

## DOCKETED

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Karen Douglas  
Janea Scott  
David Hochschild  
Andrew McAllister

Staff Present: (\* Via WebEx)

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Kourtney Vaccaro, Chief Counsel  
Alana Mathews, Public Adviser  
Eunice Murimi, Public Adviser's Office  
Cody Goldthrite, Secretariat

	Agenda Item
Susan Cochran	2
Kerry Willis	2
Jessica Lopez	3
Lisa DeCarlo	3
Heather Bird	4, 10
Heather Raitt	5
David Michel	6
Akasha Kaur Khalsa	7
Peter Chen	8
Katharina Snyder	9, 11
David Hungerford	12
Jamie Patterson	13
Terra Weeks	15
Michael Sokol	16
Sylvia Bender	17
Chris Davis	17
David Ashukian	17
Natalie Lee	17
John Kato	17
Eric Stokes	17
Rob Cook	17

APPEARANCES (Cont.)

Others Present (\* Via WebEx)

Interested Parties

Jeff Harris, Ellison, Schneider, Harris & Donlan LLP	2
Joseph Greco, Middle River Power	2
Nancee Murray, California Fish & Wildlife	2
*James Burns, Transportation Power, LLC	8
Ram Narayanamurthy, Electric Power Research Institute EPRI	10
*Rachel Kuykendall, Sonoma Clean Power Authority	12

Public Comment(\* Via WebEx)

Kevin Messner, the Association of Home Appliance Manufacturers, AHAM	3
Charles J. Kim, Southern California Edison Frank Devai, Community Resource Project, Inc.	3

I N D E X

	Page
Proceedings	9
Items	
1. CONSENT CALENDAR	9
a. ALLIANCE CENTURY ENERGY FACILITY (01-EP-04C)	
b. ALLIANCE DREWS ENERGY FACILITY (01-EP-05C)	
2. HIGH DESERT POWER PLANT (97-AFC-01C)	9
3. ENERGY EFFICIENCY STANDARDS RULEMAKING FOR PORTABLE ELECTRIC SPAS AND BATTERY CHARGER SYSTEMS (18-AAER-02)	22
a. NEGATIVE DECLARATION FOR THE PROPOSED ENERGY EFFICIENCY REGULATIONS FOR PORTABLE ELECTRIC SPAS AND BATTERY CHARGER SYSTEMS	
b. APPLIANCE ENERGY EFFICIENCY REGULATIONS FOR PORTABLE ELECTRIC SPAS AND BATTERY CHARGER SYSTEMS	
4. ENERGY PROGRAM INVESTMENT CHARGE (EPIC) 2017 ANNUAL REPORT	37
5. ORDER INSTITUTING INFORMATIONAL (OII) PROCEEDING (18-IEPR-01)	50
6. CITY OF TULARE SOLAR PHOTOVOLTAIC (PV) PROJECT HEAT-TO-POWER, AND NEAR-ZERO EMISSION DISTRIBUTED GENERATION SYSTEMS, GFO-17-501	54

I N D E X (Cont.)

7.	CALIFORNIA BIOENERGY LLC	56
	i.    CEQA FINDINGS	
	ii.   CALIFORNIA BIOENERGY LLC'S KERN DAIRY CLUSTER BIOMETHANE UPGRADING FACILITY PROJECT	
8.	ADDRESSING BARRIERS TO WIDER ADOPTION OF NEAR-ZERO EMISSION NATURAL GAS VEHICLES, GFO-17-503	60
	a.    TRANSPORTATION POWER, INC.	
	b.    INSTITUTE OF GAS TECHNOLOGY	
9.	ENHANCING SAFETY, ENVIRONMENTAL PERFORMANCE, AND RESILIENCE OF CALIFORNIA'S NATURAL GAS SYSTEM	63
	a.    UNIVERSITY OF CALIFORNIA, IRVINE	
	b.    UNIVERSITY OF CALIFORNIA, BERKELEY	
	c.    EAGLE ROCK ANALYTICS	
	d.    INFRATERRA, INC.	
	e.    DOE-LAWRENCE BERKELEY NATIONAL LABORATORY	
10.	ELECTRIC POWER RESEARCH INSTITUTE, INC.	70
	i.    CEQA FINDINGS	
	ii.   EPRI Amendment	

I N D E X (Cont.)

11.	ADVANCING THE RESILIENCE AND ENVIRONMENTAL PERFORMANCE OF CALIFORNIA'S ELECTRICITY SYSTEM, GFO-16-311	76
	a. DOE-LAWRENCE BERKELEY NATIONAL LABORATORY	
	b. UNIVERSITY OF CALIFORNIA, IRVINE	
	c. UNIVERSITY OF CALIFORNIA, BERKELEY	
12.	PROGRAMMATIC APPROACH TO EXISTING BUILDINGS RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM, GFO-17-304	79
	a. SONOMA CLEAN POWER AUTHORITY	
13.	DISTRIBUTION SYSTEM MODELING TOOLS TO EVALUATE DISTRIBUTED ENERGY RESOURCES, GFO-17-305 (Hold over to next meeting)	83
	a. ELECTRIC POWER RESEARCH INSTITUTE, INC.	
	b. DOE-SLAC NATIONAL ACCELERATOR LABORATORY	
	c. DOE-SLAC NATIONAL ACCELERATOR LABORATORY	
	d. HITACHI AMERICA, LTD.	
<del>14.</del>	<del>GREENBIZ GROUP INC.</del>	<del>--</del>
15.	2018 IEPR UPDATE RE: ENERGY EQUITY TOPICS	87
16.	DISCUSSION OF ENERGY COMMISSION PROGRESS RE: IMPLEMENTATION OF THE CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SENATE BILL 350)	95
17.	2017 DIVERSITY UPDATE REGARDING THE IMPLEMENTATION OF THE ENERGY COMMISSION DIVERSITY COMMITMENT	98

I N D E X (Cont.)

18.	Minutes	128
19.	Lead Commissioner or Presiding Member Reports	128
20.	Chief Counsel's Report	145
a.	<i>In the Matter of U.S. Department of Energy (High Level Waste Repository) (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); State of California v. United States Department of Energy (9th Cir. Docket No. 09-71014)</i>	
b.	<i>Communities for a Better Environment and Center for Biological Diversity v. Energy Commission (Court of Appeal, First Appellate District, #A141299)</i>	
c.	<i>Energy Commission v. Electricore, Inc. and ZeroTruck (Sacramento County Superior Court #34-2016-00204586)</i>	
d.	<i>National Electrical Manufacturers Association v. Energy Commission (Federal District Court, Eastern District of California, #2:17-cv-01625)</i>	
e.	<i>Energy Commission v. United States Department of Energy (Federal District Court, Northern District of California, #17-cv-03404)</i>	
f.	<i>City of Los Angeles, acting by and through, its Department of Water and Power v. Energy Commission (Los Angeles Superior Court, Case No. BS171477).</i>	



I N D E X (Cont.)

20. Chief Counsel's Report (Cont.)	145
<p>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:</p>	
<p>a. The licensing process for a nuclear waste storage repository at Yucca Mountain, Nevada.</p>	
<p>d. Alternative and Renewable Fuel and Vehicle Technology Program grant ARV-10-016 with the City of San Jose, including its subcontractor JUM Global, and the lawsuit between the two (5:16-cv-01462-HRL, United States District Court, Northern District of California [San Jose]).</p>	
21. Executive Director's Report	146
22. Public Adviser's Report	147
23. Public Comment	148
Adjournment	149
Reporter's Certificate	150
Transcriber's Certificate	151

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
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P R O C E E D I N G S

APRIL 11, 2018 10:05 a.m.

CHAIRMAN WEISENMILLER: Good morning. Let's start out the business meeting with a minute of silence for Nancy McFadden, who was certainly a phenomenal public servant.

(Whereupon, a moment of silence was observed.)

Thank you. Let's go to the Business Meeting. Item 14 is held. Let's start with the Consent Calendar.

COMMISSIONER SCOTT: Move approval of the Consent.

COMMISSIONER MCALLISTER: Second.

CHAIRMAN WEISENMILLER: All those in favor?  
(Ayes.)

Consent Calendar passes 5-0.

Let's go on to Item 2, High Desert Power Plant.

MS. COCHRAN: Good morning. I'm Susan Cochran, the Hearing Officer assigned to assist the Committee in the proceedings for the High Desert Power Plant Amendment. The Committee consists of Commissioner Douglas as Presiding Member and Commissioner Scott as Associate Member.

High Desert is a currently operating 850-megawatt natural gas-fired, water-cooled power plant, located near Victorville, San Bernardino County. The Energy Commission

1 granted High Desert a license in 2000. And High Desert  
2 began commercial operations in 2003.

3 Under the 2000 Commission Decision, High Desert  
4 was restricted to using State Water Project Water for its  
5 cooling systems. State Water Project Water would be used  
6 in one of two ways: directly for cooling purposes; and as a  
7 source for injection into the groundwater aquifer to  
8 provide a water bank to be used during those times when  
9 State Water Project Water was not directly available.

10 On October 30, 2015, High Desert filed a petition  
11 to drought-proof the power plant. The Energy Commission  
12 had previously amended the Conditions of Certification for  
13 soil and water resources to expand the allowable sources of  
14 water that High Desert could use for the cooling and  
15 storage purposes.

16 The current petition was subject to Energy  
17 Commission action in June 2016 when interim relief was  
18 granted that allowed the use of groundwater through  
19 September 30, 2017, and authorized the use of percolation  
20 as an additional means of storing State Water Project  
21 Water, through September 30, 2018.

22 Today the Commission is being asked to consider  
23 and approve a Committee Recommended Decision and Errata.  
24 The Recommended Decision proposes new Conditions of  
25 Certification for soil and water resources only. These new

1 conditions create new standards for the sources and uses of  
2 water for the High Desert cooling needs, make permanent the  
3 use of percolation as an additional means of banking State  
4 Water Project Water as the Commission had authorized  
5 temporarily in 2016, and impose certain penalties to meet  
6 the minimum percentage or exceeding the maximum allowable  
7 percentage of recycled water for power plant cooling.  
8 Groundwater is no longer used as a source of cooling for  
9 the plant.

10           The new conditions also eliminate some of the old  
11 conditions from the 2000 Energy Commission Decision that  
12 have been satisfied over time.

13           This recommended decision was filed on March 20,  
14 2018 and was subject to a 15-day comment period that ended  
15 on April 4, 2018.

16           The Committee held a Committee Conference on  
17 April 6, 2018, where additional comments were received. We  
18 received written comments from Energy Commission staff, the  
19 Petitioner and Lahontan Regional Water Quality Control  
20 Board. Staff's comments concern minor modifications to the  
21 Conditions of Certification. The Petitioner's filed  
22 comments highlighted some of the same changes as noted by  
23 staff. And also requested instead of the word "penalties,"  
24 that the amounts payable for say -- for failing to satisfy  
25 the identified targets gets for recycled water use be

1 denominated as "negotiated payments."

2           Lahontan pointed out the need for Petitioner to  
3 secure new permits to inject water for banking and for use  
4 of recycled, reclaimed water, asked that we include a map  
5 of the locations of water banking and extraction, and  
6 indicated that certain laws, ordinances, regulations and  
7 standards, "LORS," were missing from our analysis.

8           In response the Committee prepared an Errata that  
9 was filed on Monday that made most of the corrections  
10 sought by Staff and Petitioner and changed the word  
11 "penalty" to "offset remedies." "Offset remedies" was  
12 chosen, because the payments required under the Stipulation  
13 and the Conditions were to offset the over or under-  
14 utilization of reclaimed water.

15           We also added language clarifying the LORS  
16 applicable to the project, particularly as they relate to  
17 Lahontan.

18           The Committee thus recommends that the Energy  
19 Commission adopt the Order adopting the Committee  
20 Recommended Decision, along with the Errata, as the  
21 Decision of the Energy Commission.

22           I'm available for any questions or  
23 clarifications.

24           CHAIRMAN WEISENMILLER: Thank you.

25           Staff, any comments?

1 MS. WILLIS: Thank you. Good morning, my name is  
2 Kerry Willis. I'm representing staff today. Staff  
3 reviewed the Errata and it comports to our understanding  
4 following the Committee Status Conference held on Friday.  
5 We'd like to thank the parties for their hard work on the  
6 Stipulated Agreement. And with that we have no further  
7 comment.

8 CHAIRMAN WEISENMILLER: Great.  
9 Applicant?

10 MR. HARRIS: Good morning, Jeff Harris on behalf  
11 of High Desert and to my right is Joe Greco, Senior Vice  
12 President for Middle River Power. And Joe will have a few  
13 words in a second.

14 I just wanted to say thank you to the Committee  
15 as well. This process has been going on for quite a long  
16 time. We've had actually a marriage and at least one birth  
17 on our team, so -- since this started, so -- and those  
18 events happened sequentially. So things are going very  
19 well. We've gotten to a very good place with the staff and  
20 with the Department, I think. And we appreciate all the  
21 hard work.

22 We also acknowledge that the Errata reflects our  
23 understanding of the Agreement and thank you very much.  
24 And I'd like to turn to Joe now to say a couple of words on  
25 behalf of the Applicant or Project Owner.

1 MR. GRECO: Commissioners, Joe Greco here, Vice  
2 President of Middle River Power on behalf of High Desert.  
3 Nice seeing you all again, it's been awhile since I've been  
4 in front of you all.

5 I just want to say thank you to the Commission,  
6 to staff, county, others at Lahontan. A long process, but  
7 we got to a point where we think it makes sense and we  
8 believe it's important for High Desert, because of its  
9 locale, it being not on Aliso Canyon but on Kern it will  
10 provide a bridge to get to reliability needs, while we  
11 figure out how to get to the -- a greater renewable  
12 standard.

13 We are also in the process of developing a 100-  
14 megawatts solar facility right near the site, so we get the  
15 importance of it all. And I just wanted to say thank you  
16 and reiterate we look forward to moving forward in this  
17 process.

18 And thank you Jeff for all the work you've put in  
19 as well. So thank you so much.

20 CHAIRMAN WEISENMILLER: Great. Let's go to  
21 parties or comment in the room. Let's start with --

22 MS. VACCARO: Chair Weisenmiller, I think Fish  
23 and Wildlife is here.

24 CHAIRMAN WEISENMILLER: -- CDFW.

25 MS. VACCARO: Yeah.

1 CHAIRMAN WEISENMILLER: Yeah. Exactly, that was  
2 my --

3 MS. MURRAY: And I did put in a comment card.

4 CHAIRMAN WEISENMILLER: Yeah.

5 MS. MURRAY: And CDFW also appreciates the time,  
6 energy and effort that the Committee and the CEC staff have  
7 devoted to this matter following the 2015 petition.

8 We did participate in the -- we did not submit  
9 written comments, but we participated in the Committee  
10 Hearing. And let the Committee know that we did disagree  
11 with the deletion of Item 6d. We support, generally  
12 support the Recommended Decision and the Errata, but feel  
13 like -- do not believe that Condition 6d has been  
14 satisfied.

15 SOIL&WATER-6d requires that the Energy Commission  
16 approve an amendment that specifically evaluates water  
17 resource impacts of operation and impose any necessary  
18 mitigation or the High Desert Power Plant must cease  
19 operation after 30 years. The 2006 Amendment, the 2009  
20 Amendment, the 2011 Amendment, the 2014 Amendment and the  
21 2016 Decision granting interim relief, all granted the  
22 relief requested by the Project Owner, but did not  
23 specifically evaluate water resource impacts due to project  
24 operations, much less operations out 30 years.

25 While we do believe the current record supports



1 adoption of the Recommended Decision, it's worth noting  
2 that an evaluation of water resource impacts due to current  
3 operations has not been done, and 6d has not been  
4 satisfied.

5 As noted in the Committee Report High Desert  
6 Power Plant is located in the adjudicated Mojave River  
7 Groundwater Basin, which continues to be in a state of  
8 overdraft.

9 The conditions in the Recommended Decision  
10 contain reporting requirements that will increase our  
11 knowledge base of the High Desert Power Plant groundwater  
12 use in the adjudicated sub-area. And although we have a  
13 difference of opinion in terms of recycled water, is -- the  
14 source of recycled groundwater is groundwater in this  
15 adjudicated over-drafted basin. And so we understand that  
16 there is not a direct use of groundwater, there is an  
17 indirect use.

18 And we -- if there is an indication, we will get  
19 better data in the next few years or 50 years of their  
20 operation. And if there is an indication that the  
21 operation of High Desert in the Mojave River Basin is  
22 having a significant, unmitigated environmental theft on  
23 the environment, CDFW will bring that information to the  
24 attention of the High Desert Power Plant and the CEC. That  
25 may be before 30 years.

1           And so, while the High Desert Power Plant, the  
2 Project Owner has repeatedly asked for amendments to their  
3 Conditions of Certification we just wanted to put you on  
4 notice that while you are now lifting any need to evaluate  
5 after 30 years of operation -- or potentially not if you  
6 change your mind -- we are in the Basin. And we will be  
7 evaluating their water use. And we understand there's  
8 somewhat of a shift of the burden to us from you.

9           And but we do feel like there's been a lot of  
10 time and effort put forward into the Recommended Decision.  
11 We will gain more information. We don't -- and it would  
12 not be inconsistent with our settlement agreement to keep  
13 6d in this, the current Conditions of Certification.

14           Thank you very much.

15           CHAIRMAN WEISENMILLER: Let's -- are there any  
16 other parties in the room that want to comment on this?  
17 Any other parties on the line?

18           (No audible response.)

19           CHAIRMAN WEISENMILLER: Then in terms of any  
20 public comment in the room? Any public comment on the  
21 line?

22           (No audible response.)

23           CHAIRMAN WEISENMILLER: I would like to turn  
24 then, to Applicant, to see if you have any response?

25           MR. HARRIS: Thank you. And I very much

1 appreciate, Nancee giving us a heads-up that she was going  
2 to raise this issue again today.

3 A couple of things: we absolutely believe that  
4 this condition was satisfied in 2006 with an amendment, and  
5 in 2009 with an amendment and with this current amendment.  
6 We believe CEQA's been satisfied. There has been an  
7 analysis of the water use. You have, basically a  
8 certification process that is CEQA equivalent, so by your  
9 approval today you are complying with CEQA in addition to  
10 the Executive Order. And in addition to the fact that this  
11 is not a project under CEQA; I'd like to point that out, as  
12 well.

13 What we have done basically is add new limits to  
14 our existing water supplies. And so, rather than making  
15 new uses of water we've agreed to place caps on our  
16 existing approved uses of water. Those existing approved  
17 uses of water were done pursuant to a CEQA equivalent  
18 process, so we disagree with the Department's analysis. We  
19 think it's consistent with your other certifications that  
20 they're -- that this limit be removed just to eliminate any  
21 ambiguity.

22 And one of the best things that's come out of  
23 this process is we've developed a much better working  
24 relationship with the Department. There are many entities  
25 down here involved in this process. This project is a

1 water user or a customer. We deal with VVWRA, we deal with  
2 the City, we deal with Regional Board, we deal with you all  
3 and we deal with the Department. And we understand the  
4 values the Department is attempting to protect here and  
5 appreciate that work, as well.

6 So we will stand very solidly on the Recommended  
7 Decision's conclusions on pages 16 and 17. We think we did  
8 a good job of documenting this issue and understand the  
9 Department's concerns. And we'll continue to work with  
10 them going forward.

11 CHAIRMAN WEISENMILLER: Staff, any other comments  
12 in reply?

13 MS. WILLIS: No more comments. Thank you.

14 CHAIRMAN WEISENMILLER: Fish and Wildlife, any  
15 reply?

16 MS. MURRAY: There has not been an extensive CEQA  
17 record in this process and I'll just leave it at that.  
18 We're not about to challenge a CEQA document --

19 CHAIRMAN WEISENMILLER: Okay.

20 MS. MURRAY: -- in the documented process  
21 (inaudible).

22 CHAIRMAN WEISENMILLER: Susie? Last word, Susan?

23 MS. COCHRAN: Again, I think that the Committee  
24 Recommended Decision analyzes this issue. The Condition  
25 states that it shall not operate for longer than 30 years,

19

1 unless the Committee has undertaken an analysis. This  
2 Decision on its own has gone through a significant process  
3 where we have discussed numerous times all of the various  
4 water issues, the effect on the transition zone, the  
5 Mesquite Bosque and the related habitat. And those  
6 discussions and that information has been thoroughly  
7 analyzed and evaluated by the Committee. And that's why  
8 the Committee determined after the briefing from the  
9 parties that on this legal issue, Condition 6d had been  
10 satisfied.

11 CHAIRMAN WEISENMILLER: Let's transition to the  
12 Commissioners. Commissioner Douglas?

13 COMMISSIONER DOUGLAS: So I'll make a couple of  
14 brief comments. And I know Commissioner Scott probably  
15 will as well.

16 This discussion highlights the fact that in this  
17 case this was a very factually complex case. It involved a  
18 lot of parties, including the parties sitting here. But  
19 also, very much the Lahontan Water District and other  
20 entities had a  
21 -- had and have a major role in this going forward, as  
22 Mr. Harris noted.

23 And the parties also have, and have had, and  
24 continue to have, to some degree, some disagreements as  
25 well as agreements. And so what I think you really see in

1 this Decision is that in some instances not everybody comes  
2 to the table with exactly the same assumptions or  
3 perspective. Looking back, but looking forward, this is a  
4 way of proceeding that we think is protective of the  
5 resource and is a reasonable way to move forward.

6 And I want to express my appreciation  
7 particularly to Fish and Wildlife, to all the parties. But  
8 Fish and Wildlife did engage very substantially and also  
9 show a reasonable amount of flexibility and kind of looking  
10 for ways to make this work for everybody in a way that also  
11 is -- furthers their mission. And so that's been, I think,  
12 a real asset to the process.

13 And so I think that this Decision reflects the  
14 agreement of the parties. It also reflects the work of the  
15 Committee in digging through in what some around the table  
16 probably viewed as excess detail and others viewed as not  
17 enough and that's kind of the reality of it. But we did  
18 take a ride through a pretty substantial record and I would  
19 recommend this for the Commission's approval.

20 COMMISSIONER SCOTT: I also want to thank the  
21 parties for their diligence in working through a  
22 complicated set of facts and then helping us work all  
23 together to get here today. I also want to thank the  
24 Presiding Member Commissioner Douglas and her team for  
25 their leadership here.

1           As we all know California's record drought level  
2 has drawn significant attention to our water use throughout  
3 the state. And although we aren't seeing the extreme  
4 conditions that we were seeing over the last few years,  
5 water will continue to be a challenge, making it critical  
6 that we take steps to ensure our energy system is resilient  
7 to drought conditions. And so I'd like to commend the  
8 parties for developing a workable solution to drought-proof  
9 the High Desert Power Plant facility. I think that helps  
10 address environmental concerns while maintaining electric  
11 reliability.

12           So those are my comments on this. Thanks.

13           CHAIRMAN WEISENMILLER: A motion?

14           COMMISSIONER DOUGLAS: All right. So I will move  
15 approval of this item.

16           COMMISSIONER SCOTT: Second.

17           CHAIRMAN WEISENMILLER: All those in favor?

18           (Ayes.)

19           This item passes 5-0. Thank you.

20           MS. COCHRAN: All right, thank you.

21           CHAIRMAN WEISENMILLER: Let's go on to Item 3,  
22 Energy Efficiency Standards Rulemaking for Portable  
23 Electric Spas and Battery Charger Systems.

24           MS. LOPEZ: Good morning, Chair and  
25 Commissioners. My name is Jessica Lopez. I'm with the

1 Appliances and Outreach and Education Office in the  
2 Efficiency Division. Also joining me is Lisa DeCarlo from  
3 the Chief Counsel's Office.

4 Today we are seeking approval to adopt updated  
5 efficiency standards for portable electric spas, updated  
6 marking requirements for battery charger systems, and our  
7 CEQA findings. Next slide.

8 So first, I'd like to provide you with an  
9 overview of our proposal for portable electric spas. And  
10 then I'll follow with battery charger systems and our CEQA  
11 findings. Next slide.

12 So in California there are nearly 1 million  
13 portable electric spas with tens of thousands being sold  
14 each year. Portable electric spas use an estimated 2,180-  
15 gigawatt hours of electricity per year.

16 Now most spas are kept in standby mode year-  
17 round, when not in use, to circulate and filter the water  
18 and to maintain a set water temperature. And during this  
19 time, energy is wasted through heat loss due to many  
20 factors such as insufficient or improper placement of  
21 insulation in the unit or in the spa cover.

22 Over the lifetime of a unit, the standby mode  
23 represents about 75 percent of the energy consumed,  
24 compared to other modes. And is thus considered  
25 representative of the efficiency of a spa.



1            Since 2004, when the first efficiency standards  
2 were adopted, manufacturers have improved the techniques  
3 for insulation and design of a spa, providing an  
4 opportunity to save energy. Next slide.

5            Our proposed efficiency standards for portable  
6 electric spas will save energy in the state while saving  
7 consumers money.

8            The proposed regulations are projected to reduce  
9 electricity by approximately 242 gigawatt hours per year  
10 after full stock turnover. That is enough electricity to  
11 power 30,000 average California homes for one year. The  
12 energy saved is also equivalent to \$45 million per year.  
13 And lower electricity also results in reduced greenhouse  
14 gas emissions and other pollutants. Today, we present a  
15 standard that is cost-effective, technically feasible, and  
16 will save significant energy in California. Next slide.

17           Portable electric spas are factory-built, free-  
18 standing hot tubs that are electrically heated that can be  
19 rigid, flexible, or inflatable, and can contain multiple  
20 reservoirs as the example shown here. They are not  
21 permanently installed in the ground or attached to a pool.

22           Standard spas along with inflatable spas are  
23 intended mostly for recreational use, which means they are  
24 operated at a water temperature greater than 100 degrees  
25 Fahrenheit. Whereas exercise spas which are used mostly

1 for health and fitness, such as swimming, are operated at a  
2 much lower temperature of about 85 degrees Fahrenheit. But  
3 there are some cases where some exercise spas are operated  
4 at temperatures similar to standard spas.

5           So we are proposing to define "standard,"  
6 "inflatable, exercise" and "combination spas," and other  
7 necessary terms to clarify the scope and to support the  
8 proposed efficiency standards. Our analysis indicates that  
9 it is technically feasible to maintain the current scope,  
10 and thus, the proposed regulations will continue to cover  
11 these types of spas. Next slide.

12           The proposed standards focus on achieving  
13 improvements during standby mode. These standards were  
14 developed with significant input from the stakeholders,  
15 including the spa industry and the California investor  
16 owned utilities.

17           We have vetted the regulations publicly through  
18 several workshops and comment periods. And the outcome  
19 resulted in a proposal that will maintain the existing  
20 scope, easing transition between the current regulations  
21 and the proposed regulations, updates the maximum standby  
22 power limit to reduce the energy consumption of portable  
23 electric spas, updates the test procedure to align with the  
24 operating use of spas currently in the market, and updates  
25 the certification and test lab report requirements to

1 verify compliance. And it also adds a labeling  
2 requirement.

3           Now this label design is the first of its kind in  
4 the Appliance Efficiency Regulations and a key component to  
5 the proposed regulations. Spas can have multiple  
6 compatible covers and customers are most likely to base  
7 their purchasing choice on the least expensive spa cover  
8 and unit combination, which can result in higher energy use  
9 and operating costs. For this reason, the label displays  
10 the performance data of the least efficient spa cover and  
11 unit combination, influencing the customer to purchase a  
12 more efficient choice, influencing retailers to present  
13 more efficient options, and influencing manufacturers to  
14 use more efficient spa covers. This label also ensures the  
15 spa cover used during testing is sold with the unit to the  
16 consumer. And these changes will become effective June  
17 1st, of 2019. Next slide.

18           The proposed regulations for standard spas,  
19 exercise, and combination spas are technically feasible.  
20 The feasibility of our proposal relies on data received at  
21 the Energy Commission's appliance efficiency database. The  
22 data on this chart represents 960 entries certified to the  
23 database where more than 94 percent are standard spas, 5  
24 percent are exercise spas and less than 1 percent are combo  
25 spas. The chart shows the feasibility of these models

1 against the proposed standard, where the blue curve is the  
2 current standard, the red curve is the proposed standard,  
3 and the green dots symbolize the models certified to our  
4 database.

5 Non-compliant models are those above the red  
6 curve and compliant models are those below the red curve.  
7 For standard spas, about 79 percent meet the proposed  
8 standard. For exercise spas, 58 percent meet the proposed  
9 standard. And for combination spas, 44 percent meet the  
10 proposed standard.

11 The proposed standard also provides some relief  
12 for smaller spas, while tightening the power consumption  
13 for larger spas; thus the majority of the spas in the  
14 market meet the proposed standard. Next slide.

15 The proposed standards for inflatable spas are  
16 also technically feasible. The feasibility of our proposal  
17 relies on docketed test lab reports provided by the  
18 inflatable spa industry. The green dot is the resulting  
19 standby power in an inflatable spa currently in the market.  
20 It is almost three times the current standby power limit.

21 The two purple squares are two prototypes the  
22 inflatable spa industry has developed that are  
23 approximately 1.5 times the current standby power limit by  
24 either improving the spa cover or the structure of the spa.  
25 This recent development and discussions with the inflatable

1 spa industry has led to a separate standard proposal for  
2 inflatable spas.

3           The blue curve is the current standard and the  
4 yellow curve is the proposed standard. Non-compliant  
5 models are those above the yellow curve and compliant  
6 models are those below the yellow curve.

7           Presently, there are no compliant models, but we  
8 estimate 33 percent will be compliant when the standard  
9 goes into effect. And industry has indicated they are  
10 ready to deploy these prototypes when the standard goes  
11 into effect.

12           The proposal will provide the inflatable spa  
13 industry manufacturers time to innovate, develop and test  
14 inflatable spas that will meet the proposed standard. Next  
15 slide.

16           The proposed standards are cost-effective and do  
17 not impact the functionality of the unit and provide  
18 manufacturers flexibility to determine how to construct a  
19 compliant model.

20           Products may increase their efficiency by using  
21 better insulating practices, insulation materials,  
22 improving the pipe layout, improving spa cover designs,  
23 incorporating radiant barriers and improving the controls.

24           Our methodology for cost-effectiveness is based  
25 on reports and studies of the differences between a

1 noncompliant spa and a compliant spa.

2           The lifecycle costs include the incremental cost  
3 to produce a more efficient spa and the labeling cost. The  
4 lifecycle benefit is based on the energy saved. As you can  
5 see, the benefits exceed the cost, making this rulemaking  
6 cost-effective. Next slide.

7           During the 45-day comment period, we received  
8 input from various stakeholders who have requested  
9 amendments to the regulatory language to allow the label to  
10 list multiple spa covers, and require the label be placed  
11 on the packaging rather than the unit itself for inflatable  
12 spas.

13           We agreed to amend the language to instruct  
14 inflatable spa manufacturers to place the label on the  
15 packaging, to ensure consumers are able to see the label  
16 before purchasing the unit. We also agreed to amend the  
17 language to allow manufacturers to list additional spa  
18 covers other than the spa cover coinciding with the  
19 performance data on the label. This change will promote  
20 and inform consumers of more efficient options.

21           During the 15-day comment period, which ended  
22 last week, no recommendations or further requests were made  
23 or received.

24           With that, we recommend the Commission approve  
25 the efficiency standards for portable electric spas.

1           That concludes my overview for portable electric  
2 spas. Now, I'll go over battery charger systems. Next  
3 slide.

4           The current state regulations requires  
5 manufacturers to mark all battery charger systems with a  
6 "BC" inside of a circle. But in June 2016, the Department  
7 of Energy established energy efficiency standards for many  
8 of the battery chargers subject to California standards.

9           Federal efficiency standards for battery charger  
10 systems took effect for products manufactured on or after  
11 June 13, 2018, preempting California's efficiency  
12 standards. These new federal efficiency standards do not  
13 include a marking requirement for these products.

14           The proposed regulations would modify the current  
15 regulations by making the "BC" mark requirement applicable  
16 to only state-regulated battery chargers, eliminating the  
17 need to provide the "BC" mark for battery chargers that are  
18 federally regulated. This change would align state and  
19 federal marking requirements, reducing the costs of  
20 compliance for manufacturers. Thus, we recommend the  
21 Commission approve this proposal for battery chargers.  
22 Next slide.

23           The environmental impacts of the proposed  
24 regulations have been considered, and are consistent with  
25 the requirements of CEQA, the California Environmental

1 Quality Act. Next slide.

2 We prepared an initial study assessing the  
3 potential significant effects of the proposed regulations  
4 on the environment and found no significant adverse  
5 environmental impacts resulting in a Negative Declaration.  
6 We issued a 30-day comment period, consistent with the  
7 requirements of CEQA guidelines, and the proposed energy  
8 efficiency standards for portable electric spas will reduce  
9 energy consumption, with no significant change in the  
10 energy or in the process of manufacturing this appliance  
11 type.

12 The proposed standards are performance-based and  
13 do not require the use of any specific material to improve  
14 the efficiency of the product.

15 The proposed modifications for battery charger  
16 systems would not impact the environment, because they do  
17 not change the underlying efficiency standards, the sales  
18 associated with the efficiency standards or the materials  
19 that would be used to comply with the standards. Next  
20 slide.

21 And so that concludes my presentation. We  
22 recommend that the Commission approve Item 3. And I'd be  
23 happy to answer any questions at this time.

24 CHAIRMAN WEISENMILLER: Thank you.

25 Let's take public comment. Let's start with



1 AHAM.

2 MR. MESSNER: Thank you. Good morning everyone,  
3 I'm Kevin Messner, with the Association of Home Appliance  
4 Manufacturers. We support the efforts on battery chargers  
5 that's going on today. Thank you. I think this is a good  
6 example of CEC thinking it through and finding a good way  
7 to deal with all the different things that are going out  
8 there, so thank you Commissioner McAllister and everyone  
9 here, and Kristen and her team. I don't know if she's here  
10 or not but thank you and we support this.

11 CHAIRMAN WEISENMILLER: Great. Thank you.

12 SoCal Edison?

13 MR. KIM: Thank you, Chair, thank you  
14 Commissioners. I'm Charles Kim with Southern California  
15 Edison company. Today I'm speaking on behalf of California  
16 Invest Owned Utilities.

17 This journey for spa energy efficiency  
18 rulemaking, it has been a long, very long journey, almost  
19 six years from the inception. But I remember many  
20 meetings, many workshops and many staff reports revised.

21 So I need to make a statement and my gratitude  
22 goes to all the staff members who worked on this report  
23 diligently. Now I see the finish line. So I just wanted  
24 to point a few staff members: Jessica, thank you so much  
25 for working hard and bringing us up to this finish line.

32

1 And also Leah and Kristen, thanks so much.

2 What we see today, the proposed language is on  
3 the California IOU, investor owned utilizes perspective is  
4 cost-effective, technically feasible and brings significant  
5 energy savings to California. So the California IOUs fully  
6 support what is proposed today.

7 And I want to say once again I'm very grateful to  
8 standing here, because I see once again, the finish line  
9 after this long journey. So thank you so much. And  
10 thanks very much for all the hard work. Thank you.

11 CHAIRMAN WEISENMILLER: Anyone else in the room?

12 Any public comments from anyone on the line?

13 (No audible response.)

14 CHAIRMAN WEISENMILLER: Okay, then let's  
15 transition to the Commissioners. Commissioner McAllister?

16 COMMISSIONER MCALLISTER: Oh, yes. So thanks  
17 Jessica for the in-depth presentation. I think, really,  
18 not much more technical needs to be said here. I really  
19 appreciate all the work that's gone into this. I mean,  
20 certainly Charles laid it out.

21 I remember back early, earlier in my career I  
22 actually started some of the studies for the spas. And  
23 this must have been 2000 or so, so it actually isn't just  
24 six years, it's more like eighteen years. But  
25 unfortunately I didn't get to do any field work though.

1           But there have always been immense opportunities  
2 for saving energy in spas and focus on the standby power is  
3 the right way to do it, because that's where a lot of the  
4 losses are. And covers are -- all of you who have spas get  
5 a nice, thick sealable cover and you're good to go.

6           But this is common sense stuff. I mean you see  
7 it from the table that it's 10 x cost-effective, so there's  
8 a lot of leeway in there in terms of how the thing is used.  
9 It'll still be cost-effective, so it's a pretty solid, very  
10 solid analysis. And certainly, on the battery chargers is  
11 just a commonsense kind of cleanup.

12           So I fully support this. If there aren't any  
13 more comments I'll move the item.

14           COMMISSIONER HOCHSCHILD: Yeah, so I just wanted  
15 to congratulate Commissioner McAllister and your Appliance  
16 Efficiency team. I remain enormously impressed by and  
17 proud of the work. The data definitely falls in the  
18 category of important stuff that nobody knows is happening  
19 in the general public.

20           But this is -- it was interesting, when I started  
21 as a Commissioner, to learn that how much more energy we  
22 save through Title 20 Appliance work than through our Title  
23 24 Building Standards, because the turnover is so much  
24 faster.

25           And I know the joke in the Appliance Efficiency

1 Division for a long time has been, "You want to know where  
2 the next standard is going to be? Look where the cat  
3 sleeps, right? Which appliance is warm?" This may be an  
4 exception since cats don't like water, but I think it's an  
5 important one. And I just wanted to say congratulations to  
6 the team.

7 I did have a question though. What is the  
8 penalty for noncompliance now with the standard?

9 COMMISSIONER MCALLISTER: So actually, Lisa can  
10 answer that probably. I don't know, but that we do have  
11 enforcement authority under SB 454. I worked with  
12 Commissioner Douglas on that just extensively for several  
13 years. And the enforcement team, actually is up and at 'em  
14 and definitely paying attention to the marketplace and  
15 working with the manufacturers. And there's quite a bit of  
16 activity there.

17 And I think the -- I got a briefing from Legal on  
18 that, from Kirk actually, who mostly does that on the legal  
19 side. But they -- I think they have a really nice process  
20 set up where it's very collaborative. And they come to  
21 agreement to the manufacturers once they've sort of shown  
22 what the facts -- the fact pattern is.

23 So anyway Lisa, if you want to complement that?

24 MS. DECARLO: Sure, Lisa DeCarlo at Energy  
25 Commission Staff Counsel. The penalty for violation is

1 \$2,500 per violation. There are various ways to violate  
2 the standards, obviously if you do a failure to report or  
3 submit information to the database that's a violation per  
4 failure. If it's a noncompliance with the standard itself,  
5 it's a violation per units sold in California.

6 COMMISSIONER HOCHSCHILD: Great. Thank you.

7 I second the motion unless there's any other  
8 comments.

9 COMMISSIONER MCALLISTER: I want to say just one  
10 other thing about this though. In practice often, the  
11 reasonableness of the -- if there is a fine or penalty --  
12 the reasonableness is absolutely where we wanted to come  
13 down. And I think up to now we have come up with a --  
14 we're not looking to put anybody out of business or make  
15 economic hardship for them. And that's explicit in the  
16 statute actually, and in our regulations. And so I think  
17 really we'd rather not have to enforce, we'd just rather  
18 have compliance. But that's why we have the enforcement  
19 authority is to make clear that if we need to we can.

20 MISS VACCARO: So Commissioner McAllister would  
21 you just for the record, since there was -- it wasn't clear  
22 that there was a full motion out there; whoever's going to  
23 make the motion if we get a motion and a second?

24 COMMISSIONER MCALLISTER: Okay. So, but we need  
25 to do both of the CEQA Negative Declaration and the -- or

1 no, just the item?

2 MISS VACCARO: You need only move the item.

3 COMMISSIONER MCALLISTER: Okay.

4 So this is Item 3, so I'll move Item 3.

5 COMMISSIONER HOCHSCHILD: Second.

6 CHAIRMAN WEISENMILLER: All those in favor?

7 (Ayes.)

8 CHAIRMAN WEISENMILLER: This item passes 5-0.

9 Thank you.

10 Let's go on to Item 4.

11 MS. BIRD: Good morning, Commissioners. I am  
12 Heather Bird of the Energy Research and Development  
13 Division. Today I am providing an overview of the 2017  
14 EPIC Annual Report. The Staff Report was submitted to the  
15 CPUC at the end of February. And if approved at today's  
16 Business Meeting, the Commission Report will be submitted  
17 to the Legislature at the end of April. Next slide,  
18 please.

19 The report provides an overview of programmatic  
20 research areas, accomplishments, project status, and  
21 features five key themes that have emerged within the EPIC  
22 Portfolio. I will cover the themes in the next five  
23 slides, and then will follow with a description of some  
24 program highlights. Next slide.

25 Energy and Environmental Economics, Incorporated

1 is developing a long-term energy scenarios to inform policy  
2 makers about critical technology innovations needed to  
3 reduce the cost of meeting the state's 2030 and 2050  
4 climate and environmental goals. And inform long-term  
5 procurement and integrated resource planning efforts at the  
6 CPUC to address some of the challenges to the energy system  
7 caused by climate change.

8           Key findings indicate that renewable power  
9 generation needs to be about 70 percent by 2030. The  
10 electricity system needs to consist of 85 to 95 percent  
11 zero-carbon electricity by 2050. Diversity in renewable  
12 energy systems and their integration will be critical to  
13 reducing the cost of a low-carbon grid. Six million zero-  
14 emission vehicles need to be on the road by 2030 and  
15 advances in energy-efficient are more important than ever  
16 in achieving substantial reductions by 2030. Next slide  
17 please.

18           Research on smart inverters, energy storage and  
19 the commercialization of microgrids are showing how these  
20 technologies can be used in conjunction with renewables to  
21 transform the grid to accept more renewable generation and  
22 distributed energy resources to increase grid resiliency.

23           Blue Lake Rancheria in Humboldt County is  
24 developing best practices for microgrid design and  
25 operation at critical facilities. The installed microgrid

1 includes on-site renewable generation of 420 kilowatts of  
2 solar PV, coupled with 500 kilowatts of energy storage to  
3 provide services as a Red Cross safety shelter, and reduce  
4 grid demand during non-emergency operations. This project  
5 has resulted in 30 percent reduction in annual energy  
6 costs, which is estimated to be about \$300,000.

7           The microgrid was put to the test last fall when  
8 a grid outage occurred due to a local wildfire. The  
9 microgrid detected the outage and islanded, keeping the  
10 microgrid facilities from experiencing a blackout. When  
11 grid power was restored the microgrid reconnected to the  
12 grid automatically and transparently. Next slide.

13           Providing customers with energy information and  
14 tools will empower them to better manage their energy  
15 consumption. For example, OhmConnect is using a social  
16 media platform and gamification strategy to encourage real-  
17 time response to demand response signals from residential  
18 customers.

19           Participation in OhmConnect's program has grown  
20 from 15,000 when the grant was awarded in 2015 to about  
21 300,000, with participants in all three IOU service  
22 territories for net -- oh, sorry, -- high participation.  
23 There has been high participation in homes in disadvantaged  
24 communities. Preliminary results show 8 to 35 percent  
25 lower energy consumption for program participants. Next



1 slide.

2           The Energy Innovation Ecosystem connects clean  
3 energy entrepreneurs with the training, resources and  
4 expertise needed to turn advanced clean energy technologies  
5 and concepts into products that can be deployed for the  
6 benefit of companies, consumers and utilities. This slide  
7 shows the programs in the ecosystem and where they fall in  
8 the innovation pipeline.

9           Zooming in to CalSEED for a moment, CalSEED  
10 provides small grants to test the feasibility of early-  
11 stage concepts -- energy concepts. In 2017, CalSEED  
12 received 331 applicants in a single round of funding; 28  
13 were selected for an award. One awardee, Glint Photonics,  
14 is developing an LED technology that can generate a wide  
15 variety of spot, flood and asymmetrical light patterns to  
16 properly illuminate areas of differing dimensions and  
17 characteristics. This technology enables significant  
18 energy savings by placing light only where it's needed,  
19 which reduces the total energy used for illumination. Next  
20 slide.

21           The EPIC program prioritized disadvantaged  
22 communities in four of its 2017 solicitations by setting  
23 aside specific amounts for projects in these areas or  
24 providing bonus points for demonstration or test sites in,  
25 and benefitting disadvantaged communities. A project with

1 the Center for Sustainable Energy is training apprentices  
2 from disadvantaged communities on automated demand-response  
3 communications.

4 To date, a total of 97 demonstration sites are  
5 located in disadvantaged communities and 32 percent of  
6 total EPIC encumbrances for technology demonstration and  
7 deployment projects are located in disadvantaged  
8 communities.

9 For 2018 -- I'm sorry, for 2017, there was no  
10 minimum requirement for funds spent in disadvantaged  
11 communities. There is now a requirement from AB 523. And  
12 the Energy Commission is planning a workshop on May 8th to  
13 receive stakeholder input on the implementation. Next  
14 slide.

15 In 2017, comprehensive statewide outreach was  
16 conducted to ensure that a diverse range of potential  
17 applicants knew about and understood how to participate in  
18 EPIC program activities, especially solicitations. The  
19 plan included targeting particular geographic regions for  
20 specific program activities to better benefit electricity  
21 ratepayers. Outreach activities included use of an  
22 advanced, or enhanced, LinkedIn group page to provide  
23 additional networking opportunities for potential  
24 applicants.

25 EPIC materials were distributed at more than 35

1 key expositions, conferences and webinars. And staff  
2 hosted public workshops throughout the state to discuss and  
3 promote the incorporation of community-focused equity  
4 measures in EPIC research initiatives. This slide shows  
5 the distribution of project locations between 2017 and  
6 versus 2016, where there's a better balance as a result of  
7 these efforts. Next slide.

8           Evergreen Economics conducted an evaluation of  
9 the EPIC program on behalf of the CPUC. Their final  
10 report, released in September 2017, found that the Energy  
11 Commission's practices are in line with research  
12 organization best practices for the industry. It found  
13 that the Commission's program has "strong and transparent  
14 links to state policy," and that it "plans transparently,  
15 and engages external stakeholders." The evaluators lauded  
16 the Energy Commission for its due diligence to identify  
17 projects where EPIC funding is most impactful. Next slide.

18           In 2017, \$134 million in EPIC funds were  
19 encumbered and a little over \$530 million have been  
20 encumbered through the end of 2017.

21           In 2017, 11 competitive solicitations were  
22 released totaling about \$150 million and 7 projects were  
23 completed. Completed project topics included improving wind  
24 power forecasting; examining energy use and efficiency  
25 across socio-economic and ethnic groups; designing a high

1 temperature, hybrid, compressed air energy storage system;  
2 developing low- carbon energy scenarios for a decarbonized  
3 power grid; developing a public health research roadmap;  
4 and evaluating the technical and economic feasibility of  
5 electricity pump storage systems. Next slide.

6 A number of public workshops were held to respond  
7 to questions and comments regarding solicitations. The  
8 EPIC 2018 to 2020 Investment Plan and various project  
9 topics that fed into investment plan development such as  
10 distributed energy resources, climate science and funding  
11 equity. In each workshop, public comments were solicited  
12 both at the workshop and via an email and through an  
13 established docket to set up and receive comments. Next  
14 slide.

15 In 2017, Energy Commission staff prepared and  
16 submitted the EPIC Proposed 2018 to 2020 Triennial  
17 Investment Plan to the CPUC. The approval process followed  
18 a rigorous stakeholder input process at the Energy  
19 Commission and CPUC.

20 Additionally, three public workshops were held  
21 jointly with all EPIC administrators to provide a program  
22 overview and solicit public comment on each of the  
23 administrators' draft Investment Plans. After an  
24 additional public comment period, the Energy Commission  
25 submitted its application for approval in May of 2017. The

1 CPUC officially approved the EPIC Investment Plan on  
2 January 11, 2018. Next slide.

3 This is a list of key dates related to this  
4 report. The staff report was sent to the CPUC on February  
5 28th. Today, staff is presenting an overview of the Annual  
6 Report and requesting your approval. If approved today the  
7 final Commission Report will be submitted to the  
8 Legislature at the end of April with copies to the Natural  
9 Resources Agency and the CPUC. Next slide.

10 That concludes my presentation. Staff is happy  
11 to answer any questions you have at this time.

12 CHAIRMAN WEISENMILLER: Thank you.

13 MS. BIRD: Thank you.

14 CHAIRMAN WEISENMILLER: Let's start with are  
15 there any public comments in the room or on the line?

16 (No audible response.)

17 CHAIRMAN WEISENMILLER: Okay, then transitioning  
18 to the Commissioners then.

19 I think the basic message I want to give people,  
20 and I think certainly the report and the presentation is  
21 fairly good to lay it out, is that this program has really  
22 been converted into a real home run. And we have done  
23 that. You can tell we have had very public process in the  
24 development of the Investment Plan. And the Investment  
25 Plan gives us a structure to set our priorities. But

1 again, if you think back to slide 11, it's been very public  
2 to get those suggestions.

3 In addition, we have a very public process once  
4 projects are sort of adopted, where we have a Technical  
5 Advisory Committee; we estimate that we have thousands of  
6 technical advisors. Each project tends to have about five  
7 technical advisors. So again, at being in best in class,  
8 we went through a very detailed audit at the CPUC of every  
9 single project we've done. And again came out of that with  
10 flying colors.

11 But in a way it's not just the process, it's the  
12 results. And we've really -- we focused it. The reality  
13 is the old program generated a lot of reports. Frankly, a  
14 lot of them didn't make it online until Laurie came in and  
15 we just got them online, but I mean it didn't get --  
16 anyway, in terms of results, while this is very focused at  
17 results. It was very focused at making sure that all  
18 Californians can benefit from this.

19 So we have made very strong commitments on  
20 disadvantaged communities, we have exceeded those  
21 commitments. And certainly, we've got legislative  
22 ratification of that approach.

23 We have also really have tried to focus on the  
24 innovation ecosystem to again make sure that the studies  
25 basically roll out. I think that the nice part about the

1 current program is it very well integrated with the policy  
2 needs of the state. I'll just point out when San Bruno  
3 happened, that weekend I talked to Peevey about basically  
4 putting up a safety element in this program for gas  
5 pipelines.

6 With the fires, it's certainly one of the --  
7 Picker is pretty clear that he's looking for a safety  
8 element on the fires. Although frankly from the fourth --  
9 Third Climate Assessment is pretty clear that the fires  
10 were going to become a big issue. But we're now making the  
11 transitions from sort of academic studies to how do we,  
12 again help people on the ground? Certainly, the microgrids  
13 are a tangible example of that and one we've just -- she  
14 talked about earlier.

15 So again I guess the basic message is this is a  
16 program certainly we could be proud of. And I think in  
17 terms of getting the message out to the Legislature and the  
18 public that we really -- and certainly the PUC understands  
19 that we've really made sure the money we have gotten is  
20 effectively spent and managed.

21 So again, thanks.

22 COMMISSIONER SCOTT: Can I add my comment here?

23 CHAIRMAN WEISENMILLER: Sure. Asking everyone to  
24 line up.

25 COMMISSIONER SCOTT: Yeah. I just am always

1 impressed by the breadth and the depth of the projects that  
2 the EPIC team has put together. The level of creativity  
3 and innovation I think really is unmatched. And so it's --  
4 this is a fantastic program.

5 One of the other things I think is real exciting  
6 about the EPIC Program is that there are many projects --  
7 or from previous iterations, maybe, of the EPIC Program --  
8 where they have gone from R&D through EPIC into the  
9 transportation-related projects into the ARFVTP, and are  
10 funded as pre-commercial, getting into the commercial-space  
11 projects.

12 So to your point about these research questions  
13 being in a space where they have the potential to be  
14 meaningful and impactful, it goes from research to pre-  
15 commercial to out into the market. And that's just the  
16 reason we're doing all of this, and so it really is very  
17 exciting.

18 So I'm strongly in support of this next plan.

19 COMMISSIONER MCALLISTER: Yeah, so I totally  
20 agree with Commissioner Scott. And in the Efficiency and  
21 Buildings and the realms that I pay attention to, largely  
22 there are innumerable examples over the years of research  
23 that's been funded by PIER and now EPIC. And has made its  
24 way into the marketplace and eventually into standards or  
25 that -- more complex questions that are technically heavy

47



1 or there are systems analysis that are a little complex. I  
2 mean, those kinds of questions really need these funds to  
3 shed light on them, so we can use them for policy and that  
4 happens.

5 And so I think that, the point that the Chair  
6 made about the ecosystem, the innovation ecosystem, is  
7 absolutely right on. Like we're intentional about that and  
8 that's the way it should be.

9 And I really appreciate the staff coming and  
10 visiting me routinely, regularly and we spitball ideas.  
11 They really want to know what's on the radar and what our  
12 pain points are when we're trying to work through the next  
13 iteration of standards or whatever it is. And then lo and  
14 behold the next year and the next Investment Plan the topic  
15 turns up and there's a group of research projects that are  
16 going to shed light on it. And then that produces results  
17 and it's a really virtuous cycle.

18 So I think especially now when there's  
19 uncertainty about other funding sources and California has  
20 a very clear commitment to this, going forward -- and even  
21 possibly expanding it in certain areas and certainly,  
22 transportation's a focus --going forward it really puts us  
23 in a good light. And the fact that we have an incredible  
24 brand and that you have -- that Laurie and the team and you  
25 have built it up to be clearly sort of world-class is great

1 for the state and really great for our industries and what  
2 we're trying to do.

3 So thanks for that. I obviously strongly  
4 support.

5 COMMISSIONER DOUGLAS: Yeah. I'll just add that  
6 I have also seen a lot of connections between the work that  
7 I do and EPIC-funded projects and PIER-funded projects  
8 before that. And it's been extremely helpful to bring in  
9 the EPIC staff and talk about their research and how it  
10 informs things that we're currently thinking about and  
11 doing. And also how their next rounds and iterations can  
12 continue to help keep pushing the envelope.

13 So I'm happy to see this report and very  
14 supportive of the program.

15 COMMISSIONER HOCHSCHILD: Yeah. So I too really  
16 want to thank and commend the Chair for just outstanding  
17 stewardship of what I consider our crown jewel on the  
18 program. And I don't mean to be Captain Obvious here, but  
19 obviously when you have the Whitehouse proposing 78 percent  
20 cuts in clean energy, R&D having this program be really  
21 well run, is essential.

22 I particularly want to thank Erik Stokes, who's  
23 in the back here who has joined me at a number of events  
24 and had to think quickly on his feet when I've asked tough  
25 questions with stakeholders and has been fantastic.

1           And I do think one of the things we need to  
2 continue to work on is getting folks who are not the usual  
3 suspects into the program and to know about the program and  
4 to apply. And all of us have to just amplify that. It is  
5 amazing to me how many talented folks I come across who  
6 hadn't applied and have something that's actually eligible.  
7 And so I think that's got to be a continued area of intense  
8 focus and outreach to include.

9           But I am just so pleased with this program. I  
10 just want to say you guys are executing very, very  
11 successfully from my perspective, so keep it up.

12           MS. BIRD: Thank you.

13           COMMISSIONER MCALLISTER: All right, I'll move  
14 the item.

15           COMMISSIONER HOCHSCHILD: Second.

16           CHAIRMAN WEISENMILLER: All those in favor?

17           (Ayes.)

18           CHAIRMAN WEISENMILLER: It's been adopted 5-0.  
19 Thank you.

20           MS. BIRD: Thank you.

21           CHAIRMAN WEISENMILLER: Let's go on to Item 6 --  
22 5, excuse me. Yeah. Thanks for that look, Heather.

23           MS. RAITT: All right. Good morning I am Heather  
24 Raitt, the Program Manager for the 2018 Integrated Energy  
25 Policy Report, or the IEPR, for short. Staff is asking for

1 the Commission's approval of an order instituting  
2 informational proceeding to gather and assess information  
3 needed for the 2018 IEPR Update.

4 The Commission is required to prepare an IEPR  
5 every two years, supervise an overview of major energy  
6 issues and trends facing California, with an update in the  
7 intervening years. And Commissioner Hochschild is the Lead  
8 for the report this year. He issued the Scoping Order for  
9 the 2018 IEPR Update on March 20th, 2018, identifying the  
10 topics and general schedule for this proceeding.

11 The 2018 IEPR Update will be in two volumes this  
12 year on two different timelines. The first will be a  
13 short, high-level summary of the innovative energy policies  
14 implemented in recent years, and California's leadership in  
15 building a clean energy future. It's scheduled for  
16 adoption in August 2018.

17 The second volume will provide a more detailed  
18 follow-up of several energy issues examined in the 2017  
19 IEPR and will include new analytical work. It is scheduled  
20 for adoption in February 2019.

21 So adoption of this order will allow the  
22 Commission to collect information that is needed to compile  
23 the 2018 IEPR Update, but is not identified in the  
24 Commission's Data Collection Regulations.

25 So thank you for your consideration of this

1 order.

2 COMMISSIONER HOCHSCHILD: Yeah, if I could just  
3 add a little bit. First of all thank you, Heather for you  
4 and your team's hard work, along with my Adviser Terra  
5 Weeks who is here.

6 Just I want to speak for a minute just about  
7 Volume I of the IEPR, so just to be clear what this is and  
8 what this is not. This is not a normal IEPR. This is an  
9 effort to really reach a broader audience and have it be in  
10 a really readable format: lots of charts and graphs and  
11 pictures telling for a broader lay audience the clean  
12 energy stories. There is no new information at all in  
13 Volume I of the IEPR.

14 And we are not making any forward-looking  
15 projections or goals. We are simply stating what has  
16 already been decided on and then telling writ-large the  
17 story of what's happened across all the sectors that we  
18 work in beyond just Energy Commission programs, by the way,  
19 and including things like High-Speed Rail and so on.

20 I really want to thank Commissioner Douglas, who  
21 basically gave what has now become the template for this.  
22 It was just a sort of a 20-something-page document that she  
23 did on Salton Sea in an earlier life and it's very, very  
24 readable. That's what we're basing on. So you will get,  
25 if all goes well, by the end of the day today, the rough

1 draft of this. And I really want to invite your feedback  
2 and comments on it. Keep in mind that it's 24 pages and  
3 actually needs to stay 24 pages. So if you have things you  
4 want to add look at what you need to cut. That's my  
5 request.

6           And it's just based broadly on the goal. We're  
7 doing this on an accelerated timeline to get it done by the  
8 time of the -- Volume I done by the time of the September  
9 Climate Summit. The Governor's Office has provided some  
10 input and has helped shape the basic topics, but it's  
11 across all of our efficiency, clean transportation,  
12 disadvantaged communities, renewables, innovation, etcetera  
13 and about our climate goals.

14           So we're also -- I just want to acknowledge  
15 Bailey in our Media Office, who's been helping with the  
16 graphics has been terrific.

17           So you're going to get two documents: one is the  
18 text and the other is the layout. And there's text in that  
19 that's in Latin, but that's just a placeholder. We thought  
20 it was appropriate though, given how much Latin we're going  
21 to use in this, and so we don't have the text in the  
22 graphics, but you'll actually see both. And we hope to get  
23 that to you by the end of the day.

24           So unless there's further comments I would move -  
25 - do you need me to move this or it's just an update.

1 CHAIRMAN WEISENMILLER: No, it's really an item.

2 COMMISSIONER HOCHSCHILD: Oh, it is? Okay. Then  
3 I'll move the item. Unless -- oh, I'm sorry. Were there  
4 other comments?

5 CHAIRMAN WEISENMILLER: Yeah, let's check.

6 Yeah. Any comment, public comment? Anyone in  
7 the room? Anyone on the phone?

8 (No audible response.)

9 COMMISSIONER HOCHSCHILD: Okay, move the item?

10 CHAIRMAN WEISENMILLER: Anyone else?

11 (No audible response.)

12 COMMISSIONER DOUGLAS: Second.

13 CHAIRMAN WEISENMILLER: Okay. All in favor?

14 (Ayes.)

15 CHAIRMAN WEISENMILLER: This passes 5-0. Thanks.

16 (Off mic colloquy.)

17 CHAIRMAN WEISENMILLER: Let's go to Item 6 now.

18 MR. MICHEL: Good morning Chair and

19 Commissioners, my name is David Michel of the local  
20 Assistance and Finance Office within the Efficiency  
21 Division.

22 Before I start my main presentation, for the  
23 record I want to point out three errors in the agenda. The  
24 first error in the correct number of the loan is 006-17-  
25 ECD, not 001-17-ECA. The second error I want to correct is

54

1 the savings to the city over 17-year useful life equivalent  
2 is approximately \$7,658,279 in utility costs, not \$72,000.  
3 The third correction, the total project costs is estimated  
4 to be \$5,022,458, not \$7,700,000.

5 Now, with that we are requesting approval of an  
6 Energy Conservation Assistant Act, also known as "ECAA,"  
7 loan to the City of Tulare. The City submitted an  
8 application for a \$3.0 million loan to install a single-  
9 axis ground-mounted photovoltaic system totaling 2.4  
10 megawatts at DC.

11 Over the useful life of the equipment of 17  
12 years, this project will save approximately 82,223 megawatt  
13 hours of grid electricity and save the City approximately  
14 \$7.6 million in utility costs. The total project cost is  
15 estimated to be just over \$5 million.

16 Energy Commission staff has determined that this  
17 loan is technically sound, cost-effective, and based on the  
18 loan amount the simple payback is approximately 6.7 years  
19 for the loan, well within the requirements under the ECAA  
20 Loan Program.

21 We respectfully request your approval of this  
22 item for the City of Tulare. I am prepared to answer your  
23 questions. Thank you.

24 CHAIRMAN WEISENMILLER: Thank you.

25 Any comments from anyone in the room? How about



1 on the line?

2 (No audible response.)

3 CHAIRMAN WEISENMILLER: Okay. Commissioners?

4 COMMISSIONER MCALLISTER: Yeah, thanks Dave. So  
5 I got a briefing about this project and sort of the whole -  
6 - at a previous Business Meeting I just kind of asked about  
7 the whole portfolio and got a really nice briefing from  
8 Dave and his team on that and sort of some of the cost  
9 drivers underlining that. It was pretty interesting  
10 actually, the whole portfolio and what that looks like.

11 But this is -- I mean, if you do the math this is  
12 an incredibly low number in terms of the cost. It's like  
13 it's just over \$2.00 a watt, so that seems like a great  
14 deal, large system. And glad to see that it's single-  
15 access, so with those corrections that makes it a little  
16 bit clearer.

17 And I will move the item if nobody else has any  
18 comments.

19 COMMISSIONER HOCHSCHILD: Second.

20 CHAIRMAN WEISENMILLER: All those in favor?

21 (Ayes.)

22 CHAIRMAN WEISENMILLER: This item passes 5-0.

23 Thank you.

24 MR. MICHEL: Thanks.

25 CHAIRMAN WEISENMILLER: Let's go on to Item 7.

1 MS. KHALSA: Good morning Commissioners. My name  
2 is Akasha Kaur Khalsa of the Fuels and Transportation  
3 Division.

4 We request the adoption of CEQA findings and  
5 approval of proposed Agreement ARV-17-008 with California  
6 Bioenergy LLC. This is a Community-Scale Advanced Biofuels  
7 Production Facility Project, with a proposed award by the  
8 Alternative and Renewable Fuels and Vehicles Technology  
9 Program, for a \$3.05 million grant agreement to design,  
10 build and operate a centralized biomethane upgrading  
11 facility expected to annually reduce 22,000 metric tons of  
12 greenhouse gas emissions.

13 Captured dairy methane will be converted to  
14 500,000 diesel gallon equivalents of renewable natural gas  
15 per year, a very low-carbon transportation fuel. This  
16 especially meets SB 1383 goals to reduce short-lived  
17 climate pollutants.

18 Although the proposed technology is not new, this  
19 project is in a new aggregated structure that harnesses  
20 economies of scale by banding together 15 large, modern  
21 dairies southwest of Bakersfield, the Kern Dairy Cluster.  
22 Each dairy plans to have its own anaerobic digester and a  
23 long-term supply agreement to CalBio. This approach  
24 overcomes significant market barriers for cleaning biogas.  
25 It helps improve local air quality in disadvantaged

1 communities compared to untreated dairy manure.

2 Financial success will also be supported by  
3 outside grants and incentives. The Kern Dairy Cluster  
4 Biomethane Upgrade Facility project leverages Commission  
5 funds. In recent years, three anaerobic digesters were  
6 partially funded by the Commission's EPIC Program to  
7 produce electricity. Grants for anaerobic digesters have  
8 been awarded by the California Department of Food and  
9 Agriculture. We hope for a California Public Utilities  
10 Commission grant for gas pipeline injection. Incentives  
11 will flow from the federal Renewable Fuel Standard, RINs,  
12 and California Air Resources Board's Low Carbon Fuel  
13 Standard, LCFS credits.

14 I am asking today for two actions for the  
15 proposed project. The first is to adopt CEQA findings that  
16 the proposed project will have no new significant or  
17 substantially more severe environmental impacts beyond  
18 those already considered and mitigated. The second action  
19 is to approve Grant Agreement ARV-17-008 with California  
20 Bioenergy LLC.

21 I would be happy to answer any questions.

22 CHAIRMAN WEISENMILLER: Thank you.

23 First, is there any comments from anyone in the  
24 room? How about on the phone?

25 (No audible response.)

1 CHAIRMAN WEISENMILLER: Okay. Commissioners?

2 COMMISSIONER SCOTT: I want to say thanks to  
3 Akasha, for her great work on this project and an  
4 informative presentation. So I feel like my remarks are  
5 actually a little bit duplicative of what she's just said  
6 to you, but I want to highlight it, as well.

7 The benefits of the project that she pointed out  
8 here are the greenhouse gas reductions and the air quality  
9 improvements; the production of very low carbon  
10 transportation fuel; the consistency we have with the SB  
11 1383 goals; short-lived climate pollutants; and the  
12 leveraging efforts on other programs.

13 And in addition to that, the program also  
14 supports the California Sustainable Freight Action Plan,  
15 which identifies biomethane for freight in the Central  
16 Valley as a strategic pilot opportunity.

17 So I just wanted to re-highlight those, because I  
18 think it's important. And I think this project is a win on  
19 many fronts. And if there are no comments I will move  
20 approval of Item 7.

21 COMMISSIONER HOCHSCHILD: Second.

22 CHAIRMAN WEISENMILLER: All those in favor?

23 (Ayes.)

24 CHAIRMAN WEISENMILLER: This item passes 5-0.

25 Thank you.

1           Let's go to Item Number 8.

2           MR. CHEN: Good morning, Chair and Commissioners.  
3 My name is Peter Chen. I'm with the Energy Research and  
4 Development Division. We are requesting approval today for  
5 two transportation research projects recommended for award  
6 under a natural gas research program solicitation. The  
7 projects will further optimize heavy-duty hybrid-electric  
8 vehicles to effectively combine the benefits of low-  
9 emission natural gas engines and electric drivetrains  
10 without compromising range, emissions or performance.

11           Both projects will develop and demonstrate  
12 natural gas heavy-duty hybrid-electric port drayage trucks.  
13 But they'll be taking independent approaches to advancing  
14 vehicle design architectures and optimization strategies.

15           So in the first project with Transportation  
16 Power, Inc., the hybrid truck would be using a high-energy  
17 density battery pack to support 70 zero emission miles.  
18 This covers a majority of urban short-haul routes. A  
19 natural gas engine coupled with a generator will extend the  
20 operating range beyond the limitations of the battery pack  
21 while keeping NOx emissions low.

22           The project will also test an integrated electric  
23 axle system that will minimize weight, cost and complexity.

24           The truck will be demonstrated on an intensive  
25 drayage route from the Port of Los Angeles to an IKEA

1 distribution center in Lebec just north of the Grapevine.

2           In the second project with the Institute of Gas  
3 Technology, the hybrid truck will use a downsized, near  
4 zero emission natural gas engine in a parallel  
5 configuration with an electric motor. The engine will  
6 operate at high efficiency while allowing the electric  
7 motor to supplement power, assist in acceleration, and  
8 recover energy from regenerative braking. An advanced  
9 vehicle level control system will be developed to  
10 effectively manage the complex interactions between the  
11 engine, after-treatment, battery storage and hybrid drive  
12 components.

13           If successful, these projects will lead to the  
14 adoption of more near zero and zero emission capable  
15 vehicles to improve air quality and reduce greenhouse-gas  
16 emissions from the heavy-duty transportation sector.

17           We request approval of these items. And I'm  
18 happy to answer any questions at this time. I believe Jim  
19 Burns, from TransPower is on the line to provide a few  
20 comments on his projects.

21           CHAIRMAN WEISENMILLER: Thank you. Let's start  
22 with is there anyone in the room with any comments?

23           (No audible response.)

24           CHAIRMAN WEISENMILLER: Now let's go to the line.  
25 Mr. Burns?

1           MR. BURNS: I have a short page of scripted  
2 remarks. So hello, this is James Burns, Co-Founder of  
3 TransPower, a small business headquartered at Escondido,  
4 California. I'd like to take this opportunity on behalf of  
5 the TransPower team to thank the California Energy  
6 Commission and its staff members for their ongoing  
7 commitment to energy efficiency and clean heavy-duty  
8 transportation.

9           Through eight years of work, initially and  
10 largely supported by the Commission and other public  
11 partners, TransPower has become a pioneering catalyst in  
12 the creation of the burgeoning heavy-duty electric trucking  
13 market and related grid-connected battery energy storage  
14 and charging technologies.

15           This newest grant funding will help TransPower in  
16 conjunction with our international OEM partners, Meritor  
17 and the Peterbilt arm of PACCAR, to bring the best new EV  
18 and hybrid electric trucking technology in a transparent  
19 public demonstration in the state.

20           This work will support numerous skilled jobs in  
21 the state and help provide the technology validation that  
22 underlies informed policy formulation.

23           In closing, TransPower is proud of our work with  
24 the Commission over the better part of a decade. And I  
25 thank you for this next opportunity to recommit ourselves

1 to the mutual goals of energy efficiency and environmental  
2 and social justice for the citizens of California.

3 CHAIRMAN WEISENMILLER: Thank you. Thank you.

4 Anyone else on the line?

5 (No audible response.)

6 CHAIRMAN WEISENMILLER: Then let's transition to  
7 Commissioners.

8 COMMISSIONER SCOTT: Well, I'm excited about this  
9 project. I got a terrific briefing from Peter and team. I  
10 learned the difference between series hybrid and parallel  
11 hybrids during that, and also prismatic cells, so always  
12 learn something new.

13 I think it's really exciting to have, especially  
14 in this sort of medium duty/heavy duty space, to have  
15 additional options that get us towards that zero emission  
16 vehicle, so I'm in strong support of these projects.

17 And I will move approval of Item 8.

18 COMMISSIONER DOUGLAS: Second.

19 CHAIRMAN WEISENMILLER: All those in favor?

20 (Ayes.)

21 CHAIRMAN WEISENMILLER: Item 8 passes 5-0. Thank  
22 you.

23 MR. CHEN: You're welcome.

24 CHAIRMAN WEISENMILLER: Let's go on to Item 9.

25 MS. SNYDER: Good morning Chair and the



1 Commissioners. I'm Katharina Snyder with the Energy  
2 Research and Development Division. And today we seek your  
3 approval for five proposed grant agreements from the  
4 competitive natural gas solicitation.

5           The proposed agreement with UC Irvine will  
6 develop a scientific method that could help with the  
7 identification of the origin of natural gas imported to  
8 California and understand associated greenhouse gas  
9 emissions. The research team will obtain natural gas  
10 samples from different basins. And with various carbon  
11 footprints using downwind sample collection technique and  
12 determine their chemical and isotopic composition.

13           The results will be captured in a publicly  
14 accessible database, which will include the chemical and  
15 isotopic fingerprints of natural gas samples.

16           The proposed agreement with UC Berkeley will  
17 enhance the features of the Cal-Adapt platform through  
18 integration of results from California's Fourth Climate  
19 Change Assessment, including land use, land cover and  
20 extreme precipitation projections. Adding new information  
21 and improving Cal-Adapt tools will allow natural gas  
22 stakeholders to extract datasets tailored to their specific  
23 needs.

24           The proposed agreement with Eagle Rock Analytics  
25 is another grant that will further develop the Cal-Adapt

1 platform. The project will focus on providing scientific  
2 expertise for both translation of highly technical requests  
3 for natural gas sector decision support into robust tools  
4 and for identification of datasets and cloud computing best  
5 practices that can support natural gas sector resilience.

6           The proposed agreement with Infraterra will  
7 leverage information from previous work funded by the  
8 Energy Commission and other agencies to develop a  
9 comprehensive GIS database that will include information  
10 about the conditions of Sacramento and San Joaquin and data  
11 levees and geophysical characteristics of natural gas  
12 infrastructure protected by these levees. The database  
13 will help to identify critical hot spots on levees, wherein  
14 cost-effective and non-invasive technologies for  
15 geophysical data acquisition will be deployed and tested by  
16 the research team.

17           Results from this project will close the  
18 knowledge gap crucial for development of fragility curves,  
19 but describe the failure of probability of the levees.

20           The proposed agreement with LBNL is a  
21 comprehensive field study that will identify cost-effective  
22 methods for continuous monitoring and early identification  
23 of methane leaks. More specifically, this study will target  
24 an area in the Southern San Joaquin Valley, which  
25 encompasses residential, commercial and industrial

1 facilities using natural gas and also includes some  
2 associated natural gas and oil fields.

3           The research team will use research-grade  
4 measurement systems and the innovative low-cost sensors and  
5 evaluate their effectiveness through controlled release  
6 tests of pipeline gas contributed by SoCalGas and PG&E.  
7 The research team then will develop low-cost strategies to  
8 scale methane monitoring and emission quantification  
9 framework used in the San Joaquin Valley to other regions  
10 in California.

11           One of the major subcontractors will also lead  
12 community engagement efforts to ensure that the study  
13 assesses the needs and the concerns of low-income and  
14 disadvantaged communities.

15           Staff recommends the approval for the proposed  
16 agreements. And I am happy to answer your questions.

17           CHAIRMAN WEISENMILLER: Thank you.

18           First, are there any comments from anyone in the  
19 room? How about on the line?

20           (No audible response.)

21           CHAIRMAN WEISENMILLER: Then as the Lead in this  
22 area, a few comments. One is that as you can tell these  
23 agreements are split between areas. One of them is sort of  
24 enhancing Cal-Adapt and just to remind people that Cal-  
25 Adapt is now being built into the OPR's regulations for

1 people to use on planning. So it's really important to  
2 keep updating and enhancing the science there. And  
3 updating and enhancing the usability for potential planners  
4 or building designers, so that's critical.

5           The other thing is that I think I've often said  
6 that for natural gas, one of the key issues is sort of  
7 leakage and safety. And so we're really trying to enhance  
8 the science in this area of first trying to do a better job  
9 of identifying where methane leakage is in California and  
10 at the same time, providing a better shot on the science of  
11 trying to understand the differences in gas production at  
12 various basins.

13           I mean, frankly, I'm not 100 percent convinced  
14 that there's going to be enough homogeneity saving in Kern  
15 River Gas versus El Paso Gas, that we'll be able to  
16 pinpoint stuff. But it's time to look at the science, look  
17 at the difference of the chemistry and the isotopes to see  
18 if in fact we could start getting a sense of learning how  
19 that varies in the fields. Certainly the production of the  
20 gas can result in different chemical characteristics.

21           So again, it's pretty clear you have this, but  
22 it's a question of how much scatter (phonetic) there are  
23 among the different basins or wells.

24           And then also talking about the sort of  
25 infrastructure questions, it's really important unlike --

1 we're in this weird situation, on the one hand a lot of the  
2 electrical infrastructure is above ground and we're running  
3 into fire issues. And a lot of the gas infrastructure is  
4 below ground, but in a state that's relatively seismically  
5 active and/or has subsidence as we pull water out -- has a  
6 different set of issues and can certainly affect leakage.

7 Certainly, these are great studies to enhance the  
8 science in these areas and to enhance the usability of Cal-  
9 Adapt.

10 COMMISSIONER DOUGLAS: And I agree with that.  
11 And I'm strongly supportive of all these projects. I'll  
12 move approval of this item.

13 COMMISSIONER MCALLISTER: I want to make one  
14 comment, actually, just to -- so I absolutely am supportive  
15 of these just based on what the Chair just said. But I  
16 also just want to point out that we in the Building  
17 Standards context or in the discussion we're having about  
18 electrification and sort of the climate beneficial  
19 electrification, for example, on fuel switching and sort of  
20 what that looks like actually it turns out that so much  
21 depends on a small percentage of leakage one way or the  
22 other in terms of the climate impact, because methane is  
23 such a powerful greenhouse gas. In part, a lot of the  
24 answers that we get about how much fuel switching actually  
25 improves the situation go back to the uncertainty -- is

1 largely due to the uncertainty around methane leakage. And  
2 so knowing these numbers is actually really important to  
3 figure out what the best policies are going forward.

4           Obviously, we need to invest in fixing leaks.  
5 But also it does actually impact the answer that we get  
6 when we're trying to decide okay, what's the exact path for  
7 in terms of the technologies we're going to promote? And  
8 quantifying the carbon intensity of the gas ecosystem  
9 versus the electric ecosystem and all that, so it's  
10 actually -- there are any number of reasons why this  
11 research is really important.

12           CHAIRMAN WEISENMILLER: Well, the research we've  
13 done so far indicate that there are some spots, which are  
14 very large leaks. And we're trying to identify those and  
15 fix those. I mean, you can just look at the satellite data  
16 over Kern County. And again, there are some areas that are  
17 relatively large. It isn't like say every dairy farm is a  
18 necessary huge leaker, but -- or every pipeline -- but  
19 trying to identify a production facility, we're trying to  
20 identify which one and fix it is a key issue too.

21           COMMISSIONER DOUGLAS: So I have a motion.

22           CHAIRMAN WEISENMILLER: Well, I think -- so you  
23 have to start the motion. You have to second it --

24           COMMISSIONER MCALLISTER: Okay, well I'll second  
25 it. Go ahead.

1 CHAIRMAN WEISENMILLER: -- before Kourtney  
2 corrects us.

3 COMMISSIONER DOUGLAS: I think I already moved  
4 the item.

5 COMMISSIONER MCALLISTER: Okay, I'll second it.

6 CHAIRMAN WEISENMILLER: All those in favor?

7 (Ayes.)

8 CHAIRMAN WEISENMILLER: So this item passes 5-0.  
9 Thank you.

10 MS. SNYDER: Thank you.

11 CHAIRMAN WEISENMILLER: Let's go on to Item 10.

12 MS. VACCARO: Commissioner Douglas, I think you  
13 might have a disclosure on this item?

14 COMMISSIONER DOUGLAS: Thank you. Thank you,  
15 Kourtney.

16 I have a disclosure on Item 10 and Item 12a as  
17 well, which is that I teach every other year a renewable  
18 energy law course at UC Davis King Hall. And while King  
19 Hall is not on any of these contracts in any way, UC Davis  
20 is a subcontractor at Item 10 and Item 12a. Thank you.

21 CHAIRMAN WEISENMILLER: Please go ahead.

22 MS. BIRD: Hi again, Heather Bird of the Energy  
23 Efficiency Research Office. Staff is seeking approval of  
24 an amendment and adoption of the CEQA finding for the  
25 replacement of three demonstration project sites. And

1 we're also requesting a one year, no-cost time extension.  
2 And there are no changes to the total amount of the budget.

3 In 2016 EPRI was granted funds to demonstrate  
4 construction of three zero-net energy communities,  
5 residential communities, with multiple builders in three  
6 California climate zones. This was through a competitive  
7 solicitation.

8 In 2017, staff clarified to EPRI that the use of  
9 EPIC funds for the projects made them public works  
10 projects, requiring the payment of prevailing wages on a  
11 broad scale across the construction. The builders could  
12 not commit to paying prevailing wages, citing impacts to  
13 the home prices. And a goal of the project is to produce  
14 these homes at near-market price. And also there were  
15 concerns about relations -- relationships with construction  
16 trades.

17 EPRI has identified and recruited three new  
18 housing communities that will pay prevailing wage and that  
19 fit into the project scope. The Fresno and Compton  
20 communities consist of multi-family housing units in  
21 disadvantaged communities. And the Belmont community  
22 consists of four single-family homes. CEQA verification is  
23 required for the Compton and Belmont sites, and the Fresno  
24 community is CEQA exempt, as urban infill.

25 The communities had previously planned to build



1 to 2016 Title 24 Standards. The Energy Commission funds  
2 will pay for advanced efficiency measures that will allow  
3 the buildings to achieve zero-net energy.

4 A goal of the project is also electrification,  
5 although there will be some limited amounts of natural gas  
6 used on two of the sites.

7 A one year no-cost time extension is needed to  
8 allow time for construction, which is going to begin as  
9 soon as this meeting is over. And so occupancy is expected  
10 to occur sometime early next year. And then twelve months  
11 of measurement and verification data must be collected.

12 The project will inform zero net energy  
13 development processes for single and multi-family housing,  
14 identify scalability barriers, and identify best practices  
15 for involving utilities in design and construction.

16 EPRI will conduct workshops to share early  
17 lessons learned and educate builders on zero net energy  
18 home construction prior to the implementation of the 2019  
19 Zero Net Energy Building Energy Efficiency Standards.

20 The work under the proposed projects presents no  
21 significant or substantially more severe environmental  
22 impacts beyond those considered.

23 Staff requests adoption of the CEQA findings and  
24 approval of this amendment. Ram Narayanamurthy of EPRI is  
25 present in the room and would like to briefly address the

1 Commissioners.

2 CHAIRMAN WEISENMILLER: Yes. Thank you. Please,  
3 why don't you come up and introduce yourself for the court  
4 reporter.

5 MR. NARAYANAMURTHY: I'M Ram Narayanamurthy of  
6 Electric Power Research Institute, EPRI.

7 So we just really wanted to thank the Commission  
8 staff: Heather, Virginia, Mikhail, in the effort that they  
9 have expended in being able to rework the project.

10 But what it does as I think as the state's goal  
11 posts are changing from zero net to zero carbon and zero  
12 emissions, we've been able to, I think, identify sites  
13 where we can do nearly all electric or all electric in more  
14 of those cases.

15 And I think some of the early work we have done  
16 as part of this effort shows that even today for single  
17 family, all-electric construction is about 35 percent,  
18 lower GHG just given the generation mix in Cal-ISO.

19 So we are really looking forward to demonstrating  
20 not just for the single family, but also the low-income,  
21 disadvantaged communities how we can do cost-effective,  
22 all-electric building construction, residential building  
23 construction.

24 So I wanted to thank you, thank the Commission  
25 again. And thank, also, our partners, both Pacific Gas and

1 Electric and SCE, Southern California Edison, for all the  
2 effort that they are expending as part of this work.

3           So we're looking forward to the results and  
4 hopefully we'll be able to come back in a few years with  
5 some data for the standards.

6           CHAIRMAN WEISENMILLER: Okay, thank you. You  
7 know, I'm going to see the shovel start moving, right?

8           Commissioner McAllister?

9           COMMISSIONER MCALLISTER: Well, this EPIC right?  
10 So yeah, anyway so thanks for that. I'm really excited  
11 about this project and definitely glad we've found the  
12 flexibility to be -- to let it go forward and find  
13 appropriate sub-sites.

14           And in particular I wanted to highlight -- so you  
15 mentioned the other move towards carbon and towards  
16 emissions. And I wanted to just to commend you and the  
17 team to really focus on the temporal aspects of how these -  
18 - the comportment of these buildings. And then as they  
19 move forward and actually interface with the grid and push  
20 and pull energy to and from, differentiate between the  
21 kilowatt hour that's going out in the middle of the day and  
22 the one that's coming back in the evening, right? Because  
23 they are different and so that's the focus on emissions  
24 that we're looking for and that's important, that  
25 distinction is important.

1           And that's what zero net energy doesn't get at,  
2 is that annual netting; it sort of dumbs out all kilowatt  
3 hours as to being the same, but they're not, right? So I  
4 think that's the flexibility issue and the sort of  
5 accounting that we need to do, going forward. And you're  
6 in a position to really shed some light on that. And so I  
7 think it could be super-valuable.

8           MR. NARAYANAMURTHY: So that's great. So yeah,  
9 part of what we'd like to do and what we are planning to do  
10 is put flexible loads, wattages (indiscernible) --

11           COURT REPORTER: Move closer to the mic, please?

12           MR. NARAYANAMURTHY: Right. What we are planning  
13 to do is actually have flexible loads as part of these  
14 building constructions, so we can actually evaluate how  
15 they provide balancing both on energy and emissions.

16           COMMISSIONER MCALLISTER: Yeah, for sure. Great.  
17 Thanks.

18           Okay, all right. So we're going to move? Okay,  
19 I'll move this item.

20           COMMISSIONER SCOTT: Second.

21           COMMISSIONER DOUGLAS: Second.

22           CHAIRMAN WEISENMILLER: All those in favor?

23           (Ayes.)

24           CHAIRMAN WEISENMILLER: This item passes 5-0.

25 Thank you.

1 MS. BIRD: Thank you.

2 CHAIRMAN WEISENMILLER: Let's go on to Item 11.

3 MS. SNYDER: Chair and the Commissioners, I'm  
4 Katharina Snyder with the Energy Research and Development  
5 Division. And today we seek your approval for three  
6 proposed grant agreements from the competitive EPIC  
7 solicitation.

8 The proposed agreement with LBNL will use input  
9 from the residents of the City of Fresno and develop a  
10 holistic plan that uses big data for prioritized  
11 deployments of clean technology options such as solar PV,  
12 energy storage, microgrids, energy efficiency upgrades and  
13 electric vehicles to achieve climate benefits and local air  
14 quality improvements. The study results will be extendable  
15 to other areas of the Central Valley, such as Bakersfield  
16 and Stockton.

17 The proposed agreement with UC Irvine will  
18 analyze big data such as monthly energy bills and available  
19 data about the characteristics of homes, buildings and  
20 socio-economic conditions; to develop urban energy  
21 scenarios for specified objectives such as lowest  
22 emissions, improved local power quality and maximum  
23 resiliency for the Oak View community in Southern  
24 California.

25 This project will result in a microgrid design

1 ready for implementation in the disadvantaged Oak View  
2 community, and the methodology will be replicable  
3 throughout the State.

4           The proposed agreement with UC Berkeley will  
5 analyze big data sets of remotely sensed images, such as  
6 agricultural lands, road networks and the built  
7 environment, as well as GIS layers, such energy  
8 consumptions, distribution networks, new build  
9 constructions, reserve areas, and planning documents to  
10 identify critical hot spots across the Southern San Joaquin  
11 Valley with high potential for retrofits and energy system  
12 synergies.

13           Outreach and engagement with disadvantaged  
14 communities through community stakeholder sessions will  
15 help to identify local priorities and to maximize the  
16 project's benefits to these communities.

17           Staff recommends the approval for the proposed  
18 agreements. And I am happy to answer your questions.

19           CHAIRMAN WEISENMILLER: Thank you.

20           Is there any comments from anyone in the room or  
21 the telephone?

22           (No audible response.)

23           CHAIRMAN WEISENMILLER: Then again, I'll at least  
24 start out for context. Again, I think these are three  
25 strong projects. The interesting -- I'm going to flag the

1 two interesting things from my perspective. One of them is  
2 you remember from the last business meeting we had a number  
3 of microgrids on the agenda? This is another microgrid.  
4 We have a number coming up between now and the end of the  
5 year. We're making a very serious effort to really move  
6 that toward standardization, so we can get the cost down.

7 But also, that's one of our major tools for  
8 resilience frankly, are microgrids, so getting that  
9 understanding.

10 And we've gone through with very specific  
11 categories. This one is a disadvantaged community. So  
12 again we're trying to really make sure everyone benefits  
13 from that.

14 The other two, again one of the things we're  
15 really doing is forcing people to work closely with the  
16 communities to again get out of the lab, try to really go  
17 in to work with the communities and apply tools like big  
18 data to really help change the energy usage in those  
19 communities.

20 So again I think these are all -- all three are  
21 very exciting next steps, and certainly encourage people to  
22 support those.

23 COMMISSIONER MCALLISTER: I'll move Item 11.

24 COMMISSIONER DOUGLAS: Second.

25 CHAIRMAN WEISENMILLER: All those in favor?

1 (Ayes.)

2 CHAIRMAN WEISENMILLER: This item also passes 5-  
3 0. Thank you.

4 MS. SNYDER: Thank you.

5 CHAIRMAN WEISENMILLER: Let's go on to Item 12.

6 MR. HUNGERFORD: Good morning Chair and  
7 Commissioners, my name is David Hungerford and I'm with the  
8 --

9 COURT REPORTER: Your microphone needs to be on.

10 MR. HUNGERFORD: Yes. My name is David  
11 Hungerford and I'm with the Energy Efficiency Research  
12 Office in the Research & Development Division. The project  
13 we're recommending for your approval today resulted from a  
14 solicitation intended to increase energy efficiency  
15 retrofits in existing buildings through a combination of  
16 technology advancements, strategy development and  
17 demonstrations.

18 We are recommending an agreement with Sonoma  
19 Clean Power Authority, a community-choice aggregator  
20 serving Sonoma and Mendocino Counties.

21 The recipient will evaluate and quantify the  
22 benefits of emerging or advanced technologies, such as  
23 grid-connected heat pump water heaters, radiant heating and  
24 cooling systems, and residential attic insulation with  
25 using phase change materials.



1           The recipient will create an online and brick-  
2 and-mortar marketplace designed to increase energy  
3 efficiency retrofits by providing a one-stop-shop approach  
4 to planning projects that matches customer needs and  
5 facilitates streamlined access to rebates, financing and  
6 approved contractors.

7           The recipient will demonstrate and deploy the  
8 most promising technologies in homes and commercial  
9 buildings, totaling at least 300,000 square feet in Sonoma  
10 and Mendocino Counties with a goal of achieving at least 10  
11 percent average at electricity reduction in homes and 20  
12 percent average electricity reduction in commercial  
13 buildings.

14           Staff recommends approval of this agreement and I  
15 am happy to answer any questions you might have. Thank  
16 you.

17           CHAIRMAN WEISENMILLER: Thank you. First, is  
18 there anyone in the room with any comments? How about on  
19 the line? I believe there's someone from Sonoma CPA. Let  
20 me have her card.

21           So then please go ahead. Rachel, please?

22           MS. KUYKENDALL: Oh hi, can you guys hear me?

23           CHAIRMAN WEISENMILLER: Yes, we can.

24           MS. KUYKENDALL: Great. So this is Rachel  
25 Kuykendall with Sonoma Clean Power Authority. I just want

1 to echo what David said, we are very excited about this  
2 opportunity, as are our local partners and this is really  
3 something that stems from an act of our community and our  
4 partners.

5 I'm h\Happy to answer any questions as Sonoma  
6 Clean Power. But thank you again for your consideration.

7 CHAIRMAN WEISENMILLER: Oh, thank you. I mean,  
8 obviously, it's heartening to see one of the community-  
9 based organizations really reaching out to come up with  
10 programs geared at the community and the retrofit space.

11 Are there any comments?

12 COMMISSIONER MCALLISTER: Yes. I'm super-excited  
13 about this. As you all know one of our major challenges is  
14 getting to existing buildings. Certainly the local public  
15 entity is in a great position. Sonoma Clean Energy  
16 Authority is really in a great -- or Clean Power Authority,  
17 rather is really in a great position to do this flexibly  
18 and efficiently and quickly. They have a lot of autonomy  
19 and they can operate with a relatively free hand and do  
20 things that make sense in their community and really figure  
21 it out and collect information, collect data, get results  
22 relatively quickly.

23 I think our Analytics Plan kind of fits into this  
24 as well, because we'll be able to do some numbers and  
25 really see what the impacts are on the ground, and that's

1 really key to ground truth, what's going on.

2           This is a significant amount, right? It's almost  
3 \$10 million. So we're expecting big things for sure, but  
4 also, I'm optimistic that we'll learn a lot from it as  
5 well.

6           These are programmatic in a very practical way,  
7 programmatic barriers are almost I would say, it's not --  
8 most of the barriers are not technology. They're  
9 programmatic; there's somewhat cost, but it just has to be  
10 easy for real people to do the right thing. And I think  
11 you find a lot of people do want to do the right thing.  
12 And they are even willing to invest if they have the means.  
13 And so I think a place like Sonoma is really -- also, they  
14 have the fire issues and they are dealing with a lot of  
15 creative thinking at the moment. And then so I think the  
16 context there really lends itself to great things. And so  
17 not put too much pressure on you, but I'm putting a lot of  
18 pressure on you.

19           So looking forward to learning a lot from this.  
20 And you know, again this is a local government leading that  
21 we can learn from, and apply those lessons statewide and  
22 wherever the particular policy needs of the moment are, so  
23 really excited about this project.

24           Okay, so I'll move Item 12.

25           COMMISSIONER SCOTT: Second.

1 CHAIRMAN WEISENMILLER: All those in favor?

2 (Ayes.)

3 CHAIRMAN WEISENMILLER: This item also passes 5-  
4 0.

5 Thanks.

6 MR. HUNGERFORD: Thank you.

7 CHAIRMAN WEISENMILLER: Let's go on to Item 13.

8 MR. PATTERSON: Good morning. I'm Jamie Patterson  
9 of the Research & Development Division. We released a  
10 solicitation on Distribution System Modeling Tool to  
11 Evaluate Distributed Energy Resources. This solicitation  
12 was to research and develop the improvements for  
13 distribution modeling software tools that can determine  
14 operational impacts and integration strategy for microgrids  
15 and distributed energy resources, including renewables,  
16 plug-in electric vehicles, and advanced smart grid  
17 equipment.

18 There were four groups in this solicitation with  
19 one agreement to be awarded in each group. We are  
20 requesting approval of four agreements. The first is with  
21 the Electric Power Research Institute. This project will  
22 develop the Distributed Energy Resource Value Estimation  
23 software Tool called DER-VET, a publicly available, open-  
24 source, microgrid valuation and optimization software tool.  
25 DER-VET combined technical analysis with economic

1 optimization to guide design of microgrids and distributed  
2 energy resource deployments.

3           The next agreement is with DOE-SLAC National  
4 Accelerator Laboratory.

5           This project will develop OpenFIDO, an open  
6 source software tool to transfer models and data between  
7 various programs that form part of the suite of tools used  
8 in and by utilities, distributed energy resource engineers  
9 and regulators in California. The tool will provide a  
10 framework to quickly move data from one application to  
11 another as part of distribution engineering, planning, and  
12 review activities.

13           The third agreement is with DOE-SLAC National  
14 Accelerator Laboratory. This project will develop HiPAS, a  
15 High Performance Agent-based Simulation software  
16 enhancement to GridLAB-D. This project will increase the  
17 speed of the open-source version of the GridLAB-D modeling  
18 software and improve the accessibility to the community of  
19 smart grid modelers and distribution simulation users in  
20 California.

21           The fourth and last agreement is with Hitachi  
22 America, Limited. This project will develop GLOW, the  
23 GridLAB-D Open Workspace. GLOW will be an intuitive  
24 graphical user interface for GridLAB-D software that will  
25 provide a user-friendly environment for researchers,

1 planners, developers, and regulators involved in advanced  
2 electric grid technology modeling. It will be freely  
3 available and supported for a period of at least five  
4 years.

5 I move for approval of this, please. And I will  
6 answer any questions that you may have.

7 CHAIRMAN WEISENMILLER: First, is there any  
8 comments from anyone in the room? How about on the line?

9 (No audible response.)

10 CHAIRMAN WEISENMILLER: Okay. I guess my first  
11 question to you, Jamie, is have we gotten the PUC signoff  
12 on this, President Picker in particular, on these items?

13 MR. PATTERSON: No. I do not. I wasn't aware of  
14 that.

15 CHAIRMAN WEISENMILLER: Well, okay let's hold  
16 this item. You take it --

17 MR. PATTERSON: Okay. I'm going to  
18 (indiscernible) --

19 CHAIRMAN WEISENMILLER: I had given specific  
20 direction to make sure this was useful to the PUC in the  
21 DER Case, and that means talking to President Picker. And  
22 so, we'll hold it to the next meeting.

23 MR. PATTERSON: Okay. Thank you.

24 CHAIRMAN WEISENMILLER: Thank you.

25 MS. VACCARO: Chair Weisenmiller, if I may, I

1 would just ask since it is an agenda item already on the  
2 agenda --

3 CHAIRMAN WEISENMILLER: Right.

4 MS. VACCARO: -- if you would just do it as a  
5 motion and have the Commissioners second --

6 CHAIRMAN WEISENMILLER: Sure.

7 MS. VACCARO: -- and let the Commissioners decide  
8 to remove this.

9 CHAIRMAN WEISENMILLER: That sounds good.

10 Okay, obviously I'm --

11 COMMISSIONER HOCHSCHILD: Yeah, I'd move to hold  
12 it until the next meeting.

13 COMMISSIONER MCALLISTER: I'll second.

14 CHAIRMAN WEISENMILLER: All those in favor?

15 (Ayes.)

16 CHAIRMAN WEISENMILLER: This passes 5-0.

17 See you next time.

18 MR. PATTERSON: Thank you.

19 CHAIRMAN WEISENMILLER: Thanks.

20 I'm going to hold Item 15 until after lunch. And

21 see what we can do on -- yeah, Item 16. See if we can  
22 cover some of the more -- some of the additional items.

23 I'm going to have -- I have a couple calls I actually have  
24 to take at lunchtime, so what I'm trying to --

25 COMMISSIONER HOCHSCHILD: What time would you

1 like to take lunch? It's 11:45 now.

2 CHAIRMAN WEISENMILLER: It's 11:45. I thought if  
3 we can go to like 12:10 --

4 COMMISSIONER HOCHSCHILD: Okay.

5 CHAIRMAN WEISENMILLER: -- and cover some of  
6 these and then come back, it's probably going to be 1:45.

7 COMMISSIONER HOCHSCHILD: Oh, right. Okay.

8 CHAIRMAN WEISENMILLER: And so if we can get  
9 everything else before then.

10 COMMISSIONER HOCHSCHILD: Okay. Okay, let's go.

11 CHAIRMAN WEISENMILLER: Okay. Sorry.

12 So let's start with 15, right? Oh no, excuse me,  
13 we're --

14 UNIDENTIFIED SPEAKER: (Indiscernible.)

15 CHAIRMAN WEISENMILLER: Actually, what -- I'm  
16 sorry, I'm confusing people. So with the Diversity Update,  
17 Item 17, so that's the one I'm trying to hold to until  
18 after lunch. I'm sorry, I'm running in three directions  
19 today.

20 And so let's do 15 and 16 and then hopefully we  
21 can break for lunch. Okay. Sorry.

22 MS. WEEKS: Great. Hi, Commissioners. My name  
23 is Terra Weeks. I am an Advisor to Commissioner  
24 Hochschild, who is the Lead on the 2018 Integrated Energy  
25 Policy Report Update, or IEPR Update.



1           As requested during last month's business  
2 meeting, this will be a recurring agenda item to provide  
3 updates and offer an opportunity for Commissioners, staff  
4 and the public to discuss energy equity topics related to  
5 the 2018 IEPR Update.

6           As was mentioned earlier, this update will be  
7 divided into two volumes. Volume I will be a  
8 retrospective, high-level summary of the innovative energy  
9 policies implemented in recent years. It will include a  
10 section on state efforts to date to improve energy equity  
11 in California. We will also be putting together a brief  
12 video documenting topics covered in Volume I.

13           Volume II will provide a more detailed follow-up  
14 of several energy issues examined in the 2017 IEPR. It  
15 will also include an energy equity section detailing  
16 efforts to ensure that low-income and disadvantaged  
17 communities have an opportunity to participate in, and  
18 benefit from advancements and investments in energy  
19 efficiency, renewable energy and clean transportation.

20           We are planning to hold two public workshops  
21 specifically related to energy equity topics for the 2018  
22 IEPR. Both workshops will be held here at the Energy  
23 Commission. The first scheduled for May 30th, will be a  
24 joint agency workshop with the Energy Commission and Public  
25 Utilities Commission on energy equity in multi-family

1 buildings. It may address topics including best practices  
2 for multi-family distributed energy resource programs;  
3 research and pilot programs; program data, metrics, and  
4 benefits; and financing and tariffs.

5           The second workshop, scheduled for August 29,  
6 will be a joint agency workshop with the Energy Commission,  
7 Air Resources Board and Public Utilities Commission, on  
8 progress toward meeting the goals of Senate Bill 350.  
9 Proposed topics include local community outreach and  
10 collaboration; barriers for energy resources in multi-  
11 family buildings; economic and workforce development;  
12 progress in clean energy and clean transportation access;  
13 and primary remaining barriers.

14           At this point, I would like to provide an  
15 opportunity for your discussion including thoughts,  
16 concerns or proposals related to energy equity topics in  
17 the 2018 IEPR Update or related to these workshops. Thank  
18 you.

19           CHAIRMAN WEISENMILLER: Yeah, thank you.

20           One of the major issues that came out of the last  
21 IEPR, obviously was multi-family or rental housing in  
22 general, but multi-family has its own unique set of issues.  
23 I think we, and I'm not sure I'd say we made a lot of  
24 progress last year, but we made some. And so it's really  
25 good to really focus on this seriously, this time again and

1 really excited to see that workshop coming up.

2 Also excited that you're going to follow up on  
3 the Barriers collectively, the Barriers Report, to try to  
4 see if we made any progress there particularly to move the  
5 needle along.

6 So I think -- I mean, the bottom line is I think  
7 every IEPR going forward is going to have a component on  
8 equity issues. And hopefully at some point we can take  
9 more items off the Barriers List and move on to some new  
10 ones, but -- so I really applaud people's activity to just  
11 keep pushing this along. And certainly, focusing on the  
12 multi-family this time is, again we could -- there's a  
13 number of ways we could focus, but that's certainly pretty  
14 broad-hitting for a lot of people.

15 COMMISSIONER MCALLISTER: I can sort of -- do you  
16 want to say something or I can? Yeah, so I want to  
17 wholeheartedly agree with that. I've been thinking and  
18 sort of doing a lot of convening about multi-family lately.  
19 And it's complex and it's a bunch of tough nuts to crack,  
20 right? But I think if we -- I think there are solutions.  
21 And I think particularly low-income multi-family, there are  
22 a number of pathways into there. And it's going to take  
23 some resources. I think that's one thing we need to come  
24 to terms with.

25 And we also need to sort of facilitate that

1 sector specifically. It probably kind of gets lost in the  
2 mix, between single-family, residential and commercial and  
3 it's sort of like not one and not the other. And I think  
4 that fragments stakeholders in a way that hasn't been  
5 helpful historically. So this is a really great forum to  
6 actually engage with those stakeholders, ask them what they  
7 need and figure out what their limitations are.

8           And particularly low income multi-family, and  
9 generally it's either really poor housing or it's okay  
10 housing that's subsidized. And so in either case it's  
11 going to take a lot of resources. We can't expect to  
12 really get deep retrofits in that sector without some  
13 resources coming to the table, and then hopefully engaging  
14 with the private sector in a way that really leverages  
15 private capital.

16           But there are lot of solutions there. And there,  
17 there it's got much broader quality-of-life applications.  
18 And so I feel like there's a lot to like about it, but it  
19 is a difficult topic, because it is so diverse and a bit  
20 complex.

21           But again, if we're going to -- if we get to  
22 2050, 2030 and we haven't brought those folks along and  
23 then let them participate and get jobs and have better  
24 housing and have lower energy bills and have cleaner energy  
25 and air quality, we're not going to be able say we

1 succeeded.

2           And so I think that it's nice to sort of have  
3 those conversations happening in the Legislature, I think  
4 there's an awareness in our elected officials increasingly  
5 and in our policy community. So I'm really looking forward  
6 again to rolling up our collective sleeves and digging into  
7 that and working with those particular stakeholders.

8           And we did a convening a couple months ago now  
9 over at Boalt Hall, which got a lot of interesting  
10 participants in the multi-family housing sector: both  
11 public and private and nonprofit. And there was a lot of  
12 good -- there were many, many good ideas in the mix. And  
13 so the CLEE, the Center for Law, Energy & the Environment  
14 is going to crank out a report. And hopefully there will  
15 be some recommendations that take our Barriers  
16 Recommendations a step or two further. And it'll be  
17 actionable.

18           So among -- and also, we're doing all the work  
19 that Mike is leading with the Efficiency Division and the  
20 Governor's Office to focus on this DER Action Plan for  
21 multi-family. I think there are just a lot of efforts that  
22 have a lot of promise here, a number of efforts that have  
23 promise. So I'm looking forward to really digging in and  
24 pulling hard on this.

25           Oh yeah, so - and also, well, I'm assuming that

1 Commissioner Scott wants to comment a little bit on this  
2 too, but it's really nice to have the Advisory Committee  
3 sort of convene -- I forget things exactly -- but convened  
4 and the official on everything. And our counterpart over  
5 is Martha Guzman Aceves, isn't it? So yeah, and Cliff as  
6 well. Yeah, okay.

7

8 COMMISSIONER SCOTT: Yeah, I think I'm very much  
9 looking forward to the ability to have conversations around  
10 this. During the IEPR it is as -- I'm overseeing the Low-  
11 Income Barriers Study work. But it very much overlaps with  
12 much of the work that you all do all day every day, and so  
13 the ability to be able to brainstorm together, to hear  
14 ideas together, and then see how that culminates.

15 I think the August 29th workshop, which will of  
16 course be Noticed, and so look for the Notice to actually  
17 know what time and if that's the date that sticks, but it  
18 will be a great opportunity to go over just the -- this  
19 overlaps a little bit with IEPR, because we're doing this  
20 part of the IEPR Proceeding, but with also the SB 350,  
21 because it's part of our SB 350.

22 But it's just a great opportunity for our  
23 friends with the Public Utilities Commission, Commissioner  
24 Rechtschaffen and Commissioner Guzman Aceves; our friends  
25 over at the Air Resources Board, Richard Corey and others

93

1 and the Governor's Office, to really look over the Low-  
2 Income Barriers Report that the Energy Commission put  
3 together a couple years ago for energy efficiency and  
4 renewable energy. We put in place about 12 Recommendations  
5 and we are working to carry those out, right? So that  
6 we're developing the solutions to the barriers that we  
7 identified.

8           And the Air Resources Board did the same, as you  
9 all probably recall, on transportation in making sure that  
10 low-income and disadvantaged communities are part of the  
11 clean energy revolution as it relates to transportation.

12           So to be able to kind of talk about that  
13 together, talk about, again, the barriers that we've  
14 identified. But the progress that we've made in putting in  
15 place solutions to them is something I'm very much looking  
16 forward to. And I think the workshops that we have as part  
17 of the second part of the IEPR are really going to help put  
18 some additional meat on those bones as we get towards that.

19           COMMISSIONER DOUGLAS: I'll just say I'm really  
20 obviously very supportive of this topic, being in the IEPR.  
21 And I think it will link to a number of the workshops. And  
22 really, there's almost nothing we touch that doesn't have  
23 very important linkages to the work with disadvantaged  
24 communities across the board in the work that we do.

25           CHAIRMAN WEISENMILLER: Yeah. I was going to say

1 it's really good too this is a joint workshop with the PUC,  
2 because obviously the colleagues on the disadvantaged  
3 community, Martha and Cliff, are really focusing a lot too  
4 on multi-family and solar options there. So great.

5 COMMISSIONER HOCHSCHILD: Yeah, I wanted to just  
6 -- one point, just with the multi-family, it is the  
7 majority of new construction now in California. That's the  
8 future. And I mean we already know that, but it's just to  
9 be mindful that's where the state's heading. And so I just  
10 want to say thank you, especially to Commissioner Scott for  
11 being the lead on the Equity and Disadvantage Issues.

12 I don't think there's anything -- we don't need  
13 to move this. That was just an update, right?

14 CHAIRMAN WEISENMILLER: Yeah.

15 COMMISSIONER HOCHSCHILD: Okay.

16 CHAIRMAN WEISENMILLER: So let's go on to Item  
17 16.

18 MR. SOKOL: All right. Good morning, or  
19 afternoon, Chair and Commissioners. I think, just for a  
20 very quick update today on the SB 350 item. We just heard  
21 a good discussion on a lot of the equity components and the  
22 Barrier Study implementation activities.

23 One other thing I wanted to highlight for you is  
24 related to integrated resource planning. And the Energy  
25 Commission is working collaboratively with the Air



1 Resources Board and Public Utilities Commission. And there  
2 will be another workshop upcoming, either likely towards  
3 the end of this month or early next month, related to  
4 establishing the greenhouse-gas emission targets and  
5 methodology associated with getting to those targets for  
6 integrated resource planning. So there hasn't been a  
7 formal notice yet of that meeting, but that should be  
8 coming fairly soon here.

9           So with that I'll go ahead and turn it over to  
10 you for additional discussion or questions you might have.

11           COMMISSIONER SCOTT: Sure. I thank you for the  
12 brief update. There is a lot going on. I did want to  
13 highlight the Disadvantaged Community Advisory Group and  
14 that we met last -- or I'd say the group met, so they kind  
15 of Chair and officiate themselves. But they met for the  
16 first time last Wednesday, April 4th, so we're delighted to  
17 have such a great set of people to really help advise both  
18 the Public Utilities Commission and the Energy Commission  
19 on how we're doing in carrying out our SB 350, so that  
20 we're really getting great information, thoughtful  
21 information, constructive feedback.

22           How do we put in place the solutions that we're  
23 thinking about in the ways that work best for the  
24 communities? And the communities can tell us which  
25 solutions are working best and which ones to prioritize.

1 And so we're really delighted to have that advisory group  
2 together.

3 So our first meeting was on Wednesday, April 4th.  
4 It was terrific to have. Both the Chair and I were there,  
5 as well as Commission Rechtschaffen and Commissioner Guzman  
6 Aceves from the Public Utilities Commission. So we were  
7 able to lay out some of the priorities for both the Energy  
8 Commission and the Public Utilities Commission from the  
9 Commissioners' vantage point for the Advisory Group.

10 And then they had to do some procedural things,  
11 like elect themselves a Chair and a Vice-Chair and a person  
12 to take the notes. And then do such fun things as learning  
13 about Bagley-Keene and how to comply with that. So that's  
14 what they took on, on April 4th and we'll be setting up  
15 agenda -- they will be setting up agendas. Our staff will,  
16 of course, assist as that goes along and continue meetings.  
17 I think that their plan is to meet quarterly.

18 And we'll go from there, but I just really want  
19 to say thank you to all of the folks who are taking time to  
20 be part of that and lend their expertise and advice to us.  
21 And we're very much looking forward to getting going and to  
22 hearing what they have to say.

23 CHAIRMAN WEISENMILLER: So let's adjourn now and  
24 come back at 1:45. And at that point we will take up the  
25 Diversity Report, which I think is going to be great.

1           So certainly if anyone who's on the line or wants  
2 to contribute, this is -- the time will be at 1:45 for that  
3 presentation.

4           (Off the record at 12:02 p.m.)

5           (On the record at 1:56 p.m.)

6           CHAIRMAN WEISENMILLER: On the record. That's  
7 right.

8           This is Item 17, our Diversity at -- 2017  
9 Diversity Update. We had one last April and the intent is  
10 to have one every April.

11           MS. MATHEWS: Good afternoon Chair and  
12 Commissioners. I'm pleased to present this 2017 Diversity  
13 Update along with each of the Division Deputy Directors, or  
14 their representatives. This update will highlight each  
15 Division's efforts towards fulfilling the Energy  
16 Commission's diversity commitment to broaden opportunities  
17 in Clean Energy funding, programs and policy. Next slide.

18           In 2015 the Energy Commission formalized this  
19 commitment through the adoption of the Diversity  
20 Resolution. And in addition to increasing the diversity of  
21 participants in our funding opportunities, we continue to  
22 work towards increasing the benefits of our programs and  
23 policies to reach all Californians, particularly those in  
24 disadvantaged communities. In recognizing the value and  
25 benefits of diversity through thought, talent and

1 perspective we have also committed to increase the  
2 diversity of the Energy Commission workforce and  
3 procurement opportunities to reflect the rich diversity of  
4 our state. Next slide.

5 This commitment was then put into action by  
6 establishing the Diversity Working Group, which serves as a  
7 platform for each division to coordinate diversity efforts,  
8 share ideas and information and to establish metrics for  
9 tracking and measuring performance. Next slide.

10 The metrics for the performance are captured in  
11 three areas. First, program funding opportunities, which  
12 looks at the amounts awarded to diverse business  
13 enterprises and the funding amounts awarded to projects  
14 that benefit disadvantaged communities. Second, our  
15 outreach activities and how many outreach activities each  
16 division has sponsored or attended. Third is our program  
17 policy changes that target or benefit disadvantaged  
18 communities or low-income communities.

19 This year's reporting continues with the baseline  
20 set in last year's presentation, which we use to track our  
21 progress and measure success. Accordingly, each Division  
22 will now present their highlights of their efforts from  
23 their program funding opportunities, outreach activities,  
24 or program or policy changes.

25 And we will begin with Energy Assessments

1 Division.

2 MS. BENDER: Thank you, Alana.

3 Good afternoon Commissioners. I'm Sylvia Bender,  
4 the Director of the Energy Assessments Division, the  
5 Commission's Forecasting and Analytical Division.

6 MS. MATHEWS: Mic closer to you.

7 MS. BENDER: Okay.

8 We collect data from a wide variety of sources on  
9 supply-and-demand topics ranging from what types of fuel  
10 California uses to generate electricity, to the future  
11 potential for additional energy efficiency. This data is  
12 combined in various electric, natural gas and  
13 transportation models to provide the state's official  
14 forecast or to do scenario analysis on California's energy  
15 policies. This work informs decision makers and the public  
16 about the current and future impacts of these policies.

17 Integrated Resource Planning reintroduced under  
18 SB 350 to meet clean energy and air pollution goals is a  
19 new way that the Division will be providing analytic  
20 review. Sixteen public utilities, shown here on the graph,  
21 will be filing plans with the Energy Commission.

22 In August 2017 guidelines were adopted that  
23 specify the requirements for submitting the plans and the  
24 data needed to support the Energy Commission's process for  
25 reviewing the plans and recommending corrections for any

1 deficiencies. The Public Utility Boards will adopt the  
2 plans and submit them to the Energy Commission by April 30,  
3 2019.

4 The guidelines outline reporting requirements  
5 where POU's must include information pertaining to low-  
6 income and disadvantaged communities. Included among these  
7 requirements are current and new programs and policies to  
8 address local air pollution and emissions reductions,  
9 including quantitative estimates of progress toward  
10 minimizing these pollutants, and specific benefits and  
11 impacts to the disadvantaged communities.

12 Public utilities are also encouraged to report  
13 information, plans and progress in several additional areas  
14 related to low-income customers and disadvantaged  
15 communities. These include indicators to track impacts and  
16 benefits of the programs in achieving the local, federal  
17 and state policy goals; specific strategies for maximizing  
18 energy efficiency savings, including engagement to increase  
19 program participation; investments in transportation  
20 electrification and the effectiveness of these programs in  
21 improving air quality; labor, workforce and training  
22 programs; financing mechanisms to improve access and  
23 participation in clean energy programs; and last, efforts  
24 to increase contracting opportunities for small business to  
25 help make these things happen.

1           Integrated Resource Planning has been the initial  
2 opening for the Division to engage in thinking about how to  
3 analyze policy impacts on low-income and disadvantaged  
4 communities. It should be the first of many opportunities  
5 for us to combine data and technical analysis to create new  
6 information for decision makers.

7           MR. DAVIS: Good afternoon, Commissioners. My  
8 name is Chris Davis. I'm the Siting Office Manager in for  
9 Shawn Pittard, the Deputy Director for the Siting,  
10 Transmission & Environmental Protection or STEP Division.  
11 Shawn intended to be here today. His wife broke a wrist  
12 and they spent the morning at Kaiser trying to get a cast  
13 on it, so I'm here today in his place.

14           One of STEP's core functions is to evaluate power  
15 plant applications for certification. Public participation  
16 of course is a very important part of our AFC process, and  
17 that includes all segments of the population.

18           Among our first questions, is there an  
19 environmental justice population or disadvantaged community  
20 that will be disproportionately impacted by construction or  
21 operation of a proposed project? Next slide, please.

22           We begin by coordinating with the Public  
23 Adviser's Office. And STEP staff does some research. We  
24 notify property owners by mail, who live in or work within  
25 1,000 feet of a proposed project site and within 500 feet

1 of the linear facilities, such as natural gas pipelines,  
2 water pipelines and transmission lines.

3 We contact local elected officials rather via  
4 mail; Native-American tribal groups via mail and phone  
5 calls; and community groups, and that's one area that the  
6 Public Adviser's Office fulfills for us making  
7 presentations to such groups. In all cases we make these  
8 people aware of the proposed project and tell them how they  
9 can participate in the process.

10 We identify communities disadvantaged by impacts  
11 of pollution using the CalEnviroScreen tool. We identify  
12 environmental justice communities using U.S. Census data  
13 and using Census Survey data. Staff identifies populations  
14 experiencing linguistic isolation, which is people who  
15 self-identify as speaking English less than very well.  
16 When we identify such populations, we publish notices and  
17 newspaper ads in these languages pertinent to those  
18 populations around a proposed project site. We also  
19 provide interpreters at workshops and hearings. And we are  
20 getting ready next week to do so for the Stanton Project.

21 This third slide provides an example from the  
22 ongoing Stanton Energy Reliability Center AFC Proceeding,  
23 because there are people in the vicinity of the project who  
24 self-identified as speaking English less than very well.  
25 We have translated notices, newspaper ads. We continue to



1 translate notices and key documents into Spanish,  
2 Vietnamese and Korean. And we provide interpreters at the  
3 public meetings and hearings and will do so at the workshop  
4 next Wednesday.

5 Staff is committed to providing opportunities for  
6 meaningful public participation in the AFC process and we  
7 will perform the outreach necessary to ensure diverse  
8 populations are given the opportunity to participate.

9 Thank you.

10 MR. ASHUKIAN: Good afternoon Chair and  
11 Commissioners, I'm Dave Ashukian, the Deputy Director of  
12 the Efficiency Division. The Efficiency Division sets  
13 Building Standards and Appliance Standards that establish  
14 California as the world's leader in energy efficiency. Our  
15 standards reduce the cost of energy and water for all  
16 California residents, including those living in  
17 disadvantaged communities. And help California achieve our  
18 energy and environmental goals.

19 We are also responsible -- next slide please --  
20 we are also responsible for implementing the Clean Energy  
21 Jobs Act, also known as Prop 39, which provides grant  
22 funding to schools for energy efficiency and renewable  
23 energy projects. There are 2,176 eligible local agencies,  
24 of which about 63 percent are considered disadvantaged as  
25 defined as having a 50 percent or greater ratio of students

1 receiving free or reduced lunch or meals.

2 Over the last four years more than \$1.7 billion  
3 has been allocated to the Prop 39 Program. Of that  
4 funding, about \$1.5 has been allocated to the K-12 Program,  
5 and of that \$1.5 billion, we have approved \$1.3 billion in  
6 projects through 2017. We are still approving projects  
7 that have come in 2018, as well.

8 Of that funding, almost \$1 billion or about 70  
9 percent has been allocated and awarded to disadvantaged  
10 school districts through 2017. We believe that this is  
11 probably the largest grant program that the Commission has  
12 ever implemented in the life of the Commission, as well.

13 The Prop 39 funds have been awarded to every  
14 county -- next slide please, I'm sorry -- every county in  
15 California has received funds from the Prop 39 Program.  
16 All except Alpine County received funds for disadvantaged  
17 LEAs. And in fact, Alpine County does not have any local  
18 disadvantaged community -- local disadvantaged districts,  
19 and that's why it's not listed there.

20 The funding has provided more than 70 -- the  
21 funding that has been provided for projects is providing  
22 more than \$71 million in savings for disadvantaged schools,  
23 saving more than 375 gigawatt hours each year. This is  
24 roughly equivalent to the energy used to power over 55,000  
25 homes in California every year.

1           However, not all the funds that were allocated at  
2 Prop 39 have been requested by those school districts.  
3 There's approximately \$37 million in remaining funds that  
4 are being redirected to the Energy Commission's Energy  
5 Conservation and Assistance Account. That's a program that  
6 provides zero or low-interest loans to LEAs to also  
7 implement energy and renewable projects.

8           The Legislature established criteria for the  
9 remaining funds that require loans to be evaluated on a  
10 competitive basis. And there are four competitive criteria  
11 that are established to evaluate those projects: one being  
12 geographic diversity, the second being the diversity in the  
13 size of the LEAs, on the third being the energy savings,  
14 and lastly the disadvantaged communities, or the percentage  
15 of students that receive free or reduced-price lunches.

16           We have established a weighting factor of 15  
17 percent for evaluating those LEAs in the disadvantaged  
18 communities, in which they'll receive a higher percentage  
19 score for those school districts.

20           And that concludes my presentation. Thank you.

21           MS. LEE: Good afternoon, Commissioners. Natalie  
22 Lee, Deputy Director of the Renewable Energy Division,  
23 which has three programs that contribute to the Energy  
24 Commission's diversity goals: first, the New Solar Homes  
25 Partnership Program, which provides incentives for builders

1 to install solar energy systems in new residential  
2 construction including affordable housing projects; the  
3 Renewable Energy for Agriculture Program, which is a part  
4 of California climate investments, using monies from the  
5 Greenhouse Gas Reduction Fund; and the Geothermal Grant and  
6 Loan Program, which continues to support the development of  
7 geothermal resources throughout the state in low-income  
8 areas and disadvantaged communities. Next slide, please.

9           The New Solar Homes Partnership Program, or NSHP,  
10 took specific effort, excuse me, entered into specific  
11 efforts in 2017 to ensure the benefits of the program reach  
12 low-income Californians. The NSHP Guidebook was updated in  
13 March and again in October to encourage participation from  
14 affordable housing projects. Through these updates, NSHP  
15 now provides a higher incentive level for new housing  
16 developments that qualify as affordable housing. And an  
17 additional 15 percent bonus is also provided for affordable  
18 housing projects in a disadvantaged community.

19           Additional changes extended the eligibility to a  
20 broader range of project developers, provided streamlined  
21 documentation options and specifically allowed options for  
22 documentation at the reservation stage to address and  
23 identify barrier to participation. These changes have been  
24 successful.

25           In 2017 we saw an increase of 68 percent in

1 approved affordable housing project reservations. Next  
2 slide, please.

3           Also in 2017, the NSHP Program achieved a  
4 significant increase in the number of projects that  
5 completed building and received incentives. Nearly \$3.5  
6 million in incentives were paid to 37 projects. As shown  
7 on the map on this slide these projects were located across  
8 the state and supported the installation of nearly 2 1/2  
9 megawatts of clean energy, providing service for well over  
10 2000 individual housing units. Next slide.

11           Throughout the entire life of the program, 2007  
12 to present, the NSHP has supported the installation of  
13 solar of 276 affordable housing projects, of which 95 were  
14 located within a disadvantaged community. This graph  
15 illustrates trends recently showing a significant increase  
16 in overall affordable housing projects, completing  
17 reservations in 2017, and a consistent number of projects  
18 located in disadvantaged communities.

19           Moving to the second program implemented by the  
20 Renewable Energy Division, the Renewable Energy for  
21 Agriculture Program or REAP, will provide \$6 million in  
22 grants to assist agricultural operations, with the  
23 installation of on-site renewable energy technologies with  
24 an emphasis on providing assistance to low-income and  
25 disadvantaged communities.

1           Projects are expected to reduce the demand for  
2 grid electricity, increase local reliability and provide  
3 additional co-benefits, including reductions in local air  
4 pollution, workforce development and additional community  
5 investment.

6           All programs funded by greenhouse gas reduction  
7 fund monies must ensure a percentage of funds benefit  
8 disadvantaged and low-income communities and low-income  
9 households. The REAP Program has proposed percentage  
10 allocations that exceed the required minimums, with 50  
11 percent of total funds directed to projects within and  
12 benefiting disadvantaged communities, and an additional 10  
13 percent for projects within and benefiting low-income  
14 communities. These are the minimum percentage  
15 participation goals. And depending on applications we hope  
16 to exceed these targets.

17           Staff is currently working with stakeholders to  
18 develop program guidelines and anticipate releasing draft  
19 guidelines in early May.

20           And finally, next slide please, the Geothermal  
21 Grant and Loan Program continues to support the development  
22 of geothermal resources throughout California. The known  
23 geothermal areas in California are in most cases are  
24 located in or very near low-income and disadvantaged  
25 communities. The Energy Commission approved or executed

1 geothermal grants under two different solicitations in  
2 2017, as listed on this slide. In total these awards  
3 amount to roughly \$7 million invested in projects located  
4 in low-income and disadvantaged communities.

5 The Renewable Energy Division looks forward to  
6 continuing and expanding our efforts to ensure all  
7 Californians participate and benefit from our programs.

8 MR. KATO: Afternoon. I'm Deputy Director John  
9 Kato, of the Fuels and Transportation Division. Next  
10 slide.

11 Last year about \$64.2 million across four  
12 solicitations were awarded under the Alternative and  
13 Renewable Fuel and Vehicle Technology Program. Of this  
14 amount more than \$56.6 million or 88 percent was awarded to  
15 projects located in or benefiting disadvantaged communities  
16 in 2017. Next slide.

17 In 2017, \$24 million was awarded to Sustainable  
18 Freight and Vehicle Technology projects at sea ports. The  
19 vehicles of supporting intelligent transportation system  
20 technologies being deployed at these facilities are  
21 essential to reducing a disproportionate amount of air  
22 pollution impacting the disadvantaged communities that  
23 surround California's major freight distribution regions.

24 The near-zero and zero emission technology that  
25 is being deployed at the ports will allow continued growth

1 of the economically important freight sector or reducing  
2 negative environmental impacts on nearby residents. It's  
3 important to note that a third of California's economy  
4 relies on goods movement. Next slide.

5 Also in 2017, over \$33 million was awarded to  
6 community and commercial skill biofuels production  
7 projects. Of that approximately 78 percent was awarded to  
8 projects located in disadvantaged communities.

9 These seven projects will produce nearly 44  
10 million gallons per year in low-carbon biofuels and reduce  
11 greenhouse gas emissions by approximately 523 metric tons  
12 per year. These projects are expected to create  
13 approximately 100 long-term jobs within disadvantaged  
14 communities. Next slide.

15 In 2017, the Energy Commission established the  
16 California Electric Vehicle Infrastructure Project, or  
17 CALeVIP. I love that, CALeVIP, and I want to thank Albert  
18 for that. His team was great in being creative and to me  
19 it's great. I don't want to go on the music box, "Going  
20 back to Cali." (Laughter.)

21 So CALeVIP's premiere product is the Fresno  
22 County Incentive Project, which has provided nearly \$4  
23 million to incentivize the insulation of EV chargers  
24 throughout Fresno County, most of which consist of  
25 disadvantaged communities. These installations will allow



1 for increased adoption and deployment of electric vehicles  
2 and increase zero emission vehicle miles traveled within  
3 Fresno County. CALeVIP provides the Energy Commission the  
4 ability to target disadvantaged and other communities to  
5 ensure that access and benefits of electric vehicle  
6 charging accrue to all Californians. Next slide, please.

7           \$2.9 million was awarded to four innovative  
8 mobility service demonstrations, using zero emission  
9 vehicles, including battery-electric and fuel-cell electric  
10 vehicles. These demonstrations will serve disadvantaged  
11 and senior housing communities in Sacramento, the San  
12 Francisco Bay area, Fresno and San Bernardino Riverside  
13 counties. While increasing zero emission vehicle miles  
14 driven in these communities these projects provide the  
15 added benefit of educating the public about zero emission  
16 vehicles and providing opportunities to experience zero  
17 emission vehicle transportation options.

18           What is also very exciting about these project is  
19 the synergies pairing ZEV mobility services with  
20 infrastructure deployment, and how these enhance the growth  
21 of ridesharing and carsharing opportunities while  
22 complementing local transit operations. Next slide.

23           And finally, FirstElement, FirstElement Fuel,  
24 excuse me. FirstElement is integral to California's  
25 efforts to construct hydrogen refueling stations throughout

1 the state. FirstElement employs U.S. veterans as a  
2 significant part of their workforce. Of their 19 employees  
3 8 are Marines, who served our country for over a combined  
4 45 years. So I personally want to thank FirstElement for  
5 leading by example and thank our veterans for their  
6 service. Thank you.

7 MR. STOKES: So good afternoon, Commissioners.  
8 My name is Erik Stokes and I'll be providing the update for  
9 the Energy, Research & Development Division, so next slide.

10 So state policy provides direction for increasing  
11 equity and diversity in our research programs. One of the  
12 recommendations that came out of the SB 350 Barrier Study  
13 is that 25 percent of our technology, demonstration and  
14 deployment funds from EPIC go to projects located and in  
15 benefiting a disadvantaged community. Recently Assembly  
16 Bill 523 codified that recommendation into law. In  
17 addition, AB 523 added two new requirements for the EPIC  
18 program: one of those being 10 percent of our TD&D funds go  
19 to projects located in benefiting a low-income community,  
20 as well as a requirement that we consider the localized  
21 health impacts during these projects. I'll just put in a  
22 plug that we're tentatively scheduling a workshop in May.  
23 And implementing these two new requirements will kind of be  
24 the focus of the workshop.

25 The other policy direction we have is Assembly

1 Bill 865, which is called "Empower California," which  
2 directs the Commission to take steps to increase the  
3 diversity of under-represented businesses in our research  
4 programs. Next slide.

5           So within the Research and Development Division  
6 we've developed this three-pronged strategy towards  
7 increasing diversity and equity in our research programs.  
8 The first part of this strategy is increasing awareness.  
9 And over the past few years we've really scaled up our  
10 outreach efforts. We've added a few new tools to our  
11 outreach toolbox this past year, and I'll talk about those  
12 a little later in the presentation.

13           The other part of our strategy is encouraging  
14 technology developers to seek out projects that are located  
15 in and benefiting disadvantaged communities. And the way  
16 we do this is by either awarding preference points or  
17 having a funding setaside in our solicitations. And the  
18 microgrid, our most recent microgrid solicitation was an  
19 example of that strategy.

20           The third part of our strategy is scoping  
21 solicitations specifically around challenges or barriers  
22 affecting disadvantaged communities and low-income  
23 customers. One of the topics in one of our solicitation  
24 this past year was looking at low-income multi-family  
25 housing and addressing some of the barriers towards energy

1 efficiency upgrades in those homes. Next slide.

2           So one of the requirements for Assembly Bill 865  
3 is that we kind of track our progress towards increasing  
4 diversity in our projects, so the chart on the left shows  
5 kind of our current status to-date; the number of projects  
6 that include either as the prime recipient or as a  
7 subcontractor; a woman-owned business; a minority-owned  
8 business; LGBT or a disabled veteran-owned business.

9           One of the things we wanted to do in this  
10 presentation is highlight what we think has been one of the  
11 successful women-owned businesses, and that's a company  
12 called Porifera that actually received their first award  
13 from the Energy Commission in 2010. And since then they  
14 are able to attract a number of federal funding to further  
15 develop and scale up their membrane technology. They then  
16 came back to us as we launched the EPIC program. And they  
17 were able to demonstrate the value proposition in a number  
18 of food-processing applications with EPIC funds. Next  
19 slide.

20           This slide kind of shows kind of the current  
21 funding and geographic breakdown for our projects located  
22 in disadvantaged communities. As of 2017, 32 percent of  
23 our EPIC TD&D funds have gone towards projects in  
24 disadvantaged communities, so we're a little bit ahead of  
25 the 25 percent target. Next slide.

1           So one of the ways we see our projects benefiting  
2 disadvantaged communities is by improving the critical and  
3 public services provided to these communities. For a lot  
4 of these municipal institutional facilities, energy is a  
5 major operating expense and it takes away their ability to  
6 provide more and better services to the communities.

7           The other aspect of this is resilience is  
8 becoming more and more critical to these facilities in  
9 being able to provide these critical services during  
10 potential grid outages. As we have a large portfolio  
11 project that's really demonstrating some of these advanced  
12 technologies to really help some of these facilities either  
13 get to zero net energy or to create microgrids that can  
14 then island during some of these grid outages and maintain  
15 the critical services to the communities. Next slide.

16           The other way we see our projects benefiting  
17 disadvantaged communities is really by improving the  
18 affordability health and comfort for the people, especially  
19 in their residences. The one project we'll highlight above  
20 is kind of a high-tech, low-cost technology solution where  
21 they're taking smart ceiling fans in concert with smart  
22 thermostats. And they're able to reduce the HVAC use while  
23 still optimizing the residents for comfort using the  
24 ceiling fan as kind of the first measure for being the  
25 right cooling-down within the home. Next slide.

1           The third way we see our projects benefiting  
2 disadvantaged communities is by supporting the job creators  
3 within these communities, and especially around the Central  
4 Valley. The Central Valley is very dependent on the food  
5 and ag sector for its economy. And so we have a large  
6 portfolio of projects that are really trying to advance  
7 technology and develop and scale up technology solutions  
8 specifically for that sector.

9           The other project we have is there was a  
10 successful water-energy technology incubator run out of  
11 Fresno State University. And with our funding they've been  
12 able to really expand the services they provide to a much  
13 larger scale. They've also received quite a bit of federal  
14 funding using ARRA funds. And so they're really starting  
15 to position themselves as kind of the place to be for  
16 people wanting to really develop and scale up water-energy  
17 technologies. Next slide.

18           So as I mentioned we kind of added a few new  
19 tools to our outreach toolbox. One of those is a standard  
20 practice we host online networking webinars for each  
21 solicitation. And we kind of facilitate introductions  
22 among potential project partners through the online space.  
23 For our microgrid solicitation we had 70 people participate  
24 on that call.

25           We've also kind of revamped our research homepage

1 to make it easier, especially for first-time users, to find  
2 the information they are looking for.

3 And then the third part is we created kind of a -  
4 - we call it the "How to Apply for Research Funding 101,"  
5 which is a quick four-minute video that really walks people  
6 through some of those early steps. They kind of get their  
7 bearings on how to start to apply for ARRA research  
8 funding. And so we can play that video if there is  
9 interest or --

10 VIDEO: Presentation begins:

11 Are you developing innovative new clean energy  
12 technologies? Are you looking for funding to help move  
13 your research forward? If so, the California Energy  
14 Commission's Research and Development funding programs may  
15 be able to help.

16 Hi, I'm Diana with the California Energy  
17 Commission. In this video, I'll introduce you to the Energy  
18 Commission's R&D funding programs and give you some tips  
19 that can help get you started, especially if you're new to  
20 applying.

21 First, a little bit about our work. The Energy  
22 Commission has two primary R&D programs: the Electric  
23 Program Investment Charge, or EPIC, and the Natural Gas  
24 Research Program. Combined, these two programs award  
25 approximately \$150 million in funding for new projects

1 every year. Funding for these programs comes from, and  
2 must benefit, California's electric and natural gas  
3 ratepayers.

4 To get a feel for the types of projects we fund,  
5 check out the Energy Innovation Showcase at  
6 [innovation.energy.ca.gov](http://innovation.energy.ca.gov). The showcase is our online  
7 database featuring all of our funded R&D projects. Users  
8 are able to explore by location, by research topic, or by  
9 customer group.

10 If you think that our R&D funding could be right  
11 for you, one of the most important steps to take is signing  
12 up for our listservers. The listservers specific to our  
13 R&D program can be found by going to the main Energy  
14 Commission webpage at [energy.ca.gov](http://energy.ca.gov). Click on the research  
15 tab at the top of the page, scroll down to find the grey  
16 subscription box at the bottom right-hand corner, and  
17 provide your information.

18 To connect with our R&D programs, we recommend  
19 you sign up for the EPIC, Research and Natural Gas lists.  
20 These lists will keep you up-to-date on our research,  
21 events and, most importantly, upcoming R&D funding  
22 opportunities.

23 We also suggest you sign up for our Opportunities  
24 listserver. The Opportunities listserver will notify you of  
25 all new funding opportunities happening throughout the



1 Energy Commission. By subscribing to these listservers,  
2 you'll get the information as soon as it's released.

3           After you sign up for the listservers, we  
4 recommend you look through a few application manuals,  
5 included in each funding opportunity. This will help you  
6 become more familiar with the format and standard  
7 requirements of our application process. That way, when  
8 you're ready to apply, you'll be better prepared.

9           Another great way to dive in, especially if  
10 you're new, is by attending one of our pre-application  
11 workshops. Staff holds at least one of these for every  
12 funding opportunity. The times, date, and location of the  
13 workshop can be found in the application manual. These  
14 workshops provide a forum for applicants to ask staff  
15 questions about the funding opportunity, including its  
16 scope and administrative requirements. These workshops can  
17 also be a good venue to network and meet potential project  
18 partners.

19           Another valuable resource worth checking out is  
20 the Energy Commission's Research and Development Networking  
21 Hub on LinkedIn. This is a great way to connect and  
22 partner on proposals for R&D funding opportunities. You'll  
23 see that we create individual subgroups, and host dedicated  
24 networking webinars for each of our opportunities. We  
25 encourage you to participate even if you're not ready to

1 apply.

2           Lastly, to be sure you're staying up-to-date on  
3 the most important news coming out of R&D, check us out on  
4 Facebook, Twitter, LinkedIn, YouTube, and the Energy  
5 Commission blog. The blog can be found on the Energy  
6 Commission's main webpage by scrolling down to the bottom  
7 and clicking on "Follow the California Energy Commission  
8 Blog." It features stories about Energy Commission  
9 projects, activities, events, and guest speakers. This  
10 blog is a great way to learn about current clean energy  
11 efforts, and how your work could support the state's energy  
12 goals.

13           Thanks for watching. I hope this video's been  
14 helpful. And as a reminder, be sure to sign up for our  
15 listservers!

16           VIDEO: Presentation ends:

17           COMMISSIONER SCOTT: Well, just note that I'm up  
18 here saying, "I want one. I want one." (Laughter.) That's  
19 a great video.

20           MR. COOK: I'm the lucky guy who gets to follow  
21 that act, by the way, so sorry I won't have any bells and  
22 whistles like that.

23           I'm Rob Cook, Deputy Director with the  
24 Administrative and Financial Services Division. And I like  
25 to refer to our Division as the internal infrastructure

121

1 that enables our program divisions to meet their missions.

2 One of the things that I will be addressing here,  
3 the State of California has a very strong commitment to  
4 supporting small businesses and disabled veteran business  
5 enterprises. And state agencies are strongly urged to meet  
6 a 25 percent amendment with small businesses and a 3  
7 percent of our spend on disabled veteran business  
8 enterprises.

9 As you can see by these graphs these are year-  
10 over-year comparisons. The green year is the most -- the  
11 green bars are the most recent reporting period and the  
12 blue bars are the prior reporting period for the  
13 Commission.

14 Now IT, and you can see in both cases we've had  
15 year-over-year improvements in both categories. For IT  
16 goods and services they have started using both small  
17 business and disabled veteran business fuel-certified  
18 vendors to increase small business purchases by almost 35  
19 percent and disabled veteran purchases by 93 percent, a  
20 strong movement. Now in any given year they're spending  
21 between \$2 and \$4 million in that category.

22 For our procurement of goods for the Commission,  
23 and this is a category of about \$1 million of spending each  
24 year, they've applied a disabled veteran business  
25 enterprise first approach, which has increased our DVB

1 participation by 165 percent in that category.

2           Now the reason you don't see these bars leaping  
3 forward based on those things is those are smaller areas of  
4 expenditures. On our contracting area is roughly \$14 to \$15  
5 million a year. And it's a little slower moving, because  
6 the contracts tend to multi-year contracts and it kind of  
7 overwhelms the other categories. But our services  
8 contracting has modest increases in disabled veteran  
9 business enterprise spending. We have more work to do to  
10 meet our objectives with small businesses. Next slide.

11           In recruitment and hiring area we have identified  
12 39 energy-related professional job boards out there.  
13 People who are -- which obviously attract people interested  
14 in what we do. We've identified five sites that target  
15 underrepresented groups. Those five sites include: The  
16 Association of Women in Water, Energy and the Environment;  
17 the LinkedIn Society of American Military Engineers; the  
18 LinkedIn Society of Hispanic Professional Engineers; the  
19 National Society of Black Engineers; and the Society of  
20 Women Engineers.

21           In a recent -- what we did was a combined job  
22 application exam approach, with the Electric Generation  
23 System Specialist Series; there are three levels in that  
24 series. We posted that series, that exam, that application  
25 to all of those five underrepresented sites and we intend

1 to expand on this approach in the future. Next slide,  
2 please.

3 In partnership with the Public Adviser we helped  
4 put on the Diversity Career Fair for the Commission. This  
5 first initiated in 2016 and we'll have our third annual on  
6 April 26 of this year. Now improvements that we're looking  
7 at it for this year, it's great in the world of business  
8 you love to have prospects, but you'd really like to have  
9 sales, right? And in this case, we're looking at  
10 improvements that will help that conversion factor. That  
11 includes having human resources, people on hand who provide  
12 counseling and guidance to potential applicants, so they  
13 understand our classifications and where their experience  
14 might work and fit in.

15 We're also going to have on-the-spot examinations  
16 available. We have one of our largest classifications, the  
17 Energy Commission Specialist Series, is now an automated  
18 exam. It's available to you. You can get it anywhere you  
19 have Internet access. And that will be available there.  
20 And we have other exams that are available in paper format  
21 that will be available for folks. So we can bring them,  
22 help them identify what they might be able to fit in and  
23 let them take the exam on the spot.

24 That's all I've got.

25 MS. MATHEWS: So as we wrap up I would just like

1 to end with three ongoing efforts that meet our diversity  
2 commitments. And that's first the Energy Equity Indicators  
3 Draft Staff Report. That was assembled in May 2017. And  
4 this report builds on the 2016 Low-Income Barrier Study,  
5 and proposed a framework for tracking the progress of  
6 energy efficiency and renewables for low-income customers  
7 and small business contracting opportunities in  
8 disadvantaged communities. The report identifies  
9 California's Clean Energy Equity Indicators and provides  
10 next steps. And also I want to include I believe they are  
11 developing an online tool, as well.

12           Second, and in December the Commission  
13 established the Disadvantaged Communities Advisory Group,  
14 which was on offset from Senate Bill 350. And they will  
15 offer recommendations to both the CPUC and the California  
16 Energy Commission on the effectiveness of clean energy  
17 programs in disadvantaged communities. And I would just  
18 like to say that a joint committee of the Commissioners  
19 from both agencies selected 11 members, which Commissioner  
20 Scott kind of mentioned today. But they have a vast array  
21 of experience; they are located throughout the state, as  
22 well as technical expertise in clean energy fields.

23           Lastly, the Public Adviser's Office was happy to  
24 co-host, along with Commissioner Scott's office, the third  
25 annual Summer Institute in Energy, Law and Policy for local

1 high school students from disadvantaged communities. They  
2 were introduced to key energy issues and completed a final  
3 project that was so impressive they were invited to the  
4 California Public Utilities Commission's business meeting  
5 to present their finding, as well.

6 In conclusion, I want to thank all of the  
7 divisions and the Deputy Directors for their hard work in  
8 preparing this as well as the assistance of Kevin Barker,  
9 Rhetta DeMesa and the Media Office. And a special thanks  
10 for Dorothy Murimi for her hard work in organizing and  
11 helping put this presentation together.

12 Any questions or comment?

13 CHAIRMAN WEISENMILLER: Thank you.

14 Actually I was going to see if we have any public  
15 comment, either in the room or on the phone?

16 (No audible response.)

17 CHAIRMAN WEISENMILLER: Okay, just checking. No,  
18 this is good. Obviously, I think we have to keep trying to  
19 bend the curve here. And I also certainly thank  
20 Commissioner Hochschild for the Stanford Summer Intern  
21 Program that we've been trying to keep expanding. I guess  
22 you and Dian Grueneich have really been helping too, to  
23 broaden that pool. And part of it is the good news is  
24 we've been going for some of the interns to -- again  
25 netting them in as new employees.

1 COMMISSIONER SCOTT: Can I?

2 CHAIRMAN WEISENMILLER: Sure, go ahead.

3 COMMISSIONER SCOTT: Sure. I just want to say  
4 also thank you very much for the presentation. But more  
5 so, thank you for the dedication to carrying out this work  
6 each and every day. It's really important that we continue  
7 to make diversity a part of the culture here. It already  
8 is a part of the culture, but to continue to work on that  
9 and continue to incorporate it into the day-to-day business  
10 of the Energy Commission, whether it's contracting or  
11 hiring or the grants that we give. And so I really  
12 appreciate the work that you all are doing every day to  
13 make that a reality here at the Commission.

14 And then I just had a quick question, which I  
15 just wanted to know a little bit more about the on-the-spot  
16 exams. That's the first time I heard about that for the  
17 Diversity Career Fair. And I want to make sure that the  
18 people who are coming to our Diversity Career Fair are  
19 ready to take that exam or the exams that are on-the-spot  
20 when they get there. So is that part -- will that be  
21 listed in part of the outreach that we're doing for April  
22 26th?

23 MS. MATHEWS: Yes.

24 COMMISSIONER SCOTT: Yes?

25 MS. MATHEWS: Yes, it has been. And we've



1 highlighted what exams will be available.

2 COMMISSIONER SCOTT: Okay, great.

3 CHAIRMAN WEISENMILLER: Okay. Thanks again. We  
4 really appreciate you folks' effort. And again, keep up the  
5 good work. Looking forward to next year's report. Thank  
6 you.

7 Let's go to the Minutes.

8 COMMISSIONER SCOTT: I'll move approval of the  
9 Minutes.

10 COMMISSIONER DOUGLAS: Second.

11 CHAIRMAN WEISENMILLER: All in favor?

12 (Ayes.)

13 Minutes are approved 5-0.

14 Let's go to Lead Commissioner, Commissioner  
15 Scott.

16 COMMISSIONER SCOTT: Yes.

17 UNIDENTIFIED SPEAKER: (Indiscernible.)

18 COMMISSIONER SCOTT: I'd be happy to do that.

19 Let's see, for today I wanted to let you all know  
20 earlier this week I was at the -- down in Diamond Bar,  
21 California where it was a shocking 98 degrees, for the  
22 California Fuel Cell Partnership Meeting. And that was a  
23 nice opportunity to talk a little bit about Governor  
24 Brown's Executive Order here from the industry. What was  
25 they're thinking about that, how they're going to mobilize

1 to be able to put that together. Everything kind of from  
2 the supply chain all the way up to just making sure we're  
3 ready to gear up and move even faster in the infrastructure  
4 space. So that was a good meeting.

5 We have already talked about the Disadvantaged  
6 Community Advisory Group, which was last week. And you saw  
7 a picture of their lovely faces. Everyone is really  
8 excited about it, and as are we, and very much looking  
9 forward to receiving the feedback.

10 A couple of weeks ago as well there was a  
11 convening over at UC Berkeley to discuss how do we get to  
12 100 percent ZEVs, focused specifically on light-duty  
13 plugins, so it had kind of a more narrow focus than the  
14 broad transportation sector. But it was an interesting  
15 chance to also talk to a broader group of people than I  
16 might necessarily hear from on a day-to-day basis.

17 And one of the themes that stood out for me at  
18 that convening is that as we're trying to get this  
19 infrastructure out into many places, the charging  
20 infrastructure, it's difficult to reach the site host. And  
21 so we need to make it just as easy for the site host to  
22 have charging as we need to make it easy for a person who's  
23 looking to make a transition into a plugin car, right?  
24 They just want to plug in, have it be fueled up when  
25 they're ready to go, and that's it. There's a lot of stuff

1 that goes on in the background in terms of grid integration  
2 and rates and all of these things. But the average user is  
3 not going to want to know any of that. We, the energy  
4 wonks, are the ones who will have to work on those details.

5           And the same is true, actually of the site host  
6 for where the -- their business is not parking, their  
7 business is not charging, their business is whatever it is  
8 their business happens to be. Smaller businesses, multi-  
9 family homes as you know, it's not like they have a  
10 corporate sustainability officer who's going to out there  
11 looking at this. And so how do we make that just really,  
12 really simple for people to put charging in their parking  
13 spaces? So that was something that to me was a theme out  
14 of that meeting.

15           I had a chance to speak at the CALSTART Clean  
16 Transportation Summit a few weeks ago. We were on a panel,  
17 actually, on workforce. So it was a nice opportunity to  
18 highlight the work that the Energy Commission, especially  
19 through ARFVTP, or Alternative and Renewable Fuel and  
20 Vehicle Technology Program, are doing on the workforce-  
21 training side. And to point to some of the key examples  
22 and also put in a shameless plug for how awesome the Energy  
23 Commission is, if anybody was interested in coming to work  
24 here, as well.

25           And then I wanted to mention also that I had a

1 chance to go and visit Tesla. I've been out there three  
2 times: once about five years ago and once about two-and-a-  
3 half years ago, and then just a couple of weeks ago. And  
4 it's been pretty amazing to see the transformation of that  
5 facility.

6           They are expanding the facility in order to be  
7 able to gear up for Model 3. No, I didn't get any updates  
8 on what the production numbers for Model 3 look like. But  
9 it's really neat to see the NUMMI factory, which used to  
10 have nobody there for many, many years become sort of this  
11 really key component for manufacturing in California. They  
12 were saying that there are 10,000 jobs right there at that  
13 facility. And so I think that was pretty exciting.

14           And then in neither apropos of nothing really,  
15 but we got to go on a test ride in the Tesla, the P100D.  
16 That is the one that can do "Ludicrous" mode, which is the  
17 ability to go from 0 to 60 in 2.4 seconds. They said, "Oh  
18 Commissioner put your head on the headrest before we go."  
19 Dare I say you have not lived if you have not gone from 0  
20 to 60 in 2.4 seconds? It was ridiculous, but it was  
21 really, really fun. And it just shows that these cars are  
22 -- they're a lot more than just a green tree-hugger kind of  
23 car. They can be a ton of fun, great to drive. And I  
24 really do highly recommend if you ever get the opportunity  
25 to go in one in Ludicrous mode, to at least give it a try

1 once.

2 Those are my updates for you all.

3 COMMISSIONER MCALLISTER: That's great. I'll  
4 have to get over my Episcopalian upbringing I guess.

5 So great, so we haven't had that long since the  
6 last business meeting and I was on vacation for a week, so  
7 there hasn't been a lot of time to accumulate news, so I'll  
8 be pretty short.

9 I just want to highlight the fact that we -- that  
10 staff, just the Efficiency Division staff and the Building  
11 Standards Office have been working really hard on the Title  
12 24 Update and just a lot of stakeholder management to do.  
13 And I mean, you're all familiar kind of with how that goes.  
14 And we're doing pretty amazing things and so I think the  
15 forcing of conversations by innovation and sort of what we  
16 can get to at each step is really, really a positive  
17 dynamic. So it's going to produce some interesting  
18 innovational results.

19 I went to the -- I spent a week in Mexico, so I  
20 won't talk about that, but it was fun. And right after  
21 that, the day after we got back, I went to Las Vegas for  
22 the NASEO Regional Meeting. And actually one of the agenda  
23 items was on regionalization of the ISO and so in spite of  
24 the fact there's really very little upside to talk about it  
25 to an audience like that, we did have a conversation. And

132

1 it just gave me a little view into Commissioner Scott's  
2 world on the WEIB. And in fact, the Director of the WEIB  
3 was there.

4 And yeah, just the dynamic between the states is  
5 just something that we have to work on cultivating and just  
6 all-hands on deck, really to kind of develop those  
7 relationships and try to see where that conversation is  
8 going to go. Because obviously the governance issue is the  
9 main one that has to be resolved, but I think there is some  
10 positive collaboration intent there. And a lot of it is  
11 demystification. Not all of it right, but a lot of it is  
12 demystification of sort of oh, California is a big dog  
13 that's wagging the tail. But in any case, it's an  
14 interesting discussion that obviously will be ongoing.

15 Let's see, I guess -- well, yesterday I did the  
16 Keynote at the Green California Summit, which is ongoing.  
17 Actually, this Monday, and then it's ongoing yesterday and  
18 today, just a good event. You know, just an annual event  
19 of all-things-sustainability in California, so energy is a  
20 piece of it, but not all of it. So a lot of water, a lot  
21 of sustainable materials, a lot about service providers,  
22 it's really kind of an interesting mix of stuff. So I'm  
23 glad that's in Sacramento every year.

24 And then finally I just want to thank a couple of  
25 people. I want to thank Rob Cook, who is not here anymore.

1 But anyway invited me to speak the other day at his staff  
2 meeting, so that was I think really is just a good thing to  
3 do. That's a good practice. It shows leadership on his  
4 part and helps the engine room -- the admin folks down  
5 there in the engine room, it helps them see the broader  
6 context. And it really allows us, when we have that  
7 opportunity, to drive home how important they are to just  
8 making the trains run and the clocks tick. And so they  
9 deserve a lot of kudos and appreciation for that.

10 And also Paul Jacobs who I neglected to thank  
11 earlier when we did the -- when there were the enforcement  
12 discussion about the Appliance Efficiency Standards on an  
13 item of today. And I just think that sort of a legacy --  
14 well, it is a legacy of Rob Oglesby, who got the  
15 Enforcement Group together and they are just doing a great  
16 job. They're walking just a very responsible and  
17 respectful line, but not giving anything away. Definitely  
18 using their authority to make sure we have compliance and I  
19 think it's just a really nice balance they have achieved.  
20 And it's a good tone. That they set a good brand that they  
21 encourage and reinforce at the Commission, so I just wanted  
22 to do that.

23 Great. I think that's it for me.

24 COMMISSIONER DOUGLAS: All right. I just have a  
25 brief report as well. I had the opportunity to be the

1 Keynote speaker at an Association of Environmental  
2 Professionals Conference in the Palm Springs area. And it  
3 was really good. These are the folks who work in a lot of  
4 planning firms and consulting firms, local governments.  
5 And so, for them to have an overview perspective of the  
6 energy sector and particularly changes that are going on in  
7 the electricity side and the state policy goals is very  
8 helpful for them, as they work on project analyses and work  
9 with local governments on sustainability plans and that  
10 sort of thing.

11 I also had a chance to visit four tribes along  
12 the Colorado River with Tom Gates and Jessica Bonitz in the  
13 Siting Unit. So we went to see the Colorado River Indian  
14 Tribe. And then we went on to visit with the Chemehuevi at  
15 Fort Mojave. And then the Quechan actually came up and met  
16 with us at the Fort Mojave Reservation and Tribal Lands.  
17 So we had a really productive day, having a great dialogue  
18 with a number of tribes.

19 We had an opportunity to talk about DRECP, of  
20 course, Desert Renewable Energy, and a large set of issues  
21 around that. But we also had a chance to talk about the  
22 tribes' interest in renewable energy in many cases. And  
23 let them know about the work we're doing to organize a  
24 Tribal Energy Summit for this fall. And so it was a really  
25 productive set of meetings and conversations.



1           So I think that's all I've got for today.

2           COMMISSIONER HOCHSCHILD: Well, let's see, I'm  
3 working on this rulemaking on the Power Source Disclosure  
4 Program to move us closer to a sort of truth-in-advertising  
5 label that will reflect the actual greenhouse gas  
6 emissions. I wish there was a sort of "Ludicrous mode" for  
7 proceedings, because it's taking over a year and a half  
8 since we started, but we are closing in.

9           And just actually building on Commissioner  
10 Scott's comments we did the Tesla CTO and Co-Founder JB  
11 Straubel, was in here last week to present. And actually,  
12 I had him talk about energy storage. So Tesla has  
13 installed the largest energy storage project in the world  
14 in Southern Australia. It's three times bigger than the  
15 second largest, which is here in California. But it is  
16 working, I think, incredibly well. It's adjacent to a  
17 large-scale wind farm in Australia. And it's producing  
18 much more revenues than they had expected and providing  
19 better results than even they had anticipated. And it was  
20 really good to hear that.

21           He also did mention that just last week Model 3  
22 production at the factory in Fremont exceeds Model S and  
23 Model X. And in two weeks they expect Model 3 will exceed  
24 Model S and Model X combined. And so they're doing 2,100  
25 Model 3s a week now. And that's finally getting off the

136

1 ground.

2 On my end other than that, I spent a few days in  
3 Mexico for the International Association of Energy  
4 Regulators Meetings, which is once every three years, had  
5 some great visits with Amory Lovins and some others there.

6 One guest speaker we're going to bring in, in the  
7 fall who is here for Climate Summit -- I think it will be  
8 fun -- is Bertrand Piccard, who's the first person to fly a  
9 solar-powered airplane all the way around the world, a  
10 project that he raised \$130 million for and designed and  
11 built. And he is now doing a global campaign for good  
12 energy regulations and that's what he's focused on. So  
13 he's going to come here.

14 We also had Mark McGurben (phonetic) from Shell  
15 New Energy Group, who is someone I've known for a long  
16 time, present. And Shell, you know, it's interesting, you  
17 look at the modern solar industry really actually it was  
18 born out of these spinoffs from the companies like Mobil  
19 and Shell back in the day that started -- yeah, and ARCO,  
20 etcetera. And Shell is now, I think really stepping up.  
21 And they have 44,000 gas stations in the United States.  
22 And they're looking at how can they do EV charging and the  
23 rest of it there, so they're based in San Francisco, this  
24 group.

25 And let's see, I also finished installing my

1 first heat pump. So thank you, Commissioner McAllister,  
2 for inspiring me on that and that felt good. And  
3 miraculously it's working.

4 And I want to just on the Volume I of the IEPR,  
5 you'll be getting today a hard copy and electronic copy of  
6 that. I want to ask you before you read the text to read,  
7 there's two documents, just to read the layout so you get a  
8 sense of how it looks and feels. And I'd like your  
9 comments not just on the content, but also on the graphic  
10 design. Design matters a lot for this if you want to reach  
11 a broader audience and we'd like your feedback by the end  
12 of next week, if that's okay. It's 24 pages and that's  
13 pretty light text.

14 And that's it on my end.

15 CHAIRMAN WEISENMILLER: Great, thank you.

16 Just a couple of things, I was going to flag in  
17 the Aliso Canyon drama. As you recall, we lost Aliso  
18 Canyon and we bought it back, but we had pipelines out. So  
19 going into this year's event, we're going to be like May --  
20 I think it's the 7th down at South Coast again.

21 Now, we're dealing with the Morongo basically  
22 saying that, "We really don't want this pipeline going  
23 across our reservation," so adding to the drama of it's  
24 like, "How do we relabel it from just Aliso Canyon to Aliso  
25 Canyon and the pipeline system?" as sort of the issue. But

138

1 anyway, that's sort of complicating things. And obviously  
2 a lot of that goes back to antagonism in the historic  
3 relationships that go back at least 50 years when the last  
4 Agreement was negotiated. So anyway, that's just an  
5 element, stay tuned to for when we have that workshop.

6 I was going to say in the Aliso Canyon context  
7 we're having a pretty good working group between the ISO,  
8 the Energy Commission and PUC, LAWDP, Bonneville. Everyone  
9 looking at transmission upgrades a lot, not just Southern  
10 California but a lot of interest from the municipals in  
11 Northern California. And there's the DC line south, but I  
12 mean there's Tank and other lines that are north that are  
13 also interested.

14 And having a conversation, it's sort of I'm sure  
15 going to be a two-step: one is what are the costs and what  
16 are the benefits? And then what are the allocations  
17 between the Northwest and California and then among the  
18 participants in both areas?

19 I understand at one point there was about ten  
20 years ago, there was a fairly low-cost way of getting like  
21 300 megawatts on one of the transmission systems for \$30  
22 million. And the thing was one utility would pay the costs  
23 and another utility would get the benefits and they were  
24 not able to reach an agreement. So anyway I'm not saying  
25 this will not be easy, but at least trying to -- it's time

1 to really re-look at those issues, particularly as we're  
2 looking more at a day-ahead market in the northwest.

3           And frankly, the northwest is very motivated. I  
4 get a lot of calls from Allan Mansoor thanking me for  
5 pushing this, because every year as we add more renewables  
6 their revenues go down, which is true for just about anyone  
7 in the wholesale market. So they're trying figure out how  
8 to maximize the value of their sales to California, going  
9 forward. So anyway that certainly want to stay tuned, I'm  
10 sure. Those of you, more going in the regional  
11 discussions, there will be more and more attention on the  
12 transmission stock.

13           And then I was just going to close by saying sort  
14 of one those "good news, bad news" stories that I was at an  
15 event with basically all the -- I would say all the  
16 universities in California. What's happened there with the  
17 greenhouse gas money, and the Strategic Growth Council has  
18 gotten a little piece of greenhouse gas money for R&D.  
19 Well, obviously, the academic community is more or less  
20 what about us? And it's been a combination of Ram has  
21 really been pushing it -- a sort of wonderful gentleman  
22 from UC San Diego, certainly Vatican, just really cutting-  
23 edge. Climate researchers are really terrified at what's  
24 going on, on the climate side, and is trying to say, "Okay,  
25 is there something we can do to scale up technologies right

140

1 now and start bending the curve?" And it's interesting how  
2 do you find shovel ready technologies that will be  
3 significant and bend the curve and move forward?

4 And basically on the scale size UC's been pushing  
5 that. And a lot of the UC researchers are saying, "Well,  
6 what about basic research?" And so the conversation we had  
7 was very schizophrenic between, "What can we do now that in  
8 the next five years, can we scale up, reduce greenhouse gas  
9 emissions significantly? And here's my 20-year -- my  
10 research in something which in 20 years could be  
11 important." Yeas, it could very be important, but at least  
12 at this point, how do you --

13 And then obviously struggling with how to -- "We  
14 have a research program." I had to tell them, "You all saw  
15 the chart on how we went through and identified the  
16 opportunities." And I was saying, "Well actually it  
17 doesn't say, 'Come to this meeting here and give Bob ideas  
18 on what we're going to invest in.' It's just not the way  
19 it's set up and it's got to be in the plan, it's got to be  
20 a competitive process." It isn't just, "Here, I've got an  
21 idea. Give me some money." So basically how to harmonize  
22 all the various pieces here.

23 So on the one hand it's a really good opportunity  
24 to line up (indiscernible) more money and greenhouse gas  
25 funded to really do some research. And particularly how to

1 focus it on like so some of the we'll put the foot to the  
2 metal on trying to -- whatever is the "Ludicrous option"  
3 for trying to move some of the technologies we need  
4 forward.

5 But I guess part of the backdrop, which I think  
6 everyone was aware the Trump Administration has always been  
7 proposing these massive cuts in basic research. And so far  
8 it's been pretty unsuccessful. I think the Adopted Budget  
9 this year, again, has an increase in basic research. And  
10 that's been part of the drive I think from obviously UC,  
11 but they have Stanford, they have Caltech. It's just the  
12 issue. I mean just really a universal group saying, "Oh my  
13 God, what happens if Trump gets his way? What's the  
14 backstop?"

15 So anyway, it's certainly going to continue the  
16 conversation. But I mean, this sticky point like I said is  
17 we've been assuring them, "If you public money," which they  
18 do, then you really have to a pretty clean separation  
19 between the proposers and the evaluators. You can't simply  
20 decide we'd like to split the money and then hand it  
21 around. You have to have a very public process that is  
22 really perceived as very transparent and has lot of  
23 integrity, which certainly ours does.

24 COMMISSIONER HOCHSCHILD: Just with your  
25 permission, I just wanted to offer one reflection on Nancy

1 McFadden.

2 I know it sounds weird, but we've lost some  
3 remarkable people in the last year or some remarkable  
4 women, in particular. And I just really believe that we  
5 have visionary leaders who are successful, because I think  
6 Governor Brown really has been. It just it doesn't happen  
7 without somebody actually operating the machinery of  
8 implementation and figuring out, helping the Governor  
9 figure out appointments and who goes in what seat. And  
10 that was the function that Nancy played brilliantly.

11 And I think she's really irreplaceable. I've  
12 known her for almost 20 years, from back when she was at  
13 PG&E before that and with Gray Davis. And she led this  
14 incredible career everywhere she went, kind of everything  
15 she touched turned to gold from my perspective. She just  
16 was a force for good inside every organization wherever she  
17 was. You know, working with Al Gore, working within  
18 government, working within PG&E.

19 And was selfless and funny and kind and I just  
20 think set a high bar. She could have made many, many times  
21 as much money as she was making in state service. And she  
22 came in to do this work, because she believed in it and she  
23 was incredibly effective at helping a bold vision really  
24 come to fruition. And I just that -- you need that.

25 I don't think Governor Brown would be anywhere



1 near as successful without someone playing that role. He  
2 really benefited, and he knew that. I just remember her  
3 saying he would call her at 6:00 in the morning, many  
4 mornings. You know, they were just sort of fused. And it  
5 was a really beautiful symbiotic relationship, because I  
6 know she was so inspired by working for him. And brought  
7 out, I think, the best in him. And we've all seen how  
8 elliptical his mind can be, and you really need someone who  
9 kind of organizes and sequences and thinks two steps, three  
10 steps, four steps ahead.

11           Everything from who the Attorney General is now,  
12 right? I mean, she's bringing these appointments to him  
13 just in a brilliant, unique way. And so, it's a big loss.  
14 And I just wanted to share how much I for one will miss  
15 her.

16           CHAIRMAN WEISENMILLER: Yeah, certainly we all  
17 do. I was actually going to tell a story from China, which  
18 is a great story. So we were -- I think it's in Nanjing --  
19 but anyway, a small group of us were meeting with Chinese  
20 officials. And the Governor started out trying to explain  
21 who each of us were in our roles. And so obviously Ann's  
22 was easy (phonetic) and I got the special place as the  
23 Chairman. You know, in China that really -- everyone  
24 beams. But Nancy said well she's the secretary. And  
25 everyone's looking like, "What?" And he goes, "Oh you

1 know, it's like the Party Secretary." And they go, "Oh  
2 wow." You know, and she's beaming and just all of us going  
3 "Yes, really. You know, she's really important," right?

4 COMMISSIONER MCALLISTER: You know, I'll just  
5 share something very quick and personal. So I obviously  
6 echo just the class that she has and just professionalism  
7 at the highest level. It's like equal parts compassion and  
8 professionalism. And just her heart and her head were  
9 really aligned and they were really in balance.

10 But when we, my family was going through what we  
11 were going through, and Leslie was sick and we were dealing  
12 with that on a daily basis she reached out innumerable  
13 times. You know, she gave us and after Leslie passed away  
14 she sent me a book about grieving. I mean just incredibly  
15 thoughtful with all the stuff she has going on. And then  
16 it turns out that she was fighting her own cancer battle  
17 and it had gotten worse at that same time. It blows me how  
18 present somebody could be, that she could be.

19 And that's exactly the kind of person you want in  
20 a leadership role in state service is somebody who really  
21 understands people and who has compassion and who is doing  
22 things for the right motivations and reasons and is really  
23 good at it. Just the fact that she thought to reach out  
24 and did it, and actually did it, it left a really lasting  
25 impression on me. I'll always remember that.

1           CHAIRMAN WEISENMILLER: Chief Counsel's Report.

2           MS. VACCARO: So I would just like to take a  
3 moment to do a brief introduction. Just last week we added  
4 an attorney to our Siting Advocacy Unit, it's Nick Oliver.  
5 He comes to us with experience practicing with local  
6 jurisdictions. We're very excited to have him. I think  
7 some of you have known I've had some vacancies for quite  
8 some time, and I've taken a little bit of time to fill  
9 them.

10           I think maybe I have another one or so to fill,  
11 but we're really very glad that Nick has joined our team.

12           CHAIRMAN WEISENMILLER: Great, welcome aboard.

13           MR. OLIVER: Thank you.

14           CHAIRMAN WEISENMILLER: Welcome.

15           Executive Director's Report?

16           MR. BOHAN: The same thing, just a brief  
17 announcement. It's someone who's not new to the  
18 organization, but he's new to his position, Jason Harville,  
19 I think you all know him, sitting over here. He was most  
20 recently in the Assessments Division and has now accepted a  
21 role as a CEA focusing on our data needs. Commissioner  
22 McAllister has really taken the lead in this area, but it  
23 impacts all the divisions. And so he's starting off small  
24 and is going to grow the data enterprise. Glad to have  
25 him.

1 CHAIRMAN WEISENMILLER: Great.

2 Public Adviser?

3 MS. MATHEWS: I have three things very quickly.

4 I had the opportunity to attend an event. It was actually  
5 last month, "Humans and the Environment." Thanks to  
6 Kourtney, our Chief Counsel, for inviting me to that. And  
7 that had really interesting information about environmental  
8 justice and how to approach that and be more aware and  
9 increase your cultural competencies.

10 The second is a community leadership summit on  
11 Best Practices for Building Successful, Clean Energy  
12 Programs. And that was hosted by the Strategic Growth  
13 Council. And I wanted to highlight that. I participated  
14 as one of their panelists, but they had about 200 community  
15 leaders who came. So it wasn't really technical at all, it  
16 was just the on-the-ground people who were just there all  
17 day to find out about the funding and get some one-on-one,  
18 so I thought it was a good model. Hopefully we can  
19 duplicate that here at the Commission at some point.

20 And then lastly I also the San Joaquin Valley  
21 Clean Transportation Summit, where everyone is very excited  
22 about CALeVIP. I had an opportunity to showcase our  
23 funding opportunities, always have those fliers out, as  
24 well as I had the opportunity to meet with a lot of Fresno  
25 State students about career opportunities. So also, if you

1 all don't have fliers I will share them with you, so that  
2 you can promote the Diversity Career Fair that's coming up  
3 in a few weeks here.

4 That's it. Thanks.

5 CHAIRMAN WEISENMILLER: That's great.

6 Any public comment? Please. If you want to  
7 please come on up and identify yourself.

8 MR. DEVAI: Good afternoon, I'm Frank Devai. I'm  
9 with Community Resource Project and Community Resource  
10 Project is a local service provider for the LiHEAP and also  
11 the LIWP program. We're the Region 1 administrator for the  
12 LIWP.

13 But I'm here on a personal level. And I've been  
14 an inspector, a Quality Inspector for the organization for  
15 six years. And I want to compliment you for your devotion  
16 to the DAC, the disadvantaged communities. But I have run  
17 across several times I would go inspect a home and across  
18 the street is another family just as poor if not worse, but  
19 they don't qualify because they're just outside of the DAC  
20 area.

21 And my appeal to you is that we don't forget the  
22 disadvantaged communities that are outside of the DAC area.  
23 I've seen a lot of programs that would have -- we should  
24 concentrate on the disadvantaged in California. And that  
25 is what I wanted to just emphasize this afternoon.

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Thank you for your time.

CHAIRMAN WEISENMILLER: Thank you.

Okay, this meeting is adjourned.

(Adjourned the Business Meeting at 3:07 p.m.)

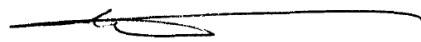
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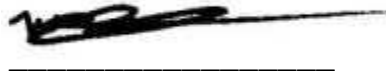
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