because I got a little feedback from Elizabeth and  
18 Kevin who also said really nice things about you and that  
19 you even get comments coming in from people, businesses who  
20 are working with you through our grant programs, that your  
21 supervisor gets positive feedback about you. So I just  
22 want to say thank you all your great work.

23           MS. ZHANG: Thank you. Thanks for all the good  
24 words. (Laughter.)

25           CHAIR HOCHSCHILD: Thank you. Let's move on to

1 Public Adviser's Report. Jen?

2 MS. MARTIN-GALLARDO: Thank you. And I think  
3 today's the last time I get to come before you all at a  
4 business meeting as the Acting Public Adviser, so thank you  
5 so much for the opportunity. It's been a great  
6 opportunity.

7 And I just wanted to leave a remark. You had  
8 mentioned something, Commissioner Monahan, about outreach  
9 efforts and how the Energy Commission can collaborate with  
10 every division that is working on improving our outreach to  
11 communities. And I'm going to put a plug in for the Public  
12 Adviser's office, as Naomi Gallardo gets started. She's  
13 got a great team in the Public Adviser's Office, who has a  
14 great start on things like lists of entities to outreach to  
15 for specific reasons and specific areas of the state. And  
16 there's just a lot of energy in being able to assist  
17 everyone at the Energy Commission to collaborate and also  
18 to know what each other are doing and what's working well  
19 and how to make improvements.

20 So on the other issues that I'm working on with  
21 Chair Hochschild we've started our EPIC calls for our grant  
22 recipients. And I'm just enjoying working with staff on  
23 working on our grant process and how we can make  
24 improvements to streamline those things for everyone who's  
25 going to be working in our programs now and in the future.

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Myra Severtson  
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