

## DOCKETED

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BUSINESS MEETING  
BEFORE THE  
CALIFORNIA ENERGY COMMISSION

In the Matter of:	)	Docket No:
	)	16-BUSMTG-01
<i>Business Meeting</i>	)	
_____	)	

CALIFORNIA ENERGY COMMISSION  
THE WARREN-ALQUIST STATE ENERGY BUILDING  
ART ROSENFELD HEARING ROOM - FIRST FLOOR  
1516 NINTH STREET  
SACRAMENTO, CALIFORNIA 95814

WEDNESDAY, April 13, 2016

10:00 A.M.

Reported by:  
Susan Palmer

## APPEARANCES

### Commissioners

Robert Weisenmiller, Chair  
Karen Douglas  
Andrew McAllister  
David Hochschild  
Janea Scott

### Staff Present:

Rob Oglesby, Executive Director  
Kourtney Vaccaro, Chief Counsel  
Alana Mathews, Public Adviser  
Cody Goldthrite, Secretariat  
Linda Barrera, Staff Counsel  
Lisa DeCarlo, Staff Counsel

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Diana Gonzalez	14
Bradley Meister	15
Sonya Ziaja	16
Felix Villanueva	17
Nicholas Blair	18
Joshua Croft	19

Others Present (\* Via WebEx)

Interested Parties

Thomas E. Enslow, Esq., California IBEW/NECA LMCC	5a, 5b
Aaron Klemm, CSU Chancellor's Office (letter)	5a
Tom James, Intelligent Efficiency (letter)	5a
Gene Thomas, Ecology Action	5a, 5b
*Mostafa Kashe, L.A. County Dept. of Public Works	5a
Don Link, Controlled Energy	5a, 5b
*Rick Brown, TerraVerde Renewable Partner	5a
*Scott Randolph, Contractor	5a
*Don Link, Controlled Energy	5a
Greg Mahoney, City of Davis	5a
*Mike Stone, NEMA	5a, 5b
*Leslie Kramer, Stanford University	5a, 5b
*Matt Tracy, Enlight Inc.	5b
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P R O C E E D I N G S

MARCH 9, 2016 10:05 a.m.

CHAIRMAN WEISENMILLER: Good morning. Let's start the meeting with the Pledge of Allegiance.

(Whereupon, the Pledge of Allegiance was recited in unison.)

CHAIR WEISENMILLER: So in terms of today's agenda, 15b has been pulled for now. We'll deal with it later and the rest of it is as written.

So let's start with the Consent Calendar.

COMMISSIONER SCOTT: Move consent.

COMMISSIONER MCALLISTER: I'll second.

CHAIR WEISENMILLER: All those in favor?

IN UNISON: Aye

CHAIR WEISENMILLER: Aye, so the consent passes five to zero.

Let's go on to Item 2, Energy Commission Appointments.

Kevin, please go ahead. Staff? Let's get to the staff presentation on the Pomona Repower Project.

MR. PAYNE: Good morning Chair, Commissioners. My name is Lon Payne. I am a Project Manager with the Siting Unit. With me is Staff Attorney Lisa DeCarlo.

We're here today to present a proposed order appointing a Siting Committee for the Pomona Repower

1 Project's application for a Small Power Plant Exemption or  
2 an SPPE, for short.

3 Pomona Repower is a 100 megawatt peaking facility  
4 that will replace the existing 44.5 megawatt San Gabriel  
5 Cogeneration Facility. The project would occupy two acres  
6 in an industrial area located at 1507 Mount Vernon Avenue  
7 in the City of Pomona, Los Angeles County, California.

8 On March 21st, 2016 AltaGas Pomona Energy, Inc.  
9 filed an application for an SPPE seeking an exemption from  
10 the California Commission's licensing requirements. The  
11 Pomona Repower Project will be powered by one General  
12 Electric LMS100 gas turbine. The LMS100 will use the  
13 existing 66 kilovolt Simpson transmission line to connect  
14 to the Grid.

15 The project would use existing supply and  
16 discharge lines including natural gas, potable recycled  
17 water supply, processed wastewater and sanitary wastewater.  
18 The project plans to use recycled water from the Pomona  
19 Water Reclamation Plant for cooling and processed water  
20 uses. The project will also include the removal of the  
21 existing LM5000 gas turbine currently in operation.

22 If interested, I would be happy to provide you  
23 with a brief summary of the SPPE process if you'd like a  
24 refresher. Thank you. And we'd be happy to answer any  
25 questions you may have.

1 CHAIR WEISENMILLER: Thank you.

2 Let me start with a question. Do any of the

3 Commissioners want to hear the SPPE 101 discussion?

4 UNIDENTIFIED SPEAKER: (inaudible)

5 CHAIRMAN WEISENMILLER: I think any -- oh no,

6 well we could. Actually, I've done a couple and I think

7 Commissioner Douglas has done a couple, but anyway --

8 COMMISSIONER MCALLISTER: You said an LMS100?

9 MR. PAYNE: LMS100.

10 COMMISSIONER MCALLISTER: 100.

11 CHAIR WEISENMILLER: Yeah, it sounds like we're

12 good.

13 Okay, so we would need to appoint a Committee. I

14 think Commissioner Scott should be the lead member on this

15 and Commissioner Douglas should be the second member.

16 Commissioner Douglas did with the IBM -- or the Data Center

17 SPPEs, so you've got some experience. Obviously, you don't

18 in this area, but these are nominally simpler cases.

19 COMMISSIONER SCOTT: I'll likely get the

20 refresher offline.

21 CHAIRMAN WEISENMILLER: Right.

22 COMMISSIONER DOUGLAS: I move approval of the

23 proposed Committee.

24 COMMISSIONER MCALLISTER: Second.

25 CHAIR WEISENMILLER: All those in favor?

1           IN UNISON:   Aye.

2           CHAIR WEISENMILLER:   Thank you.

3           Let's go on to Item Number 3, which is Order  
4   Instituting Investigation.   Heather Raitt, please?

5           MS. RAITT:   Good morning, I'm Heather Raitt,  
6   Program Manager for the Integrated Energy Policy Report.  
7   Today I'm asking for the Commission's approval of an order  
8   instituting informational proceeding to gather and assess  
9   information needed to prepare the 2016 IEPR Update.

10           The Commission is required under Public Resources  
11   Code 25302 to prepare an IEPR every two years with an  
12   update in the intervening year that assesses California's  
13   electricity, natural gas and transportation fuel sectors.

14           Commissioner Douglas is the Lead Commissioner for  
15   the 2016 IEPR Update.   On March 28th, 2016 she issued a  
16   Scoping Order that identifies the topics and general  
17   schedule for the proceeding.   The topics include natural  
18   gas, an Aliso Canyon storage facility gas leak response,  
19   environmental performance of the electricity generation  
20   system, climate adaptation and resiliency, electricity  
21   forecast and reliability updates, and nuclear energy.

22           The adoption of this order will ensure that the  
23   Lead Commissioner has access to a full range of options for  
24   collecting information related to the topics in the Scoping  
25   Order.

1           So in closing I request that the Commission  
2   approve this order instituting informational proceeding for  
3   the 2016 IEPR Update. Thank you.

4           CHAIR WEISENMILLER: Thank you.

5           Any comment, Commissioner Douglas?

6           COMMISSIONER DOUGLAS: Well, just briefly that  
7   obviously we've begun some work and some workshops, both in  
8   terms of reviewing the comments on the Scoping Order,  
9   moving forward to finalize the scope for this IEPR. And we  
10   already held a workshop, which I think you'll probably  
11   speak to in the Commissioner Reports later in Porter Ranch  
12   looking at some of the reliability issues potentially  
13   arising from the Aliso Canyon issues.

14           So the work on the IEPR is underway. It's a  
15   strong team. It's a set of really important and topical  
16   subjects. And so I'm definitely looking forward to working  
17   on it and working with our IEPR team, working with the  
18   number of divisions that are pitching in some significant  
19   support to this year's IEPR Update and to my colleagues  
20   and working with my colleagues on this as well.

21           CHAIRMAN WEISENMILLER: Yeah, go ahead.

22           COMMISSIONER MCALLISTER: No, sorry. I want to  
23   just -- I'm looking forward to it, but I think we all  
24   issues that we're interested in on the IEPR Update in 2016.  
25   I want to just thank Commissioner Douglas for taking the

12

1 lead on it and I think the Scoping Order is terrific.

2 And also just highlighting the fact that 2016  
3 really is a time for us to identify the ducks and start to  
4 get them in a row in terms of 350 and sort of the other  
5 newish things. That we need to organize and get our  
6 information bases in place, so that in 2017, 2019 we can  
7 really move forward and create that sort of foundation for  
8 the new future, which is when we're really going to put the  
9 pedal to the metal on the clean energy front. And really  
10 localize and get more detailed in the way the forecast and  
11 other resources we can develop goes.

12 So anyway, I took that was really, really key  
13 moment to kind of pause, take some deep breaths, and really  
14 get it right. And I really appreciate your leading that  
15 effort.

16 COMMISSIONER DOUGLAS: Thank you.

17 COMMISSIONER MCALLISTER: Do we need to vote on  
18 this or no?

19 COMMISSIONER SCOTT: Are you going to move?

20 I move approval. Oh, yeah, right. This is an  
21 informational -- no, that's right.

22 COMMISSIONER MCALLISTER: Oh, no, no. This is an  
23 order. Yeah, sorry.

24 COMMISSIONER SCOTT: Yes, I move approval of Item  
25 3.

1 CHAIR WEISENMILLER: Yes, all those in favor?

2 IN UNISON: Aye.

3 CHAIR WEISENMILLER: This item passes five to  
4 zero. Thank you, Heather.

5 So let's go on to the Clean Energy Jobs  
6 Presentation.

7 MR. BEAS: Hello and good morning, Commissioners,  
8 Chair Weisenmiller, my name is Rodolfo Orozco Beas and I am  
9 the Legal Fellow for the Office of Commissioner David  
10 Hochschild. I want to first of all thank everyone for  
11 being here as well as thank you all for giving me this  
12 opportunity to present to you the data I was able to find  
13 regarding clean energy jobs.

14 Now before I turn to what I found regarding clean  
15 energy jobs in California I thought I would start by  
16 focusing on trends and clean energy on the national level.  
17 Now, in conducting my research though I quickly realized  
18 that the data on employment regarding clean energy sectors  
19 was not going to be easily obtainable. For example, recent  
20 trends in sectors such as biogas, biomass, geothermal and  
21 energy efficiency with SCRS (phonetic) and enough solid  
22 data was not available to properly outline any employment  
23 trends in those industries at the state or national level.

24 And while this is not ideal, I think this  
25 exercise shows the importance of not only keeping a fluid

1 database for these sectors, but it also shows that having  
2 such data can help outline successes and trends properly in  
3 order to get an idea of not only where we are as a state,  
4 but where we are going as an economy. But where  
5 appropriate I will outline any data for these industries.

6 Now, in my research I focused on sectors where  
7 employment data for recent years was available -- the  
8 sectors that have accessible data included solar and wind.  
9 As you can see on the national level the solar industry has  
10 seen significant growth since 2010. According to the Solar  
11 Foundation employment in the solar industry on the national  
12 level has grown 123 percent since 2010. By the end of 2015  
13 the solar industry employed about 209,000 workers.

14 Now the jobs we are talking about here include  
15 jobs in insulation firms, manufacturing, sales,  
16 distribution and project development.

17 As for the wind industry, you will see that after  
18 experiencing a slight downturn in 2013, wind jobs grew  
19 sharply in 2014. According to the American Wind Energy  
20 Association as of February of this year, the U.S. wind  
21 energy industry supported around 73,000 full-time jobs  
22 directly associated with wind energy project planning,  
23 siting, development, construction, manufacturing and supply  
24 chain, and operations.

25 As for other clean energy industries, according



1 to the International Renewable Energy Agency the geothermal  
2 industry employed around 35,000 workers in the United  
3 States as of the end of 2014. While the biomass industry  
4 supported around 152 direct and indirect jobs. In a 2014  
5 Report the American Council on Renewable Energy found the  
6 hydropower industry employees between 200,000 and 300,000  
7 workers in the United States.

8 Now the job data for these industries is positive  
9 and shows how clean energy is adding a significant amount  
10 of jobs to our economy. While this diversification has  
11 helped several energy industries benefit it has been  
12 detrimental to others.

13 For example the coal industry, which provided 52  
14 percent of the nation's electricity in 2011 has lost more  
15 than 40,000 jobs since 2008 according to the National  
16 Mining Association. Furthermore, the market cap value of  
17 the top four U.S. coal companies has declined 99 percent  
18 since January of 2011.

19 Now turning your attention to what is going on in  
20 California. As we can see the trends in solar and wind are  
21 similar to the trends nationally. You will notice that  
22 when jobs have remained somewhat consistent since 2010,  
23 that solar job growth has increased significantly. Here  
24 you can see that wind energy or the wind industry has  
25 employed between 2,000 and 8,0000 each for the past five

1 years. The state solar workforce has expanded 110 percent  
2 since 2010 and employs around 75,600 employees here in the  
3 State of California.

4 Now to put that into context you can see here  
5 that solar employs more people in the State of California  
6 than all of the utilities combined, with a projected 14,000  
7 more jobs to be added by the end of this year according to  
8 the Solar Foundation. Now in terms of the California  
9 economy it is impressive that between 2014 and 2015 the  
10 state solar workforce has expanded 38 percent. You will  
11 see that in that same time the California job growth rate  
12 and the U.S. job growth rate expanded 2.9 percent and 1.9  
13 percent respectively.

14 Now turning now to clean transportation,  
15 currently the largest manufacturing plant in California  
16 produces electric vehicles. Now while there is no solid  
17 data on the industry as a whole, as to how many jobs are  
18 directly supported by the manufacturing and maintenance of  
19 electric vehicles, there are some examples of the positive  
20 effect that clean transportation is having in California.  
21 Some examples include companies that have received grants  
22 from the California Energy Commission.

23 Protera, who has designed and developed new zero  
24 emission battery electric buses as well as Tesla, which  
25 currently employs over 12,000 people in the state. And

1 with the increased demand for electric vehicles in the  
2 street of California and beyond, as well as the increased  
3 demand for electric bus fleets by several cities companies  
4 like Tesla and Protera will continue to grow and expand,  
5 which means that they will likely need more California  
6 workers to meet their demand.

7           Furthermore, the California High-Speed Rail  
8 Authority announced in June of last year that construction  
9 on high-speed rail, which will be 100 percent powered by  
10 renewable energy are estimated to create 20,000 jobs  
11 annually for five years. Furthermore, connecting Los  
12 Angeles and San Francisco will generate 66,000 jobs  
13 annually for 15 years. Moreover, the Phase 1 Blended  
14 System will generate 2,900 permanent operation jobs.

15           Now, I wanted to end my presentation by speaking  
16 briefly about how the data I was able to find does suggest  
17 that our economy has not only taken a step towards becoming  
18 greener, but that in doing so, is increasing not only job  
19 growth in the state, but job growth on the national level.

20           Now California has been a leader in this regard  
21 and is an example of how a state can thrive with a vision  
22 of a clean energy economy. While solar and wind do help  
23 with the narrative other clean energy industries should be  
24 applauded as well for their efforts.

25           Now the writing on the wall is pretty clear for

1 the near future. Clean energy industries in the state  
2 should continue to flourish and expand. With the extension  
3 of the Federal Production Tax Credit and the Investment Tax  
4 Credit through 2020 and 2022 respectively, as well as  
5 California's move to go to 50 percent renewables by 2030,  
6 there is opportunity in the state for clean energy  
7 industries to grow and in essence for our state to continue  
8 to generate jobs and opportunities for Californians.

9 And with that I want to thank you all for  
10 allowing me this opportunity to speak in front of you here  
11 today. Thank you.

12 CHAIR WEISENMILLER: Thank you.

13 I was going to note that obviously BYD is also  
14 another company that does electric buses. It actually  
15 manufacture -- well, it's located in Lancaster. And  
16 certainly again it's gotten Energy Commission grants,  
17 (inaudible) based upon the Governor's trade mission to  
18 China. So anyway...

19 COMMISSIONER HOCHSCHILD: I really want to thank  
20 you, by the way, for doing this. And just to be clear I  
21 think it's important to identify where we don't feel we  
22 don't have good data just going forward, because I think  
23 tracking the progress across all technologies is really  
24 important.

25 What I heard you say is basically biomass and

1 geothermal were harder to get than to some extent hydro or  
2 at least small hydro; I'm not sure?

3 MR. BEAS: Yeah. Yeah, essentially that's what I  
4 was getting at, that there is definitely a need for a more  
5 concise and accessible database for those industry areas.

6 COMMISSIONER HOCHSCHILD: Okay. Was there  
7 anything else in clean transportation or elsewhere that you  
8 just looked and it was hard to find or jobs, tracking jobs?

9 MR BEAS: Yeah, well energy efficiency and  
10 transportation are kind of in the same boat here where  
11 there is some numbers regarding how many jobs they create  
12 on certain aspects of manufacturing, for example,  
13 batteries. But as a whole it is a little harder to  
14 determine where some of these kind of greener industries  
15 fall in terms of employment -- at least in the past five  
16 years, which is where I was focusing my research on.

17 COMMISSIONER MCALLISTER: Thank you.

18 Just on that point I mean I think efficiency is  
19 kind of unique in that you could argue that any  
20 construction job is an energy efficiency job pretty much,  
21 because we have standards that really do force the issue.

22 And we also have a lot of more service-oriented  
23 companies in the state that provide energy management  
24 services. And that's kind of built now into the system in  
25 a lot of ways, particularly non-residential but

1 increasingly residential as well. And I think there are  
2 technology companies and analytical firms and just a lot of  
3 sort of value add going on that may not be manufacturing of  
4 widgets, but it really is energy management.

5           And so those numbers are very large, but I think  
6 you can say, "Well, it's 10 percent of this person and 20  
7 percent of that person and 5 percent of the other person."  
8 So it sort of is a cross-cutting effort that I think we're  
9 in general, since it's so in the ether and in the water --  
10 and we're all drinking the Kool-Aid maybe -- that we're all  
11 familiar with, so that it maybe doesn't emerge as an  
12 obvious sort of clean energy thing that you can tag, but it  
13 certainly is there.

14           CHAIR WEISENMILLER: Well, certainly some of the  
15 debate on the national solar numbers that he used I think  
16 maybe there's a lot of (inaudible) some of it includes  
17 energy efficiency. You know, again on these projects you  
18 can do both.

19           You know, obviously Rossi is the one on point in  
20 the administration. He's skeptical of the industry job  
21 numbers put out by the industry per se, but they are  
22 impressive. Although again I think, going forward, it's  
23 very good to keep tracking these, which obviously other  
24 parts of the state government are responsible for.

25           And also just to put out the diversity part and

1 the union labor part, how many of these are good jobs and  
2 how are below prevailing wages? But again it's good to  
3 keep track of those questions.

4 And certainly thank you for your activity and  
5 certainly for your public service being here as an intern.

6 COMMISSIONER HOCHSCHILD: And by the way let me  
7 just say Rudy comes to us out of UC Davis, as does Emilio,  
8 and it's just a great example of I think the kind of  
9 trajectory we want from our top tier public universities  
10 into the Commission. And that's been a real pleasure.  
11 We're not letting him go, by the way. This summer he is  
12 going to go work for Kourtney in the Legal Office and he  
13 may never leave.

14 But actually just one bit of good news I did  
15 learn recently is that the affordable renewables, now from  
16 here going forward, the Department of Energy is actually  
17 going to take over from the Solar Foundation and actually  
18 detail the same methodology, which is a census-based  
19 approach doing surveys. And then we'll be getting national  
20 renewables data, pan renewables data from DOE on jobs  
21 starting this year going forward. So I think that will be  
22 helpful.

23 CHAIR WEISENMILLER: That's good.

24 COMMISSIONER MCALLISTER: I think on efficiency  
25 we are actually facing these issues. The Prop 39 is the

1 Clean Energy Jobs Act, right? So one of the core goals is  
2 to move energy efficiency and clean energy generally in the  
3 schools. In efficiency traditionally it's been sort of,  
4 "Well okay we invest x amount of dollars in the sector."  
5 And there's a multiplier that DOE uses to figure out well  
6 how many jobs were created by that investment. And so I  
7 think there is a need to update. You know, whether that  
8 multiplier where it fits, where it doesn't fit, kind of  
9 update it in a way and understand the industry better.

10 We do have some resources in the state though,  
11 the Don Vial Center and others that do work on energy  
12 efficiency and the jobs implications, the economy  
13 implications for labor markets and all that, so that's very  
14 helpful. So we do have resources in the state on the  
15 efficiency side. And there have been some good reports  
16 that have come out on efficiency jobs.

17 COMMISSIONER HOCHSCHILD: Yes.

18 COMMISSIONER MCALLISTER: So you might look for  
19 that and incorporate it when you have a chance.

20 CHAIR WEISENMILLER: No, I was going to point to  
21 that. I mean certainly Don was in the first Brown  
22 Administration and then sort of a PUC Commissioner and  
23 always had a very strong labor focus among other things.

24 So anyway, but thanks again. We're glad to hear  
25 you're staying and certainly encourage you to encourage the



1 best and brightest from Davis, particularly diversity  
2 candidates to come.

3 So with that let's go over to 5, 2016  
4 Nonresidential Compliance Manual Update. Let's start with  
5 Part a.

6 Peter Strait, please?

7 MR. STRAIT: Thank you Commissioners.

8 As noted this item is in two parts, so we'll  
9 start with Part 5a. This is for the Compliance Manual,  
10 Section 25402.1(e) of the Public Resources Code requires  
11 that the Commission, "Certify not later than 180 days after  
12 approval of the Standards by the State Building Standards  
13 Commission an Energy Conservation Manual for use by  
14 designers, builders, and contractors of residential and  
15 nonresidential buildings."

16 I'm here today to ask the Commission to approve  
17 and certify the compliance manuals for the recently  
18 approved 2016 version of the Building Energy Efficiency  
19 Standards consistent with the statutory requirement.

20 For those who may not be familiar with them the  
21 compliance manuals are a plain-language recipe book for  
22 complying with the Building Energy Efficiency Standards.  
23 They describe the steps that builders, designers and  
24 similar parties can take to ensure their projects meet  
25 efficiency requirements. It is not itself a regulatory

1 document. Rather, it describes the regulations in order to  
2 assist designers and builders and provides forms to be used  
3 to document and demonstrate compliance for California's  
4 building officials.

5           Also, for those who may not have participated in  
6 the rulemaking for the 2016 Standards, amendments to a  
7 portion of these Standards relating to nonresidential  
8 lighting alterations were adopted at a later date than the  
9 majority of the regulations. Because of this, the  
10 associated sections of the compliance manuals were  
11 similarly offset in their production.

12           Following a workshop and a public comment period  
13 our office has now finalized changes to the 2016  
14 Nonresidential Compliance Manual chapters and forms for  
15 non-residential lighting alterations. In addition, staff  
16 have identified incorrect and minor errata occurring in a  
17 handful of additional compliance forms. We are here today  
18 to bring a complete compliance manual that includes these  
19 sections before the Commission for approval.

20           The draft changes to the chapters and forms were  
21 made available for public comment from March 1st to March  
22 15th. Staff received very few comments on the specific  
23 content of the chapters and forms. Of the comment letters  
24 received only one made specific reference to the language  
25 in the Draft Compliance Manual and requested that the

1 proposed language be changed. Staff made changes to the  
2 final language to be responsive to this commenter's  
3 comment.

4 The majority of comments received by staff  
5 instead discussed restricting the completion of a new  
6 Certificate of Compliance Form to certified acceptance test  
7 technicians. This is not currently a requirement in the  
8 2016 Building Standards and would require a rulemaking  
9 action to amend Title 24. I mention this as I believe some  
10 of the commenters here today will be making this comment  
11 and this request.

12 The current action before the Commission is the  
13 approval of the Compliance Manual for the currently  
14 approved Standards, which is required by statute as  
15 mentioned before to be done within 180 days of their  
16 approval by the Building Standards Commission. As we are  
17 required to approve a current Compliance Manual for the  
18 current standards we therefore recommend approval even if  
19 future changes to the Standards are contemplated.

20 I'm happy to answer any questions that the  
21 Commission may have.

22 CHAIR WEISENMILLER: Okay, thank you.

23 Let's go through public comment. And again this  
24 is on a.

25 Tom Enslow, first.

1           MR. ENSLOW: Good morning Chair, Commissioners,  
2 Tom Enslow on behalf of the California State Labor  
3 Management Cooperation Committee for the International  
4 Brotherhood of Electrical Workers, and the National  
5 Electrical Contractors Association.

6           The organizations that I represent have serious  
7 concerns over the proposed Compliance Manual provisions  
8 related to the new 35-to-50 percent power reduction  
9 compliance pathway for lighting alterations. The LMCC  
10 feels that the enforcement concerns that have been raised  
11 previously on those alterations have not been addressed.

12           Now this was a compliance pathway that was highly  
13 controversial when it was adopted, in large part due to  
14 concerns over its enforcement. And at the time the  
15 Commission committed that they were going to address  
16 enforcement issues as they moved forward.

17           Enforcement is a huge issue in building codes as  
18 you know, particularly with Energy Code. Studies have  
19 shown that without reliable verification compliance with  
20 Energy Codes is -- approximately 65 percent of projects  
21 fail to comply with Energy Code requirements. So the 35-  
22 to-50 percent power reduction compliance pathway heightens  
23 this enforcement concerns, because it's enforcement relies  
24 on the comparison of the performance of the preexisting  
25 lighting system with the new altered lighting system.

1           And this is problematic. And we refer this again  
2 and again from enforcement officials, because enforcement  
3 officials verify the final product of the code. They don't  
4 look at -- they don't go in and inspect a building  
5 beforehand. And to suddenly adopt Building Standards based  
6 on a comparison of preexisting conditions with new  
7 conditions creates an enforcement gap that's ripe for  
8 fraud.

9           And so as I said the Commission's response was to  
10 commit to addressing enforcement issues, so staff held a  
11 workshop on enforcement in February. And at that workshop  
12 numerous inspectors and other stakeholders testified that  
13 merely requiring a contractor to sign a document verifying  
14 compliance would not be sufficient since there is no way to  
15 verify if someone is lying once the original lighting  
16 alterations and original lighting fixtures have been  
17 removed. And so it creates this new incentive for fraud,  
18 because there's almost no way to get caught once you've  
19 done the work.

20           So numerous stakeholders recommended using  
21 acceptance tests just to conduct this pre-installation,  
22 visual inspection, and a report was prepared by the  
23 University of California Davis Lighting Technology Center,  
24 finding that use of acceptance testing would be cost  
25 effective. And we have supported acceptance testing,

1 because that's what building officials thought would  
2 relieve them from the responsibility of having to go in  
3 beforehand, which they felt they didn't have the resources  
4 to do.

5 But despite the commitment to address the  
6 enforcement the current Compliance Manual only requires a  
7 simple verification by the contractors, no verification of  
8 existing conditions is required that's meaningful in any  
9 way. Our clients feel that this is a violation of the  
10 commitment that was made to address these concerns that we  
11 had raised. And we urge the Commission to expect staff to  
12 continue looking at this issue and amend their Compliance  
13 Manual as we go forward before the effective date of these  
14 provisions.

15 Thank you.

16 CHAIR WEISENMILLER: Thank you.

17 Aaron Klemm from the CSU's Chancellor's Office.

18 MS. MATHEWS: Mr. Klemm can't be here, so I will  
19 be reading them on his behalf.

20 (Reads letter from Aaron Klemm)

21 "Honorable Commissioners my name is Aaron Klemm  
22 and I am the Chief of Energy and Sustainability for the  
23 California State University CSU system.

24 "CSU is a leader in high quality, accessible and  
25 student-focus higher education with 23 campuses, 460,000

1 students and 47,000 faculty and staff.

2 "The trustees of the CSU have maintained and  
3 expanded CSU's long-standing energy management program with  
4 aggressive goals for energy efficiency and carbon emissions  
5 reductions in CSU's buildings. CSU's built environment  
6 totals over 85 million square feet with over 40 percent of  
7 the space being built before 1980.

8 "Consequently, cost-effective lighting  
9 alterations to existing buildings are essential for CSU to  
10 meet the trustees energy and climate goals, given the  
11 multiple demands for limited funding and financing  
12 capacity. CSU strongly supports the staff recommendation  
13 to approve Item 5 without any amendments, which will  
14 provide an additional, more cost-effective compliance  
15 option for lighting alteration projects in the 2013  
16 Building Energy Efficiency Standards.

17 "Thank you for considering this comment."

18 And I have another request if I can just read  
19 that while I'm here now? It's a comment on behalf of Tom  
20 James.

21 CHAIR WEISENMILLER: Sure.

22 Again, I encourage people when they send in  
23 comments in writing to assume we will read them as we are  
24 all literate as opposed to having them read to us. Thanks.

25 MS. MATHEWS: (Reads letter from Tom James.)

1                "My name is Tom James and I am a long time  
2    lighting efficiency pioneer here in California.    Almost 30  
3    years ago I helped create one of the first compact  
4    fluorescent lighting fixture manufacturers in the country.

5                Over the years I've had the great privilege of  
6    working with utilities, lighting retrofit companies,  
7    contractors, distributors and end users around the country  
8    to help them with their lighting efficiency programs and  
9    projects.    Historically I have been supportive of lighting  
10   controls and was one of the very first to be certified as a  
11   CALCTP acceptance test technician in 2014.

12              Given the much higher efficacy SSL lighting is  
13   now the norm in terms of our retrofit and renovation  
14   projects.    I firmly believe that our lighting control  
15   systems need to be simpler to deploy and much more cost  
16   effective if they are ever to make compelling economic  
17   sense for the commercial marketplace.    Moreover, I see no  
18   good reason to require ATTs to verify existing fixture  
19   wattages as that basic function has been easily handled by  
20   the lighting contractors and utility companies who have  
21   built the lighting retrofit industry that exists today.

22              I strongly support the CEC staff recommendation  
23   to approve Item Number 5 without any amendments, which I  
24   trust will provide an additional and more cost effective  
25   compliance option for lighting alteration projects in the



1 2013 Building Efficiency Standards.

2 Thank you for your consideration and your good  
3 work.

4 CHAIR WEISENMILLER: Thank you.

5 Tom James? Oh, Tom -- Mr. James -- okay.

6 Let's go to Gene Thomas.

7 CHAIR WEISENMILLER: Let's go to Gene Thomas.

8 MR. THOMAS: Hi. I'm Gene Thomas, Ecology  
9 Action. I've got just some quick bullet points to go over  
10 regarding the percentage reduction compliance option and  
11 then the verification of existing fixtures.

12 Just to reiterate that lighting retrofit market  
13 continues to suffer under the current 2013 Code, it needs  
14 attention now. Major energy savings is being stranded  
15 because code-triggering retrofit projects are not selling.

16 Lighting retrofits that do proceed are much less  
17 comprehensive than before consisting mainly of screw-in  
18 LEDs and other non-code triggering lamp replacements. CEC  
19 developed the 2016 Percentage Reduction Compliance Path  
20 with extensive stakeholder input, specifically to address  
21 these unforeseen, negative market effects with the 2013  
22 Code.

23 And CEC analysis proves that allowing this  
24 compliance option now will save more energy now and will do  
25 so at reduced cost to rate pairs.

1           And we, College Action, urges the Commission to  
2   approve the staff proposal as written to allow the  
3   Percentage Reduction Compliance Path as an option under the  
4   2013 Code.

5           Regarding verification of existing fixtures there  
6   is no needed for the added expense and hassle of having  
7   ATTs verify existing fixture wattages, because contractors  
8   are already accurately performing that function of the  
9   people that install the retrofits. And it's important to  
10   know that lighting contractors are incentivized on multiple  
11   levels to be accurate. When contractors sign the  
12   acceptance form attesting to those fixtures they do so  
13   under penalty of law.

14           Overstating projected savings has far more  
15   potential downside for contractors than potential upside.  
16   There is no credible study data showing that licensed  
17   lighting contractors do not accurately characterize  
18   existing fixture pipes and wattages.

19           Furthermore there is no credible study data  
20   proving that ATTs do provide greater accuracy in verifying  
21   control settings than the contractors who installed them.  
22   Lighting contractors are far more qualified than ATTs on  
23   the subject of correctly identifying existing fixture types  
24   and wattages.

25           In contrast CALCTP's ATT training curriculum does

1 not include instruction on how to identify incumbent  
2 lighting technologies and properly assign system wattages.  
3 That whole training curriculum would have to be developed  
4 from scratch and disseminated to all the current ATTs.  
5 Adding ATT verification requirement would substantially  
6 disrupt project work flow and layer on additional costs  
7 with no greater likelihood of accuracy than the current  
8 approach.

9 Building inspectors already rely mainly on what  
10 the responsible designer, the lighting contractor, has  
11 attested to in the compliance forms under penalty of law.  
12 Jurisdiction to wish to review existing fixtures lamps can  
13 do if they wish by examining photos of existing fixtures  
14 that were removed. Also, potentially the building owner or  
15 decision maker could sign an affidavit attesting to the  
16 accuracy of the existing fixtures that were removed.

17 The 11th hour is not an appropriate time to push  
18 through a radical, untested scheme that goes far beyond  
19 current enforcement practices and is not called for in  
20 adopted regulations. Ecology Action strongly urges the  
21 Commission to reject the Special Interest proposal to  
22 require ATT verification of existing and new fixtures.

23 I'm available for any questions if you like.

24 CHAIR WEISENMILLER: Okay, thank you.

25 Is there anyone else in the room who wants to

1 speak on this issue? Let me go to the people who called  
2 in. We may have questions for folks afterwards, but let's  
3 get their other public comment in.

4 Let's start with L.A. County.

5 MR. KASHE: -- L.A. County area as well 16  
6 contract cities I fear by having the 5b -- to try to change  
7 4 to 5b I won't be able to do that. I get contractors and  
8 designers on a daily basis coming to my counter and they're  
9 doing everything possible not to comply with the code. And  
10 they're writing anything possible on the plans to get a  
11 permit. There is no way of me being able to verify or my  
12 staff to able to verify any of the existing lighting  
13 circuits or the wattage or deficiencies, so I really feel  
14 this should be a third-party doing this for us. And we  
15 should get this to be documented and recorded to the state  
16 level. At the same time, who better than the acceptance  
17 technicians, who are already contractors to begin with?  
18 Most of them understand (inaudible) acceptance technicians  
19 are contractors. And yes, they could be trained. There's  
20 still time for us to be able train them from now until  
21 January 1st. Thank you.

22 CHAIR WEISENMILLER: Thank you.

23 Let's go to Matt Tracy.

24 MR. TRACY: -- what I wanted to say, but I just  
25 wanted to put my last two cents on that in that anything

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1 that simplifies the process makes it so that there is fewer  
2 costs, which make lighting retrofits more valuable for the  
3 building owner. Anything that adds paperwork, anything  
4 that adds extra people in the middle of the process adds  
5 costs, which makes the payback worse in the lighting  
6 retrofit.

7 So I am definitely in approval of the early  
8 adoption of the 35-50 percent compliance option. And I'm  
9 definitely in opposition of the fixture verification by  
10 acceptance test technicians. Thank you.

11 CHAIR WEISENMILLER: Thank you.

12 Rick Brown. Rick Brown?

13 MR. GOLDTHRITE: Sorry.

14 MR. BROWN: I'm also a member of the Executive  
15 Committee of the School Energy Coalition and have been  
16 asked by our Executive Director, Anna Ferrara, to speak on  
17 her behalf. And basically we are in support of the staff  
18 recommendation in both items. We are School Energy  
19 Coalition, it's an organization made up of K12 schools,  
20 community colleges. School construction and energy  
21 consultants focus on energy, water efficiency, and  
22 renewable energy generation projects for California  
23 students. And we support, again, the staff proposal.

24 In 2012 California voters approved funding from  
25 public energy projects through Prop 39, which then focused

1 on K14 districts per the Governor and the Legislature. And  
2 since the implementation rules were established schools  
3 have been gathering the required baseline data and  
4 benchmarking analysis for funding approval in their Energy  
5 Expenditure Plan. The resulting utility bill savings that  
6 have come from these projects are already stretching  
7 taxpayer dollars as they are used for other school  
8 priorities, such as teachers' books or technology that  
9 assist students statewide to a better academic achievement.

10 And so that's why we're in strong support of  
11 these measures, which as I testified and Anna testified  
12 last fall, are really necessary to get these projects freed  
13 up. And in terms of my company we're already having  
14 projects go forward using the new Option 3. And in the  
15 case of public schools around the verification issue we  
16 already, as part of Prop 39, have to do extensive pre-  
17 installation verification processes. That's a requirement  
18 of Prop 39.

19 And we have to do post-implementation  
20 verification. Not just of the installations, but of the  
21 actual energy saving. So a) we don't think this is  
22 necessary anyways, but it particularly is not necessary for  
23 schools. We also have requirements for an inspector of  
24 record, a third party, to verify implementation to the  
25 code. So we think this would not be applicable in any case

1 in the public school sector.

2 So I'm glad to answer any questions. Thank you  
3 for your time.

4 CHAIR WEISENMILLER: Thank you.

5 Scott Randolph, City of San Jose.

6 MR. RANDOLPH: Yes, I'm an inspector on a  
7 contract for the City of San Jose.

8 I'd like to speak first as the school just spoke.  
9 They are a very limited group in that they don't represent  
10 the vast majority of the work in the State of California.  
11 And as such, I don't believe that their input has much  
12 value when we look at the whole state as it sits.

13 As a building inspector there is absolutely no  
14 way that enforcement has ever worked with self-  
15 certification. We don't allow self-certification in any  
16 aspect of the building departments. And why would we start  
17 doing that now? I have absolutely no concept. It doesn't  
18 work, people don't tell the truth, people are not honest.  
19 And when it comes to money they will do everything  
20 possible, as the City of L.A. said, to avoid extra costs  
21 and extra interference or extra, even verification by an  
22 outside official.

23 Number two the early adoption, I think, is a  
24 completely bad idea. Many of the jurisdictions in the Bay  
25 Area -- there is 109 different jurisdictions -- many of the

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1 jurisdictions are just now even after 18 months really  
2 getting a handle on the Title 24 requirements and what's  
3 required and what isn't. And now to say that we're going  
4 to step up an early adoption of one singular program that  
5 is very controversial anyway, I think that will harm rather  
6 than help in the jurisdictional and the inspection system.

7           The whole concept is that the city is there to  
8 verify how everything is going to work and it takes time  
9 for a city of over a million plus people, their inspection  
10 department, it involves in getting their head around what's  
11 happening. And to do an early adoption well before any of  
12 the rest of the requirements are coming into effect I think  
13 is a very bad idea. Thank you.

14           COMMISSIONER MCALLISTER: Just to be clear, so  
15 Mr. Randolph, I've got you as City of San Jose. Are you  
16 actually employed with the City of San Jose?

17           MR. RANDOLPH: I'm a contractor that works for  
18 the City of San Jose.

19           CHAIR WEISENMILLER: So you're not representing  
20 the City's view on this?

21           MR. RANDOLPH: Not totally, no. I worked for the  
22 city for almost three years and then left and went out.  
23 And I was requested to come back and work as a contractor,  
24 so I don't speak for the City of San Jose.

25           COMMISSIONER MCALLISTER: Great, thank you.



1 CHAIR WEISENMILLER: Okay, Don Link?

2 MR. LINK: Hello?

3 CHAIR WEISENMILLER: Please go ahead.

4 MR. LINK: Okay. Let me turn the speaker off,  
5 please. Yeah, my name is Don Link. My company is  
6 Controlled Energy, a lighting retrofit company that's been  
7 in this industry since 1986. We've retrofitted hundreds of  
8 thousands if not billions of light fixtures, installed  
9 thousands of occupancy centers and daylight harvesting  
10 controls when they were appropriate.

11 We install controls when they are cost effective  
12 and not in a "one size fits all," prescriptive manner. I  
13 urge the Commission to approve Item 5a and b, as they are,  
14 because they provide a third path for the lighting retrofit  
15 industry.

16 Those prescriptions in 2013 Title 24 are not  
17 appropriate for the lighting retrofit industry, but more  
18 for the inside wiremen-type companies that do new  
19 construction. My company has seen its business and staff  
20 shrink 80 percent since the 2013 regulations took effect.  
21 Commission staff has shown that the new 50-35 percent  
22 compliance path will increase energy savings by 33 percent  
23 more than the 2013 Regulations.

24 My industry needs the flexibility of 2016  
25 Regulations to be able to do its work of reducing kW demand

1 in kilowatt hours of consumption, something we've been  
2 doing effectively for 30 years. We know how to do it, we  
3 know how sell it to our customers. We cannot sell the 2013  
4 requirements, because of their cost and complexity. Cost-  
5 effective energy efficiency drives our sales and our  
6 industry.

7 I also think the 2016 Regulation should be  
8 implemented immediately and not wait until 2017 to go into  
9 effect. Many companies like mine are hanging by a thread  
10 and need to get back to work saving energy. Please do the  
11 right thing for my industry for its customer base, which is  
12 really not served very well by 2013 Standards. And also do  
13 the right thing for the State of California.

14 The idea of the acceptance testing technician  
15 verifying is redundant in my work, because that kind of  
16 verification is already being done by the utilities and  
17 third-party rebate organizations. They require a pre-  
18 inspection and verification, because they're giving out  
19 public funds. So that would be redundant, it would be  
20 another layer, it would time consuming and quite expensive.  
21 The ATT can charge anything he wants for this kind of work.

22 So please do the right thing, approve 5a and b as  
23 they are. Thank you much.

24 CHAIR WEISENMILLER: Is there anyone else on the  
25 line who wants to speak about 5a?

1 MR. GOLDTHRITE: (Inaudible)

2 CHAIR WEISENMILLER: I don't have cards for them.

3 Ask them to introduce themselves and then to speak.

4 Actually, Tom we have on for 5b. And now we're just  
5 dealing with 5a, but if he wants to speak on a, that's  
6 fine. Okay, fine.

7 So let's transition now from public comment to  
8 discussion on the dais. Commissioner McAllister, you want  
9 to lead us?

10 COMMISSIONER MCALLISTER: Sure.

11 So thanks, everybody, for coming on this.

12 Obviously a lot of diversity of opinion, I guess  
13 first of all I don't know if staff, Peter, you've been  
14 taking any notes on any particular issues you want to  
15 respond or develop those themes a little further? And we  
16 heard a few themes that have different opinions across  
17 them.

18 MR. STRAIT: Sure.

19 We know that enforcement of this is a somewhat  
20 new field in nonresidential projects, so we do have a  
21 sensitivity to the comments that were raised regarding  
22 enforcement.

23 For a building inspector walking into a project  
24 that has taken this approach and looking at the installed  
25 lighting that building inspector is still able to make a

1 call whether this project looks to be one that's met the  
2 goals of Title 24 or met its requirements or hasn't.

3           These 35 and 50-percent numbers are not  
4 arbitrary. They were set to provide the same or superior  
5 results to the existing approach of calculating based on  
6 the square footage. So a building inspector can make the  
7 same assessment of the space and if they find that it  
8 hasn't met that they can red tag the controls, similar to a  
9 project using the existing options and say, "These need to  
10 be updated, because the space doesn't meet what would be  
11 required to have a reduced controls option."

12           We looked at whether there would be value in  
13 having an ATT perform these functions. The primary thing  
14 that we found is this would require a change to the  
15 regulations, so in terms of this action before us of  
16 approving the current compliance manuals based on current  
17 code it really would be a separate action that would  
18 subsequent.

19           However, we did find that an ATT is not  
20 necessarily in a more independent role than a contractor,  
21 an engineer or an architect. An AC can also be a licensed  
22 contractor, engineer or architect. It can be the lead  
23 contractor on a lighting alteration project, its primary  
24 designer or the lighting systems installer. In these cases  
25 we didn't find that an ATT would be less subject to

1 pressure to overstate installed lighting wattages than a  
2 contractor, engineer or architect.

3 We also found that would mean it would not be a  
4 new set of eyes on the project and that the people  
5 possessing an ATT certification would be able to self-  
6 certify.

7 We did find that there was an increase in project  
8 costs and that there would be an increase in logistical  
9 difficulties to have an ATT participate where they're not  
10 normally required to do so.

11 We did find that contractors, engineers and  
12 architects have strong disincentives and deterrents for  
13 submitting falsified information.

14 We also found that the most common type of  
15 noncompliance in a case like this wouldn't be that they  
16 falsified a document, but that they simply do not pull a  
17 permit at all. I received a call just this morning from a  
18 retrofitter that was seeking information. And their  
19 commentary was that they had a lot of competition from  
20 shops that would sell themselves as, "We'll take of all the  
21 permitting, we'll do everything for you" and then behind  
22 the scenes they simply do not do so. So adding an ATT  
23 would only apply additional compliance to projects that  
24 have pulled a permit, not to those that are completely  
25 underground.

1           There is an additional auditing that ATTs  
2 receive. ATTs are overseen by ATT employers and ATT  
3 certification providers, so there is a layer of auditing of  
4 their work that isn't applicable necessarily to  
5 contractors, engineers or architects. Although one could  
6 think of the building official inspecting the property as  
7 an auditing of that builder's work.

8           And lastly, there was a legal issue with  
9 prohibiting a licensed contractor, engineer or architect  
10 from making statements about the installation and the  
11 wattage of an existing lighting system. This is something  
12 that Code expects these parties to do when they're  
13 designing a new building, but to say that they are not  
14 qualified to do so in an existing building would create an  
15 odd conflict between our Code and the Building Professions  
16 Code.

17           For those reasons we took a very close look at  
18 this option and it wasn't something that we would recommend  
19 to the Commission at this time.

20           COMMISSIONER MCALLISTER: Yes. I want to dig in  
21 a little bit to the -- at least one commenter, I think a  
22 couple of commenters said -- I believe it's most of these  
23 projects, but many at least of these projects participate  
24 in programs, the incentive programs, that are ratepayer  
25 funded that do require establishment of this baseline.

1           Now maybe you can give us some insight on that  
2 and how that information is used and where it goes?

3           MR. STRAIT: Certainly. So many of these  
4 projects, the reason that -- or let me go back a little  
5 bit. One of the things that help us engage in so many of  
6 these projects in the State of California is this ratepayer  
7 funded assistance that's provided by our utility companies.  
8 And as a part of that they require documentation of the  
9 existing and the proposed lighting systems; it's fairly  
10 extensive.

11           Anytime we talk about cutting a check to someone  
12 for having performed an action we want to have a strong  
13 guarantee that that exists. So while this is not a  
14 regulatory proceeding it is still a very strong incentive  
15 and very difficult to thwart program that is applicable to  
16 most of the lighting retrofit projects that occur within  
17 the state. And we know have significant uptake.

18           In fact, some information submitted to us during  
19 the 2016 Rulemaking proceeding showed that as the economy  
20 recovered these projects are even under the somewhat  
21 onerous requirements in 2013, as some commenters have  
22 framed that, increasing and quite drastically. So  
23 participation in these programs is very strong and it does  
24 provide that additional layer of certainty that folks that  
25 are engaging in these retrofit projects are reaching the

1 same endpoint that we care about of an efficient building.

2           It's worth noting that the only difference that  
3 we're focused on for this is option is whether or not a  
4 bilevel switch or a bilevel control is installed for that  
5 space. All the control requirements related to area  
6 controls and related to automatic shutoff controls are  
7 still required for these projects.

8           These projects are not required to install  
9 daylighting controls or demand-response controls. However,  
10 those are also not required if you install an efficient  
11 lighting system under the current options -- that's when  
12 you're 85 percent or less of your installed lighting power  
13 allowance.

14           And with LEDs it's practically guaranteed that if  
15 you're installing LEDs you're going to reach that point.

16           COMMISSIONER MCALLISTER: So thanks. I guess, so  
17 in terms of there's a diversity of projects. There are  
18 existing buildings that have a particular context. And I  
19 guess what's your sense of the role of the building  
20 departments and the building inspectors in coming in and  
21 sort of signing off on a project?

22           You know, that 35 and 50 is a firm requirement.

23           MR. STRAIT: Right.

24           COMMISSIONER MCALLISTER: So it's a global sort  
25 of sense of, "Oh, this looks like a good project" doesn't



1 necessarily guarantee that you are getting that percentage.  
2 And so I guess I wonder how you can comment on them walking  
3 into a building after it's done. And what that looks like  
4 for them.

5 MR. STRAIT: Sure.

6 Actually, one comment that we received from  
7 several building officials is that they were frustrated  
8 that we had requirements that weren't just asking that LEDs  
9 be installed and that be sufficient to show that you've  
10 reached an efficient building.

11 We know that for many building officials their  
12 job is very difficult, there is a lot they've got to  
13 inspect and that their top priorities are to make sure that  
14 no one gets hurt and that no one gets killed. That is,  
15 they are first looking at the building to make sure it's  
16 not going to fall down or catch fire or otherwise imperil  
17 someone that's an occupant or resident in that building.

18 Third on the list is efficiency, because while  
19 this has a profound impact on the quality of life of the  
20 occupant and their economic status in the state -- and has  
21 a universal impact on, for example, climate change and all  
22 of the state's goals -- it doesn't have an immediate  
23 threat. If somebody has less efficient lighting there is  
24 not an immediate threat posed to that occupant.

25 When they get to this point they want these

1 processes to be as simple and as easy as possible. Part of  
2 the reason that we have the HERS Program in Residential and  
3 the ATT program in Nonresidential is to offload some of the  
4 detailed inspection work and some of the more complicated  
5 questions to a trained third party who can competently  
6 attest that if the building official were to look and  
7 inspect at that level themselves they would find a  
8 compliant system.

9 COMMISSIONER MCALLISTER: Although in this case  
10 the ATT is not necessarily an independent third-party,  
11 because they are not required to be a true third-party.  
12 Right, they could be the contractor in and of itself.

13 MR. STRAIT: Correct, correct.

14 The goal in an ATT program is not so much to  
15 provide an independent third party, but mainly to provide  
16 someone with the explicit training necessary to put the  
17 lighting controls, these complex control systems and  
18 complex mechanical control systems, through a series of  
19 tests that show that it's actually going to live up to its  
20 end of the bargain.

21 This is necessary because these are somewhat  
22 complicated and difficult to install and configure  
23 correctly, so even someone that's trying their best to do  
24 the right thing, have they missed even one thing that's  
25 going to cause this to not function in an automated sense

1 as it properly should?

2 In this case we don't have quite the same  
3 situation where we're asking someone to count a number of  
4 fixtures and determine their wattage. It's not something  
5 that requires a detailed test procedure to accomplish.

6 COMMISSIONER MCALLISTER: So what portion -- so  
7 there are three options. The third option, some of those  
8 will actually require an ATT because they will involve  
9 lighting controls as well, right?

10 MR. STRAIT: Yes.

11 COMMISSIONER MCALLISTER: So I think having the  
12 ATTs -- I mean that's why we have ATTs to make sure that  
13 those systems function well.

14 I guess any idea of sort of any anticipation or  
15 sort of anticipated idea of what portion of the Option 3  
16 projects might be touched by an ATT?

17 Actually, before you answer that I want to just  
18 back up on something there. The two other options require  
19 -- I mean, we're talking about this Option 3, but I think  
20 we have a long record that shows that parts of the lighting  
21 market have suffered because of complexity. And so the  
22 goal of this update that staff has been managing is to  
23 simplify where that's going to create more project flowing.

24 And fundamentally if we want to reach our SB 350  
25 goals we need more projects and they really need to be done

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1 today; they need to be done soon, now. And somebody has to  
2 be able to sell it. If they can't sell it it's not going  
3 to happen. So I think we have to find that balance of  
4 expecting responsible actors in the marketplace to do the  
5 right thing and to comply with code, but also not impose  
6 too many transaction costs on it.

7           And that's a fine balance. And we do disagree  
8 about sort exactly where it sits, but I think we're all  
9 really headed in the same direction. And to the extent  
10 that new construction and major TI and significant projects  
11 that have a relatively high capital cost are happening.  
12 Those won't be able to take Option 3. And so we're talking  
13 about some subset of the marketplace. And we want them to  
14 both get a permit, not go underground, and save a lot of  
15 energy.

16           So I think we all agree that we need to look at  
17 ways to help that happen. So anyway I guess any idea of  
18 what percentage of Option 3 might be touched by an ATT at  
19 the end of the project?

20           MR. STRAIT: I'd say most. Not quite all of  
21 them, only because some projects will have existing  
22 controls that meet all the requirements in the current  
23 code. But projects using this option still are required to  
24 install automatic shutoff controls that are required to  
25 have an ATT.

1           It's worth noting that ATTs, even under the  
2   current options they don't conduct verification of the  
3   lighting power allowance calculated under the square foot  
4   approach either. So they are not coming in and verifying  
5   or double-checking that a contractor correctly reported the  
6   square footage of the space or the occupancy that the space  
7   is expected to have.

8           COMMISSIONER MCALLISTER: So there in the Options  
9   1 and 2, in their case are they actually playing that kind  
10   of an enforcement role or they are really just doing the  
11   technical assessment; is that right?

12          MR. STRAIT: What's required in Code is that they  
13   perform a technical evaluation. They perform a series of  
14   acceptance tests on the lighting controls. And some of  
15   that determines if the daylighting control is required is  
16   what's installed a daylighting control that's actually is  
17   living up to that name.

18          I do believe they provide as just an additional  
19   service an advice to the contractor to say, "You know, I've  
20   looked at this and it looks like you need updated controls  
21   here, because these don't seem to make sense." But it's  
22   not something that the Code requires or expects them to do.

23          COMMISSIONER MCALLISTER: Okay. Are there any  
24   other -- I kind of want to invite some of the different  
25   parties to reply on some of these issues.

1           Well, what seems to be the issue somewhat is the  
2   role of the Building Department and the inspector and the  
3   responsibility of the contractor. We've heard, "Oh,  
4   contractors do the right thing and they have an incentive  
5   to do the right thing." But then others say, "Contractors  
6   lie all the time." And so that seems to be a difference in  
7   worldview more than anything else, but it's hard to tell  
8   right, sitting where I sit.

9           So I guess if anybody has additional comments  
10   they want to make them on that. And we can take a minute  
11   each, if anybody wants to?

12           Sure. Gene raised his hand or Gene and then Tom.

13           MR. THOMAS: I would just say that at the time of  
14   permit application any building jurisdiction that wanted  
15   to, if they looked at what the form said were the existing  
16   fixtures and it looked fishy to them, "Gee, this building  
17   is five years old and it says on the form that they have  
18   T12s with magnetic ballasts," they could ask for additional  
19   verification at that time. Or they could request a field  
20   visit.

21           Even after the fact they could verify by doing a  
22   lighting power allowance calculation that -- I think this  
23   is what you alluded to -- that would demonstrate that it  
24   was below the 85 percent. And then that would virtually  
25   make it certain that the fixtures that were attested to as

1 preexisting were what they say they were.

2 But in terms of the, "You can't trust  
3 contractors, you can trust contractors" issue? As Peter  
4 touched on there is an extensive third-party verification  
5 system in place for any projects that get a rebate.

6 So as a program implementer, I mean just our  
7 recent contract with City of San Francisco -- it's a \$55  
8 million contract. A lot of the savings to be delivered is  
9 going to come from lighting, so we would like to see that  
10 contract renewed when the time comes. And if their own  
11 verification processes, because they go out and look at our  
12 installations every day, if they see those as being  
13 problematic we don't get renewed. And then we lose that  
14 potential revenue.

15 And so the contractors that we supply these  
16 projects to, they have to do what we tell them to do and we  
17 inspect 100 percent of those projects. And we pre-inspect  
18 a significant percent of those projects. So if our  
19 lighting specialist does the initial audit and says,  
20 "Here's what's on site. Here's what we're recommending,"  
21 then we also have a management audit of a percentage of  
22 those to make sure that he's characterizing accurately  
23 what's there and specifying correctly what makes sense to  
24 install.

25 So there are multiple levels of these.

1                   COMMISSIONER MCALLISTER: And if the 50 percent-  
2 35 percent option turns out not to be the best, then you  
3 would go with Options 1 or 2 or --

4                   MR. THOMAS: That's what I mean with -- I would  
5 suspect that unless somebody is requesting a really cutting  
6 edge, "I want a demand-responsive daylighting and sky-lit  
7 retrofit," which would be highly uncommon -- the large  
8 majority of the time that's probably the option that we  
9 would go with, because it's most cost-effective and it  
10 makes the most sense. But what it allows is instead of  
11 avoiding code-triggering jobs like we're virtually forced  
12 to do now we can start doing them again.

13                   And as Peter kind of touched on it's hard to not  
14 achieve that level of savings. And our recent comments  
15 provided some examples of pretty efficient existing  
16 lighting that we were able to upgrade and get well over 50  
17 percent savings on. So there's no motivation for us to  
18 fudge things or for the contractors that we employ to fudge  
19 things.

20                   I mean, most of their revenue comes from these  
21 projects that we give to them, so they would lose most of  
22 their revenue and possibly their licensing if they were  
23 found to be doing fraudulent projects.

24                   MR. MCALLISTER: Okay, thanks a lot.

25                   Mr. Enslow?



1           MR. ENSLOW: First of all I just got a text that  
2 said that some inspectors had trouble calling in and  
3 they're on their phone now and wanted to talk about this  
4 (inaudible) --

5           CHAIR WEISENMILLER: Well, we've transitioned  
6 over.

7           MR. ENSLOW: Okay.

8           CHAIRMAN WEISENMILLER: So certainly (inaudible)  
9 --

10          MR. ENSLOW: (inaudible) No, thanks.

11          For as far as enforcement goes our contractors  
12 deal every day bidding against projects in which the bids  
13 that they're losing to, there is no way they could ever  
14 comply with the Code and actually even cover their material  
15 costs. I mean, they see this fraud on a day-to-day basis.  
16 And study after study shows that this widespread  
17 noncompliance. The idea that just simply having people  
18 sign a paper will ensure compliance, you know, it's never  
19 been proven to work. And in fact there's study after study  
20 it doesn't.

21          What I find interesting though is that why we're  
22 here today, is that the utility incentive programs do  
23 require pre-inspection -- exactly what we're saying is  
24 necessary here. And that it's been successful and it  
25 hasn't hurt the program. And we're asking that that needs

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1 to happen for all installations, not just for the utility  
2 incentive programs. We're not asking to double up on  
3 enforcement. If there is an equivalent utility inspection,  
4 maybe that takes the place of acceptance testing. But this  
5 pre-inspection -- it's important to the utilities -- it  
6 should be important to the Commission. The idea that you  
7 can just go into a building and just know by your hunch  
8 whether or not they complied is ridiculous.

9 I mean, first of all I think one of the  
10 fundamental issues here is this idea that was stated by a  
11 staff that just putting in LEDs will get us the level of  
12 energy efficiency that we're looking for. That is not  
13 true. Putting in an LED will not give you necessarily a  
14 50-percent or even 35-percent reduction in most cases.

15 One of the issues we had with the Compliance  
16 Manual is originally it had a statement saying that if you  
17 replace HID lamps with LED lamps you will get a 50-percent  
18 reduction in power consumption. Well the manufacturers'  
19 own HID studies show that in almost no case would you get  
20 50 percent just by replacing HID lamps with LED lamps.  
21 You'd also have to further degrade and alter the lighting.  
22 Just doing these replacements does not give you equivalent  
23 to what the other pathways give.

24 And that's our concern, is that these installers  
25 are going to say, "Hey, we put in LED. Of course we met

1 this." And inspectors will go, "Okay." And that's sort of  
2 what we're hearing from inspectors, that's what we're  
3 hearing from staff, and it's just simply not true. And so  
4 this is why a pre-inspection is needed. It's required by  
5 the utilities it should be required by the Energy  
6 Commission.

7 COMMISSIONER MCALLISTER: So I want to just state  
8 for the record that absolutely we have a stake in  
9 compliance and we want this to work. So at the same time  
10 we also want projects to not have undue transaction costs  
11 imposed upon them that create a disincentive to even get a  
12 permit or do the project at all.

13 So again, this is a balance.

14 All the people in the room are involved in this  
15 industry on a daily basis. And I think, actually, there  
16 isn't a lot of evidence about -- from the lighting sector.  
17 You've quoted a lot of evidence in your various filings on  
18 different sectors, HVAC and other sectors, that show  
19 noncompliance and additional savings when third parties  
20 inspect, etcetera. I don't think we really understand that  
21 fully for lighting.

22 We do know from the retrofits that that section  
23 of the marketplace, that sector, has declined a lot and is  
24 actually -- sort of needs pathways that work more for it.  
25 So but it's a big marketplace.

1           And I'm actually proud of the fact that we have -  
2   - we're pushing a lot of advanced controls into the  
3   marketplace. We're getting the field kind of prepared for  
4   having truly markets for demand response that actually do  
5   have cash flow associated with them. And that's happening  
6   alongside all of this discussion we're having, which is one  
7   option -- the discussion we're having right now.

8           So all of you who came today I really want to  
9   just say thank you for all your input. It's really, really  
10   good. So I guess my point is that we -- number one, in  
11   order to require ATTS in this -- not commenting on the  
12   details of what enforcement ought to look like in sort of  
13   making a definitive normative statement about that -- I  
14   think we do have enough people in the room that can pay  
15   attention to this marketplace going forward and get a sense  
16   for whether this fraud is taking place. And sort of roll  
17   with the punches going forward according to what the actual  
18   project environment looks like and how it evolves.

19           In order to require ATTs in this, though, it  
20   would require -- I mean, we've all had this discussion now  
21   multiple occasions about the regs themselves and now the  
22   compliance manuals. In order to actually require that we'd  
23   have to change the regs and that would require an emergency  
24   rulemaking. And I certainly don't have an appetite for  
25   that. And I think the resources we would have to dedicate

1 to that in the timeframe we have is very difficult to  
2 justify.

3 But if there are specific issues we can pay  
4 attention to, work on and continue this discussion about,  
5 "Okay, what is actually happening out there in terms of  
6 enforcement with this option for projects that are taking  
7 it," then certainly we need to keep doing that. I mean, I  
8 think we all have an interest in compliance.

9 And I agree it's not a matter of, "Oh, that  
10 project looks like a good project. We're not going to ask  
11 the question whether it got to 35 or the 50 percent."  
12 That's not acceptable, because that wouldn't comply with  
13 this option. But I think we need to make an educated  
14 decision about that before we impose sort of and layer on  
15 additional requirements for a given project. Because we  
16 can know where that goes and that's where we are today.

17 So in any case, I want to open it up to the dais  
18 if there are any comments on it. This gets complicated  
19 really fast. Like most things energy efficiency there's  
20 forest, but there are also a lot of weeds down in that  
21 forest.

22 CHAIR WEISENMILLER: Well again I appreciate  
23 people stepping forward, but part of the reality is we had  
24 public comment. We were trying to transition out of the  
25 dais, so we have (inaudible)--

1 MR. MAHONEY: (inaudible)

2 CHAIRMAN WEISENMILLER: So let's -- Andrew?

3 COMMISSIONER MCALLISTER: Yeah, so I guess -- I  
4 mean, identify yourself.

5 MR. MAHONEY: Okay. My name is Greg Mahoney.  
6 I'm the Chief Building Official for the City of Davis. And  
7 I'm the Chair of the CALBO Energy Commission Advisory  
8 Committee.

9 And I just wanted to comment on the inspectors  
10 comment that we have never allowed them self-certification.  
11 And I don't believe that's true. In fact, the insulation  
12 certificates that we require on projects that demonstrate  
13 energy compliance are in fact self-certification forms.  
14 And we develop those and require those to be completed for  
15 CALGreen measures. And so those are widely used and  
16 accepted.

17 I'm not really going to speak to what's the main  
18 topics here, but just to kind of give my opinion really  
19 quickly. I think that rather than focus on starting points  
20 and then have to deal with the consequences associated with  
21 those we should look more at outcomes and determine where  
22 we're trying to get irregardless of where we are now. And  
23 just say, "If this an acceptable outcome then we should  
24 allow it to be done without the additional controls that  
25 may be required on the options."

1           So I think if we focused on outcomes a lot of  
2 this controversy would go away. I know it's late in the  
3 game to bring that up, but that's my opinion.

4           COMMISSIONER MCALLISTER: Thanks again.

5           CHAIRMAN WEISENMILLER: Next up, please?

6           So we've had two parties pop up on the phone.  
7 And again we're trying to transition. And certainly we'll  
8 let both speak, but I mean part of the messaging is that  
9 Andrew raised a very broad question about compliance.  
10 Well, in fact that's going to be a big focus on the Demand  
11 Forecasting staff over time. So please data there are  
12 great, but at least at this point let's try to move on, on  
13 this specific topic. We've got a pretty long day.

14           But anyway, so I will ask Mike Stone from NEMA on  
15 the line -- are you still there?

16           MR. STONE: So I'm speaking regarding self-  
17 certification in the use of acceptance testers. On  
18 allowing self-certification like this is really  
19 unprecedented and it might be simpler, but I would assert  
20 that it's bad enforcement policy. There's a significant  
21 financial incentive to not comply with these rules, but say  
22 that you did. And this would create an unlevel playing  
23 field for those who do play by rules in lighting retrofits.

24           Some lighting retrofits spoke. That's only a  
25 small part of the types of projects that are covered by

1 141.0. It also includes tenant improvements and lots of  
2 other types of remodel projects, so this doesn't only apply  
3 to retrofit contractors who are with the utility or a  
4 public university. And also public universities and  
5 schools and hospitals are not inspected by local building  
6 departments, so they might have some different types of  
7 controls in the projects that are going on there as opposed  
8 to the private sector and the vast number of buildings that  
9 fall under these regulations.

10 And if you look at Chapter 17 of the Building  
11 Code that requires third-party or special inspection for a  
12 number of different items that the building official is not  
13 able to inspect. So this should really be treated the same  
14 for lighting baselines -- to verify them it really should  
15 be treated the same. So I'm asking you to support the use  
16 of acceptance testers as third-party verifiers. Thank you.

17 And by the way, I represent NEMA, the National  
18 Electrical Manufacturers Association. Thanks.

19 CHAIR WEISENMILLER: Thank you.

20 And Leslie Kramer, Stanford?

21 MS. KRAMER: I'm with the Energy Retrofit  
22 Programs at Stanford. And I'm basically calling just to  
23 show my support for the adoption of Items 5a and 5b. And I  
24 agree with all the preceding comments that were made in  
25 favor of it.



1           And am particularly concerned about the early  
2 adoption of the 2016 Standards, move that forward. As I've  
3 said before when I commented earlier we claimed there were  
4 about 400,000 kilowatt hours per year in energy savings  
5 that we weren't able to obtain, because of all the delays  
6 and stalling related to the complexity of the 2013  
7 Standards. I think that number is close to a million  
8 kilowatt hours now. And as people have said earlier,  
9 customers have the option of just not proceeding with these  
10 projects and just doing a re-ballasting as things fail as  
11 they used to do. And so there won't be any projects to  
12 certify if the vendors can't make a case for it  
13 economically.

14           And so we are looking for keeping things as  
15 simple and efficient as possible, so that these retrofit  
16 projects -- and I'm not talking about new construction and  
17 TI work, but these unique subset of retrofit projects that  
18 are driven by the benefits of the retrofit -- can proceed a  
19 little bit less impeded. So we're just supporting 5a and  
20 5b. Thank you.

21           CHAIR WEISENMILLER: Okay, thank you.

22           Commissioner, that's it?

23           COMMISSIONER MCALLISTER: Any additional comments  
24 to put in from staff?

25           MR. STRAIT: The only comment I would make is in

1 regards to self-certification the current form for  
2 reporting the lighting power allowance, which looks at the  
3 square footage and the occupancy type, is self-certified.

4 COMMISSIONER MCALLISTER: Okay, thanks.

5 I'll move to the dais. Anybody to make comments?

6 No?

7 Okay. So we're on 5a, so I'm going to move Item  
8 5a.

9 COMMISSIONER HOCHSCHILD: I second.

10 CHAIR WEISENMILLER: All those in favor?

11 IN UNISON: Aye.

12 COMMISSIONER WEISENMILLER: 5a passes five to  
13 zero. Thank you.

14 Let's go on to 5b.

15 MR. STRAIT: All right.

16 CHAIR WEISENMILLER: Please.

17 MR. STRAIT: Thank you, Commissioners.

18 The second part of this item is a compliance  
19 option for the 2013 Standards. Fundamentally, buildings  
20 can comply with our Standards in one of two ways: By  
21 following the prescriptive compliance options in the  
22 Standards or by following a performance-based approach to  
23 compliance.

24 The specifications in Section 141.0(b)2 of the  
25 2013 Building Standards, including those that specify that

1 the lighting controls required for alterations, are  
2 prescriptive requirements. Meaning that builders can  
3 either implement these requirements as written and comply  
4 prescriptively, or can implement measures that create an  
5 equivalently efficient building, and comply using the  
6 performance approach.

7 In the Rulemaking for the 2016 Standards staff  
8 developed a new compliance path for lighting alterations  
9 based on achieving a percent reduction lighting power. In  
10 doing so extensive work was done to determine percent  
11 reduction targets that were equivalent in performance to  
12 the existing options of installing up to a certain percent  
13 of an area-based lighting power allowance calculation.

14 The percent reduction targets of 35 percent and  
15 50 percent were shown to result in buildings with a  
16 performance equal to or better than buildings following the  
17 prescriptive path to compliance common to both the 2013 and  
18 2016 Standards. This is even accounting for the impact of  
19 not installing bilevel lighting in buildings that achieve  
20 these targets.

21 Because hitting these targets results in a  
22 building whose performance meets or exceeds that of the  
23 standard design building that follows the prescriptive  
24 approach, that building would comply with the 2013  
25 Standards under the performance approach to compliance.

1 In recognition of this, and to be responsive to the  
2 numerous requests staff received during the 2016 Rulemaking  
3 to provide the same relief as the new percent reduction  
4 option as quickly as possible, staff prepared a compliance  
5 option for the 2013 Standards that would allow compliance  
6 based on documenting the percent reduction in lighting  
7 power within the space. And that includes relief from the  
8 bilevel lighting requirement that applies prescriptively to  
9 projects installing 85 percent or less of their allowed  
10 lighting power.

11 This option does not implement the specific  
12 language of the 2016 Standards, but borrows two of its core  
13 concepts and makes use of the compliance form developed for  
14 2016. Completing the form is an alternate method of  
15 showing that the proposed building's performance will meet  
16 or exceed the standard design building. And is therefore  
17 an alternative method of demonstrating compliance with the  
18 2013 Standards using the performance approach to  
19 compliance.

20 Staff therefore requests the Commission's  
21 approval of this alternative -- or rather I should say the  
22 Commission's authorization of this alternative procedure  
23 for demonstrating compliance with the 2013 Standards.

24 I'm happy to answer any questions that you may  
25 have.

1 CHAIR WEISENMILLER: Okay. Thank you.

2 So again, we have a number of comments. Some  
3 people talked about a and b both, so I'll sort of run  
4 through the list.

5 Tom Enslow, certainly can go first.

6 MR. ENSLOW: Good morning, Chair and  
7 Commissioners, Tom Enslow on behalf of the California IBEW  
8 NECA Labor Management Cooperation Committee, which  
9 represents over 1,000 contractors and 30,000 electricians  
10 in the state.

11 The Labor Management Cooperation Committee  
12 opposes the proposal before you, because 2016 Lighting  
13 Alterations Standards proposed for early adoption fail to  
14 meet the standards for adoption as an additional compliance  
15 path.

16 First the proposal would not be legally approved  
17 today, because it was not properly noticed for public  
18 comment. Adoption of an additional compliance path  
19 requires a notice of public comment period in compliance  
20 with Commission approval, requirements of Section 10-110.  
21 The proposal before you however, is substantially different  
22 than the proposal that went out for public comment.

23 First, the proposal that went out for public  
24 comment only proposed adoption (inaudible) compliance path  
25 for lighting alterations. The notice did not mention or

1 include applying this path to lighting modifications, and  
2 the proposal before you also includes lighting  
3 modifications.

4 Second, the notice that went out for public  
5 comment proposed adoption of the entire 2016 Lighting  
6 Alteration Standards as an alternative compliance path.  
7 And the proposal before you carves out just a portion of  
8 that proposal and the public hasn't had an opportunity to  
9 review and comment on the implications of just adopting  
10 that portion.

11 In addition, the proposal violates a prohibition  
12 in adopting an additional compliance path that deletes or  
13 alters existing requirements or that it would reduce energy  
14 efficiency in any particular installation in which it was  
15 applied.

16 Here the 35-to-50 percent compliance pathway  
17 that's proposed for early adoption does not require  
18 installation of two-step lighting controls, multi-level  
19 controls, doesn't require compliance with maximum lighting  
20 power density and lounge requirements. And doesn't require  
21 certain shutoff controls for hallways, stairwells, hotel  
22 rooms, display cases, etcetera; all of which are required  
23 under any of the pathways under 2.13. And thus in those  
24 specific areas of a building they would not be efficient as  
25 under the current code.

1           We also oppose early adoption on the grounds that  
2   it deprives local agencies sufficient time to address how  
3   they will enforce and understand these new requirements.  
4   California Building Standards law provides that subsets of  
5   Building Standards don't become effective until 180 days  
6   after publication. And the whole point is to provide both  
7   the installers and local building officials time to be  
8   ready to successfully implement these standards.

9           And the 180-day waiting period is particularly  
10   important in this case, because of adoption and enforcement  
11   of this 35-to-50 percent power reduction threshold has been  
12   highly controversial due to the creation of its unique  
13   enforcement and verification concerns. By proposing  
14   immediate adoption, the Commission is depriving  
15   jurisdictions from the statutorily mandated time to learn  
16   the new code requirements and determine how the locality  
17   will inspect and enforce these requirements. They are the  
18   ones that have to put the names in the paper saying that  
19   they have approved this installation.

20           January 1st will come soon enough; don't  
21   exasperate this controversy. Give building departments the  
22   time they need to review and assess these new requirements.  
23   Thank you.

24           CHAIR WEISENMILLER: So I'm going to ask staff  
25   and Chief Counsel's response on that, but at this point I

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1 want to go through and see is there anyone else in the room  
2 who wants to comment on this issue?

3 Please.

4 MR. THOMAS: Gene Thomas, Ecology Action.

5 I just remind the Commissioners that staff has  
6 already pointed out the statutory authority under which you  
7 can approve an alternate compliance path. This is not  
8 something that saves less energy, it's something that saves  
9 more energy than the current regulations. It is not  
10 official, early adoption of the 2016 Standards, only an  
11 alternative compliance path. And it will simplify things  
12 for the jurisdictions.

13 You've just heard comment that they're only just  
14 now getting up to speed on the 2013 Code in large part due  
15 to its complexity. This simplifies things for that. Any of  
16 them that feel uncomfortable with this alternative  
17 compliance approach could opt in to insisting on one of the  
18 approaches if they felt that was necessary. Or again, at  
19 the time of permit application if they don't like the look  
20 of what is attested to on existing fixtures, they could do  
21 a lighting power density calculation and demonstrate that  
22 the retrofit will exceed 2013 Code.

23 I also would like to speak on what Tom Enslow  
24 said a couple of minutes ago, that it's very difficult for  
25 the LEDs to meet that 35 percent and 50-percent threshold.

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1           In our recent comments to the Commission I  
2   provided some examples of actual projects, common T8 to LED  
3   retrofit examples, that meet the 35-50 percent wattage  
4   savings threshold. And some of these are third-generation  
5   T8 existing high bays that go to LED retrofit strip and 66  
6   percent savings; another T8 starting system to LED, 59  
7   percent; another T8 to LED, 66 percent; another T8 to LED  
8   69 percent.

9           These are pretty efficient systems to begin with  
10   and they can meet that threshold. So it's not rocket  
11   science. The people that are taking down the existing  
12   fixtures from the ceiling or retrofitting them, and  
13   physically looking at the lamps and ballasts and noting the  
14   wattages down, are perfectly capable of doing it accurately  
15   and reliably. And they would not want to jeopardize their  
16   revenue stream by committing fraud and then being barred  
17   from participating in utility programs.

18           And in terms of the union contractors having  
19   difficulty competing with nonunion lighting contractors  
20   that's not hard to understand when they are charging \$120  
21   plus an hour union scale for retrofit work that shouldn't  
22   require that level of cost. So I know it would be nice if  
23   they felt that they were able to better compete with their  
24   higher price scale, but that shouldn't be a concern of the  
25   Commission. Thank you.

1 CHAIR WEISENMILLER: Okay, thank you.

2 Okay. I'm going to move through the folks;  
3 anyone else in the room?

4 (No audible response.)

5 Okay. So now I'll move through folks on the line  
6 and give them the opportunity to comment on 5b.

7 Let's start with L.A. County.

8 MR. KASHE: Yes, again this is Mostafa Kashe with  
9 L.A. County. As far as the early enforcement I've got over  
10 100 combination inspectors, and when it comes to electrical  
11 and enforcing the electrical portion of the Code that's the  
12 weakest link. I need time to be able to go out there and  
13 train my inspectors.

14 So I would encourage the Commission to  
15 (inaudible) the 2017, if there's anything for us to be able  
16 to enforce that portion. Thank you.

17 CHAIR WEISENMILLER: Thank you. Actually it is  
18 in 2017, so you need to start training.

19 Tom James, and then again if you have nothing to  
20 contribute on this issue, that's fine. Go ahead.

21 MR. JAMES: I would just like to echo what Aaron  
22 Klemm at the CSU, and Leslie Kramer from Stanford, and the  
23 energy managers here at UC San Diego and San Diego State  
24 have communicated, which is that they need this cost-  
25 effective lighting alteration path. They have been

1 paralyzed in numerous ways by the undue transaction costs  
2 associated with the 2013 Lighting Control Code  
3 requirements.

4 And we all need to see a simpler, more cost-  
5 effective method, especially if we want to look at the big  
6 picture and recognize that the more budget that needs to be  
7 allowed for lighting, is that much less budget that can go  
8 to HVAC and other deferred maintenance issues that need the  
9 state's attention.

10 And we need better outcomes if we're going to  
11 have half a chance to meet our SB 350 goals.

12 CHAIR WEISENMILLER: Okay, thank you.

13 Matt Tracy?

14 Mr. TRACY: No, thank you.

15 CHAIRMAN WEISENMILLER: No?

16 Okay, followed by Rick Brown. Yeah, well Matt  
17 Tracy, sir go ahead and speak.

18 MR. TRACY: Oh, I was passing.

19 CHAIRMAN WEISENMILLER: Okay, fine.

20 MR. TRACY: This is Matt Tracy. I don't think I  
21 have anything to add to it right now.

22 CHAIRMAN WEISENMILLER: Okay. Thank you.

23 Rick Brown?

24 MR. STRAIT: Just to jump in really quick, the  
25 phone has a delay.

1 CHAIRMAN WEISENMILLER: Right, yeah.

2 MR. BROWN: Can you hear me now?

3 CHAIRMAN WEISENMILLER: (inaudible)

4 MR. BROWN: This is Rick Brown on behalf of the  
5 School Energy Coalition. Again, we support the staff  
6 recommendation of 5b.

7 I would make one comment in addition to what we  
8 said earlier. A comment that schools are inconsequential  
9 in the scale of things, I think that reflects an ignorance  
10 about the scale of what's going on in schools today. In  
11 Prop 39 alone, which is just one funding source, 47 percent  
12 of the funding is being used for lighting retrofit.

13 Those projects were stalled before this  
14 compliance option, this new Option 3, was put on the table.  
15 Well, those projects are now moving ahead. And if that 47  
16 percent number continues for all of the allocation of Prop  
17 39 you're talking about \$700 million just for Prop 39.

18 Next fall there's a measure on the ballot, a  
19 school bond facilities measure, for \$9 billion. The polls  
20 are saying it's going to pass. I guarantee you a huge  
21 portion of that \$9 billion is going to be for lighting  
22 (inaudible) and these are prevailing wage and mostly union  
23 jobs.

24 So people who think that the schools are an  
25 inconsequential part of this don't know what they're

1 talking about. Thank you.

2 CHAIRMAN WEISENMILLER: Thank you.

3 Don Link?

4 (No audible response.)

5 Okay, Mike Stone?

6 MR. STONE: I would like to begin with the early

7 adoption of Standards. And I really don't have much else

8 to add besides what the other folks that agree with me

9 said. Mustafa from L.A. County, I think I'm right on board

10 with exactly what he said. So anyway, I'm against the

11 early adoption. Thanks.

12 CHAIRMAN WEISENMILLER: Okay. Thank you.

13 Leslie Kramer?

14 (Conversation in background on phone line.)

15 COMMISSIONER MCALLISTER: Leslie, are you there.

16 Leslie Kramer?

17 MS. KRAMER: Hi. I'm still here, yes. I think I

18 provided my comments earlier in relation to 5a, just in

19 support of both a and b. So I have no further comments.

20 CHAIRMAN WEISENMILLER: Okay. Thank you.

21 Anyone else on the line to comment on 5b?

22 MR. GOLDTHRITE: Scott Randolph, (inaudible).

23 CHAIRMAN WEISENMILLER: He wasn't on b, but I

24 always want to make sure.

25 Okay. I think we've gotten everyone on the line,

1 checking.

2 Okay. So now let's go to staff and Chief Counsel  
3 on the legal question.

4 COMMISSIONER HOCHSCHILD: I'm sorry, if I could  
5 just ask a clarifying question? Because I'm sort of  
6 ignorant that we're all meeting on the minutia here -- that  
7 first speaker mentioned the difference between  
8 modifications and alterations. If you could also address  
9 what that difference is?

10 MR. STRAIT: Actually as to the 2013 Code,  
11 luminaire modifications in place are a subset of lighting  
12 alterations, so they're both considered lighting  
13 alterations.

14 So first, and Counsel will speak if we need to  
15 have more detailed explanation that we would need to make,  
16 but the Draft Staff Report was made available to interested  
17 parties. And 60 days were provided to submit comments,  
18 which was consistent with Section 10-110(a).

19 We did receive comments that indicated ways in  
20 which the Staff Report was unclear and we addressed those  
21 in revising the draft into the final version. It's worth  
22 noting however, that neither the compliance option itself,  
23 staff's analysis of the compliance option, or staff's  
24 recommendation are changed between the draft report and the  
25 final. We feel this stems from a fundamental

1 misunderstanding that the commenter had, related to the  
2 proposed compliance option.

3           The Staff Report begins by saying this is not an  
4 adoption of the 2016 Code. It is not a change to the 2013  
5 Code. Fundamentally, we've made that more clear. And  
6 that's why the final report goes into a little bit more --  
7 spends a little bit more language saying we're taking a  
8 concept out of that. We are not causing language to be  
9 adopted early.

10           From a strict perspective we're not engaging an  
11 underground regulation nor are we engaging in some process  
12 that would cause a regulatory change to happen without a  
13 rulemaking process. So the compliance option does not  
14 implement the 2016 language. It does not include  
15 exceptions or differences in applications specific to the  
16 2016 Standards. The comment letter identifies differences  
17 between the 2013 and the 2016 language, but erroneously  
18 states that the compliance option makes these differences  
19 effective, which it does not.

20           The 2013 Standards permit performance based-  
21 compliance. The lighting power allowance determined by the  
22 percent reduction approach will be below the maximum  
23 determined by the square foot calculation. So these  
24 lighting power allowances still are applicable and these  
25 projects will come in below those. That's why these 35 and

1 50-percent thresholds exist. And that's how they were  
2 determined under the 2016 cycle. And in fact, they meet  
3 those thresholds under an assumption of the 2016 lighting  
4 power allowance values where the 2013 lighting power  
5 allowance values are actually somewhat higher, meaning it's  
6 easier to come in under those thresholds

7 I mean again, the record shows that buildings  
8 using this option will consume less energy than buildings  
9 complying prescriptively with what's in Section  
10 141.0(b)2(I), noting that this is -- again, it's not  
11 allowing buildings to ignore full suite multilevel  
12 controls, daylighting controls, or demand-response  
13 controls. Rather the current 2013 language does not  
14 require those controls when you have efficient lighting  
15 systems installed that are below 85 percent of your  
16 lighting power allowance. That's the comparison.

17 Something that was up to 100 percent of the  
18 lighting power allowance would be required do those  
19 controls, but something at 85 percent or lower is not. And  
20 these projects will similarly come in below that lower  
21 threshold. Buildings with newer and more efficient  
22 lighting systems, that would be more challenged in a  
23 percent reduction environment, are likely to already have  
24 these kinds of controls installed to begin with.

25 I mean, if there's anything specifically that we



1 need to speak to I'm happy to do so, but fundamentally our  
2 legal staff has advised us that there's not a legal or  
3 procedural reason that we could not do this. Nor is there  
4 a legal or procedural error that we've engaged in, in  
5 bringing this to you.

6 COMMISSIONER MCALLISTER: Chief Counsel, do you  
7 have anything to add?

8 MS. VACCARO: I don't have anything to add. The  
9 lead attorney from Chief Counsel's Office, Linda Barrera,  
10 is to my right. And she can answer, I think, any specific  
11 questions on this matter.

12 COMMISSIONER SCOTT: So I just want to confirm,  
13 because we did hear -- and I heard you say it I think --  
14 that there was a question on whether or not it was properly  
15 noticed and there was a question about whether or not the  
16 public had a chance to review and comment. And I think we  
17 heard you say at the beginning that there was a 60-day  
18 comment period and at the very end, you closed by saying  
19 there was no procedural reason to not go forward.

20 I just wanted to confirm that.

21 MR. STRAIT: Yes. I will confirm that.

22 I would note also that I believe the only  
23 substantive comment that we had was we only received one  
24 comment letter specific to this topic. Many of the  
25 comments received on Item 5a were generic and referring to

1 both, but they also were not referring to specific  
2 language. We only received one comment letter that had a  
3 detailed look at the staff analysis and made detailed  
4 commentary on that. And we again, in editing from the  
5 draft to the final, we took those comments into account.

6 COMMISSIONER MCALLISTER: So Lead Counsel, do you  
7 have anything to add to that?

8 MS. BARRERA: No, not at this time.

9 COMMISSIONER MCALLISTER: Okay.

10 MR. STRAIT: No.

11 COMMISSIONER MCALLISTER: So move the dice?

12 Okay, so I guess the issue that you didn't  
13 address just now, Peter, was as to sort of the ability of  
14 the local building departments to kind of adjust now versus  
15 later. And I guess maybe you could speak to that?

16 MR. STRAIT: Certainly.

17 The way that we've -- the path we charted for  
18 compliance on this, is basically to duplicate an existing  
19 form. So under the 2013 Code when you're calculating the  
20 lighting power allowance for the space there are two forms  
21 that you're filling out. There's an LTI-01 and an LTI-03.  
22 The LTI-03 is something like a tax worksheet that gives you  
23 a number that then goes on the LTI-01 and becomes your  
24 lighting power allowance. We've developed a form, LTI-06,  
25 that allows you to make the calculation of that number

1 following a different recipe. But that number in the LTI-  
2 01, that the building inspector reviews, is otherwise  
3 unchanged.

4 The building inspector won't be doing anything  
5 differently under this approach. The way that that number  
6 was determined is different, but not what the building  
7 inspector has to check that's on the form. The LTI-06 form  
8 actually copies directly, the same lighting schedule that's  
9 on the LTI-01 form that describes the new lighting. So the  
10 same description that building inspectors are used to  
11 seeing right now for lighting that is on the LTI-01 that  
12 describes the new equipment being installed is on the LTI-  
13 06 equipment, purposed toward describing the existing  
14 equipment that's being removed. So all of this information  
15 is already familiar to building officials; they won't be  
16 looking at anything that's unusual.

17 We do recognize that there is always a challenge  
18 with training to a new set of codes or a new set of  
19 requirements. And that's why we kept this as close to  
20 status quo as possible and as parallel to existing forms  
21 and materials as possible. So we don't see that there's an  
22 enormous hurdle in this case. This isn't a brand-new way  
23 of doing things from the building inspector's perspective.  
24 They're going to have a form that still has a lighting  
25 power allowance number. They're going to be looking to see

1 if that lighting power allowance was achieved.

2 And again, the only difference is whether or not  
3 bilevel switches are required for that space, which if a  
4 building inspector does have a concern they could red tag  
5 those controls and say, "I'm not confident that this was  
6 met. Please put in the bilevel switching that's required."

7 COMMISSIONER MCALLISTER: Okay, so in terms of on  
8 Item a, on your comment about how "Look, we really do -- "  
9 I mean we do want enforcement. We do want compliance. And  
10 we need to really keep our ear to the ground and eyes on  
11 the marketplace to see what happens. And I guess with  
12 early application -- so I would like to see that kind of  
13 vigilance in monitoring the marketplace certainly as 2016  
14 goes into effect in January 1.

15 And now if we approve the early application of  
16 these provisions in the compliance manuals that really  
17 applies doubly. I mean we really need to see how things  
18 play out in the marketplace, understand it and then be  
19 willing to come back to the table if there are issues we  
20 need to address. And so I'm vehement about that. So I  
21 think some good points that were raised on all sides.

22 And so I want to move forward. I want to enable  
23 the marketplace to get these projects. I do want to solve  
24 the issues that really came up in the 2013 Code, but with a  
25 little bit of a caveat that it's not just clear sailing

1 from here on out. There's a complex marketplace that's got  
2 -- you know, marketplaces are always a little chaotic. So  
3 and that's not necessarily a bad thing, but we really have  
4 to pay attention. And I think that's really on us here and  
5 our stakeholders out there in the marketplace to tell us  
6 what they see in the real terms, bring us the actual  
7 information about actual projects, good and bad.

8 So, okay anybody else on the dais?

9 Okay. So I'm going to move for Item 5b.

10 COMMISSIONER DOUGLAS: Second.

11 CHAIRMAN WEISENMILLER: All those in favor?

12 IN UNISON: Aye.

13 CHAIRMAN WEISENMILLER: 5b passes five to zero.

14 Thank you, very much.

15 MR. STRAIT: Thank you.

16 CHAIRMAN WEISENMILLER: I'm going to flip 6 and 7  
17 in the interest of caution. I'd like to get both done  
18 before lunch. But at a minimum I want to make sure we get  
19 7 done, so that we have a number of parties in the  
20 audience. We can cover that and let them go.

21 So let's start with 7 and again, Rhetta,  
22 hopefully you'll get your short presentation in afterwards.

23 Staff, Jacob?

24 MR. ORENBERG: Good morning, Chair and  
25 Commissioners. My name is Jacob Orenberg. I'm the Project

1 Manager for the 2016-2017 Investment Plan Update for the  
2 Alternative Renewable Fuel and Vehicle Technology Program,  
3 or ARFVTP.

4 Today staff are seeking your approval of this  
5 Investment Plan Update. If approved, the current Lead  
6 Commissioner Report version will be reissued as an official  
7 Commission Report. And this will serve as a guide for our  
8 finance solicitations and awards in the coming fiscal year.

9 Also, as part of this agenda item we're including  
10 revisions pages 32 and 44 of the Investment Plan Update,  
11 which will be added to Commission Report version of this  
12 document.

13 These revisions are shown in the back of  
14 documentation for this agenda item and have been included  
15 at the request of the California Public Utilities  
16 Commission. The changes clarify and update language, which  
17 did not accurately reflect CPUC activities. They're being  
18 made at this time because Energy Commission staff was not  
19 informed of the need for changes until after the  
20 publication of the Lead Commissioner Report.

21 The purpose of the ARFVTP is to provide funding  
22 support for projects that reduce greenhouse gas emissions  
23 within the transportation sector, which is responsible for  
24 about 37 percent of statewide emissions. The projects we  
25 fund also contribute to other state goals including

1 improved air quality, increased alternative fuel use,  
2 reduced petroleum dependence and the promotion of economic  
3 development.

4 To date, our program has awarded more than 606  
5 million in funding to more than 545 projects. Our statutes  
6 call on us to develop a diverse portfolio of alternative  
7 fuels without adopting any one preferred option.  
8 Accordingly, we have funded a broad range of project types,  
9 including alternative fuel production, alternative fuel  
10 infrastructure, alternative vehicle demonstrations and  
11 related needs. The projects funded by the ARFVTP are  
12 expected to accrue significant benefits for the state.

13 In 2015, the National Renewable Energy Laboratory  
14 prepared an updated Benefit Report, which sampled 262 of  
15 these projects and projected direct reductions of over 2.4  
16 million metric tons of CO2-equivalent greenhouse gases and  
17 over 313 million gallons of petroleum fuel from the sample  
18 by the year 2025.

19 This chart provides a visualization of ARFVTP  
20 projects to date, with each column representing a component  
21 of the transportation sector funded through our program.  
22 The fuel production category represents about \$135 million  
23 divided between ethanol, biodiesel, renewable diesel and  
24 biomethane. The infrastructure investment consists largely  
25 of hydrogen refueling stations in blue and electric vehicle

1 charging stations in green. This category also includes  
2 natural gas, E-85 and biodiesel fuel infrastructure. The  
3 funding for vehicles primarily consists of vehicle  
4 deployment incentives for natural gas trucks, in purple,  
5 and advanced technology hybrid, plug-in hybrid and electric  
6 truck demonstration projects in green.

7 We've also supported in-state manufacturing  
8 facilities plus other awards such as workforce training,  
9 regional readiness planning and fueling standards  
10 development.

11 For the 2016-2017 Investment Plan Update we  
12 issued the initial Staff Report in October, which was  
13 followed by the first Advisory Committee meeting held here  
14 in Sacramento, in November. Based on the feedback received  
15 we released a revised Staff Report in January and held a  
16 second Advisory Committee meeting in Long Beach for  
17 additional public input. Last month, we released the  
18 proposed Lead Commission Report, which is what we're  
19 seeking approval for today.

20 As mentioned, we hosted two Advisory Committee  
21 meetings in order to hear from member organizations and  
22 state agencies. There are 25 other groups and individuals  
23 who also participated in those meetings. We received and  
24 considered 27 comments via our Public Docket and  
25 participate in ongoing meetings with stakeholders.



1           This slide lists all of the Advisory Committee  
2 members for the 2016-2017 Update, who we thank for their  
3 contribution to and dedication to our program. This list  
4 includes representatives of fuel and technology groups,  
5 environmental and public health groups, academic  
6 institutions and partnering state agencies.

7           I'll now give a brief summary of this Investment  
8 Plan's proposed funding allocations starting with biofuel  
9 production and supply.

10           To date the program has funded 50 projects to  
11 expand the in-state production of capacity of ethanol,  
12 biomethane and diesel substitutes for transportation fuel  
13 with a cumulative production capacity of 135 million  
14 gallons of fuel per year from these projects.

15           Similar to prior investment plans, this  
16 allocation is open to all project stages and a variety of  
17 biofuel types. Future grant solicitations may place a  
18 higher emphasis on project cost effectiveness, both in  
19 regards to petroleum displacement and greenhouse gas  
20 emission reductions per ARFVTP dollars spent, as well as on  
21 conversion efficiency. The allocation will also continue  
22 efforts to support innovative and transformative biofuel  
23 technologies. For this category, we're proposing a \$20  
24 million allocation for fiscal year 2016-2017.

25           For electric charging infrastructure, the

1 priorities for the upcoming fiscal year include DC fast  
2 charger deployment, workplace charging, chargers at multi-  
3 unit dwelling residences and underserved areas throughout  
4 the state. There may also be a focus on residential  
5 charging infrastructure for freight and fleet vehicles,  
6 which often have different requirements than conventional  
7 charger types.

8           Going forward, we'll continue to monitor the  
9 deployment effort by investor-owned utilities, charging  
10 station networks, and auto makers to avoid duplication of  
11 efforts. Based on the anticipated need for funding, we  
12 propose a \$17 million allocation for this category.

13           For hydrogen fueling infrastructure, Assembly  
14 Bill 8 of 2012 sets a maximum of \$20 million allocation for  
15 the expansion of California's growing hydrogen refueling  
16 network. One of the goals guiding the hydrogen refueling  
17 infrastructure allocation is to have a network of 100  
18 stations throughout the state. California is making  
19 progress toward this goal and we estimate that 53 stations  
20 will be operational by end of 2016.

21           That said, the Air Resources Board recently  
22 predicted that there may be a statewide capacity short-  
23 falls for hydrogen refueling as soon as 2021. This will  
24 reinforces the need to continue the maximum allocation of  
25 \$20 million for hydrogen refueling infrastructure, which

1 should be able to provide for about seven new stations as  
2 well as funding for operations and maintenance necessary to  
3 support the initial stations.

4           To complete the infrastructure investments we are  
5 proposing funding for our natural gas fueling stations to  
6 provide an opportunity to increase the use of this proven,  
7 readily available alternative fuel. The focus of this  
8 allocation is on communities and organizations without  
9 access to private capital, which could not otherwise  
10 proceed without this funding. We expect this category to  
11 emphasize projects in school districts in order to achieve  
12 maximum health benefits among vulnerable populations by  
13 displacing older diesel buses. For this, we are proposing  
14 a \$2.5 million allocation.

15           Moving from infrastructure to vehicles, we're  
16 also proposing funding for natural gas vehicle deployment  
17 incentives. These vehicles offer opportunities for  
18 achieving immediate greenhouse gas emission reductions and  
19 petroleum use reduction. In addition a new generation of  
20 low NOx natural gas engines are expected to be released  
21 this year, which reduce nitrogen oxide emissions by 90  
22 percent, compared to the current diesel emission standard.  
23 For the coming year, we may place an emphasis on the  
24 deployment of these engines.

25           In the prior funding cycle, we saw a strong

1 demand for natural gas vehicle incentives with the most  
2 recent incentive round fully reserved in less than one  
3 week. Going forward, we will utilize our contract with UC  
4 Irvine to determine the need for state incentives in the  
5 sector and the levels at which incentives should be set.  
6 For natural gas vehicle incentives we're proposing a \$10  
7 million allocation for the coming fiscal year.

8           In this Investment Plan Update we've expanded the  
9 scope of the medium and heavy-duty vehicle technology  
10 demonstration and skill category to meet the goals of the  
11 ARFVTP and the state. As in previous years, this funding  
12 was open to a broad range of vehicle technologies and  
13 vehicle application types. However, the focus for the  
14 coming fiscal year is expected to be on sustainable freight  
15 and goods movement projects.

16           We may also consider providing funding to  
17 enabling of non-propulsion projects such as intelligent  
18 transportation systems as well as the fueling  
19 infrastructure specifically for the vehicles under this  
20 allocation.

21           We're also continuing to scale up a portion of  
22 this category to enable a smoother transition from  
23 (inaudible) to vehicle commercialization and early  
24 deployment. We're proposing a \$23 million allocation for  
25 this category to support the expanded scope.

1           In addition to funding for alternative fuel and  
2 vehicle projects, our program also funds related activities  
3 that contribute to their market success. In this  
4 Investment Plan we are proposing \$3 million for the  
5 emerging opportunities category, which has traditionally  
6 been reserved for federal cost sharing opportunities or  
7 projects that weren't anticipated during the Investment  
8 Plan development.

9           We're also proposing a \$2.5 million allocation  
10 for Workforce Training and Development based on estimated  
11 funding needs from our partnering state agencies.

12           And finally, we are reserving \$2 million for  
13 regional readiness plans and implementation. Previous  
14 awards in this category have helped local governments  
15 identify regional activities for encouraging zero emission  
16 vehicles, streamlined their infrastructure permitting  
17 process, and conducted local outreach and awareness  
18 activities.

19           This final slide summarizes all of the proposed  
20 funding allocations for the 2016-2017 Investment Plan  
21 Update. At this point I'd be happy to answer any questions  
22 you may have. Thank you.

23           CHAIRMAN WEISENMILLER: Thank you. First let's  
24 do public comment and then we'll see what comments the  
25 Commissioners have.

1 Peter Christensen, ARB, thank you.

2 MR. CHRISTENSEN: Well, looking at the clock on  
3 the way up I can still say good morning.

4 Thank you for the opportunity to address you  
5 today. I'm happy to be here on behalf of ARB and encourage  
6 your support of the plan that's before you.

7 You know, as you know ARB and the Energy  
8 Commission have a very strong history of working together  
9 and making coordinated investments in this area. We think  
10 that the plan that's before you today includes an excellent  
11 mix of the advanced technology fuel and vehicle projects  
12 that are going to help significantly in moving forward to  
13 achieve our air quality goals under the federal Clean Air  
14 Act as well as our long-term climate change goals here in  
15 California.

16 I think one of the things that comes through in  
17 the plan is that you have investments that are being made  
18 in commercially available technologies, commercially  
19 available fuel and vehicle technologies. They're helping  
20 to not just make small improvements, but really  
21 transformative improvements in the California fleet. And  
22 you're also balancing that with investments in pre-  
23 commercial demonstration technologies.

24 We think that's particularly important to help  
25 bring technologies that are not available yet, today, but

1 to help them advance to help us bring more commercial  
2 technologies. That's especially true in the heavy-duty  
3 area as we look at the freight sector and trucking in  
4 California. So we support the investments that you're  
5 making today.

6 I would also just, of course, recognize that your  
7 staff -- ARB participates on the Advisory Committee and  
8 your staff are very helpful as we go through our funding  
9 plan process as well. So I want to thank Commissioner  
10 Scott for your leadership in this area, Jacob, and all of  
11 the staff in the ARFVTP Program. We look forward to the  
12 coming year, thank you.

13 CHAIRMAN WEISENMILLER: Great, thank you.

14 Bonnie Holmes-Gen?

15 MS. HOLMES-GEN: Good morning, Chairman and  
16 Members, Bonnie Holmes-Gen with the American Lung  
17 Association in California. And I'm pleased to be here  
18 today in support of this plan. And I want to thank  
19 Jason (sic) Orenberg for all the hard work that was put in  
20 and the great job that he and the staff did. I appreciate  
21 also Commissioner Scott's work. And I thank all of you for  
22 the opportunity to be a member of the Advisory Committee.  
23 It's always really wonderful to participate and see money  
24 going out to put real clean air projects on the ground and  
25 in our communities and I love being a part of that.

1           And we do support the allocations as a balanced  
2 portfolio. And this is always the rub here, to develop the  
3 portfolio of projects with limited funds that advances the  
4 long-term wrap-up that we need toward clean advanced  
5 technology and fuels, but still keep those near-term  
6 solutions that improve local air quality and health at  
7 hand. And this allocation does that and I would note that  
8 the pace of the wrap-up that we need is very dramatic to  
9 meet our 2030 and 2050 goals, so I'm trying to make sure  
10 that we're keeping focused on that long-term goal. It's  
11 incredibly important, as you know.

12           I appreciate the increase in the medium heavy-  
13 duty demonstration category. I think that's really  
14 important, especially for our communities living near  
15 diesel hot-spots. And we'd, of course, like to see more  
16 funding in that and several categories that advance,  
17 especially those that advance zero emission vehicle and  
18 infrastructure. But we will be advocating for the GTRF  
19 funding allocations of course in the Legislature that will  
20 compliment this plan and expand the alternative fuel and  
21 vehicle options.

22           I just want to underscore the health benefits.  
23 This is why, of course, we're involved in this effort. And  
24 the Whitehouse just released last week, a report that  
25 underscores the serious public health impacts of climate



1 change. Another report that reminds us of the urgency of  
2 transforming away from fossil fuels and moving toward these  
3 clean technologies and, of course, this is a critical tool.

4 We'll be releasing our State of the Air Report  
5 next week, talking about air quality throughout the state  
6 and focusing on these important tools.

7 And I guess, I just have two requests, I'm sure  
8 there's many but two. One is that we want to help you get  
9 the word out. We want to continue to focus legislators,  
10 media and the public on these investments. And you have  
11 some great tools on your website, but we need to do more to  
12 package and feed this information out and generate public  
13 excitement.

14 And part of that, I just would ask if we could  
15 think about changing the name. We would talk about that,  
16 it's time.

17 CHAIRMAN WEISENMILLER: Yeah. I know.

18 MS. HOLMES-GEN: I can try and brainstorm. I  
19 don't have a glib little snippet for you, but something  
20 that talks about investments, clean transportation and  
21 fuels investments for California -- something that  
22 communicates more clearly to the public what this program  
23 is. Although, I have to say Commissioner Scott just rolls  
24 this off her tongue, this whole acronym, which I'm not very  
25 good at.

1                   So thank you again. And I'm really happy to be  
2 on the Advisory Committee and help support this.

3                   CHAIRMAN WEISENMILLER: Well, thank you for your  
4 contribution.

5                   ChargePoint, please?

6                   MR. ROPER: I'm going to speak about Item 9.

7                   (Off mic colloquy)

8                   Okay, great.

9                   CHAIRMAN WEISENMILLER: Let's go on to Eileen  
10 Tutt.

11                  MS. TUTT: Thank you, Chairman Weisenmiller and  
12 Members of the Energy Commission. My name is Eileen Tutt,  
13 I'm with the California Electric Transportation Coalition.  
14 I also want to thank Commissioner Scott for your leadership  
15 on this Committee and the staff has been truly amazing, so  
16 you guys have a great team here. And I want to give a  
17 shout out to all of them.

18                  I truly believe that without this really  
19 important funding we would not be where we are in the state  
20 today progressing the growth in the market for zero  
21 emission vehicles. I think this Commission and your staff  
22 play a key role. This money is very important.

23                  I'm very honored to be a member of the Advisory  
24 Committee and I want to second Bonnie's name change  
25 proposal. I'm happy to get together with you and talk to

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1 you about options, because I can never get the acronym  
2 right. It would be great. It's almost as bad as KFSA.  
3 (phonetic) There is one worse than you, just so you know.

4 COMMISSIONER MCALLISTER: Congratulations on  
5 saying KFSA actually instead of KFTA, (phonetic) so way to  
6 go.

7 MS. TUTT: That one I got down, but I still can't  
8 remember the order of letters.

9 So anyway I think we know based on the NREL Study  
10 that you guys so effectively that we need a lot more plug-  
11 in electric vehicle charging infrastructure -- very happy  
12 to see the Investment Plan looking at the needs in the  
13 medium and heavy-duty sectors.

14 I also just want to give a quick shout-out to the  
15 importance of these regional readiness efforts. A lot of  
16 this action and a lot of getting this infrastructure in  
17 place is going to rely on local governments. And with  
18 regional readiness money has really helped to inspire a lot  
19 of those local communities get in this game and help us  
20 move to a cleaner zero emission future.

21 So I also want to give a little shout out to the  
22 workforce training element of the plan. I think this just  
23 reflects the balance of the plan and I very much look  
24 forward to continuing to work with you. And I hope that  
25 you will approve this plan today. Thank you.

1                   CHAIRMAN WEISENMILLER:   Thank you.

2                   Tim Carmichael?

3                   MR. CARMICHAEL:   Hello, Commissioners.   Tim  
4 Carmichael with Southern California Gas Company here in  
5 support.   I've been a member of the Advisory Committee for  
6 a number of years and it was a pleasure to work on this  
7 update as well.

8                   So first on the Natural Gas section I appreciate  
9 the framing and the wording.   One detail I want to make the  
10 Commissioners aware, Commissioner Scott I'm sure is already  
11 aware, that the near zero NOx emission engines are just  
12 coming available this month.   They're currently only  
13 available -- they will only be available in the 9 liter  
14 size, which is applicable to refuse trucks, transit buses  
15 etc. but not all of the heavy-duty trucks that we think of,  
16 and see on the road.   That next larger size engine is  
17 anticipated for the end of 2017.

18                  It's just a detail that is important if the  
19 agency is going to prioritize low NOx engines and  
20 renewables, which we support.   But we need to keep in mind  
21 that today given what's available, it's a limited  
22 applicability.

23                  I want to mention that there's still room for  
24 improvement with the use of metrics in evaluating how we  
25 divvy up this pie and what we prioritize for funding

1 projects. We've made progress in the time that this  
2 program's been in place, no doubt. But as we've talked  
3 about at various Advisory Committee meetings, there's still  
4 room for improvement there.

5 And finally, I am pleased to announce that the  
6 Trade Association has hired a new president. He'll start  
7 in a couple of weeks. His name is Thomas Lawson and I'll  
8 be introducing him to Commissioner Scott and hoping that  
9 there's a seat on the Advisory Committee for him going  
10 forward. Thank you very much.

11 CHAIRMAN WEISENMILLER: Thank you.

12 Anyone else in the room?

13 (No audible response.)

14 Let's go to the telephone line, Sekita Grant?

15 MS. GRANT: At this point, Chair and  
16 Commissioners, thank you for giving me a few moments to  
17 speak. My name is Sekita Grant, Legal Counsel with the  
18 Greenlining Institute. And we really focus on supporting  
19 strategies that prioritize equity and accelerate the growth  
20 of these clean energy, and particularly here, clean  
21 transportation technologies and jobs in low-income  
22 communities and disadvantaged communities.

23 Thank you for inviting us to participate on the  
24 Advisory Committee. This is our first year and we greatly  
25 appreciate the opportunity to share our perspective in this

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1 space. I just wanted to quickly express support for the  
2 2016-2017 ARFVTP Investment Plan. We're really excited to  
3 see the final product. It provides -- as usual I've seen  
4 this through lots of the years -- but really provides an  
5 excellent technical analysis of the various fuels and  
6 technologies supported by this program. And also which  
7 we're really excited about it, it elevates the importance  
8 of diversity in providing meaningful benefits to  
9 disadvantaged communities. And we're very excited to see  
10 our piece and we look forward to helping to flesh that out  
11 in the implementation and in future plans.

12 So just thank you too, Commissioner Scott, for  
13 your leadership in this space and helping to keep this  
14 state on an aggressive path towards a clean transportation  
15 future. And definitely thanks to staff, I know that  
16 there's a lot of work that went into this. And a special  
17 thank you to Jacob for putting a lot of time and resources  
18 into this and really for providing us with another high-  
19 quality Investment Plan.

20 So we look forward to seeing and working on its  
21 successful implementation and on future plans as well. So  
22 thank you for the opportunity to speak.

23 CHAIRMAN WEISENMILLER: Thank you.

24 Do we have any others?

25 MR. MCCLORY: Hello, can you hear me?

1                   CHAIRMAN WEISENMILLER:   Yes, we can.

2                   MR. MCCLORY:   Okay.  Hi, this is Matt McClory.

3   I'm a Group Manager at Toyota Center and I'm also speaking  
4   on behalf of Justin Ward.  And we're in support of this  
5   Investment Plan Update.

6                   First off, I'd like to thank Chairman  
7   Weisenmiller and the Members of the Commissioner for this  
8   opportunity to comment.  And also I'd like to say thank you  
9   to Commissioner Scott for this program and a special thanks  
10  to Jacob Orenberg for his effort to prepare this update.

11                  Last year Toyota recently announced a target to  
12  reduce power plant emissions of all new vehicles by 90  
13  percent in 2050.  In order to meet this aggressive goal we  
14  are planning for a significant increase in hybrid vehicles,  
15  plug-in hybrid vehicles, fuel cell vehicles, and battery-  
16  operated vehicles.  Moreover we feel that in 2015 we expect  
17  that these technologies will dominate our portfolio also to  
18  (inaudible) engines.

19                  However, in order to support the vision of  
20  pollution and carbon reduction the energy feedstock for  
21  these technologies should also target an alternate goal of  
22  being renewable on zero carbon.  We support the Investment  
23  Plan Update in that it continues to provide continuous  
24  support for near-term projects on the pathway to this  
25  vision.  And we look forward to working together to

1 accelerate and expand this effort towards the future.

2 And with that I'll stop there.

3 CHAIRMAN WEISENMILLER: Thank you.

4 Anyone else on the line?

5 (No audible response.)

6 Okay. Let's transition to the Commissioners,  
7 Commissioner Scott?

8 COMMISSIONER SCOTT: Great, well I'm really  
9 excited to have this Plan here before all of you on our  
10 Alternative and Renewable Fuel and Vehicle Technology  
11 Program. As you all know, and I won't underscore it more  
12 than just to say that transforming the transportation  
13 sector really is a critical component to the state meeting  
14 both its federal clean air standards, and for us meeting  
15 our climate change goals, energy security goals. And you  
16 heard many of the commenters kind of underscoring and  
17 highlight that for you.

18 So what I will just do is spend a minute saying  
19 thank you so very much to Jacob. He's done a fantastic  
20 job. This is actually his first year shepherding the  
21 Investment Plan from start to finish and so thank you,  
22 Jacob, for your terrific work there.

23 We did, I think he mentioned this is his  
24 presentation, it was a great public process. We did a  
25 meeting here in Sacramento, but we also did one in Southern



1 California in Long Beach. We have been trying to make sure  
2 that we get our second meeting in other areas of the state  
3 to ensure that we have an additional set of folks who can  
4 potentially participate in our meetings if they can't make  
5 it to Sacramento.

6 And I want to say thank you very much to our  
7 Advisory Committee members for the thoughtful information  
8 and advice that they provide to us, the time and effort  
9 that they spend on helping the Energy Commission really  
10 make sure that this program is the best that it can be, and  
11 so I appreciate all of the work that you do and the time  
12 that you spend helping us out with that.

13 I wanted to say also thanks to all of our  
14 interested stakeholders and commenters who weigh in and  
15 also help us to shape the Plan. And to all of the authors  
16 who are listed on the inside cover of the report and helped  
17 Jacob to put this together.

18 And then let me just -- I wanted just to  
19 acknowledge Tim Carmichael, because he has done fantastic  
20 work on our Advisory Committee and we'll miss having you  
21 there. But I look forward to meeting -- I think his name  
22 is Thomas Larson -- I look forward to meeting the new  
23 president of the Natural Gas Coalition.

24 And we have out front for folks to take a look at  
25 -- actually we have a ride and drive for the Toyota Mirai,

1 so if you're excited about a fuel cell electric vehicle  
2 just like I am, please take the time to take a look at it.  
3 Go for a ride in it, drive it. Thank you so much to Toyota  
4 for bringing that for us today. We've got a BMW out front  
5 as well, the i3. These are exciting.

6 The Energy Commission's portion of the funds  
7 tends to help support the infrastructure that enables these  
8 vehicle and consumers to be able to make the choice of  
9 purchasing these vehicles or helping to build the  
10 infrastructure.

11 And then we also have a motor, it has an electric  
12 delivery truck outside. And it's a fantastic story that  
13 Rhetta will tell when she gets a chance to make her  
14 presentation about where those trucks are deployed. So I  
15 hope that all of you will take some time to go and take a  
16 look at those.

17 And let me just say thanks to the Air Resources  
18 Board for your partnership. You are always awesome to work  
19 with and we enjoy the partnership that we have on our  
20 Investment Plans. And to Bonnie, to Eileen, to Tim, to  
21 Sekita, and that for making the time to call in, in support  
22 of the Plan.

23 So with that unless you all have questions, I  
24 heartily recommend your approval.

25 COMMISSIONER HOCHSCHILD: I just want to say real

1 quick, I want to thank you. I know how hard you have  
2 worked on this, and your staff. But also just to reiterate  
3 the point that Bonnie made about the names.

4           It's true, not just of the ARFVTP Program, of  
5 other programs we operate here. I do think there's a lot  
6 of value to helping communicate to the public what we're  
7 doing. You know, whether it's the Clean Air Transportation  
8 Program or whatever if you would consider this an  
9 appropriate name. But this is a challenge for a number of  
10 other programs we operate. I think we focus on so much on  
11 implementing the programs successfully that we don't spend  
12 enough attention just on the communication side and I think  
13 a name is really important.

14           So I do appreciate you raising that, and that  
15 applies I think more broadly to state government in  
16 general. But as we're doing this just be mindful to the  
17 communications.

18           And I just want to say I'm in full support of the  
19 Plan. I think it's terrific.

20           CHAIRMAN WEISENMILLER: Well, I was going to say  
21 actually for a trivia question, the Energy Commission the  
22 first time I was here was not really referred to as the  
23 Energy Commission but it was the full -- I'm not sure I  
24 could even get it right now -- but Energy and Resource  
25 Conservation Development Commission. And so the Commission

1 did a resolution to rename itself, so there's at least some  
2 precedence.

3 COMMISSIONER MCALLISTER: Although it still is on  
4 the website, when you scroll down to all agencies it  
5 appears actually. It's not in that alphabetic order where  
6 you would expect it, right? It's in --

7 CHAIRMAN WEISENMILLER: Yeah. Well, I don't know  
8 how we got it past the Chief Counsel's Office, but anyways.

9 COMMISSIONER MCALLISTER: So I'll second.

10 CHAIRMAN WEISENMILLER: All those in favor?

11 IN UNISON: Aye.

12 CHAIRMAN WEISENMILLER: All right, five-zero,  
13 thank you.

14 Okay. So at this point we're going to have  
15 Rhetta give a brief presentation. Those of you who want to  
16 see more of the (inaudible) program. And as Janea said  
17 there's also some vehicles outside, so you have your choice  
18 but I certainly encourage people to do both.

19 Please.

20 MS. VACCARO: I'm sorry, I just have a quick  
21 question. I may have for some reason missed this. I know,  
22 Commissioner Scott, you heartily recommended approval. I  
23 heard a second. But I don't know if there was actually a  
24 motion?

25 CHAIRMAN WEISENMILLER: Make the motion then.

1           COMMISSIONER SCOTT: I will move approval of the  
2 Investment Plan.

3           COMMISSIONER MCALLISTER: I'll second.

4           CHAIRMAN WEISENMILLER: All those in favor?

5           IN UNISON: Aye.

6           MS. VACCARO: Thank you.

7           CHAIRMAN WEISENMILLER: Thank you.

8           MS. DEMESA: Good morning, thank you Chair and  
9 Commissioners. I recognize that we're pushing into the  
10 lunch hour, so I will be brief. My name is Rhett DeMesa  
11 and I am with Commissioner Scott's Office.

12           I just wanted to take a couple of minutes this  
13 morning to provide a brief update to the Alternative and  
14 Renewable Fuel and Vehicle Technology Program's Clean  
15 Transportation to our website.

16           As we just heard from Jacob and some of the other  
17 speakers, the Energy Commission's Alternative and Renewable  
18 Fuel and Vehicle Technology Program provides annual funding  
19 to develop and deploy innovative technologies that  
20 transform California's transportation fleet to help meet  
21 the state's ambitious climate and clean air goals.

22           Each year dozens of projects funded through this  
23 program are successfully completed and are bringing  
24 additional clean transportation options to California's  
25 transportation market. To showcase the diversity of

1 successful projects this program supports, each year we  
2 select a handful of the successful projects to feature on a  
3 section of the Commission's website called "The Driving to  
4 Clean Transportation Tour."

5           We've recently gone through the process of adding  
6 a couple of successful projects that I thought I'd briefly  
7 highlight here today starting with Motiv. Motive Power  
8 Systems received \$1.6 million in ARFVTP funding to partner  
9 with AmeriPride who are the largest textile rental and  
10 supply companies in North America, to retrofit ten of  
11 AmeriPride's package delivery vans located at their Vernon,  
12 California facility, with all electric drive train systems.

13           This project directly supports 42 jobs, is  
14 reducing greenhouse gas emissions each day, and is reducing  
15 local pollution in and around the facility location, which  
16 is located in a disadvantaged community.

17           AltAir Fuels retrofitted what was once an active  
18 refinery in Paramount, California to a refinery that now  
19 produces renewable diesel, a drop-in fuel that can be  
20 stored, transported and used without infrastructure or  
21 engine modification. Through the ARFVTP the Energy  
22 Commission provided a \$5 million grant to AltAir to support  
23 the second phase of an expansion project that increased the  
24 facility's renewable diesel production capacity by 10  
25 million gallons per year, bringing the facility's total

1 production capacity to 40 million gallons annually.

2 In addition to the environmental benefits  
3 resulting from the increased renewable fuel that will  
4 displace conventional diesel, the project is projected to  
5 have created over 200 direct and indirect jobs in an area  
6 with a 13 percent unemployment rate. This is an exciting  
7 project, because the fuel is being produced and used in  
8 transportation applications today. In fact, the Department  
9 of the Navy has contracted with AltAir to provide a blend  
10 of their renewable diesel for use in operations including  
11 their Great Green Fleet Initiative.

12 Tim Carmichael alluded to this project a little  
13 bit in his comments, but for the next project in  
14 partnership with South Coast AQMD and SoCalGas, the Energy  
15 Commission's PIER Natural Gas and ARFVTP programs provided  
16 funding to Cummins Westport, Inc. to help support the  
17 development and on-road demonstration of a new near-zero  
18 NOx natural gas engine for use in the medium and heavy-duty  
19 truck market.

20 In October of 2015 this engine became the first  
21 mid-range engine in North America to receive emission  
22 certifications from both the USEPA and the California Air  
23 Resources Board that meets the .02 grams per brake  
24 horsepower hour options near-zero NOx emission standard.  
25 This technology is important for the state's climate and

1 air goals, because it is a near-zero emission technology  
2 that offers a real near-term option for the heavy-duty  
3 sector to become cleaner and more sustainable.

4 Finally, the California Energy Commission awarded  
5 Ontario CNG, Inc. just over \$2.1 million to install a  
6 hydrogen fueling station in Ontario, California which is  
7 anticipated to be operational in the second quarter of this  
8 year.

9 This station is not only part of the initial  
10 hydrogen station network the Energy Commission is rolling  
11 out across the state, it's also the first fueling station  
12 in Southern California to offer all of the major  
13 alternative fuels including hydrogen, biofuel, compressed  
14 natural gas and EV charging. What's even more cutting edge  
15 about this station is that the hydrogen that will be for  
16 sale will be 100 percent renewable.

17 As I mentioned earlier these are just a handful  
18 of the many successful ARFVTP projects to date. Across the  
19 board we have projects that are motivating fleets to  
20 expedite their transition to lower carbon fuel options,  
21 providing zero emission technologies in areas hardest hit  
22 with pollution. And are overall helping to achieve  
23 California's climate and clean air goals.

24 To learn more about these projects, as well as  
25 other projects funded through the program, we invite you



1 and the public to visit "The Driving to Clean  
2 Transportation Tour" on the Energy Commission's website,  
3 which we have the link right up there. And with that, I  
4 would like to thank you for your time and would welcome any  
5 comments or questions.

6 CHAIRMAN WEISENMILLER: Thank you. Thanks for  
7 your work on this.

8 COMMISSIONER SCOTT: Great. Yeah, let me just  
9 say thank you so very much to Rhetta and Kourtney and  
10 O'Shea (phonetic) on my team for pulling together this  
11 information. And then our web team for getting it posted  
12 for us.

13 Some of the folks had mentioned that it'd be  
14 great to have ways to highlight some of the projects that  
15 we have, this is one way. And so we're trying to work on  
16 that. It's always nice, I think, to have a flavor of the  
17 type of projects that are being funded with those  
18 investments. So I am glad to have that there and the Motiv  
19 truck that Rhetta highlighted is outside for us to view.

20 So thank you, Rhetta.

21 CHAIRMAN WEISENMILLER: Okay. So we're going to  
22 take a break until 1:05. There are some logistical issues  
23 on the dais, but be prompt, be back and please take the  
24 Alternative Vehicle Tour.

25 (Off the record at 12:21 p.m.)

1 (On the record at 1:04 p.m.)

2 CHAIR WEISENMILLER: Back in session. Let's  
3 go on to Number 8, the University of California,  
4 Irvine.

5 MR. FREEMAN: Good afternoon,  
6 Commissioners. My name is Andre Freeman from the  
7 Fuels and Transportation Division.

8 Just wanted to refresh your memory back to  
9 last year in October of 2015 when the Energy  
10 Commission in collaboration with the University of  
11 California Irvine released the Natural Gas Vehicle  
12 Incentive Project.

13 The project received approximately \$11  
14 million of Energy Commission funding to incentive  
15 natural gas vehicle purchases.

16 Today I'm seeking approval of this contract  
17 amendment that will provide additional funding to  
18 the project from the Energy Commission's Alternative  
19 and Renewable Fuel and Vehicle Technology Program.  
20 This funding will be utilized to address the current  
21 \$9 million incentive wait list and also fund  
22 research that will analyze the environmental impacts  
23 that these vehicles have in California and identify  
24 ways in which renewable natural gas can factor into  
25 California sustainable (inaudible) initiatives.

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1           Previously, the Energy Commission has run  
2   solicitations that provided natural gas vehicle  
3   purchase incentives through auto manufacturers and  
4   vehicle dealerships. Based on lessons learned from  
5   these solicitations and information gathered from  
6   other successful vehicle incentive programs, the  
7   incentives funded by this contract will be provided  
8   directly to vehicle purchasers. This new method will  
9   help streamline the processing of requests and  
10   reduce the amount of time for purchasers to receive  
11   reimbursement.

12           These natural gas vehicles can help fleets  
13   replace aging gasoline and diesel fleets with  
14   cleaner alternatives.

15           Additional benefits from the promotion of  
16   natural gas vehicle sector can be achieved for the  
17   further development of Los NOx engine, natural gas  
18   electric hybrids, and biomethane production  
19   facilities that are also being funded by the  
20   Commission.

21           In addition to implementing this incentive  
22   project, the university will collect and analyze  
23   information on the usage of vehicles and the  
24   resulting environmental impacts. The university will  
25   collect information directly from all vehicle

1 purchasers through surveys and will also get data  
2 from electronic monitoring systems that will be  
3 attached to a portion of the deployed vehicles. The  
4 resulting data analysis will help fill major  
5 information gap regarding the real world duty cycles  
6 and emissions of these vehicles.

7           The analysis summarizing this information  
8 will be available to inform future Energy Commission  
9 investments, technical reports, and advise policy  
10 decisions on how to meet California's climate change  
11 and petroleum reduction goals.

12           The Energy Commission staff are also  
13 working actively with staff from the Air Resources  
14 Board's Air Quality Improvement Program and  
15 (inaudible) transportation funding programs which  
16 also have funding identified for natural gas vehicle  
17 purchase incentives which will be used to maximize  
18 and encourage the near term adoption of low NOx  
19 engines and renewable natural gas usage.

20           With that, I'd like to thank you for your  
21 attention and am available for any questions you may  
22 have.

23           CHAIR WEISENMILLER: Thank you. Any  
24 comments from anyone in the room or on the phone?

25           Let's go to Commissioner Scott.

1 COMMISSIONER SCOTT: I don't have any  
2 questions or comments on this one. If there are no  
3 others, I'll move approval of Item 8.

4 COMMISSIONER DOUGLAS: Second.

5 CHAIR WEISENMILLER: All those in favor?

6 IN UNISON: Aye.

7 CHAIR WEISENMILLER: This passes five to  
8 zero. Thank you.

9 Let's go on to Item Number 9, DC fast  
10 charging infrastructure for California's north-south  
11 corridors.

12 MS. LOPEZ: Good afternoon, Chairman and  
13 Commissioners. My name is Thanh Lopez, staff in the  
14 Zero Emission Vehicle and Infrastructure Office of  
15 the Fuels and Transportation Division.

16 Staff is seeking approval of nine proposed  
17 awards totaling over \$8.875 million for electric  
18 vehicle charging infrastructure projects that are  
19 funded through the Alternative and Renewable Fuel  
20 and Vehicle Technology Program, or ARFVTP.

21 The Energy Commission's ARFVT Program has  
22 funded nearly \$40.7 million for 7,490 chargers as of  
23 December 2015. These include Level 1, Level 2, and  
24 DC fast chargers at destination, residential,  
25 workplace, and commercial sites across California.

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1 Of these 7,490 chargers, 120 were DC fast chargers  
2 that have been funded to date.

3 The nine projects proposed today would add  
4 an additional 61 DC fast chargers to California's  
5 fast charging network, bringing the total of 181 DC  
6 fast chargers funded by the ARFVT Program.

7 This slide shows the breakdown of DC fast  
8 chargers funded by previous ARFVTP solicitations.  
9 Highlighted are the DC fast chargers proposed for  
10 funding today from Grant Funding Opportunity 15-601.  
11 For Program Opportunity Notice, or PON 11-602, some  
12 of the fast charger locations include grocery stores  
13 along major corridors, college and universities, and  
14 retail locations statewide.

15 For PON 13-606, some of the fast charger  
16 locations included airports, hotels, grocery stores,  
17 parks, and libraries statewide.

18 One of the goals of the Energy Commission's  
19 plug-in electric vehicle infrastructure strategy is  
20 to support the Governor's goal of reaching 1.5  
21 million zero emission vehicles, or ZEVs, on  
22 California roadways by 2025. There are several ZEV  
23 action plan goals that are related to our ZEV  
24 infrastructure and planning that include having  
25 sufficient infrastructure available to support 1

1 million zero emission vehicles by 2020, 1.5 million  
2 zero emission vehicles on California roadways by  
3 2025, and Californians should have easy access to  
4 zero emission vehicle infrastructure as current  
5 conventional vehicles have access to gasoline  
6 service stations.

7           The 2013 ZEV Action Plan also required that  
8 a PAC be identified to complete the West Coast Green  
9 Highway, which is intended to stretch from British  
10 Columbia to the Mexican border in a manner that  
11 aligns with California's statement infrastructure  
12 plan and the state's regional planning.

13           In October 2013, the governments of  
14 California, Washington, Oregon, and British Columbia  
15 signed an agreement called the Pacific Coast Action  
16 Plan on Climate and Energy, which includes the  
17 commitment to transition the west coast to clean  
18 modes of transportation and support the states of  
19 Washington and Oregon as well as the Pacific  
20 northwest portion of the West Coast electric  
21 highway, currently a network of electric vehicle DC  
22 fast charging stations located every 25 to 50 miles  
23 along Interstate 5 and other major roadways in the  
24 Pacific northwest.

25           California is in the process of completing

1 DC fast charging on highway corridors through the  
2 central California region to the Mexican border,  
3 including the Bay Area and Los Angeles regions. The  
4 map shown here are all of the existing DC fast  
5 charging stations in California as of April 2016.

6 According to the U.S. Department of  
7 Energy's Alternative Fuel Data Center, there are 362  
8 DC fast charging station locations in California.

9 The proposed agreements from the  
10 (inaudible) will help close the gaps between fast  
11 chargers in the Central Valley, extend the fast  
12 charging system to the California borders, and  
13 provide a secure network of interregional fast  
14 charging on our north/south corridors.

15 The proposed projects presented for your  
16 consideration provide funding to four organizations  
17 to install electric vehicle charging infrastructure  
18 along Interstate 5, Highway 99, and U.S. 101.

19 Three proposed agreements with ChargePoint  
20 will install 7 DC fast chargers and 16 level 2  
21 chargers along Interstate 5 from the Oregon border  
22 to Red Bluff and from Sacramento to Santa Clarita.

23 Three proposed agreements with EV Connect  
24 will install one DC fast charger and two level 2  
25 chargers in San Clemente along Interstate 5, and 20



1 DC fast chargers and 10 level 2 chargers along  
2 Highway 99 from Sacramento to Wheeler Ridge.

3 Two proposed agreements with NRG EV  
4 Services will install ten DC fast chargers and five  
5 level 2's on Interstate 5 and two DC fast chargers  
6 and one level 2 charger along Highway 99 from Red  
7 Bluff to Sacramento.

8 Finally, one agreement with Recargo to  
9 install 11 DC fast chargers and 8 level 2 chargers  
10 along U.S. 101 between San Jose and Buellton.

11 The proposed nine agreements will install a  
12 total of 61 DC fast chargers and 42 level 2 chargers  
13 at 41 sites along Interstate 5, Highway 99, and U.S.  
14 101, as shown on the red markers on the map.

15 The purple markers show existing DC fast  
16 chargers along the corridors that were identified in  
17 the grant solicitation.

18

19 This DC fast charging network will support  
20 alternative transportation fuel and vehicle  
21 technology goals of the State of California such as  
22 the zero emission vehicle goals of having sufficient  
23 ZEV infrastructure that is able to support up to one  
24 million vehicles by 2020.

25 Corridor charging gives existing and

1 prospective electric vehicle owners the assurance  
2 that they can recharge when driving long distances  
3 along freeway or highway.

4           The deployment of a DC fast charging  
5 network will also enable interregional and  
6 interstate travel by electric vehicles, and in some  
7 cases support the needs of electric vehicle owners.

8           Staff is requesting the Commission support  
9 an approval of the proposed resolutions approving  
10 these nine agreements.

11           Thank you for your consideration on this  
12 item, and I am available to answer any questions.

13           CHAIR WEISENMILLER: Thank you. Let's take  
14 public comment. We'll start with ChargePoint in the  
15 room. Mr. Roper.

16           MR. ROPER: Chairman and Commissioners, I  
17 thank you for the opportunity to speak today.  
18 ChargePoint, along with our installation partner,  
19 (inaudible), are grateful for the opportunity to  
20 support the completion of the West Coast Electric  
21 Highway. This initially will enable travel to many  
22 parts of the state currently unreachable by EV,  
23 subsequently supporting a reduction in range anxiety  
24 and promoting achievement of the state's EV adoption  
25 goals.

1           The Commission's investment is paramount to  
2 initiating E vehicle systems in rural areas  
3 throughout the state where it would take a private  
4 company years to recuperate their investment in  
5 absence of Commission funding.

6           These highly visible corridor charging  
7 sites will serve both as vital infrastructure for  
8 EVs and promote awareness for the general public.

9           Resource commitments from local  
10 governments, site hosts, equipment, and installation  
11 providers will ensure that the environmental and  
12 economic impacts of the Commission's investment are  
13 maximized.

14           This initiative will directly create and  
15 support jobs in the state. Regional installation  
16 contractors will perform installations and our small  
17 but mighty corridor deployment team will drive this  
18 project for the next two years.

19           We appreciate the flexibility to customize  
20 the business model. In ChargePoint's model the site  
21 hosts will own and operate the charging equipment.  
22 Equipment and installation will be provided free of  
23 charge to the hosts and will be backed an industry  
24 leading parts and labor warranty that guarantees 97  
25 percent up time.

1           Our model will allow site hosts to provide  
2 EV charging services and an amenity to attract EV  
3 drivers to their business without worrying about  
4 recuperating capital costs. Many of our hosts have  
5 committed to providing subsidized or even free  
6 charging.

7           Furthermore, allowing the hosts to own and  
8 operate the charging stations brings them closer to  
9 realizing the benefits of EV charging provisions. In  
10 our experience, hosts that own equipment and operate  
11 charging equipment are quicker to report an issue,  
12 promoting station up-times, and are likely to invest  
13 in future infrastructure.

14           We also appreciate the Energy Commission's  
15 vision to future proof these locations. The 125  
16 kilowatt stub out requirement lays the foundation  
17 for the expansion of chargers in the future while  
18 minimizing costs, and demonstrates vision to be  
19 prepared for tomorrow's vehicles with larger  
20 batteries and faster charging speeds.

21           We support the requirement for open point  
22 of sale and networking protocols as a way to  
23 mitigate stranded assets. Our equipment supports  
24 open charge point protocol and is portable to future  
25 versions of OCPP as it becomes a standard.

1           To further the open payment protocol  
2 effort, ChargePoint cofounded the Roaming for EV  
3 Association, or ROVE, a consortium of charging  
4 station providers and auto OEMs developing a single  
5 payment mechanism that will enable drivers to charge  
6 on multiple networks.

7           Coordination with the regional EV  
8 coordinating councils was also extremely valuable  
9 for this initiative. By leveraging the PEV readiness  
10 plans and local knowledge provided by the councils,  
11 we were able to optimize site selection, providing  
12 maximum benefits to the drivers.

13           These initial discussions have also led to  
14 collaborations outside of corridor deployment  
15 efforts. Since submitting our proposal we have been  
16 in constant contact with the coordinating councils,  
17 air pollution control districts, and local  
18 governments. These partnerships have proven fruitful  
19 in supporting siting efforts, smoothing permitting  
20 issues, and utility coordination on other projects.

21           Again, we're grateful to be a part of this  
22 historic opportunity. We've already begun  
23 coordination with our hosts and partners, and are  
24 committing to completing the corridors ahead of  
25 schedule and on budget.

1 Thank you.

2 CHAIR WEISENMILLER: Thank you. Anyone else  
3 in the room? Let's go to the telephone line and  
4 start with PUC.

5 MS. POIRIAR: We have no comment.

6 CHAIR WEISENMILLER: Okay.

7 UNIDENTIFIED SPEAKER: Hello Commissioners  
8 and Commissioner Scott, thank you especially for  
9 this funding. And I'm just going to make it brief  
10 because I know we're a little bit over already.

11 I'm with Recargo - PlugShare, otherwise  
12 known as the app that most of you are familiar with  
13 that's finding charging stations, and I just want to  
14 thank you for the opportunity that you've  
15 potentially given to us to deploy the chargers along  
16 101.

17 I come from Oregon where I did the West  
18 Coast Electric Highway in Oregon, so I'm especially  
19 appreciative of this to be able to carry on that  
20 corridor development in California.

21 And we believe that fast charging is the  
22 number one barrier to continuing EV options so  
23 supporting funding like this is very important,  
24 especially continuing to support that type of  
25 funding if we're going to see the 200 mile range

1 (inaudible) succeed, they're going to need the  
2 charging infrastructure and we strongly believe that  
3 fast charging is our primary focus right now.

4 And not just any fast charging but reliable  
5 chargers that EV drivers can expect to come, be able  
6 to charge, leave with a charge and not have to wait  
7 for somebody else. So we do appreciate the  
8 innovation that you guys have included in this  
9 funding to allow us to participate. Thank you.

10 CHAIR WEISENMILLER: Thank you. So EV  
11 Connect?

12 MR. YAN: We just wanted to say thank you  
13 for allowing us to be part of this opportunity. We  
14 support the importance of this project.

15 We believe that our (inaudible) station  
16 management systems will be an important component to  
17 the success of our corridors.

18 CHAIR WEISENMILLER: Thank you. Anyone else  
19 either in the room or on the line?

20 Okay, then let's turn to Commissioner  
21 Scott.

22 COMMISSIONER SCOTT: Great. I'll just kind  
23 of underscore some of these that you heard both from  
24 Thanh about the project and from Ashley and Dedrick  
25 and Erik about filling in the West Coast Electric

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1 Highway, so this will enable folks, as Thanh  
2 mentioned in presentation, if they would so choose  
3 to drive from British Columbia to Mexico.

4 And it's great, I think, for the Energy  
5 Commission to have been able to provide support to  
6 the chargers that will help with that effort.

7 I think you probably noticed also on  
8 Thanh's map that we're also having chargers not just  
9 on I-5, which I think is what people think of when  
10 they think Washington through California, but 99,  
11 which is what a lot of state folks use when they're  
12 traveling around the state, and 101. So we're  
13 excited that we're being able to hit all three of  
14 those corridors.

15 And just say thanks again to Ashley and  
16 Dedrick and Erik for being here and speaking and  
17 supporting to their teams for their good work on  
18 this one.

19 So if there aren't questions, I will move  
20 approval of Item 9.

21 COMMISSIONER HOCHSCHILD: Just one quick  
22 comment. I'm glad to see we're building chargers and  
23 not building walls.

24 I do have a question. Just with fast  
25 charging today, the technology (inaudible) how



1 quickly can you get recharged 50 miles or a hundred  
2 miles? What is the time and would you expect that  
3 improve over time?

4 MS. LOPEZ: Yes, currently with the fast  
5 charger technology you can get about 60 miles of  
6 range for every 20 minutes of charging. We  
7 anticipate that that will improve as technology gets  
8 better in the future.

9 COMMISSIONER HOCHSCHILD: Great, thank you.

10 COMMISSIONER MCALLISTER: You moved it,  
11 right?

12 COMMISSIONER SCOTT: Yes. Do you want me to  
13 move it again? I move approval of Item 9.

14 COMMISSIONER MCALLISTER: I'll second.

15 CHAIR WEISENMILLER: Okay, all those in  
16 favor?

17 IN UNISON: Aye.

18 CHAIR WEISENMILLER: This passes five to  
19 zero.

20 Great, let's go on to Item 10, Quantitative  
21 Biosciences, Inc. Thank you.

22 MS. KHALSA: Good afternoon, Commissioners.  
23 My name is Akasha Khalsa.

24 Today the alternative and renewable fuel  
25 and vehicle technology program staff propose

1 granting Agreement ARV-15-067 with Quantitative  
2 Biosciences, Incorporated, for a \$2 million grant  
3 titled Compressed biomethane vehicle fuel and algae  
4 feed production via sustainable anaerobic digester  
5 biogas purification project.

6           Anaerobic digester feed stock is 20 percent  
7 food waste and 80 percent dairy manure. Quantitative  
8 Biosciences will design, construct, and operate a  
9 pilot membrane gas purification system to produce at  
10 least 100,000 diesel gallon equivalents per year of  
11 biomethane transportation fuel at Fiscalini dairy  
12 farm in Modesto.

13           This farm is in a disadvantaged community  
14 that according to the CalEnviroScreen has the most  
15 impaired water quality in the state. The water from  
16 flushing the dairy will be treated sufficiently for  
17 reuse on agricultural crops by the design,  
18 construction, and operation of a high rate algae  
19 pond which consumes wastewater nutrients.

20           Quantitative Biosciences proposed several  
21 scientific improvements to enhance the utility of  
22 this project with an impressive carbon intensity of  
23 negative -2.4.

24           The carbon dioxide from this anaerobic  
25 digester will feed the algae during photosynthesis

1     rather than be released into the air.

2             Often coproducts are the economic boost  
3     that lets an alternative fuel succeed. The algae  
4     biomass as a nutrient rich animal feed has already  
5     been widely researched but not yet accepted by  
6     dairymen. This grant will add algae to the cow's  
7     diet to complete the sustainable carbon cycle.

8             Quantitative Biosciences will write up the  
9     technical and economic benefits of the project. This  
10    is a hundred percent renewable fuel that will be  
11    compressed into a tube trailer and sole offsite for  
12    trucks and buses that use compressed natural gas,  
13    replacing 100,000 gallons of diesel fuel per year.

14            CHAIR WEISENMILLER:   Thank you. So do we  
15    have any public comment either in the room or on the  
16    line on this? Okay, then Commissioner Scott, again.

17            COMMISSIONER SCOTT:    Yes. No comments.  
18    Looks like a fantastic project. I'm interested to  
19    see how it comes out. So if there's no questions for  
20    Akasha, I will move approval of Item 10.

21            COMMISSIONER DOUGLAS:   Second.

22            CHAIR WEISENMILLER:    All those in favor?

23            IN UNISON:    Aye.

24            CHAIR WEISENMILLER:    This passes five to  
25    zero. Thank you.

1           Let's go on to Item 11, Itron, which I  
2   guess will do business in California as IBS.

3           MS. HUTCHISON: Good afternoon, Chairman  
4   and Commissioners. I'm Elizabeth Hutchison,  
5   Renewable Energy Division. Sitting beside me is Jim  
6   Goldman.

7           Energy Commission staff is seeking approval  
8   of a two-year contract with Itron, Incorporated, for  
9   \$419,930. Through this contract Itron will audit and  
10   evaluate the operation and performance of solar  
11   energy systems that have received incentives through  
12   the Energy Commission's New Solar Homes Partnership  
13   Program.

14          NSHP provides incentives for solar energy  
15   systems installed on newly constructed residential  
16   buildings located in the investor owned utility  
17   territories.

18          Senate Bill 1 requires the Energy  
19   Commission to annual conduct random audits of solar  
20   energy systems to evaluate their operation and  
21   performance. It is proposed in this contract that  
22   Itron conduct these audits in consultation with  
23   Energy Commission staff.

24          Itron will compare the actual performance  
25   of NSHP installations relative to their expected

1 performance and come up with the performance ratio  
2 for each installed system.

3           This contract also allows physical audits  
4 to be conducted (inaudible). Itron will then  
5 estimate what percent of systems are performing  
6 within the acceptable range of this average  
7 performance ratio.

8           This contract will not include safety  
9 audits as the statute does not direct the Energy  
10 Commission to do so.

11           Approval of this contract with Itron will  
12 assist the Energy Commission in meeting the audit  
13 requirements called for in SB1. Itron was selected  
14 through a competitive bid process and has  
15 demonstrated it is qualified to provide the  
16 necessary technical assistance to the Energy  
17 Commission.

18           Under this agreement Itron will submit a  
19 final report that identifies the average performance  
20 ratio of NSHP installations and provides an estimate  
21 of the percentage of NSHP systems that are  
22 performing within acceptable range of that ratio.

23           In conclusion, this contract will allow the  
24 Energy Commission to fulfill its SB1 mandate to  
25 conduct random audits of solar energy systems, and I

1 ask for your approval of this item.

2 Thank you for your time and consideration  
3 and I am available to answer any questions.

4 CHAIR WEISENMILLER: Thank you. Any  
5 comments on this contract either in the room or on  
6 the phone?

7 Let's transition to Commissioners.

8 COMMISSIONER HOCHSCHILD: No comments. I  
9 welcome this and look forward to the results. If no  
10 other comments I'd move this item.

11 COMMISSIONER MCALLISTER: I'll second after  
12 one comment. (inaudible) full CSI, right, so I think  
13 that obviously builds on that and there's a lot of  
14 institutional knowledge there related to that.

15 Supplemental hearing, do you have -- is  
16 there a plan for where you get data from and making  
17 sure that there's a broad based sampling going on  
18 coming from all the places that we need it to, which  
19 has been a long-term, I won't say problem but it's  
20 been a challenge to get the right data from the  
21 right folks.

22 MS. HUTCHISON: Yeah, we're trying to make  
23 sure that we are getting data across all 16 climate  
24 zones in California, and also that will cover both  
25 (inaudible) and also all the product types such as

1 custom homes, affordable housing, large buildings.

2 COMMISSIONER MCALLISTER: Yeah, just good  
3 management practice, so I'll second.

4 CHAIR WEISENMILLER: All those in favor?

5 IN UNISON: Aye.

6 CHAIR WEISENMILLER: This passes five to  
7 zero. Thank you.

8 Let's go on to Public Interest Energy  
9 Research 2015 Annual Report. Erik.

10 MR. STOKES: So good afternoon,  
11 Commissioners. My name is Erik Stokes with the  
12 Energy Research and Development Division. I'm  
13 requesting Commission approval today for the 2015  
14 PIER Electric Annual Report.

15 Just a quick bit of background.

16 The final PIER Electric funds were numbered  
17 in June 2013. Energy Commission staff continues to  
18 manage the remaining projects as the PIER Electric  
19 Program winds down.

20 Eighty-one projects funded through the PIER  
21 Electric Program were either completed or remained  
22 active in 2015. This report includes summaries for  
23 all eighty-one projects including a description of  
24 their anticipated benefits to electric rate payers.

25 This report also highlights some of the

1 successes of the PIER Program including (inaudible)  
2 phasers which save an estimated \$210- to \$360  
3 million annually.

4 And automated demand response, which saved  
5 rate payers over \$12 million in 2012 alone, and we  
6 expect those numbers to increase in the coming years  
7 as demand response (inaudible) key strategy for  
8 integrating renewables.

9 This report also includes a brief  
10 description of some of the lessons we learned from  
11 our administration of the PIER Electric Program and  
12 how we've applied those toward our administration of  
13 the EPIC Program.

14 This will be the last annual report for the  
15 PIER Electric Program. We do plan to release a  
16 comprehensive final report for the PIER Electric  
17 Program that details of the program's benefits over  
18 its lifetime.

19 Thank you for your consideration, and I'm  
20 happy to answer any questions.

21 CHAIR WEISENMILLER: Thank you. Any  
22 comments either from the audience or on the phone?

23 I'm the lead on the research area.  
24 Obviously this is a good opportunity (inaudible) to  
25 some extent as we transition our accomplishments in



1 this area. I think Erik identified at least some of  
2 those.

3 And again, I appreciate staff pushing this  
4 along.

5 COMMISSIONER DOUGLAS: Yeah, absolutely.  
6 Appreciate those comments and I'll move approval of  
7 this item.

8 COMMISSIONER SCOTT: Can I ask one quick  
9 question? So I reviewed through the executive  
10 summaries and the reports for both of these, and I  
11 wondered, there were some neat statistics, Erik,  
12 that you mentioned in your presentation that aren't  
13 in the executive summary, and I wonder if we're  
14 planning to do like a one-pager or something neat so  
15 that people, if they don't have time to read the  
16 whole report can grab those really cool highlights  
17 and just know what the PIER Program has done.

18 MR. STOKES: Yeah, I think that's something  
19 we can do, definitely.

20 COMMISSIONER SCOTT: I think that would be  
21 great. I will second.

22 CHAIR WEISENMILLER: All those in favor?

23 IN UNISON: Aye.

24 CHAIR WEISENMILLER: This passes five to  
25 zero. Thank you.

1

2           Let's go on to Number 13.

3           MR. STOKES: This is Erik Stokes again. I'm  
4 seeking Commission approval today for the 2015 EPIC  
5 Annual report.

6           This report complies with all CPUC EPIC  
7 decisions as well as Senate Bill 96, which was  
8 signed into law in 2013. In particular, SB96  
9 requires the Energy Commission to prepare and submit  
10 to the Legislature an annual report that includes a  
11 brief description of each project awarded or  
12 completed in the previous calendar year as well as  
13 an update for each project underway.

14           The report also provides an overview of the  
15 Energy Commission's administration of the EPIC  
16 Program in 2015. I'll take the next couple minutes  
17 just to provide some highlights of those efforts.

18           In 2015 the Energy Commission released 17  
19 competitive solicitations totaling just under \$230  
20 million in EPIC funding. Topics covered in these  
21 solicitations included micro grids, energy storage,  
22 bio energy, and technologies that improve both water  
23 and energy efficiency.

24           Eighty-one projects totaling over \$170  
25 million were approved at Energy Commission business

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1 meetings in 2015. All eighty-one projects were  
2 awarded through a competitive solicitation process.

3           Also in 2015 the Energy Commission  
4 continued to conduct outreach efforts to increase  
5 the participation of underrepresented groups in the  
6 EPIC Program. As of December 31st, 2015, 18 awards  
7 included a project site located in a disadvantaged  
8 community, 20 awards included disabled veteran,  
9 minority, women, or LGBT owned business. And 37  
10 awards included a certified small business.

11           Also in 2015 the Energy Commission held the  
12 first EPIC annual symposium. Over 250 people  
13 participated and over 40 projects were showcased.

14           Since all the other projects just began in  
15 the last year, we don't have many results to present  
16 yet but we look forward to sharing the results of  
17 these exciting projects in future EPIC annual  
18 reports as well as public workshops and the next  
19 EPIC annual symposium.

20           Thank you for your consideration and I'm  
21 happy to answer any questions.

22           CHAIR WEISENMILLER: Thank you. Are there  
23 any comments from anyone in the room or on the  
24 phone?

25           Then again, I think this is a very good

1 summary of the program. We're going to get into a  
2 range of things this afternoon that have been  
3 issued, but this is a pretty good wrap-up in the  
4 annual report.

5 I certainly thank staff for all their  
6 activities to pull this together. Anyone else have  
7 any questions or comments?

8 COMMISSIONER SCOTT: Same comment as  
9 before.

10 MR. STOKES: We are working on a  
11 highlights, Commissioner Scott, for this program.

12 COMMISSIONER SCOTT: Awesome, thank you for  
13 doing that.

14 COMMISSIONER MCALLISTER: If you could  
15 provide that to the Commissioners we'd like to see  
16 that. So I'll move this Item 13.

17 COMMISSIONER SCOTT: Second.

18 CHAIR WEISENMILLER: Okay. All those in  
19 favor?

20 IN UNISON: Aye.

21 CHAIR WEISENMILLER: This item passes five  
22 to zero. Great, thank you.

23 Let's go on now to Item 14, Regional Energy  
24 Innovation Clusters. We're going to have a summary  
25 and then we're going to cover Items b and c, and

1 then we're either going to take off Item a or  
2 Commissioner McAllister is going to recuse himself.

3 MS. VACARRO: So I think first if we could  
4 have the disclosures as to, I think you have two  
5 items where you have disclosures, one with a  
6 recusal, and then (inaudible).

7 COMMISSIONER MCALLISTER: Okay. So I want  
8 to disclose on Items a and c. On Item a I will  
9 recuse, since my former employer, the Center for  
10 Sustainable Energy is a sub on Item a.

11 Item c I will just disclose UC Davis is a  
12 sub on that one and my wife is a professor at King  
13 Hall Law School at UC Davis, but there is no  
14 conflict here.

15 COMMISSIONER DOUGLAS: And on Item c I'm  
16 just disclosing that while this year I'm not  
17 teaching any courses at UC Davis Law School, I am  
18 talking to them about teaching a course next year  
19 and I have taught in previous years, so I just want  
20 to make that disclosure.

21 CHAIR WEISENMILLER: Thank you. Staff, go  
22 ahead.

23 MS. GONZALEZ: Good afternoon, Chair  
24 Weisenmiller and Commissioners. My name is Diana  
25 Gonzalez with the energy Deployment and Market

1 Facilitation Office. I am seeking Commission  
2 approval today for three projects selected from the  
3 Regional Energy Innovation Clusters competitive  
4 solicitation.

5           This solicitation was released September  
6 2nd, 2015, for the purpose of supporting the  
7 development and commercialization of promising new  
8 energy innovations to benefit electric rate payers  
9 in Pacific Gas & Electric, Southern California  
10 Edison, and San Diego Gas & Electric service  
11 territories.

12           As new energy policies are adopted,  
13 entrepreneurs must conceptualize and develop  
14 innovative new solutions for a cleaner, safer, more  
15 affordable, more reliable, and more resilient  
16 electric grid.

17           However, many entrepreneurs lack viable  
18 market strategies, access to laboratory facilities,  
19 business expertise, or merely an understanding of  
20 the needs of potential customers, making  
21 commercialization difficult.

22           This grant addresses a critical gap in the  
23 path to market for energy innovations by providing  
24 key services, resources, and infrastructure to  
25 energy entrepreneurs in each region.

1           There were a total of 12 proposals  
2 received, and 3 will be considered for funding  
3 today, for a total of approximately \$15 million.

4           I would like to add that we do recognize  
5 there was not a passing proposal for the Los Angeles  
6 region, but we have rereleased the solicitation and  
7 are scheduled to have the prebid workshop next  
8 Tuesday, April 19th.

9           CHAIR WEISENMILLER: Thank you.

10          MS. GONZALEZ: So I'll start with Item b.

11          CHAIR WEISENMILLER: Great, let's do it.

12          MS. GONZALEZ: Okay. Item b is an agreement  
13 with Physical Science Innovations, who proposes to  
14 accept 12 entrepreneurs annually into the Bay Area  
15 Regional Energy Innovation Cluster. These  
16 entrepreneurs will benefit from the services  
17 provided from the cluster, including technical and  
18 business development support, access to national  
19 laboratory facilities, and early stage  
20 commercialization support.

21          Additionally, entrepreneurs will use the  
22 resources to further develop their technologies that  
23 will enable a shift to a low carbon economy.

24          Also for consideration is Item c, an  
25 agreement with the California State University

1 Fresno Foundation, who proposes to primarily focus  
2 on incubation services for entrepreneurs developing  
3 energy technologies for the water and agricultural  
4 sectors and connecting them with business and  
5 economic development organizations in the Central  
6 Valley and north state.

7           In an effort to provide these services to  
8 over 100 startup companies, the California State  
9 University Fresno Foundation plans to leverage  
10 existing partner facilities including five  
11 California State University campuses at Bakersfield,  
12 Chico, Humboldt, Monterey Bay, and Sacramento, and  
13 the Sierra Business Council's Small Business  
14 Development Center.

15           In addition, the California State  
16 University Fresno Foundation will produce outreach  
17 events and conferences to publicize energy and water  
18 entrepreneurs and innovations including outreach to  
19 disadvantages communities throughout the central  
20 valley region.

21           Staff is seeking approval for these two  
22 items, and I can answer any questions at this time.  
23 We do have a representative from the California  
24 State University Fresno Foundation here that will  
25 provide some comments on behalf of their project.



1 DR. ZOLDOSKE: Is that my cue?

2 CHAIR WEISENMILLER: Yes, that's your cue.

3 Please come up, thank you.

4 DR. ZOLDOSKE: Good afternoon. Dave  
5 Zoldoske, Fresno State. And I just want to first  
6 thank you for recognizing the central valley and the  
7 north coast in our unique challenges there. And we  
8 do have (inaudible) as you probably know and we've  
9 been engaged with them for many years. Also  
10 groundwater pumping and water quality are very  
11 energy consumptive, and so appreciate the  
12 opportunity to address those particularly in our  
13 region as well as food production.

14 So my comments is just to say thank you and  
15 to recognize our region and provide support to  
16 address those issues. So thank you again.

17 CHAIR WEISENMILLER: Thanks for being here.

18 I think, Commissioners, as you know, part  
19 of the transition that we have (inaudible) is more  
20 of a focus on market facilitation, and so this is  
21 part of that focus and builds off the prior contract  
22 we had on the (inaudible).

23 So again, I think we tried to put together  
24 an ecosystem to really encourage innovation in clean  
25 tech and I think these are key parts of it.

1           COMMISSIONER MCALLISTER:   Totally agree, so  
2 I'll move items b and c.

3           COMMISSIONER HOCHSCHILD:   Second.

4           CHAIR WEISENMILLER:   All those in favor?

5           IN UNISON:   Aye.

6           CHAIR WEISENMILLER:   b and c pass five to  
7 zero.

8           We'll take a minute while Commissioner  
9 McAllister leaves the room.

10          Okay, let's talk about Item a now.

11          MS. GONZALEZ:   Okay. Item a is an agreement  
12 with Cleantech San Diego, who proposes to provide  
13 services for 20 to 25 entrepreneurs annually. This  
14 project will provide customized entrepreneurial  
15 services including education training, business  
16 development, testing facilities, and advisory  
17 support to the San Diego region.

18          Cleantech San Diego will work with  
19 businesses, local jurisdictions, and other  
20 organizations in the region to connect emerging  
21 technologies to region specific needs.

22          Staff is seeking approval of this item and  
23 I can answer any questions at this time, and we also  
24 do have a representative from the Cleantech San  
25 Diego that would like to provide some comments on

1    behalf of this project.

2                   CHAIR WEISENMILLER:    Okay. Please come  
3    forward.

4                   MR. ANDERSON:    Good afternoon. My name is  
5    Jason Anderson, President CEO of Cleantech San  
6    Diego. Thank you for allowing me to speak today and  
7    for considering adoption of the resolution approving  
8    Agreement EPC-15-030 with Cleantech San Diego.

9                   We are a nonprofit trade association that  
10   positions the greater San Diego region as a global  
11   leader in the clean tech economy. We achieved this  
12   by fostering collaborations across the public,  
13   private, and academic landscape, leading advocacy  
14   efforts to promote clean tech priorities, and  
15   encouraging investment in the San Diego region, and  
16   we've been doing this for about nine years.

17                  As proposed, the San Diego Regional  
18   Innovation Cluster brings together nine globally  
19   recognized business organizations and academic  
20   institutions to connect entrepreneurs to facilities,  
21   training, and resources that will accelerate their  
22   energy innovations to market and transform our  
23   region's energy system.

24                  The partnership is made up of Cleantech San  
25   Diego, (inaudible), San Diego Venture Group and

1 Imperial Valley EDC, Inland Empire Economic  
2 Partnership, the Center for Sustainable Energy, San  
3 Diego State University, UC San Diego, and the  
4 University of San Diego.

5 This is actually the first time all of  
6 these organizations have come together to work under  
7 one directive, thereby increasing our collective  
8 ability to support energy innovation within our  
9 region, help California meet its statutory energy  
10 goals, and promote economic development.

11 We're extremely grateful for this  
12 opportunity and are excited to support the continued  
13 growth of the energy sector in the San Diego region.  
14 And I'd like to thank Diana and Erik, all of their  
15 staff for all of their support in getting this to  
16 this point today. Thank you.

17 CHAIR WEISENMILLER: Thank you. Thanks for  
18 being here.

19 Any other comments on this item either in  
20 the room or on the phone? Let's transition to the  
21 Commissioners.

22 I think I hit it pretty much in the initial  
23 part. This is obviously (inaudible) the state, and  
24 this is another piece of that. Certainly San Diego  
25 is a very interesting environment. This type of work

1 plays a key part.

2 COMMISSIONER HOCHSCHILD: I would agree,  
3 and I would just note that they were the first city  
4 in the United States to mandate a hundred percent  
5 renewables by 2035 (inaudible) and I think it's  
6 added to the momentum so I'm really encouraged to  
7 see this. Do you need a motion?

8 CHAIR WEISENMILLER: Yeah.

9 COMMISSIONER HOCHSCHILD: I move the item.

10 COMMISSIONER DOUGLAS: Second.

11 CHAIR WEISENMILLER: All those in favor?

12 IN UNISON: Aye.

13 CHAIR WEISENMILLER: This passes four to  
14 zero with Commissioner McAllister recusing himself.

15 MS. GONZALEZ: Thank you.

16 CHAIR WEISENMILLER: Thank you.

17 Going on to Item 15, Reducing costs for  
18 communities and businesses through integrated  
19 demand-side management and zero net energy  
20 demonstrations. Staff, go ahead.

21 MR. MEISTER: Good afternoon, Mr. Chairman  
22 and Commissioners. You know, Item 15b is going to  
23 moved to the next business meeting, I just recently  
24 found that out.

25 I have an item to present from competitive

1 solicitation PON-15-308, which calls for communities  
2 and businesses through integrated demand-side  
3 management and zero net energy demonstrations.

4 I'm seeking approval of a \$2,999,591 grant  
5 with Prospect Silicon Valley to fund the  
6 demonstration of large scale cost effective pathways  
7 to achieving maximum energy efficiency in a grocery  
8 store.

9 The project, located in San Francisco at  
10 Whole Foods Market, will provide \$650,000 to  
11 (inaudible) save 40 to 60 percent of existing  
12 energy.

13 Supermarkets and grocery stores have among  
14 the highest energy use of commercial building types,  
15 and therefore, are among the most challenging  
16 (inaudible) to achieve zero net energy among  
17 commercial buildings.

18 The solution is to identify a cost  
19 effective (inaudible) package for retrofit  
20 applications that utilizes energy strategies  
21 (inaudible) technologies including HVAC and advanced  
22 refrigerants, phase change materials, improved  
23 kitchen equipment, occupancy sensing measures,  
24 improved lining and advanced controls for  
25 (inaudible), which are growing very rapidly.

1           The project will demonstrate lower costs  
2 and greater reliability. Dissemination of findings  
3 to the wider market will also result in additional  
4 benefits as more markets throughout the state adopt  
5 these types of technologies.

6           The project has several partners to include  
7 Lawrence (inaudible) National Lab, ARUP, San  
8 Francisco Department of the Environment, and the  
9 Whole Foods Market where the demonstration will  
10 occur.

11           I ask for your approval and I'm happy to  
12 answer any questions.

13           CHAIR WEISENMILLER: Great, thank you. Is  
14 there any comment on this from anyone in the room or  
15 on the phone? Let's transition to the dais.

16           This is certain again one of the research  
17 projects that I've been directing. I think everyone  
18 knows the importance of zero net energy over the  
19 longer term, and particularly this type of retrofit  
20 of commercial buildings. So again, I think it's a  
21 good project.

22           Other comments?

23           COMMISSIONER MCALLISTER: Yes. Totally  
24 agree, great project. You've got to get started on  
25 sort of a nominal goal for commercial is 2030, so a

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1 little bit more time than residential but you can't  
2 start too soon, and an integrated approach that  
3 looks in all the corners for opportunities and  
4 really hopes to orchestrate the operation of a  
5 building and really eventually the vision is to get  
6 it behind the scenes automated in a way that it just  
7 happens (inaudible). So there's so much potential  
8 here and we just need to unlock it, and this is the  
9 kind of project that will really make that happen.

10 So I'll move item 15a.

11 COMMISSIONER SCOTT: Second.

12 CHAIR WEISENMILLER: All those in favor?

13 IN UNISON: Aye.

14 CHAIR WEISENMILLER: 15a passes five to  
15 zero. Thanks.

16 Let's go on now to Item 16, which is  
17 reducing the environmental and public health impacts  
18 of electricity generation and make the electricity  
19 system less vulnerable to climate impacts.

20 MS. VACARRO: Before we move on, I believe  
21 there's a disclosure from the dais.

22 COMMISSIONER MCALLISTER: Yes. Again I have  
23 a disclosure and not a recusal. Item 16c has UC  
24 Davis as a sub. So again, my wife is a professor at  
25 King Hall, which is not involved in this project.

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1           COMMISSIONER DOUGLAS:   And I have the same  
2   disclosure, just that I'm talking to King Hall about  
3   potentially teaching a law course next year.

4           MS. ZIAJA:   Thank you. Good morning -- good  
5   afternoon at this point, Commissioners and Chair. My  
6   name is Sonya Ziaja from the Research and  
7   Development Division. I will be presenting nine  
8   proposed grant agreements from an EPIC solicitation  
9   released last October.

10           The solicitation addresses several research  
11   areas covering indoor air quality, public health,  
12   terrestrial and aquatic habitats, planet impacts and  
13   water energy nexus, as it relates to California's  
14   electricity system.

15           The projects I will be covering today  
16   amount to \$6,273,837 with a geographic scope that  
17   covers the entire state. Staff recommends funding  
18   all eight projects. I will discuss each of these  
19   briefly.

20           The first proposed funding is the Electric  
21   Power Research Institute for \$799,444. The purpose  
22   of this research is to improve understanding of the  
23   costs and benefits of electrification, especially as  
24   they relate to environmental justice.

25           All of the energy scenarios estimating the

1 evolution of the energy system with deep GHG  
2 reductions by 2050 so electrification of energy  
3 services as in space heating, heat pumps, electric  
4 cars, processed heat in industrial plants and  
5 electricity is a very attractive option, however,  
6 these studies use very crude assumptions about  
7 electrification. The goal of this proposed study is  
8 to develop more realistic assessments.

9           Black & Veatch Corporation will develop a  
10 prototype interactive mapping tool for California  
11 localities that will make environmental,  
12 engineering, and electrical distribution grid  
13 information available in a single easily accessible  
14 online location on the database and web platform.

15           The tool will demonstrate the potential for  
16 adapting information for local distributed  
17 generation planning for solar PV to reduce  
18 environmental permitting and risk, and therefore  
19 costs.

20           This tool will integrate aspects of  
21 (inaudible) renewable energy planning models  
22 developed for the DRACP, the San Joaquin Valley  
23 Solar and (inaudible).

24           The research team will also provide  
25 guidance to groups that may wish to emulate the

1 process in their own local areas.

2           To assist with improving air quality, a  
3 proposed study by UC Davis for \$1.5 million will  
4 develop and demonstrate approaches to  
5 synergistically improve ventilation and indoor air  
6 quality during HVAC and whole building energy  
7 efficiency retrofits in California schools, with  
8 ultimate targets of identifying and demonstrating  
9 approaches and technologies that are needed for ZNE  
10 schools.

11           Also related to environmental justice,  
12 Public Health Institute will develop in conjunction  
13 with emerging energy technology experts a workshop  
14 to elicit public input to create a public health  
15 research roadmap to proactively identify possible  
16 risks to human health associated with California  
17 rapid energy transition.

18           This project would be for \$151,000. The  
19 goal would be to produce guidance for future  
20 research and to anticipating and preventing  
21 potential unintended health impacts of emerging  
22 energy systems.

23           Another proposed research area by Lawrence  
24 Berkeley National Lab for a proposed \$625,000 will  
25 make improvements in methodologies and provide

1 better estimates of the electricity used for pumping  
2 groundwater. The lab will develop a model based on  
3 empirical research as well as fieldwork.  
4 Additionally, the project will use qualitative  
5 methodologies to elicit information about the actual  
6 use and adoption of energy efficient pumping  
7 technologies.

8           The research and fieldwork will provide the  
9 data necessary to improve reliability of  
10 California's electric and water systems in  
11 responding to drought occurrences, electricity  
12 demand increase, and variable electricity supply.

13           Eagle Rock Analytics for a proposed  
14 \$400,000 would provide seasonal and decadal climate  
15 probabilistic forecasts tailored for the management  
16 and planning of the electricity system.

17           This project is crucial to the energy side  
18 of California's fourth climate assessment. The  
19 research for the assessment will depend on shared  
20 seasonal and decadal forecasts in order to ensure  
21 consistency and intercomparability.

22           A proposed study by Lawrence Berkeley  
23 National Lab for \$1.5 million would develop smart  
24 ventilation systems that are suitable for new and  
25 existing advanced and ZNE homes.

1 Smart ventilation systems use information  
2 about current thermal occupancy system and air  
3 quality conditions to optimize performance for  
4 ventilation related equipment.

5 This work will build on efforts of the past  
6 decade that have facilitated dynamic ventilation  
7 approaches and will be able to inform future  
8 enhancements to Title 24 and related regulations.

9 The University of California Berkeley has  
10 proposed research for approximately \$500,000 to  
11 determine the effect of utility scale solar  
12 installations on the soil carbon cycle in deserts  
13 and arid landscapes.

14 A prior study indicated that (inaudible)  
15 soils (inaudible) can release substantial quantities  
16 of soil carbon. Soils in the desert can contain  
17 large quantities of carbon but in relatively fragile  
18 conditions. However, the nature and magnitude of  
19 this potential problem is not known and there is  
20 considerable scientific debate about this issue.

21 The research team will measure the amount  
22 of soil carbon in undisturbed and disturbed soils in  
23 typical areas that could be used for future solar  
24 energy farms.

25 Finally, a project with UC California Los

1 Angeles for a proposed approximately \$600,000 would  
2 focus mitigation of bird fatalities and renewable  
3 energy facilities by improving knowledge of  
4 migratory routes and timing of specific breeding  
5 populations.

6 This would extend prior peer review  
7 research using gnomes and (inaudible) to identify  
8 migration routes for future vulnerable and  
9 endangered species and assist in determining which  
10 breeding populations are at greatest risk.

11 The project will also identify promising  
12 sites for future renewable energy facilities that  
13 avoid conflicts with migratory birds.

14 The project has also attracted over  
15 \$800,000 in matched funding.

16 Staff recommends funding all of these  
17 projects and I'm happy to answer any questions.  
18 Thank you.

19 CHAIR WEISENMILLER: Thank you. I think  
20 most people are aware of the three prior assessments  
21 we have had, which have been 30-some studies each.

22 And so now we're launching a fourth  
23 assessment, these are sort of packages of studies  
24 that are covering very important areas.

25 One of things I would just highlight for

1 people to keep in mind is that, although we're a  
2 very great state, very prosperous, that there are  
3 about 100,000 people in the central valley that have  
4 no heating. They're not served by natural gas and  
5 they have propane or other wood or you name it.

6 And so again, just trying to figure out how  
7 to target, particularly (inaudible) strategies, even  
8 though it's going to trade off costs with some other  
9 stuff, but again, it's one of those things that  
10 we've really been trying to build into the research  
11 activities things to reach out to this the  
12 disadvantaged and make sure we're covering the whole  
13 state, or all citizens with our research.

14 COMMISSIONER DOUGLAS: I just wanted to  
15 comment that I think this is a really strong list of  
16 projects and I appreciate, staff gave me a briefing  
17 on this and I just appreciate the work they've all  
18 put into it because it's a really good and important  
19 set of projects.

20 COMMISSIONER MCALLISTER: One of my  
21 frustrations has been -- not frustrations really,  
22 but challenge. But when we're talking about really  
23 pushing the envelope, again, we also have real world  
24 market and cost effectiveness issues and we really  
25 have to work hard to check all boxes, not just the

1 (inaudible) technology boxes, which are kind of sexy  
2 in a lot of ways and easy to get people excited  
3 about.

4 I think the optimization, just duke it out  
5 in the marketplace. Figure out what works, going  
6 back (inaudible) learning that we do to get really  
7 get ready for prime time in all ways is really  
8 critical, and that's what enables all our systems to  
9 participate.

10 And market evolution takes all kinds of  
11 different forms, but I see in this group of projects  
12 a real commitment to seeing what works, developing  
13 technologies that really work for all Californians,  
14 and that are applicable on a mass scale, and that's  
15 really what we need to get where we need to go.

16 It's not about photo ops, it's about really  
17 getting to everybody, and this is really great  
18 projects that demonstrates that fact that we're  
19 trying and will produce a bunch of really valuable  
20 results, so I'm very excited to support them.

21 So I'll move Item 16.

22 COMMISSIONER SCOTT: Second.

23 CHAIR WEISENMILLER: All those in favor?

24 IN UNISON: Aye.

25 CHAIR WEISENMILLER: Item 16 passes five to

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1 zero. Thank you.

2 Let's go on to Item 17, developing a  
3 portfolio of advanced efficiency solutions Phase II:  
4 Plug load technologies and approaches for buildings.

5 Staff, please.

6 MR. VILLANUEVA: Good afternoon, Chair and  
7 Commissioners. My name is Felix Villanueva with the  
8 Energy Efficiency Research Office.

9 Today staff is recommending approval of two  
10 agreements totaling more than \$1.9 million in EPIC  
11 funding. These are the two remaining agreements  
12 under solicitation JFO-15-310, developing a  
13 portfolio of advanced efficiency solutions Phase II:  
14 Plug load technologies and approaches for buildings.

15 The projects I am presenting today are a  
16 result of a competitive solicitation.

17 As we know, plug load deployment includes  
18 every electrical device that plugs into a power  
19 outlet in buildings. As California is approaching  
20 zero net energy, plug loads are becoming the fastest  
21 growing unregulated end uses in energy for not only  
22 residential buildings but for commercial buildings  
23 as well.

24 The projects I am presenting today focus on  
25 such devices in commercial buildings throughout

1 California. Research is needed to not only increase  
2 energy efficiency in these devices, but to  
3 understand the relationship between the devices and  
4 its users.

5 Today's projects fall within one of the two  
6 following funding groups.

7 Funding Group A is develop next generation  
8 plug load devices and technologies, and Funding  
9 Group B is develop integrated plug load strategies.

10 Staff proposes funding for the following  
11 projects.

12 From Funding Group A we have electric plug  
13 load savings potential of commercial food service  
14 equipment through Fisher-Nickel for \$937,469.

15 The recipient will evaluate the energy load  
16 and energy reduction potential of unventilated  
17 commercial plug load food service equipment; for  
18 example, toasters, food warmers, and coffee burners.

19 Food service facilities are one of the  
20 largest energy users in the commercial building  
21 sector, consuming as much as five times more energy  
22 per square foot than any other type of commercial  
23 building in California.

24 There are estimates of over 93,000  
25 commercial food service sites within California that

1 use one or more plug load appliance. The appliances  
2 contain simple on and off controls; however, most  
3 operators have adopted a standard practice of  
4 letting these appliances run continuously throughout  
5 the day and are often left on overnight.

6           So the team will monitor appliances at five  
7 different commercial kitchens in northern California  
8 and demonstrate reduced energy consumption through  
9 the use of pre-commercial appliance designs and  
10 control technologies.

11           If 15 percent of the 93,000 commercial food  
12 service sites across California were to adopt high  
13 efficiency equipment and routinely implement standby  
14 controls, an estimated 362.3 gigawatt hours in  
15 energy could be saved annually. This equates to  
16 annual reductions of \$54.4 million in operating  
17 costs and reduction of 118,000 tons of Co2  
18 emissions.

19           Over \$202,000 in matched funding will be  
20 provided. Project partners are Davis Energy Group,  
21 Fisher Consulting, Opinion Dynamics Corporation,  
22 (inaudible) and PG&E.

23           Now, from Funding Group B we have flexible  
24 control strategies for plug loads with context aware  
25 smart power outlets to mitigate electricity waste

1 and support demand response with the Electric Power  
2 Research Institute for \$1,050,022.

3           The recipient will develop control  
4 integration and displaced in order to develop an  
5 integrated plug load systems and other energy  
6 consuming systems in commercial buildings that will  
7 lead to actual and sustainable reductions in energy  
8 use.

9           As I mentioned earlier, plug loads today  
10 are predominantly under a manual on and off control  
11 with many plug loads left running always on,  
12 resulting in wasted energy.

13           A key innovation of this project is the  
14 addition and integration of the user presence  
15 information for predicting and detecting wasted  
16 electricity usage.

17           Presence detection is enabled through micro  
18 locating technology, for example, Bluetooth  
19 technology, within smart power receptacle outlets.  
20 With mobile devices and micro location services,  
21 user customized preferences gain mobility in that  
22 personalized preferences can follow the user as he  
23 or she moves across the building.

24           Another innovation is the development of  
25 plug load control contexts that provide a

1 classification for determining appropriate control  
2 strategies that may be applied based on the type of  
3 building, the space assignment, and the plug load in  
4 question.

5 Energy savings estimated at 2,293 gigawatt  
6 hours per year. There is also potential of demand  
7 reductions of 10 percent.

8 \$335,120 will be provided in matched  
9 funding. Project partners are Metro Systems,  
10 (inaudible) Networks, Skycentrics, Southern  
11 California Edison, and the San Diego Gas & Electric  
12 Company.

13 Staff recommends approval of these projects  
14 and I'll be happy to answer any questions. Thank  
15 you.

16 CHAIR WEISENMILLER: Thank you. Any  
17 comments on this from anyone in the room or on the  
18 phone? Let's transition to the Commissioners.

19 MS. MATTHEWS: We have one comment.

20 CHAIR WEISENMILLER: Please.

21 DR. COLEMAN: This is Andrew Coleman. Thank  
22 you Chairman and Commissioners. This also includes  
23 NASA Ames as part of the project and appreciate the  
24 opportunity. And it also will be beneficial to plug  
25 loads in laboratories, so it should have wide

1 applications. That's just what I wanted to add.

2 Thanks very much.

3 CHAIR WEISENMILLER: Thanks for being here.

4 I wanted to say I think when we look at  
5 energy use, oftentimes we think of lighting in the  
6 commercial sector. With LEDs I think we're making  
7 significant progress there.

8 But really the other big picture is plug  
9 load, which are growing and growing in many areas  
10 we're sort of preempting plug load. So this is very  
11 important area of research and I think these  
12 projects going forward will make some progress  
13 there.

14 Commissioner.

15 COMMISSIONER MCALLISTER: Yeah, I couldn't  
16 agree more. I want to thank really the whole team  
17 and the Chair for his leadership on this.

18 The plug loads are really a unique set of  
19 challenges, as the Chair said. And there's a lot  
20 going on. This is not the only place where the  
21 program is addressing this. There's some really  
22 promising things going on.

23 Back in the day on the food service, we  
24 worked with large chain based down in San Diego to  
25 try to figure out, okay, they have these big

1 standalone buildings that are incredibly energy  
2 intensive, but they also have a lot of constraints  
3 regarding their business. Food service, hygiene, air  
4 ventilation. And the customer, they have to think  
5 about the customer and make sure they want to  
6 actually come in the building and buy a product.

7           So their business imperatives don't always  
8 align in their view at least with efficiency and  
9 optimization, so hopefully this work here on that  
10 front can help benefit all things toward best  
11 practices and it does really target these issues and  
12 look at this.

13           So there's a huge amount of energy we could  
14 save potentially, so I'm glad to see this good team  
15 assembled. So I think we're really moving in the  
16 right direction. And obviously there's a big economy  
17 in California where we make a huge impact if we can  
18 take advantage of all the opportunities we've  
19 already got scaled.

20           Anybody else?

21           COMMISSIONER SCOTT: Yeah, I'll just say  
22 that it's really exciting to see the innovation in  
23 the state. I got a series of excellent briefings  
24 from the EPIC staff on a lot of the projects that  
25 we're going through right now. What they all

1 mentioned was how they connect with one another. So  
2 the energy efficiency moves that we're trying to  
3 make, the move to zero net energy and all those  
4 things that are driving energy down but plug loads  
5 are driving energy up, and so we really need to hit  
6 all of those components to make sure that we get  
7 where they're going and they all highlighted that in  
8 their briefings to me and I wanted to highlight that  
9 too to kind of tie it together how it all fits  
10 together. So I thought it was great and I'm excited  
11 to see these projects coming through.

12 COMMISSIONER MCALLISTER: The modern aspect  
13 of the second one as well. We're always talking  
14 about data, I'm certainly always talking about data,  
15 but the amount of interactivity and data flow just  
16 even within a given project onsite to incorporate  
17 behavior and natural occupancy (inaudible) the  
18 building, that's a new frontier and it's  
19 complicated, so these projects really are necessary  
20 to move that all forward.

21 COMMISSIONER HOCHSCHILD: I agree. I just  
22 want to also acknowledge Ken Rider. I know he's  
23 worked closely with your team, thanks, (inaudible).

24 COMMISSIONER MCALLISTER: So I'll move  
25 Item 17.



1 COMMISSIONER HOCHSCHILD: Second.

2 CHAIR WEISENMILLER: Okay. All those in  
3 favor?

4 IN UNISON: Aye.

5 CHAIR WEISENMILLER: Item 17 passes five to  
6 zero.

7 Let's go to 18, Navigant Consulting.

8 MR. BLAIR: Good after Chairman and  
9 Commissioners. My name is Nick Blair with the Energy  
10 Research and Development Division. I'm seeking  
11 Commission approval today for resolution to  
12 Agreement 300-15-009 for a \$6,937,889 contract with  
13 Navigant Consulting, Incorporated, to conduct market  
14 analyses designed to increase the commercial impact  
15 of energy technologies funded through the EPIC  
16 Program.

17 This contract was the result of competitive  
18 solicitation, we received four proposals. Today we  
19 are recommending funding for the top ranked proposal  
20 team.

21 The overall goal of this contract is to  
22 provide immediate access to highly specialized  
23 knowledge and technical expertise that are outside  
24 the Energy Commission's current capabilities on  
25 market analysis and trends and path to market

1 strategies for current and future EPIC technologies.

2 Over the term of the this six-year contract  
3 Navigant will provide key insights into how the EPIC  
4 Program has mobilized the commercialization of clean  
5 energy technologies and how future funding decisions  
6 can continue this trend.

7 Work from this contract will provide  
8 support to the Energy Commission and EPIC  
9 (inaudible) by assessing and identifying costly  
10 customer problems, primarily for businesses that  
11 require energy solutions that can be provided by  
12 EPIC technologies and research, by developing better  
13 market strategies for select EPIC projects that  
14 define market value potential, identify primary  
15 target markets, renew existing market channels, and  
16 create a detailed approach to achieving success in  
17 the marketplace by estimating market opportunities  
18 for specific EPIC recipients in critical market  
19 segments, and by tracking past and current awarded  
20 EPIC technology solutions to monitor successes and  
21 more accurately consider future EPIC funding  
22 opportunities.

23 This work will provide invaluable  
24 information to the Energy Commission and various  
25 past, present, and future EPIC awardees that will

1 help move technologies from the research and  
2 development phase into full commercialization.

3 I respectfully request approval of this  
4 resolution, and I'm happy to answer all questions.

5 CHAIR WEISENMILLER: Thank you. Any  
6 comments from anyone in the audience or on the  
7 phone? Commissioners.

8 I was just going to say, again, this fits  
9 in with the others, as Commissioner Scott indicated,  
10 a lot of these tie in together, so this fits well  
11 with the innovation clusters and (inaudible)  
12 activity, so all three fit together and this will  
13 build off of that. So I think it's a good project  
14 and I encourage people's support for it,

15 COMMISSIONER SCOTT: Move approval of this  
16 item.

17 COMMISSIONER MCALLISTER: Second.

18 CHAIR WEISENMILLER: Okay. All those in  
19 favor?

20 IN UNISON: Aye.

21 CHAIR WEISENMILLER: Item 18 passes four to  
22 zero.

23 MR. BLAIR: Thank you very much.

24 CHAIR WEISENMILLER: Okay. Let's go on to  
25 Item 19, Itron, which again is IBS in California.

1           MR. CROFT:   Good afternoon, Chair  
2   Weisenmiller and Commissioners. My name is Josh  
3   Croft with the Energy Deployment and Market  
4   Facilitation Office. I'm seeking Commission approval  
5   today for a \$999,884 contract with Itron.

6           Itron will work with Energy Commission  
7   staff and in consultation with stakeholders and  
8   subject matter experts to develop a technical  
9   assessment of key needs and gaps within ZNE building  
10   research, development, demonstration, and  
11   deployment.

12           This contract was the result of a  
13   competitive solicitation that received six  
14   applications. Today we are recommending funding for  
15   the top ranked proposal team.

16           Itron will leverage the proposal team's  
17   deep experience and expertise with ZNE while  
18   utilizing the existing body of ZNE work through  
19   secondary data (inaudible) reviews, interviews, and  
20   other forms of stakeholder input, such as workshops  
21   and a web portal.

22           The contract's intent is to identify and  
23   analyze the challenges and gaps and research needed  
24   to achieve ZNE as a standard and sustainable  
25   building industry practice. The team will solicit

1 stakeholder input throughout the formation of this  
2 gaps analysis which will be performed over the  
3 course of two years.

4           This contract's goals and objectives are to  
5 synthesize the input of stakeholders and experts to  
6 analyze performance and cost targets for promising  
7 ZNE technologies, provide a detailed description of  
8 barriers that hinder the adoption of ZNE building  
9 technology in the marketplace, analyze stakeholder  
10 recommendations on research most needed to achieve  
11 cost effective ZNE buildings, and to develop  
12 critical indicators of success for ZNE building  
13 adoption.

14           Itron's team includes the following  
15 subcontractors: New Buildings Institute, EPRI, David  
16 Energy Group, Integral Group, UC Davis Energy  
17 Efficiency Center, and Amerit Consulting.

18           This team includes experts in residential  
19 and commercial ZNE construction, experts in  
20 behavioral research as it relates to zero net  
21 energy, and experts in the latest commercial zero  
22 net energy building technologies.

23           This wide range of expertise enables the  
24 team to produce a quality gaps analysis that  
25 encompasses the goals and objectives that were

1 mentioned earlier.

2           Staff respectfully requests approval of  
3 this resolution and I'm happy to answer any  
4 questions.

5           CHAIR WEISENMILLER: Thank you. Any  
6 comments from anyone either in the audience or on  
7 the phone? So hearing none let's go to Commissioner  
8 discussion.

9           Like I said with plug loads, obviously the  
10 others sort of key emphasis is on zero net energy,  
11 which obviously is not going to be easy, and so  
12 trying to fill in some of the gaps.

13           When I was in China at (inaudible)  
14 University, we basically got beat up on the concept  
15 of zero net energy and we all lived in suburban  
16 tract houses. Chinese housing were 20-story high-  
17 rises, so they were doing the math and ensuring me  
18 this would never work there. I said, yeah, I know.

19           But anyway, but certainly the measure of  
20 combining renewables and energy efficiency into one  
21 project is incredibly important, so again I would  
22 urge people to support it.

23           COMMISSIONER MCALLISTER: So I agree with  
24 all that. And actually on the consent calendar we  
25 did approve a pretty aggressive (inaudible) for the

1 City of Santa Monica (inaudible) we didn't talk  
2 about it because it was on consent, but how much PV  
3 you put per foot of floor space in a building. Well,  
4 it's not true. It only matters in terms of a ZNE  
5 building.

6 I guess I just wanted to note -- thanks for  
7 your presentation, Josh. I wanted to note that there  
8 hasn't been a lot of work, as you mentioned, on ZNE.  
9 That goal is really for a single family.

10 And actually I would say to a large extent  
11 any housing exists already for a single family that  
12 we need to implement that in the Building Code, so  
13 observed technology development is important, but  
14 still going forward after that as we see more  
15 coverage and cost effectiveness.

16 But I think commercialization and getting  
17 costs down there are really the priorities for  
18 single family. So I'd kind of like to see, make sure  
19 that we focus on some of the issues that are really  
20 truly market relevant in the near term for that,  
21 because we do have goals. So maybe that suggests  
22 more of a commercial focus or at least a different  
23 kind of focus on single family versus commercial.

24 And certainly we worked relatively  
25 recently, within the last few years with the PUC to

1 produce the ZNE roadmap, which is pretty high level,  
2 pretty general in coverage, but it does have a lot  
3 of the issues that the contract here is going to be  
4 looking at, so hopefully we'll be working in close  
5 coordination with them.

6 More of a voluntary market approach, that's  
7 their shake at the PUC because they're pushing  
8 markets. We need more code relevance, but I think  
9 it's really important to keep close coordination  
10 with them on the research agenda obviously, and I  
11 think it does that since the funding comes from  
12 (inaudible).

13 The cost targets and being very clear on  
14 the metrics, those are all the suggestions that I  
15 would have at a high level, but certainly it's a  
16 good project. There's a lot at stake. We need to be  
17 very clear on how we approach it.

18 So I'll move Item 19.

19 COMMISSIONER DOUGLAS: Second.

20 CHAIR WEISENMILLER: Okay. All those in  
21 favor?

22 IN UNISON: Aye.

23 CHAIR WEISENMILLER: Item 19 passes four to  
24 zero. Thank you.

25 Let's go on to Item 20, which is the



1 minutes for March 9th.

2 COMMISSIONER DOUGLAS: Move the minutes.

3 COMMISSIONER SCOTT: Second.

4 CHAIR WEISENMILLER: Okay. All those in  
5 favor?

6 IN UNISON: Aye.

7 CHAIR WEISENMILLER: Minutes are approved  
8 four to zero.

9 Lead Commissioner and Presiding Member  
10 reports. Commissioner Scott?

11 COMMISSIONER SCOTT: Sure, I have a couple  
12 highlights for you all today, and actually I'm going  
13 to look to Alana for just a second to see. Are you  
14 going to highlight (inaudible) in your report? Okay.  
15 I might want to add on whatever else she would like,  
16 but I just wanted to make sure.

17 I know that you all know that we are having  
18 a diversity career fair here at the Energy  
19 Commission on Friday, April 29th. It starts at 10:00  
20 a.m. I have done my best to email the flyer out to  
21 folks that I know and ask them to spread the word. I  
22 hope that I can encourage my fellow Commissioners  
23 and other folks around the room to take a look at  
24 that and spread the word to folks that they know so  
25 we have a really great turnout for our first

1 diversity career fair.

2 I will highlight for you, a few Fridays ago  
3 -- I think I may have mentioned this already, but a  
4 few Fridays ago I did get to attend United Airlines  
5 first commercial flight that was using renewable  
6 diesel, which was really awesome. It was at LAX and  
7 it was flying from there to San Francisco Airport.

8 With the amount of fuel that they were  
9 contracted to purchase, which is about 15 million  
10 gallons, they can do about 12,500 flights between  
11 LAX and San Francisco.

12 And what's really exciting about it as  
13 well, although the Commission didn't fund this  
14 portion because it's jet fuel, but it's that same  
15 facility, the Altair facility that Rhetta had  
16 mentioned in her presentation that has been able to  
17 scale (inaudible). Not only can they do renewable  
18 diesel for the (inaudible) sector but they can do it  
19 for (inaudible) as well.

20 So I was pretty jazzed, that was very  
21 exciting. There were eight speakers and they held us  
22 strictly to our time limit because we spoke before  
23 the flight left, and of course they don't want the  
24 story of the first flight to be late because of all  
25 the speeches. It was not late and we landed on time.

1           I wanted to just mention last week I was at  
2 the Department of Energy's hydrogen and fuel cell  
3 technology advisory committee. Katherine Dinwoody  
4 from Air Resources Board and I represent the state  
5 of California on that committee.

6           This is fantastic because a lot of what Doe  
7 does is the research things and a lot of the  
8 research is early research, and in California it is  
9 in the pre-commercial and standing of the industry  
10 phase, and so to really be able to talk with each  
11 other, understand what's going on both in Doe and  
12 what they're looking at, what their priorities are,  
13 what the State of California is looking at, what our  
14 priorities are, and the good partnership that we  
15 have together to complement one another to bring  
16 hydrogen to the commercial space has been great.

17           I wanted to note that in the 2005 Energy  
18 Policy Act that was where this advisory committee  
19 was formed and they said in 2015 what we'd like to  
20 do is enable the ability to make a commitment to  
21 commercialization by 2020.

22           The committee had a little bit of a  
23 discussion about where are we on that, because in  
24 California we're quite a bit ahead of the rest of  
25 the nation, and so it's like, oh, we're in the space

1 we need to be to say we've met that goal.

2 And we all admit there's quite a bit more  
3 that needs to be done even here in California, of  
4 course, to continue the commercialization, but that  
5 was a fun spirited discussion around the table of  
6 the advisory committee members.

7 I also wanted to highlight because Jean  
8 Barones from our transportation team attended the  
9 meeting. She gave a fantastic presentation, just  
10 knocked it out of the park. And the depth of  
11 knowledge and expertise that she brought to her  
12 presentation, her enthusiasm (inaudible).

13 And it was a little bit funny because when  
14 she finished, you know you have the thing where you  
15 set your card on the side and that's how the chair  
16 knows to acknowledge you to make comments. They were  
17 cutting each other off to be able to tell Jean how  
18 fantastic they thought she had done, and that they  
19 felt like with someone like her and other folks like  
20 her around the table in California they felt sure  
21 that we could get where we were trying to go. And it  
22 was just a really nice complement and I thought she  
23 did a great job, so I wanted to highlight that here  
24 for you all.

25 And then my last note is I just want to say

1 thank you so much to Courtney Smith who served as my  
2 adviser. She was diligent and smart, terrific,  
3 fantastic to work with. I'm completely heartbroken  
4 to be losing her from my team, but so wonderfully  
5 excited for the Commission that we get to retain her  
6 talent.

7 And I want to say congratulations to her as  
8 well. I know she's not here today but I'll be sure  
9 to pass it along, as she takes on (inaudible)  
10 Division, so I'm really excited for her and wanted  
11 to make sure to thank her for her great work.

12 COMMISSIONER MCALLISTER: And I think  
13 Suzanne will be around long enough to have a  
14 transition, right, because she also has just done an  
15 incredible job.

16 COMMISSIONER SCOTT: As well for sure.

17 COMMISSIONER MCALLISTER: She's a star as  
18 well.

19 So I was actually gone for much of the  
20 month, but since the last business meeting  
21 (inaudible) New Zealand so I shall be brief.

22 New Zealand actually, from an energy  
23 perspective it was super interesting, but I won't  
24 get into that. There actually are some people that  
25 (inaudible) that actually work there and are pushing

1 the energy (inaudible) there too, so we have a major  
2 impact globally, not just national.

3 But really just a couple of things.

4 Codes and standards work is just moving  
5 forward on a bunch of different fronts and I just  
6 want to congratulate the team for getting a  
7 (inaudible). And really there's a lot of good stuff  
8 on the table and lots of stakeholder interaction and  
9 it's all, I think, very positive and can help save a  
10 lot of energy for the state.

11 Let's see. Just a couple things really.

12 On the 31st a delegation of Mexican  
13 officials were here and at UC Davis for the most  
14 part, but I was able to interact with them on R&D  
15 and the energy efficiency realm, and I thank Laurie  
16 and Virginia for supporting that presentation. It  
17 really went well.

18 There's a lot of opportunity to do R&D  
19 transfer, not necessarily tech transfer but R&D  
20 transfer and then manufacturing promotion really  
21 about Mexico and its reforms and its energy  
22 efficiency efforts. And I think particularly in the  
23 lighting sector there's just so much opportunity  
24 there. And they have a manufacturing that can really  
25 enable (inaudible), so I'm pretty excited about

1 keeping engaged on that front, and hopefully there's  
2 some industry partners that can be brought to that  
3 and help down actually in Mexico and that'll help  
4 all of us really.

5           And then finally we'll talk about this with  
6 Chair Weisenmiller, but the (inaudible) hearing down  
7 there. It was an exciting time and I'll let you  
8 cover the topics, but it certainly highlighted to me  
9 how important and how a broad set of bases on that  
10 issue. I mean, we know how important it was for the  
11 state but I think it's going to be engaging for a  
12 long while and I really appreciate your (inaudible)  
13 on that as we move into summer and as we move beyond  
14 that into winter and we have to deal with the gas  
15 supply issues. There's definitely going to be less  
16 for awhile.

17           So big deal but solutions are there and  
18 we're going to have to go for them and grab them by  
19 the ears and make them happen, particularly on  
20 efficiency.

21           I'm actually kind of excited that it's  
22 creating such a stir in the efficiency realm and I  
23 think there's some creative thought that's resulting  
24 from that which can help us much beyond.

25           So that's it.

1                   COMMISSIONER DOUGLAS:   You know, I also  
2   took a little time off over the past couple of  
3   weeks. There was Spring Break and there was a family  
4   visit as well, so I don't have any reports right now  
5   and look forward to hearing the Chair's report.

6                   CHAIR WEISENMILLER:   I'll cover three  
7   things, which I've done since the last. I'll sort of  
8   do them chronological.

9                   So in early March I went back to DC to  
10   testify before the NRC. They had a meeting, I guess,  
11   to be precise on the terminology, with the  
12   Commissioners to discuss decommissioning.

13                  And basically, decommissioning, the NRC has  
14   never had a very (inaudible) policy there. And what  
15   it does is when a plant stops operating, like San  
16   Onofre, it's obviously no longer an operating power  
17   plant, so they look at the permit requirements when  
18   operating a power plant and they decide, well, we  
19   could release the applicant from many of those  
20   conditions.

21                  And applicants have 60 years to  
22   decommission a site, and they have standards for  
23   that. But again, so they started before, this was  
24   before 9/11. Now there's a more coherent process to  
25   say as a regulator what should you really be looking



1 at when decommissioning. And they stopped with 9/11.

2 And so but now have picked it up again. And  
3 a lot of their focus has shifted from permitting new  
4 plants to decommissioning existing plants, so it's  
5 certainly timely in a number of states.

6 The industry was there and obviously kept  
7 emphasizing that efficiency was important, and I was  
8 one of the state representatives saying, actually,  
9 in the whole context ideally talking about trying to  
10 move more to a consent based approach on long term  
11 storage of waste, that they should really be  
12 thinking about a much more consensual process on  
13 decommissioning that really brings in state and  
14 locals and decision makers, and certainly the  
15 community.

16 I mean, SMUD -- in the case of San Onofre  
17 there's a community engagement panel, which is a  
18 voluntary (inaudible) that Edison has done.

19 So one of the things we were recommending,  
20 or I was recommending, was that that be more  
21 formalized and that they have much more of a  
22 outreach to various entities on the state and local  
23 level to get that registration.

24 And something that came up is, again, they  
25 just stopped operating so you could stop monitoring

1 emissions from the plant. (inaudible) they just turn  
2 off any radiation detection equipment.

3 And so certainly New Jersey made this  
4 point, well, actually, just leave it operating. At  
5 least we know if something happens.

6 But that goes away, emergency planning goes  
7 away.

8 We also ran into this at (inaudible) and  
9 San Onofre which got rejected by them, was that  
10 (inaudible) either operating or not, that an issue  
11 is have you put that fuel into casks. That has a big  
12 impact as the radiation decays and (inaudible) in  
13 the cask or maybe even eventually move it offsite,  
14 you would think the regulatory conditions and the  
15 monitoring, etcetera, (inaudible) would continue  
16 through that spectrum.

17 Certainly that will be interesting to see  
18 what they do. This was sort of advanced rulemaking,  
19 they're starting a rulemaking proceeding to deal  
20 more formally with it next year. So that's the  
21 positions we're taking.

22 Then I went to Berlin.

23 COMMISSIONER SCOTT: Can I ask one quick  
24 question before you transition?

25 CHAIR WEISENMILLER: Sure.

1           COMMISSIONER SCOTT: When you were making  
2 those recommendations did you feel like the NRC was  
3 interested in those and going to take them under  
4 consideration, or what was the response to the  
5 recommendations that you were making?

6           CHAIR WEISENMILLER: It was mixed, it was  
7 mixed. I mean, there was one Commissioner who was  
8 clearly trying to get the point out that nothing has  
9 gone really that long yet in decommissioning. And  
10 with keeping costs down and efficiency.

11           And others seemed to be more at least  
12 thinking about it. But again -- and as we were  
13 walking in we're all looking around and, as I said,  
14 just at the mixture of folks seeing that obviously  
15 some people (inaudible).

16           There were very strong comments from a  
17 number of people but there were very strong anti-  
18 comments from industry and the staff was certainly  
19 not seeming to be that (inaudible), at least it was  
20 certainly more toward the industry side than the  
21 (inaudible) side.

22           COMMISSIONER MCALLISTER: So the industry  
23 is perfectly fine with keeping casks onsite in  
24 perpetuity?

25           CHAIR WEISENMILLER: Well, that's why they

1 sued the federal government, but no, there's a lot  
2 of (inaudible) consistency where on the one hand  
3 they are moving stuff in pools into the casks.

4           On the other hand they say, well, there's  
5 no real safety difference between the two of them,  
6 which just makes no sense whatsoever. Why do you  
7 spend the money if there's no -- anyway.

8           I think the industry (inaudible) like it or  
9 not. They've always had a myopia on the back end of  
10 the fuel cycle. Historically they just assume  
11 magically it was going to go away, and then  
12 magically they could just keep stuffing it in the  
13 existing spent fuel pools.

14           I applauded the fact the NRC was now at  
15 least thinking about the back end.

16           So I went from there to Berlin. Basically,  
17 this was the German fall of Paris. They did a really  
18 nice job of having a very broad international  
19 contingent that talked about not only the German  
20 success on renewables but what was going on  
21 globally.

22           It was a good time for the German economy  
23 and energy to really look back at their  
24 accomplishments over time in the last few years in  
25 Germany and look at some of the next steps for them.

1 But again to look more broadly.

2 Security was pretty intense, obviously, at  
3 this time. A lot of side events.

4 I went up to 50 Hearst, their version of an  
5 RTO that does that part of Germany.

6 And then had some meetings with actually  
7 some academics and some regulators on market  
8 structure questions. Fun conversations there. How  
9 you monitor how ISOs are operating, things like  
10 that.

11 COMMISSIONER MCALLISTER: So what's the  
12 thinking about where generation mix is going?

13 CHAIR WEISENMILLER: Well, the Germans are  
14 still struggling. I mean, the thing that they've  
15 struggled with a lot in the past year, and in fact  
16 last year, you know, historically the Germans have  
17 had this situation where they are definitely phasing  
18 out nuclear. They are definitely growing renewables.

19 And at the same time they've built a lot of  
20 coal plants. And so their greenhouse gas emissions  
21 -- last year (inaudible) greenhouse gas emission  
22 actually went down in the power sector, but  
23 historically they've been increasing. So they've had  
24 increasing costs.

25 They had decreasing marginal costs, which

1 means that a lot of their power flows out to the  
2 border areas either advertently or inadvertently.  
3 And obviously it's not good strategy to buy high and  
4 sell low, you know. Bankruptcy illustrates the folly  
5 of that notion. So they're struggling on that count.

6           They tried to put in place basically things  
7 to knock out coal generation got slapped back  
8 politically, so they're now putting instead of their  
9 capacity market they're putting (inaudible) reserve  
10 market where they will pay to keep some of the coal  
11 plants operating.

12           At a place where once you have marginal  
13 costs of zero and even on peak they can't even keep  
14 pond storage projects alive, and so the notion  
15 somehow you can keep coal plants alive as a backup.

16           COMMISSIONER MCALLISTER: They have a  
17 regional transmission like the (inaudible) power  
18 figured out?

19           CHAIR WEISENMILLER: Well, we have our  
20 regional issues in the west. Now you can imagine  
21 you're in the EU and you have combinations of  
22 countries, some of which the Germans have enormous  
23 amounts of (inaudible).

24           So I did go into one of our meetings was  
25 with the EU on these issues. And again, you can

1    imagine walking into a room with 30 people and  
2    listening to conversations it's very clear that they  
3    are at least slow and methodical in trying to reach  
4    decisions. I don't know if they reach them or not,  
5    but again just trying to deal with market structure  
6    questions.

7                COMMISSIONER MCALLISTER:    (inaudible)  
8    having issues (inaudible) up north (inaudible).

9                CHAIR WEISENMILLER:    Yeah, they have lots  
10   of issues, I guess is the bottom line. But one of  
11   the issues is, yeah, wind is in the north, the load  
12   is in the south.

13               They have a single price throughout Germany  
14   and Austria, one price, which means the pricing  
15   signals (inaudible) anywhere you want even though  
16   the load is in the south, and they're having lots of  
17   trouble getting high voltage lines built across  
18   Bavaria. And if they don't succeed, they will  
19   probably have to go to (inaudible) pricing. But  
20   again, that's probably the next energy minister's  
21   problem instead of this one.

22               But yeah, they're having a lot of trouble  
23   building lines. Lots of problems on the operational  
24   systems.

25               Again, the sort of question I kept asking

1 and no one would ever answer was just how much  
2 manual (inaudible) they have. The answer is lots and  
3 increasing. So it's interesting to compare their  
4 issues to ours.

5 But it's a good time to celebrate and it  
6 was a good chance to see how they handle the multi-  
7 lingual multi-government.

8 They have a lot of focus on Twitter, so  
9 they had one screen for the Twitter stuff.

10 They had one panel on renewables and how we  
11 love renewables, which of course had a Saudi in the  
12 middle of the group, and so he was talking and of  
13 course you look at the Twitter feeds and it's just  
14 sort of beating the guy into the ground, right.

15 Anyway, so that was interesting.

16 Aliso was interesting. Part of the question  
17 -- and again, we had a workshop in southern Cal.  
18 It's always interesting in terms of what people take  
19 away or don't take away.

20 The good news was that we put in place an  
21 administration wide program to respond to Aliso,  
22 respond to the Governor's letter of January 6th, you  
23 know, his order.

24 And on the reliability side it's been the  
25 Energy Commission, ISO, PUC, and LAWP doing the



1 analysis, which certainly deepens relationships  
2 among us. And we looked at near term; i.e., this  
3 summer.

4           Ultimately we have to look at long term;  
5 i.e., next winter, and then take longer term views.  
6 And when we did, A, we're surprised that this summer  
7 is that problem, and we always thought when next  
8 winter would be a problem, you know, particularly  
9 coal.

10           Anyway, the storage system is designed  
11 generally to help core/residential customers deal  
12 with winter heating lows, which you can have very  
13 high lows there of the straight coal.

14           1948 was like three standard deviations  
15 (inaudible), so it's like a 1 in 35 target for per  
16 peak month for core, because if you drop core load  
17 you have to go out and you light pilot lights.

18           And (inaudible) statistic was after the  
19 Northridge earthquake they lost 200,000 homes that  
20 they had to relight, and it took -- I'm trying to  
21 remember -- it took months, bottom line. So you go  
22 out and you bang on peoples' doors, they're not in,  
23 you come back, you know. Anyway, it was designed in  
24 that fashion.

25           And the summer issue, which again, most

1 people didn't get although I thought the  
2 presentations were good, (inaudible) basic criteria.

3 But the problem is when we went in we  
4 thought the problem would be rapid ramps. Turns out  
5 the problem is misforecasting between (inaudible)  
6 and day off.

7 If you look at how the gas system operates  
8 and the power system operates, they don't operate  
9 the same. And gas molecules move very slow, three  
10 miles per hour in the high pressure lines, 20, low  
11 pressure. And you basically use (inaudible) you say  
12 this is how much gas I need tomorrow. It's all  
13 marching along, the molecules do, and then the next  
14 day you discover, oh, we just lost a transmission  
15 line or the cloud cover is going out in Los Angeles  
16 and your forecast is wrong, and you could either  
17 have too much gas or you could have too little gas.

18 And if you have too little gas in the day  
19 of, without a storage field to deal with the hour by  
20 hour variation, there's no way to respond. It's the  
21 gas moves very slowly, there's not storage fields of  
22 sufficient size in the basin to respond. So it  
23 doesn't take much to misforecast.

24 We were finding pressure problems on the  
25 SoCal gas system, 150 million cubic feet a day,

1    which (inaudible). Again, it's not a particularly  
2    big number, ten percent. Anyway, and suddenly you're  
3    worrying about having to drop load, drop power plant  
4    service, which then drops electric load unless you  
5    can move power in from someplace else to keep the  
6    lights on.

7               And then if you combine it with outages and  
8    different things, you could be off by as much as  
9    several hundred cubic feet a day.

10              Again, just looking if you go back over  
11    recent history, just resimulate the operation system  
12    (inaudible), which were sort of average years for  
13    the summer. They weren't particularly hot. The  
14    outages. (inaudible) I'm not sure I'd say they were  
15    routine.

16              So then you go to fill and you say what can  
17    you do. Well, if you don't have enough you can try  
18    to do demand response, right.

19              And again, next winter probably a supply  
20    question, but this summer it's really under or over.

21              So having said that, of course everyone has  
22    potential (inaudible), some of which will be  
23    interesting to say I've got the solution, can you  
24    tell me what the problem is. And so trying to at  
25    least understand the problem; i.e., misforecasting

1 as opposed to saying, oh, I can help you with  
2 additional supply.

3 Well, there are times we may have too much  
4 supply, so it's not like that's the magic bullet  
5 there.

6 So I think again a lot of getting the  
7 message out. We're going to really need people in  
8 the basin to really help us with energy efficiency,  
9 demand response when we need it this summer, so it's  
10 going to be -- depending on whether it's hot, cold,  
11 the averages, it could either be very stressful or  
12 less stressful.

13 But we're talking 14 days. This is not  
14 easy. And we reduced it somewhat by the ISO can  
15 obviously move stuff into the basin, again, with  
16 enough notice LAWP can with enough notice.

17 But so far it's been things like you can  
18 build a gas system without storage. Well, you can,  
19 but we did build it with storage, and the problem  
20 now is we had a system that was very dependent on  
21 Aliso Canyon. It broke, so (inaudible) again, right.  
22 And now you have to figure out, and then you  
23 discover there's a large reliance on what turns out  
24 to be a broken piece of equipment, and so you're  
25 trying to figure out how to work your way around.

1           Anyway, you could, but the next month or  
2 two it's not like you can rebuild all the pipe  
3 coming into L.A. I'm not even sure why you'd want to  
4 rebuilt all the pipe to make it twice as big going  
5 forward, so that's one issue.

6           There's also been this confusion of LAWP  
7 has some gas fields in Wyoming and they've never  
8 been able to get that. They sell the gas  
9 (inaudible), so they've never been able to really  
10 get it into Los Angeles.

11           There are people saying, well, you have  
12 that. It's like, yeah. It's like if you drove your  
13 car to Wyoming and said, well, I have a gasoline  
14 container in my garage in Sacramento so I don't have  
15 worry about gasoline here.

16           Unless you've got the Star Trek's  
17 teleprompter, shipping stuff is not going to help  
18 you to have the gasoline there.

19           So once you get interaction of gas and  
20 power both, it makes everything at least twice as  
21 complicated.

22           COMMISSIONER MCALLISTER: I'm still  
23 interested. I thought that market reform aspect of  
24 this is pretty interesting, because as it turns out  
25 we have also the loosest balancing rules of pretty

1 much anybody in the U.S.

2 CHAIR WEISENMILLER: Oh, yeah.

3 COMMISSIONER MCALLISTER: Tightening those  
4 up could actually help us if we had (inaudible).

5 CHAIR WEISENMILLER: We need that. I mean,  
6 basically you balance over the course of a month, so  
7 you can have like a ten percent. They don't have  
8 necessarily float gas that day. You can just deal  
9 with it later.

10 And as Andrew said, there are places that  
11 are hourly balancing, not just monthly balancing. So  
12 we're trying to get at the daily and having said.

13 But certainly the response of all the  
14 (inaudible) customers is, well, that's not how they  
15 did their contracts. So being said, unless you  
16 forecast correctly now, you have large financial  
17 penalties, and what are the tools, how do we deal  
18 with that.

19 So it's been incredibly controversial. You  
20 may be approached by utilities, refineries, by large  
21 industrial, anyone who buys their own gas is  
22 suddenly going, oh my god, daily balancing is really  
23 hard.

24 So again, it's not like there are a lot of  
25 easy answers here.

1                   COMMISSIONER MCALLISTER:  It's also not  
2  rocket science, though.  I mean, everybody else does  
3  it so how hard can it be if we need to migrate our  
4  contracts.  That's really the kind of conversation I  
5  think we will see now coming up is sort of, it's not  
6  seatbelts, it's not going to put them out of  
7  business, but (inaudible) seatbelts but it won't be  
8  that hard.

9                   CHAIR WEISENMILLER:  Right.  No, the PUC is  
10  dealing with that.  There's a bunch of questions.  
11  It's like we have 15 PUC (inaudible) now, which  
12  certainly if we run a history we'll (inaudible) this  
13  summer.

14                   On the other hand, we don't know if and  
15  when we will ever start reinjection, so it might be  
16  that suddenly all we have next winter is 15  
17  (inaudible), which is pretty miserable on into the  
18  winter with that.

19                   But anyhow, the big question of how much  
20  you use now versus later.  It's not a pretty  
21  situation.  So certainly it's a time for concern,  
22  it's a time for people to pull together,  
23  particularly on (inaudible).

24                   And as Andrew said, it's certainly a good  
25  time, there's no reason not to do energy efficiency

1 now, particularly if you're looking out over the  
2 trend between here and next winter and start putting  
3 it in place.

4 COMMISSIONER MCALLISTER: Yeah, if you take  
5 into account some of the avoided costs of potential  
6 blackouts or whatever, you're sort of economically  
7 and financially looking a lot better with some of  
8 the gasoline measures, so you can build a case from  
9 that perspective, maybe it's easier to justify.

10 CHAIR WEISENMILLER: Oh, yeah. Although  
11 again, it's just the notion of how much can you  
12 really do between now and the summer?

13 We're trying to encourage sort of a  
14 competition between LAWP and Edison where  
15 (inaudible) was saying that there ought to be  
16 another 20 megawatts of demand response, which is  
17 like (inaudible).

18 But having said that, let's get 30, can we  
19 get actually get some (inaudible) here.

20 So Chief Counsel's Report.

21 MS. VACARRO: So I have two information  
22 items.

23 The first will bring you to the December  
24 meeting when the Commission tasked the chief  
25 counsel's office to take all appropriate steps to



1 address concerns that we had with Bendota Bio Energy  
2 and the grant agreement.

3 And today I'd like to let you know that we  
4 did file a complaint last Friday. The Attorney  
5 General's Office filed it on behalf of the  
6 Commission in Sacramento Superior Court. There are a  
7 number of causes of action.

8 And this isn't the forum today to have any  
9 discussion about the lawsuit, it's more  
10 informational. Certainly don't want you reading it  
11 in the press or otherwise hearing about it, but  
12 we're happy to give you individual briefings, if  
13 you'd like that, to get a better sense of the scope  
14 of the complaint and where things will go moving  
15 forward.

16 And the other item -- I feel like proud  
17 parent. I have two new hires. I feel like every now  
18 and again at a meeting I'm able to say this, but  
19 these are particularly great hires for a couple of  
20 reasons.

21 We talked about the diversity fair that's  
22 coming up, and that's great for getting people in  
23 the door.

24 What's equally important is having people  
25 come back when they get the credentials or otherwise

1 are qualified, and so one of our hires, Angela  
2 Worth, is going to be in the house unit.

3 Angela had worked as an intern in the Chief  
4 Counsel's Office quite awhile ago. Did a multi-year  
5 fellowship with the federal government. Moved across  
6 country to join us again, and I think that's pretty  
7 tremendous. It speaks well of the Commission and her  
8 commitment to environmental law and energy law.

9 We also benefit from Corey Irish, who is in  
10 Contracts, Grants, and Loans, who earned his law  
11 degree while working here by day and is now a new  
12 attorney in our Transactions Unit.

13 And I just think this is sort of the good  
14 news story, I think, for Chief Counsel's Office but  
15 also for the Energy Commission, so I'm just really  
16 pleased to be able to introduce them to you today.

17 CHAIR WEISENMILLER: Great. Thanks.

18 Executive Director Report.

19 MR. OGLESBY: Just two quick things.

20 One on workload for the agency as a whole,  
21 following on the Aliso Canyon discussion.

22 This is an effort similar to the kind of  
23 ongoing effort coordinating with multiple agencies  
24 like the Drought Taskforce. So it will be something  
25 that continues on as we go through the spring and

1 summer, fall, in all probability, for some time.

2 And also going into the IEPR process as we  
3 do some of our follow-on assignments that we're  
4 required by the Governor to explore and analyze on  
5 natural gas.

6 So it'll be something that we have to  
7 accommodate in our work schedules and absorb the  
8 workload, and we're also seeking some augmentation  
9 through our resources to help with the immediate  
10 challenges and some of the long term that we haven't  
11 done yet.

12 Secondly, just a heads up warning that we  
13 are coming toward the end of the fiscal year. Most  
14 of our transaction work is required to be completed  
15 by the end of the fiscal year, and so plan your days  
16 accordingly as we go into May and June business  
17 meetings, because the agendas are going to be rather  
18 extended with all the transactional types of things,  
19 so just a heads up on that.

20 That's all I have.

21 CHAIR WEISENMILLER: Thanks.

22 Public Adviser.

23 MS. MATTHEWS: Thank you. I just want to  
24 thank Commissioner Scott for mentioning the career  
25 diversity fair that we're going to have on April 29,

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1 so certainly all of our Commissioners who have  
2 relationships with higher institutions, pass that  
3 along.

4 And then the second thing I wanted to  
5 highlight is that on March 30th, this would be under  
6 AB865 to increase the diversity of participants in  
7 our funding programs.

8 We attended the CPUC had a small business  
9 expo. Unfortunately I had a family emergency so I  
10 was not able to attend, but thankfully Lorraine did  
11 attend on the Energy Commission's behalf, and we  
12 were able to reach about 200 diverse businesses,  
13 small and diverse businesses, to let them know about  
14 our funding programs.

15 So we will certainly continue that  
16 relationship with the CPUC's Supplier Diversity  
17 Program to do more outreach to reach the AB865  
18 objectives.

19 CHAIR WEISENMILLER: Great, thank you.

20 Public Comment?

21 The meeting is adjourned.

22 (Adjourned at 2:51 p.m.)

23 --o0o--

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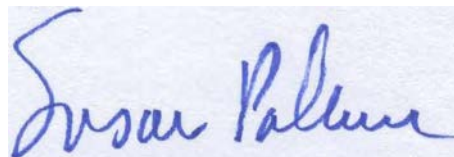
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